

Sanitary inquiry : - England. : Local reports on the sanitary condition of the labouring population of England, in consequence of an inquiry directed to be made by the Poor Law Commissioners. Presented to both Houses of Parliament, by command of Her Majesty, July, 1842.

Contributors

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London School of Hygiene and Tropical Medicine

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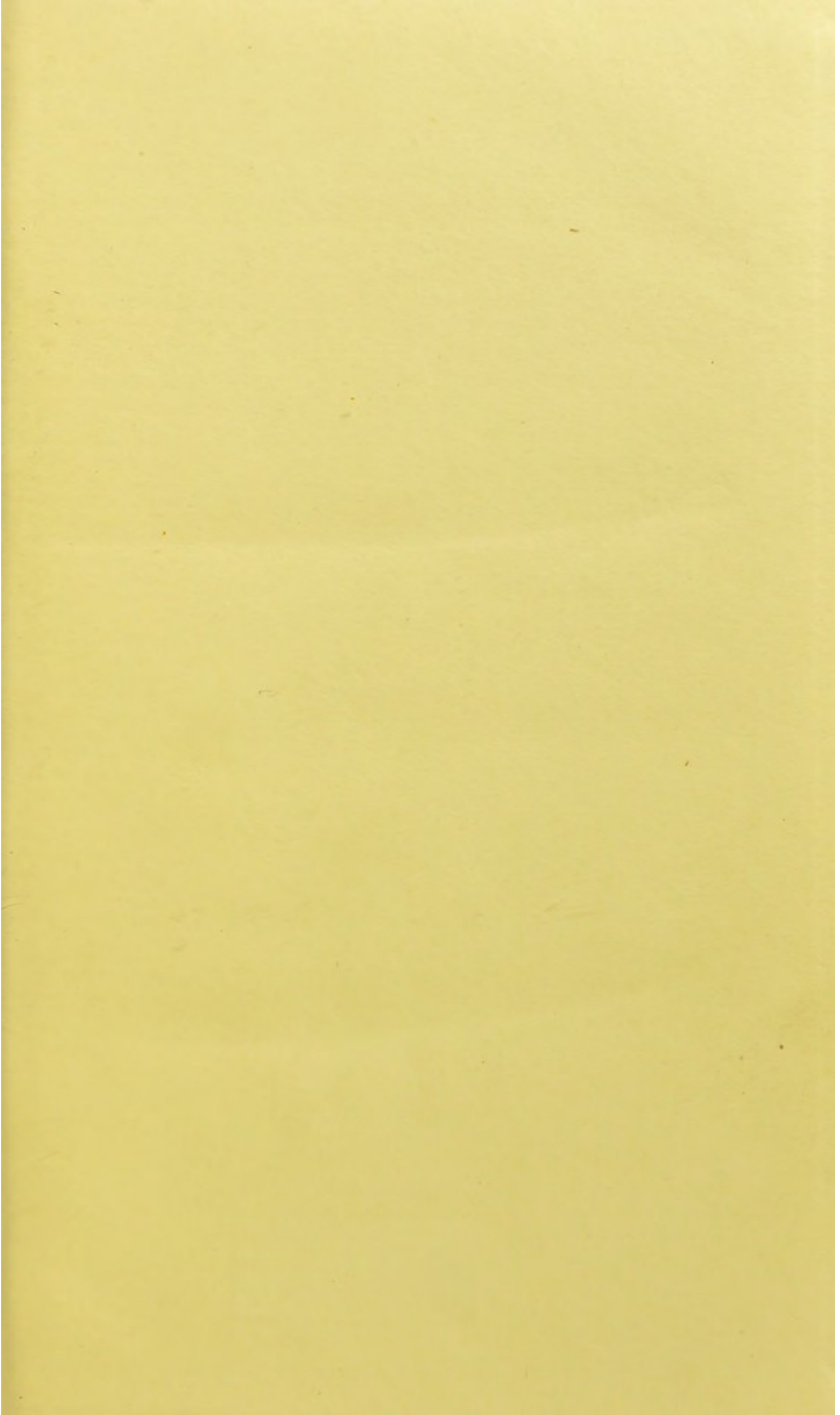


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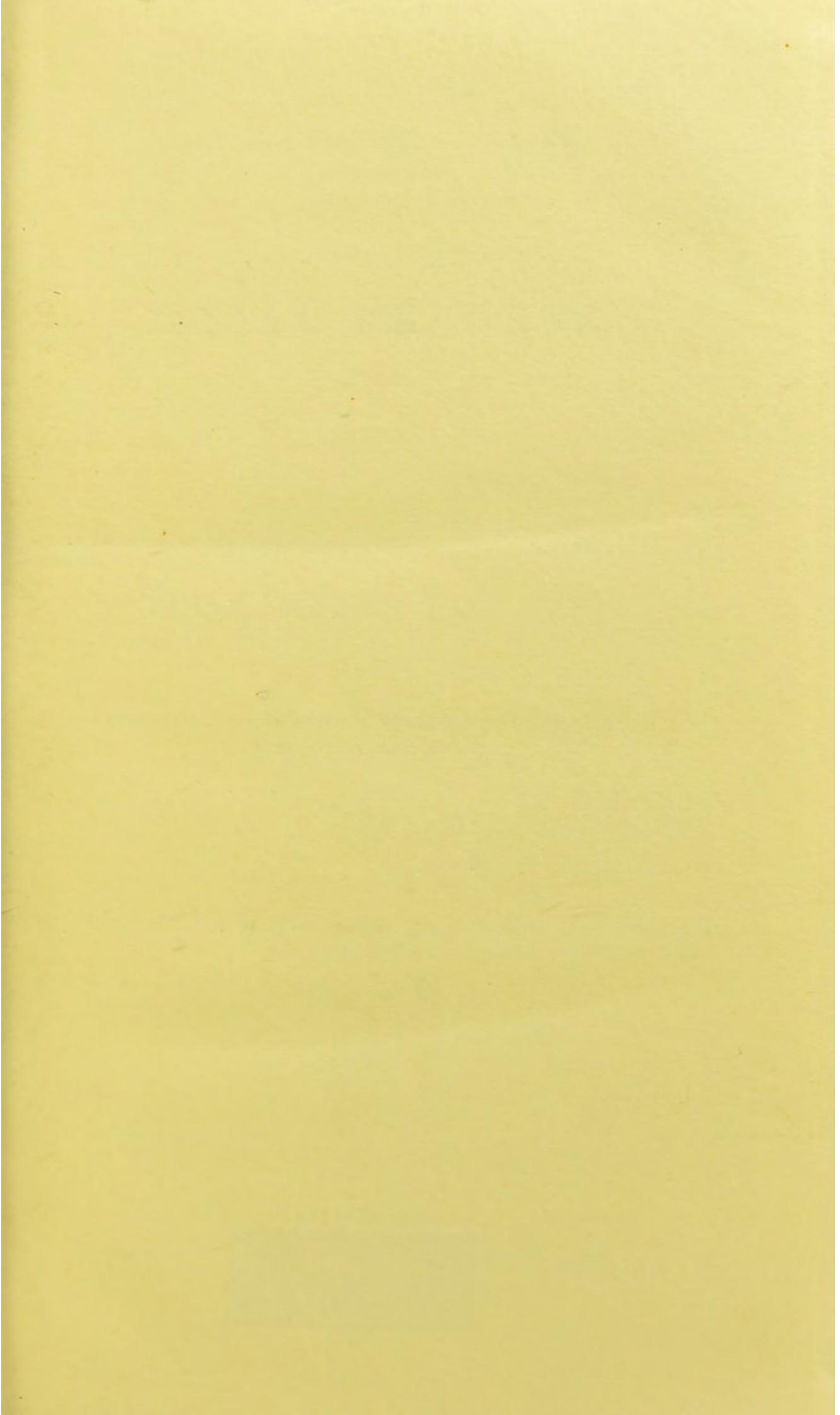
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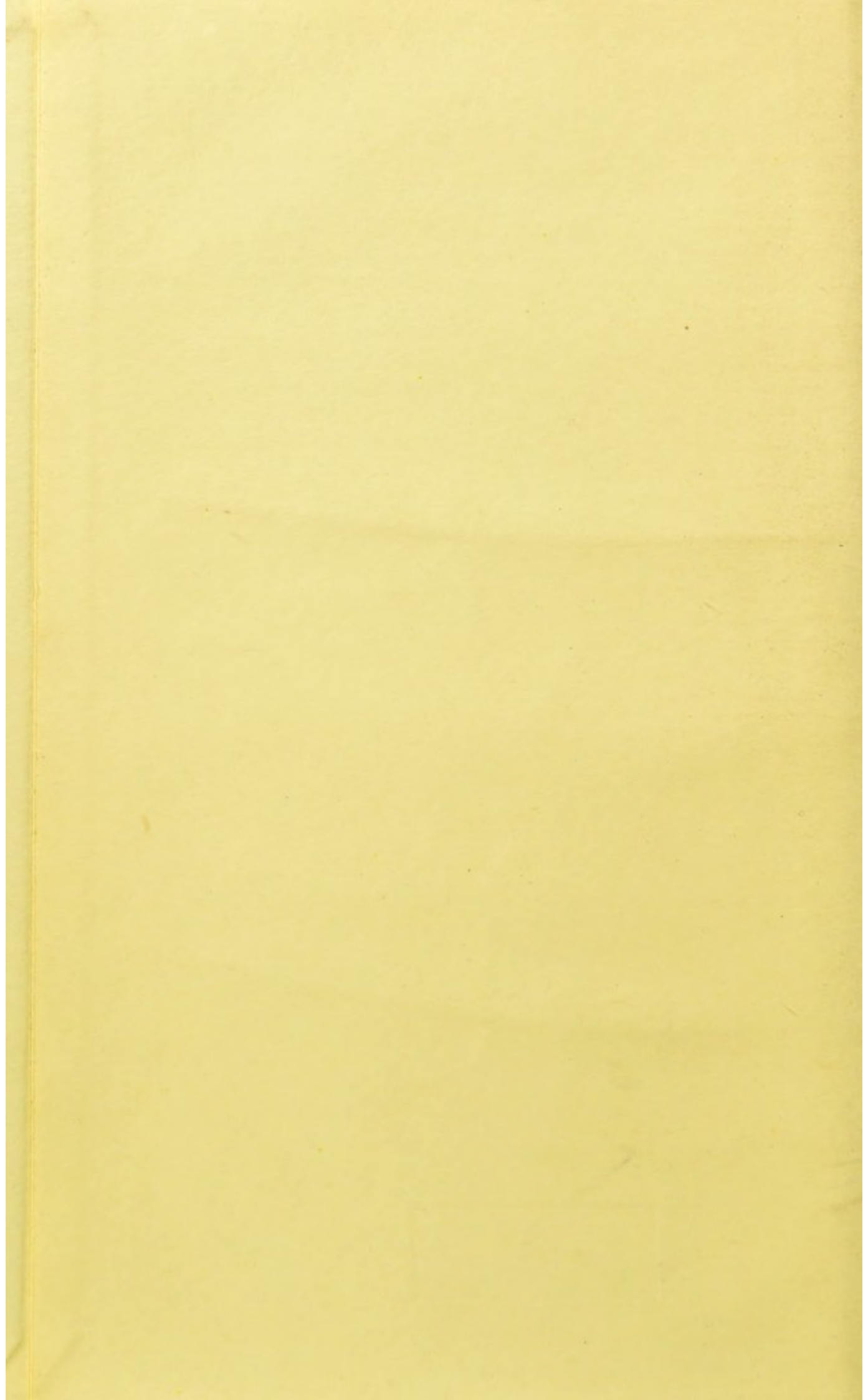
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SANITARY INQUIRY:—ENGLAND.

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LOCAL REPORTS

ON THE

SANITARY CONDITION OF THE LABOURING
POPULATION OF ENGLAND,

IN CONSEQUENCE OF AN INQUIRY DIRECTED TO BE MADE BY THE
POOR LAW COMMISSIONERS.

*Presented to both Houses of Parliament, by Command of Her Majesty,
July, 1842.*

LONDON:

PRINTED BY V

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BOOKSELLER,
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1842.

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SANITARY INQUIRY--ENGLAND

LOCAL REPORTS

OF THE



Presented to both Houses of Parliament, by Command of Her Majesty
July 1845

LONDON:

PRINTED BY W. CLOWE AND SONS, BUNGAY, SUFFOLK.

1845

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SANITARY INQUIRY—ENGLAND.

No. 1.

ON THE SANITARY STATE OF THE COUNTIES OF DEVON AND
CORNWALL.

BY W. J. GILBERT, ESQ.,

Assistant Poor Law Commissioner.

GENTLEMEN,—In conformity with your instructions, I beg to send you a report of the sanitary state of my late district; it is less full and particular than I could have desired, but the change of Assistant Commissioners' districts, which occasioned my removal into Staffordshire, obliged me to leave my inquiries incomplete.

My attention has been confined to the two counties of Devon and Cornwall.

Several practitioners of eminence in different parts of those counties will report to you fully and in detail the state of their respective neighbourhoods: in addition you will obtain reports from the various surgeons acting as medical officers in the different unions of those counties.

My information is obtained chiefly from examination of the medical officer's books and personal inquiry of those conversant with the state of the poor, by conversation with the labouring people themselves, and from inspection of their dwellings, and of the neighbourhoods in which they reside.

From these several sources of information, I find that numerous causes of disease exist similar to those pointed out by Drs. Arnott, Smith, and Kay, in their reports on parts of the Metropolitan districts, and the fatal consequences of these causes are easily and distinctly traceable. The immediate cause is usually malaria, arising chiefly from three sources—open drains, dirt-pits and heaps, and the state of the cottages.

Causes of Disease.

The diseases arising from malaria present themselves in many forms: they frequently assume a character apparently not resulting from such causes. The inmates complain of fits, convulsions, paralysis, ulcers, indigestion, and various other diseases; they tell you that they and their families have always been subject to them, and ascribe them to hereditary or personal infection, to low or unsuitable diet, hard work, exposure to cold, and other causes; but wherever such a regularly recurring complaint is found, almost

invariably there is some open drain, some stagnant pool, or some long encouraged collection of decomposing animal and vegetable matter. In other places we find the dung-heap and the poison; but all the inhabitants in health. But on the occurrence of a change in the weather, in the wind, in the temperature of the climate, the whole party within the range of the poison are on their sick-beds; head-aches, constipation, small-pox, and fevers; and in many cases atrophy.

Collections of decomposing Animal and Vegetable Substances.

The collection is a property highly prized, and frequently forms the subject of bitter contention between neighbours in the same narrow court or unventilated passage. The attempt to remove any part is the sure cause of contention, and would subject to annoyance and ill-will any well-disposed and more intelligent neighbour who should interfere. In addition to the instances which you will receive from the reports of the medical men, I may relate to you some few amongst the many I have found in my personal examinations.

In the parish of Modbury, many of the dwellings of the poor are arranged round narrow courts having no other opening to the main street than a narrow covered passage. In these courts there are several occupants, each of whom has accumulated a heap.

In some cases, each of these heaps is piled up separately in the court, with a general receptacle in the middle for the drainage. In others a pit is dug in the middle of the court for the general use of all the occupants. In some the whole courts up to the very doors of the houses are covered with filth. Around this mass, the cottages of the residents are arranged, having no back outlet, no back windows, or other means of ventilation. The windows and doors of the houses open and look towards this mass; and all the air supplied to the inmates is obtained through these doors and windows. The residents I learnt were very frequently subject to fever, and were always regarded as the first to be affected by any epidemic disease. The gross ignorance or carelessness from which such a state of things could result does not, however, appear confined to the poorer classes of inhabitants, but to be far more widely extended, if we may judge from the following circumstance. Information was given me that a common sewer ran through Modbury, and was collected in an open pool in one of the inn-yards. The greater part of this inn-yard I found had been excavated so as to form a deep pit on each side of the sewer; which was here laid open. The surface was several square yards quite open, and the depth considerable. Within two or three feet of the surface of this filth was a window which I was told was the window of one of the bed-rooms of the inn. By the side of this filth-pond was the skittle-ground of the inn. Many of the town's-people I understood were there of an afternoon to enjoy their

holiday, and the skittles and balls lying around recently used gave evidence that the account was correct. By what means the inn-keeper managed to induce people to pass their time on the embankment of such a deep wide pond of most offensive filth I am at a loss to account; but it was so extremely offensive, that, having obtained the information, we were glad to make a hasty retreat. The inn-keeper was accustomed to clean this out once or twice a-year and sell it as manure.

I give this as an instance of abuse amidst a village population in a rural district, and there are many villages in which instances of a similar kind might be found; and in country places where there are rows of cottages, or even in the case of single cottages, similar nuisances may be observed.

In an old parish workhouse belonging to a large town in Cornwall, I found that the inmates had long been suffering from fever, which in some cases had assumed a typhoid form. The medical man was said to have given due attention, and the patients were well supplied with medicine. The house was in the lowest part of the town and in a damp situation, and I was told near the common sewer, which at that part had very little fall, and consequently but bad drainage. In the middle of the small courtyard of the workhouse, towards which the windows faced, I found a dung-heap collected, which I had immediately removed, and was glad to learn that shortly afterwards there was a visible improvement in the health of the inmates, and ultimately that the fever was entirely removed.

As further evidence on this subject—

Mr. Moyle, medical officer of the Kea and Feock district, Truro union, says—

“The decomposition of refuse vegetable and animal matter thrown from the houses is constant, and filth of every description is lodged within a few feet of the door. They have also stagnant pools near the doors which emit a most intolerable stench.”

“The chief object of the proprietors is to accumulate as much manure as possible for the cultivation of their gardens and for the growth of potatoes. Many persons have a heap of 20 loads of dung, most abominably shocking to the olfactory powers of strangers coming near it, within a short distance of the doors. Independent of the turnpike roads, there are no scavengers or other persons appointed to remove the soil in my district.”

Mr. Spry, medical officer of the Truro district, Truro union, says—

“In this road, called the Back lane (in Truro), is a lodging-house for vagrants, and some tenements adjoining, the filth from which is all cast into an open trench before the houses. From the attention paid to the sweepings of the streets by the commissioners of paving and lighting, a general show of cleanliness is preserved, but in some of the courts

where the scavengers are prohibited from entering, being private property, and no thoroughfare, the stench is sometimes abominable, and instead of being desirous of having the accumulated filth removed, each resident emulates the other in filling his much-cherished pit. One such place on the western side of Culinick-street is especially remarkable for this distinction, and here two out of the four cases of typhus occurred. One of them, transferred to me by my predecessor in office, I immediately caused to be removed to the workhouse in a healthy situation, where he ultimately recovered; and the other case also did well, although kept in the same situation, by the purification of the premises and court, and liberal allowances of porter, wine, &c."

Mr. C. Doble, medical officer, St. Just district, Truro union, says—

"Contagious febrile disease was very prevalent in Veryan parish. A great number of cases arise from stagnant pools, accumulations of seaweed, &c. The labourers generally keep a stagnant pool for the purpose of obtaining dung."

Mr. Hugoe, medical officer of the Padstow district, St. Columb Major union, says—

"During the period within which I am required to report, there has not occurred a single case of contagious disease within this district, the absence of which I attribute principally to the cold wet weather we have had. Some years since typhus was always prevalent during the summer months when the heat was greatest, induced in my opinion by the filth allowed to accumulate in the streets and bye places of the towns and villages. The streets are constantly covered with refuse, animal and vegetable matter; and I doubt not, should the coming summer prove hot, we shall have a return of that form of fever above alluded to. The population of the parish of Padstow is 1822. In the year 1833 cholera prevailed: in that year 70 deaths took place. In the preceding year typhus fever produced the same rate of mortality, and in 1831, 43 deaths from typhus and scarlatina. The year after the cholera prevailed, viz. 1834, only 31 deaths are recorded. There were 31 deaths in 1835, and 35 in 1836. During these years, immediately after the prevalence of cholera, much greater attention was paid to cleaning the streets and the removal of various nuisances; but there still exist many causes likely to produce disease, should we have a return of very warm weather favouring the production of miasma. The local advantages for draining and cleaning the town are great, from the excellent supply of fresh water which might easily be made to pass through every street; and there is a gradual descent towards the sea. All obnoxious matters might by that means be washed away, instead of being allowed to accumulate as at present, rendering the streets alike disgusting to the senses of smell and vision."

Mr. J. Fry, medical officer, St. Breock district, St. Columb Major union, says—

"Heaps of dung with vegetable matter deposited near the dwellings of the poor (and such houses are not sufficiently ventilated) have been heretofore the cause of fever spreading."

M. F. Trevan, medical officer of the third district, Bodmin union, gives a return of 12 cases of typhus fever "amongst labourers residing principally in narrow lanes in a small and dirty fishing town." Mr. Trevan says—

"I believe the cause to be a disregard of ventilation, want of sewers, the formation of cesspools, the effluvia arising from the proximity of pigsties with accumulations of filth composed of animal and vegetable matter in a state of putrefactive decomposition."

Mr. Ward, medical officer of the town of Bodmin district of the Bodmin union, gives a return of 15 cases of typhus and 30 of synochus occurring in the old workhouse and town of Bodmin. Mr. Ward says—

"In the outcases the majority occurred in St. Nicholas-street, where more or less fever of a typhoid character generally prevails. At the rear of the houses there is a good deal of wood and thicket with considerable accumulations of filth from the houses, cowhouses, stables, pigsties, &c. The malaria arising from the decomposition of animal and vegetable matter is, in my opinion, the chief cause of keeping up the infection. Three of the five cases of death took place in this street in one family of five persons occupying one small room (having no other to sleep in), damp and ill-ventilated."

Mr. Belling, medical officer of the Lostwithiel district, Bodmin union, says—

"Three of the four first cases" (in his return, viz. typhus) "which occurred in the Lostwithiel poor-house were evidently produced by miasma or putrid effluvia arising from accumulated filth, and which, if not removed before next spring, will certainly cause a return of the disease."

Mr. Joce, medical officer of the Chittlehampton district, Barnstaple union, says—

"This district consists of three parishes, Swymbridge, Bishop's Tawton, and Landkey. Typhus fever occasionally prevails here; but by far the most prevalent is synochus. During the last ten years, I have in numerous instances clearly traced the origin of this disease to miasm, arising from the putrefaction of vegetable and animal substances. And it is with great satisfaction I am enabled to state that such causes might readily be removed by the interference of proper authorities: at present, however, they are never attended to. * * * * But the most frequent cause of disease is the manure pit, which is generally, for the sake of convenience, made as near to the door of the dwelling as possible. To the poor man it is of some importance in the cultivation of potatoes; and into it every species of filth is thrown. The manure is generally allowed to collect for 12 months, at the expiration of that time is carted away for the garden or the potato-field, when fever generally appears in our villages."

Mr. Peyton Pick, medical officer of the Braunton district, Barnstaple union, says—

“Nos. 2, 3, 4, 5, 6, 7, and 8 (in his Medical Return) were cases of fever occurring in people living close to a marsh which is occasionally covered by the tide. Immediately behind the houses there are several manure pits, which are generally filled with very putrid water and filth. Besides the above cases, there were at the same time several others in the adjoining houses, principally in children a little removed above the pauper. This neighbourhood might be easily improved by filling up the pits and draining. The cases 10, 11, 12 (1 typhus, 2 synochus) were in children whose residence has two pigsties in front of it. The inhabitants of these houses are very often ill, and are too poor to remove the nuisance. I have noticed that fever is not the only disease which is induced indirectly by the decomposition of animal and vegetable substances near the residences of the poor; but that the inmates of houses so situated are less capable of resisting injurious physical causes from their constitutions being wakened by the malaria.”

Mr. Henry Hele, medical officer of the Ashburton district, Newton Abbot union, says—

“The refuse and filth, necessarily arising from the consumption of the families and otherwise, is usually thrown in a pit at the back of the houses, frequently beneath or near the room in which they principally live. They have no other place to keep the filth above named; and if they had, the principal number do not appear to have the wish to remove it further off. They cannot be convinced of the mischiefs arising from the generation and accumulation of foul air. Their sewers or drains, when any, are not kept clean, and frequently they are found to be completely choked; the scavengers are not permitted to remove the refuse and dung from the backs of the houses, as the poor preserve it at any risk, for the purpose of manure for a small crop of potatoes or otherwise. The ventilation around the houses is generally very bad.

“I firmly believe that the majority of cases” (of contagious febrile diseases) “is produced by a crowded state of the inmates, together with the accumulation of filth, in the immediate vicinity of the dwellings.”

Mr. S. Hunt, medical officer of the Chagford district, Okehampton union, says—

“You will perceive, there are (in the Return) 82 cases of fever, and two only specified as typhus: of these 44 occurred between July 13th and September 13th, 1838, and all within a mile of the village of Chagford, and in it. As I reside in the village, and have been for several years the medical attendant on four separate clubs, consisting of about 400 members in the lower walks of life, among whom typhus fever raged at the period above named, I am certain that the greater number of those cases were typhus; the number of cases I had on my visiting list of typhus at that time was 84, nearly the whole of whom resided in the village. Surprise is constantly expressed at this village being so frequently attacked with typhus fever, and having nearly at all times a typhoid type of fever lingering among the poorer inhabitants; and the surprise is most natural, situated as it is on a hill within three miles of Dartmoor, having an abundance of pure water flowing through every street; and

the soil being what is called 'a light sandy soil;' the whole district too is perfectly free from malaria, produced by natural causes.

"The village contains about 1000 inhabitants, nine-tenths of whom are daily labourers, either at a large woollen manufactory or agriculture. The cottages of the labourers are, generally speaking, very old and inconvenient, &c. &c. A great number of them are situated in blind alleys called 'drangs,' without privies or drains; but all the refuse matter is carefully collected, and preserved throughout the year, as manure for potatoe ground. Each cottage has a pigsty within three yards of the door, the drainage of which adds to the already offensive effluvia that are generally around it!! * * * * The occurrence of typhus fever has not been at regular intervals: it has appeared with violence three times in the space of ten years; but among some of the poor in those drangs, there is nearly at all times a degree of fever having the typhoid character.

"I most certainly attribute the primary cause of the appearance of typhus fever among us to the malaria generated around each cottage, by the decomposition of animal and vegetable matter in the dung-hill, preserved to manure the potatoe ground rented by each cottager. The secondary causes are the crowded state of their rooms; as many as 12 or 14 individuals sleep in one small apartment, parents and children, many grown up as well as lodgers; in some instances a poor diet: but the general diet is wholesome, consisting of potatoes, pork, puddings, &c.

"In conclusion, I have to state my perfect conviction, that an improved style of residences for the poor, combining free ventilation with a removal of those dung-heaps, the erection of privies and formation of drains, would render typhus fever almost unknown among us. During the last very severe epidemic, there was not one person attacked above the grade of a labourer, though it was as severe a form of disease as ever I witnessed among the crowded lanes and alleys of Southwark whilst in attendance on the Southwark Dispensary."

Mr. B. J. Ball, medical officer of the Mevagessey district, St. Austel union—

gives, in his Return, three cases of scarlatina gravior; the patients three children of a miner, whose residence he states to be in a low and marshy situation. Mr. Ball describes this dwelling, which is in the parish of St. Ewe, as "a small cottage with only two rooms, and a dung-pit before the door, kept expressly for the purpose of accumulating filth for manure, which he uses for his garden. A pit of this sort is considered by almost every poor man in this district as a necessary appendage to his cottage; he even values it at half his living, and says that, if he is obliged to do away with the pit, he cannot grow his potatoes, &c.: not thinking it is the very nursery of the fever which rages so on his children: and I have often the greatest difficulty in getting cottagers to remove them, although fever may be raging to an alarming extent in his house!!"

In the larger towns, some attempts have been made to protect the inhabitants against disease, and the causes referred to, in many instances, have been removed. Since the visitation of the cholera, which alarmed the local authorities, and attracted their

attention to the subject of general health, the magistrates and the several boards of health have diffused more generally a knowledge of those circumstances which conduce to disease, and so tended to remove them.

Assisted by some medical gentleman, I personally inspected all the back alleys and courts, and other parts usually occupied by the poorer classes of the people in Exeter, Plymouth and Devonport.

At the time of the cholera, the towns had been closely inspected, and many nuisances removed; and since, they have not existed to such an extent as previously, and the cases of fevers, and other diseases having their origin more immediately in malaria, have not been so numerous.

In effecting these improvements and in removing nuisances, it is acknowledged that the powers of the law were overstepped; which are admitted to be defective for sanitary purposes. Some very able reports from these towns will, I trust, be sent to you; and I shall therefore think it unnecessary to go more fully into particulars.

It will however, I think, be found from these reports, that there are existing instances of a nature analogous to those before mentioned, calling for some system of general sanitary police.

Open Drains and Sewers.

Another prominent cause of malaria is to be found in open drains and sewers. There are few neighbourhoods in which some of these are not to be found, and attendant upon them, their usual follower, fever in different stages.

In the reports of the medical men, you will doubtless find this stated as a leading cause of disease; and many instances will be furnished to you, and I shall therefore content myself with giving you one instance; although there are few towns and villages which would not furnish some similar.

In Tiverton there is a large district, from which I find numerous applications were made for relief to the Board of Guardians, in consequence of illness from fever. The expense in procuring the necessary attention and care, and the diet and comforts recommended by the medical officer, were in each case very high and particularly attracted my attention.

I requested the medical officer to accompany me through the district, and with him, and afterwards by myself, I visited the district, and examined the cottages and families living there. The land is nearly on a level with the water; the ground is marshy and the sewers all open. Before reaching the district, I was assailed by a most disagreeable smell; and it was clear to the sense that the air was full of most injurious malaria. The inhabitants, easily distinguishable from the inhabitants of the other parts of the town, had all a sickly, miserable appearance. The open drains in some cases ran immediately before the doors of the houses, and some of the houses were surrounded by wide open

drains, full of all the animal and vegetable refuse not only of the houses in that part, but of those in other parts of Tiverton. In many of the houses, persons were confined with fever and different diseases, and all I talked to, either were ill or had been so; and the whole community presented a melancholy spectacle of disease and misery.

Attempts have been made on various occasions by the local authorities to correct this state of things by compelling the occupants of the houses to remove nuisances, and to have the drains covered; but they find that in the present state of the law their powers are not sufficient, and the evil continues and is likely so to do, unless the legislature affords some redress in the nature of sanitary powers. Independently of this nuisance, Tiverton would be considered a fine healthy town, situate as it is on the slope of a hill, with a swift river running at its foot.

It is not these unfortunate creatures only who choose this centre of disease for their living-place who are affected, but the whole town is more or less deteriorated by its vicinity to this pestilent mass, where the generation of those elements of disease and of death is constant and continuing.

State of the Cottages and Dwellings of the Poor.

Another cause of disease is to be found in the state of the cottages. Many are built on the ground without flooring, or against a damp hill. Some have neither windows nor doors sufficient to keep out the weather, or to let in the rays of the sun, or supply the means of ventilation; and in others the roof is so constructed or so worn as not to be weather-tight. The thatch roof frequently is saturated with wet, rotten, and in a state of decay, giving out malaria, as other decaying vegetable matter.

The construction of the cottages is generally very defective; usually one room on the ground-floor, and one or two on the first-floor.

There is often deficient sleeping room, and no means of affording the different members of the family separate apartments: the parents and children, both male and female, frequently sleeping in the same apartment. Many cottages are without privies, and few have the necessary addition of a dust-pit, or a place for washing potatoes, or for other household work.

Some of this description of cottages which have come under my observation are the following:—

1. A cottage at Modbury, which I visited with the medical officer: the inmates consumptive: the head of the family in a weak condition; suffering from cough and occasional vomiting of blood. One of his daughters died of consumption a few months previously. The medical officer stated that it was impossible to mitigate the sufferings of the family, unless they were removed to a drier and more comfortable habitation. The ground-floor of mud, and in a very wet and dirty state; the walls streaming with

wet. One bed-room up stairs for the whole family, which consists of a man, his wife and two daughters. This apartment dark and imperfectly sheltered from the weather. The planks of the floor damp; completely blackened by filth; and in so broken a condition that it was unsafe to tread on them.—Rent 2*l.* 10*s.* per annum.

2. Another cottage nearly opposite the above, I found to be floored with rough stones and mud, in the same manner as the street, and almost equally damp and dirty. One bedroom up stairs, divided by a wooden partition. This room much exposed to the weather. Family all more or less affected with rheumatic fever, expressed themselves fully conscious that their ill-health arose from the miserable condition of their dwelling. Rent 2*l.* 15*s.*

Many of the cottages in the lower part of the same town were exceedingly damp, dirty and ill-ventilated; and the inmates stated by the medical officer to be continually subject to fevers and rheumatic complaints. No privies. The flooring generally very damp, and commonly a want of sufficient sleeping accommodation; families consisting of man, wife, and one or two grown-up children (besides those of younger years), having but one bed-room.—Rents for cottages of this description vary from 2*l.* 8*s.* to 2*l.* 15*s.* per annum.”

As further evidence of the bad state of the cottages inhabited by the poorer classes,

Mr. Doble, medical officer of the Perranzabuloe and St. Agnes district, Truro union, says—

“Where typhus prevails to any extent, the inhabitants of those places are far from being cleanly, perhaps a large family occupying one single bed-room.”

Mr. Moyle, medical officer, Kea and Feock district, Truro union, says—

“Some of the cottages whence febrile diseases arise are unduly crowded. I have known 12 or 14 persons sleep in a room of 14 feet square, low, and with but one window. Low mud walls with few conveniences. The roof always of thatch, the inside of which is often very black, full of dust, and spider’s webs. But few houses properly supplied with water.

“Whatever the situation of the pauper’s house in my district, whether high, medium, or low, it is uniformly damp from a want of sewers to take off the rain and slop water; dirty from (with many) a total disregard of personal cleanliness; low; ill ventilated; many houses of a ground and one upper room, often lodging in one and sometimes two beds from five to nine or even 12 persons, with one window only in the upper room, so fixed that it cannot be opened.”

Mr. Hender, medical officer of the sixth district of the Launceston union, says—

“The tenements occupied by the poor are frequently too small; the chambers being crowded with beds, thereby rendering their purification by washing so troublesome as to induce many to neglect it altogether.

I believe if general attention were given by the poor to the cleanliness of their habitations and persons, not only contagious and infectious fevers, but many other diseases would be less frequent and less severe."

Mr. J. F. Smith, medical officer of the fifth district of the Launceston union, says—

"The houses inhabited by the poor in this district are generally in a most dilapidated condition; consisting of one room on the ground floor, and one bed-room, having no other place for their potatoes, fuel, &c. Scarcely one house in ten is weather-tight, and there is generally an accumulation of filth in front of the doors, as they have no proper receptacle for refuse. I consider that in this district there is a great need of superior cottage accommodation; and that the health and condition of the inmates would thereby be considerably improved and benefited."

Mr. Street, medical officer of Penryn district, Falmouth union, says—

"Within the town there are at least eight or nine lodging-houses, the nightly resort of itinerant travellers. These are lodged in rooms very crowded with beds: frequently a room of ten feet square will contain four beds, and in each of these beds three persons are allotted to sleep. Out of the seven cases of typhus returned, five occurred in those lodging-houses. The authorities have frequently been applied to to remove the nuisance, but without avail, the answer being 'We have no power to remedy the evil.' This I consider as a great source of fever in this town.

"There is an inferior class of labourers, chiefly paupers of out-parishes, and receiving out-door relief from their different parishes who have come to reside in Penryn, whose residences are very bad, and generally speaking in a very filthy and dilapidated state. They inhabit single rooms only in houses where there are several different families residing, and perhaps there are four or five persons crowded together in a small room. Few of the smaller class of cottages have privies; and the receptacle for the refuse is generally very near the dwelling, and is by no means kept cleanly, nor are the contents frequently removed."

Mr. Ward, medical officer of the Bodmin district, Bodmin union, says—

"It appears to me that the improvement of the cottage residences of the poor would exert a very beneficial influence on the prevalence of fever; for at present houses ill-ventilated, damp, badly drained, and surrounded by cesspools and accumulations of filth, are but too common. Generally speaking, too, there is a want of proper accommodation, for I myself have seen, amongst the cases quoted in my return, four persons ill of a continued fever in one bed; neither have the poor, even where it is practicable, any due regard to the removal of nuisances and filth from their doors."

Mr. J. Fry, medical officer of the Egloshayle district, Bodmin union, says—

"A few years since, autumnal typhus prevailed to a great extent in a small country village in my district (St. Mabyn), commencing on a young subject who had laboured under a severe attack of influenza, easily

traceable from house to house in those exposed to it, to the number of 45 to 50—one death.

“In no one instance could I but remark the peculiarity favourable to its propagation, such as the ground floors of many being under the surrounding land on a clay soil, not sufficiently drained; apartments not having any thoroughfare for air; eating and sleeping in the same; no convenient privies; collections of dung and vegetable matter near the dwellings preparing for sale or potatoe crops. I have now several cases of fever in the parish of Egloshayle (synochus), having the same exciting causes as above.”

Mr. T. B. Torr, medical officer of the Loxhore and Marwood district, Barnstaple union, says—

“There is much room for improvement. The houses are low and badly ventilated. The windows very small; and more than one half of them are incapable of being opened. The cottages are for the most part inadequate in size for the number of inmates; and cold and damp in consequence of the neglect of the landlords to keep them in repair. Thatch is almost the universal mode of covering, and this from the prejudicial practice (which I am constantly condemning) of placing new layers of reed on the old and decomposed materials of the roof: it is of very frequent occurrence, to observe them attain a thickness of three, or even five or six feet! And thus results a species of artificial marsh constantly suspended over the sleeping rooms; the emanations from which (as most of these rooms are without ceilings) must be detrimental to health.”

Mr. Joco, medical officer of the Chittlehampton district, Barnstaple union, says—

“The cottages of the poor are generally more capacious than in many other parts of England; for the most part constructed of stone or mud and covered with thatch. They are, however, frequently much neglected by their owners. The roofs become permeated with moisture; the side walls soaked with drainage from the thatch; and the ground-floors are often without pavement. Such an atmosphere is generally prejudicial to health, and deserves the consideration of all persons interested in the preservation or the comforts of the poorer classes.”

Mr. Cooke, medical officer of the Barnstaple district, Barnstaple union, says—

“The cases of typhus (in the return two in number) occurred in low lodging-houses frequented by mendicants and vagrants, and generally crowded and in a most filthy state.”

Mr. Pearse, medical officer of the Tavistock district of the Tavistock union, says—

“The continued fevers (in the return 83 cases) include those of the typhoid character; and would be greatly diminished in number had the poor more house-room and suitable accommodations as appurtenances. The great majority of the poor in this town are shut up, a whole family (on an average man, wife, and three children) in a room not more than 12 feet square, which serves them as kitchen, scullery, store-room, bed-

chamber, wash-house, drying-room, and all; not having either garden, curtilage, water-closet, or any other convenience. Such a state of things tends not only to deprave the health, but also the morals of the poor in a very great degree."

Mr. C. K. Vacy, medical officer of the Lefton district of the Tavistock union, says—

"The faulty construction of the greater number of the houses of the poor, neither ventilation nor proper drainage being attended to, together with the crowded state of their inmates, is undoubtedly a frequent cause of disease."

A. D. Acland, Esq., a guardian of the Axminster union, who has favoured me with a communication on this subject, gives his opinion, that—

"The accommodation in the cottages of the poorer classes is very insufficient in many respects, according to our views of what is necessary. It does not appear that the poor themselves feel it to be at all an inconvenience, or not generally so. It is in their moral habits that the evil is mostly seen.

"With regard to their moral habits as connected with their cottages, there is one very great and serious evil—the growing up of brothers and sisters to years of puberty in the same bed-rooms with their married parents, and even with a married brother-in-law and sister, or the converse. By this means it is obvious that habits of indelicate thought and conversation, and ultimately of action, are soon produced. In fact, few women in this neighbourhood ever marry until they have had, or show obvious signs of being about to have, their first infant. I am far from saying that their greater separation would secure morality; that security is to be found in higher powers, and in principles inculcated by early religious education and careful superintendence; but their mode of life does tend to undermine their existence, even where those principles are implanted, and affords a ready stimulus to evil where that has commenced."

In the towns, families occupy separate rooms in the several cottages; and have but one room for the common purposes of cooking, taking meals, and sleeping.

In the improved class of cottages I find these defects removed. There is a sitting-room, a small sloping-room behind for cooking and washing, and other domestic offices; and a privy and dust-bin so situated as not to be offensive to the inmates of the house.

I beg to inclose some plans of cottages of an improved kind, which were sent to me by *Mr. Jack*, a medical officer of the Plympton St. Mary union, with the following letter:—

DEAR SIR,

King's Tamerton, January 13, 1839.

I HAVE sent you some plans of cottages for your inspection; they will cost in erecting about 70*l.* They are upon a large scale: some of less dimensions would answer every purpose, and the cost would be about 50*l.*, according to the location and facility of procuring materials. Having taken some pains to ascertain the condition of the agricultural labourer, I am convinced a better method might be practised whereby the farmer and the labouring man might be profited, and many of the

latter prevented from seeking parish relief, if each farm had one or more cottages belonging to it according to the size of the farm, and let with it, and kept in repair by the farmer. Each cottage should have a small garden attached to it, and be let for 2*l.* a year, or that sum be redeemed by working during the harvest either by the wife or the husband. The cottager should have the privilege of planting a few potatoes; the farmer to prepare the ground for receiving the seed, and the cottager to find manure and do all the rest.

* * * * *

In the neighbourhood there are no cottages belonging to the farms; they are all in the hands of proprietors, and let from 4*l.* to 5*l.* a year, and are generally in a bad condition.

I am, dear Sir,

Your most obedient servant,

ANDREW LENOX JACK.

To W. J. GILBERT, Esq.,

Assistant Poor Law Commissioner.

Among the causes to which may be attributed the existence of such wretched tenements is the want of information on the subject of cottage building.

At Modbury the old parish workhouse had been converted into a row of cottages, having convenient day and sleeping rooms, and domestic offices. Some of the tenants in these had left their former cottages in the village, for which they had paid higher rents; and I found the landlord in the act of surveying them. He said that he must repair them; and it was evident that the improved state of the newly-finished cottages, and the reduced rent, had induced him to consider the necessity of improving the cottages, and keeping them in a better state of repair.

Costs of Buildings.

As regards your inquiries respecting the cost of building cottages, and the amount of rent paid, these amounts differ so widely in the different parts of the two counties, that it is almost impossible to give any answer applicable to all. In some places the stone and materials are near at hand: in others they are brought from a great distance. In others, as in the north of Cornwall, mud only is used for the walls, and very little wood.

The cost of building must, of course, be seriously affected by these circumstances. The amount of rent, however, does not wholly depend upon the cost of the building or upon the state of the cottage, upon the supply of cottages as compared with the demand for them and upon the amount of wages paid in the district.

Usually the supply of an article will increase in proportion to the demand, and the price will be controlled accordingly; but in the case of cottages in the country, free competition for building does not exist: the power of building is limited by the extent of land which can be had fit for the purpose; and frequently but a small class of persons feels disposed to embark in the speculation

of cottage building. All the holders of cottage property, who look to it as a matter of income, get the utmost possible rent; and in cases of a deficient supply of cottages, the labourers are willing to give the utmost farthing they can spare rather than be driven out of their parish, or be obliged to live far away from their work. The amount of rent is not in these cases regulated by the real worth of the cottage, by the amount expended in building, &c., but by the amount which can be pressed from the labourer out of his wages.

Where cottages are the property of some resident gentleman who is willing to extend the cottage accommodation, neat dwellings are furnished at low rents. In some cases the farmers are tenants of the cottages, and give the occupation as part of the wages.

Wherever the demand for rent is such that the wages of the labourer cannot procure a cottage to himself, two join together and live in the same cottage. This is not often necessary in country places; but in towns many families living in separate rooms are found to be occupants of the same house.

Some cottages I have seen bear in the rent a small proportion to the cost of the building; whilst others bear a very high proportion. As an average price, however, for the usual and ordinary class of country cottages, I should say that the building price would be about 30*l.*, whilst some cottages would not, independently of the labour, cost more than 5*l.*, and others would be as high as 80*l.* or 90*l.* It depends upon the materials and situation.

Rents in proportion to Earnings.

The usual rent paid, I should say, as an average, was 1*s.* 6*d.* a week.

The wages of a labouring man are, in some parts of Devon, 7*s.* a week, and in others they are 8*s.* or 9*s.*; whilst in Cornwall they are much higher. To this amount, task and other extra work, and the earnings of the wife and family, are to be added. In some families these extra earnings are small whilst compared with others, and the proportion which the amount of rent bears to the general expenditure usually varies accordingly; but it may be averaged at about one-seventh of the other expenditure.

Having thus reported to you the sanitary state of Devon and Cornwall, as far as my time would allow me to collect information, I may conclude by stating that the general experience I obtained of the two counties during the time they were under my superintendence leads me to the conclusion that many causes injuriously affecting the sanitary condition of the various classes exist there, requiring the aid of legislative enactments for their removal.

I have the honour to be, Gentlemen,

Your most obedient servant,

W. J. GILBERT,
Assistant Commissioner.

To the Poor Law Commissioners.

No. 2.

ON THE SANITARY STATE OF TRURO.

BY DR. CHARLES BARHAM.

THE town of Truro, which now contains about 10,000 inhabitants, is situated on the declivities of two hills, and on a central platform between them. At the foot of each of these hills runs a small river, and the waters of the two are united within the limits of the town. The tide ascends into the channels of each a little beyond those bridges, which cross them at the lowest point of their course. At spring tides it reaches the mill-pool on the eastern stream, and beyond the West bridge on the other. The tongue of land which separates these streams is occupied by the principal part of the old town, lying chiefly on ground almost level, and constitutes the parish of St. Mary. From this the country rises by a gentle ascent towards the north-west, and on the outskirts of the town falls within the parish of Kenwyn; the rise of the land on the north-eastern side of both rivers is more rapid than on the other. The division of Truro to the north-east of St. Mary's lies in the parish of St. Clement, and is placed in part on the side of a generally steep acclivity, in part on the flat between its foot and the river. On the south-west of St. Mary's, in the parish of Kenwyn, the best and newest portion of the town is situated, partly on a hill-side almost as steep as that just mentioned, partly on a level at its foot; but some of the older quarters of the town are comprised in this division, and must be hereafter noticed as most objectionable in their arrangements. Both the streams above mentioned are rapid in their course, and their waters are bright, but inconsiderable in volume in seasons at all dry. A portion of the western river is diverted into a separate channel, and constitutes "the leat" which supplies the chief part of the water running through most of the streets within the parish of St. Mary. The tideways are filled with an extensive alluvium, which is only traversed by the small fresh-water rivers during the greater part of the day, but is completely covered at high water, at neap as well as at spring tides. It is rare that any offensive odour is perceived from these mud banks, though hydrogen and its usual compounds are emitted on their being disturbed. Below the town the tideway expands rapidly, so that it reaches a quarter of a mile in width within little more than the same distance from the bridges, and the valley afterwards opens to a still greater extent. The depth at high water admits at spring tides of the coming up to Truro quay of vessels of 100 tons and upwards. The climate is very temperate, and has something of that insular character so strongly marked in the western extremity of Cornwall. The temperature seldom reaches 75° Fahrenheit in the

shade, and as seldom falls to 25° in the night; in the present year, however, it fell in the night of January 7 and 8 to 14° , and in 1832 it was observed at 10° , the average of the maxima throughout the year being 56.7 , and that of the minima 44.2 . The mean quantity of rain falling in the course of the year may be estimated at 40 inches, and by the average of the two last years more or less rain has fallen in 194 days in each year; and making some allowance for the wetness of those seasons, it is probable that half the year is more or less showery. The amount of sunshine is decidedly less than that in the eastern counties of England; the intensity of the rays is also inferior. There is almost always more or less breeziness in this western peninsula, but fogs often lie in the valleys, and they are frequent at night in the central parts of Truro. I have detailed these particulars of climate with some minuteness, as the amount and quality of effluvia produced by any decomposing body must always be greatly dependant on the conditions of heat and moisture, and the degree of their concentration must vary with the extent of ventilation.

Having now given a slight sketch of the *natural* characteristics of Truro, I will proceed to pass under review some of the artificial arrangements provided by civic economy. The two rivers on which the town is placed have, of course, afforded a double facility by supplying a general channel for drainage, and the water by which refuse may be carried into it, and they have been applied to these purposes to a very considerable extent. A large portion of the town is now supplied with drains or sewers, which discharge themselves into some part of these channels either above or below the points to which the tide ascends, and the supply of running water to some of the lower and more densely peopled parts of the town, especially in St. Mary's parish, is ample, being partly turned through the sewers, and partly conveyed in open channels on each side of the streets, with deeper pits forming wells here and there for the convenience of dipping pitchers and other utensils.

A detailed account of the public sewers is given in the Appendix, and is believed to be nearly, if not quite, complete. Many of these are of recent date, and owe their existence to the alarm excited when the cholera was near at hand. Some of them (as may be seen by a reference to the accompanying map) are made to discharge themselves into the rivers; and such of these as are swept by a stream of water are unobjectionable in themselves. Several others stop short of this desirable termination, and, after collecting filth from various localities, deposit a portion in catchpits here and there, and finally open on the surface, frequently in some street or lane, where a neglected deposit of a mixed animal and vegetable nature is allowed to become a probable source of annoyance or mischief. Much of this incompleteness may be removed (as regards the main lines of sewerage) at no great expense; and it is said to be the intention of the com-

missioners of improvement to remedy the deficiency, when they are free from the debt with which they are now encumbered. Many of the smaller sewers are, however, much too narrow to be effective, and some of them are no better than covered drains. But the greatest evils in this department are unquestionably those which spring from the ignorance, cupidity, or negligence of landlords. It is useless to have a good sewer carried through the centre of a street, if the houses at the sides, and still more those situated in courts and lanes adjoining, have no communicating drains; and it is worse than useless to furnish these backlets with the mere semblance of drains—gutters forming pits here and there—then as they approach the street, perhaps slightly covered so as to produce obstruction more frequently than protection, a concentrated solution of all sorts of decomposing refuse being allowed to soak through and thoroughly impregnate the walls and ground adjoining. One or more of these mischievous conditions is to be found in connexion with a large proportion of the older houses of Truro, excepting the better class; and in many of the courts and backlets all these evils are in full operation. I have repeatedly noticed in the country that the occurrence of fever has been connected with *near proximity to even a small amount of decomposing organic matter*; and it is certain that all measures for effecting improvement in the sewerage of streets, the supply of water, and ventilation, may be rendered nearly inoperative for the obviating of the causes of disease, if a little nidus of morbid effluvia be permitted to remain in almost every corner of the confined court, where the poor man opens his narrow habitation in the hope of refreshing it with the breeze of summer, but gets instead a mixture of gases from reeking dunghills, or, what is worse, because more insidious, from a soil which has become impregnated with organic matters imbibed long before; and now, though, perhaps to all appearance dry and clean, emitting the poisonous vapour in its most pernicious state. Nothing short of the placing in proper hands a peremptory authority for the removal of what is hurtful, and the supply of what is defective, making the exercise of that authority a duty, can remedy the existing evils.

The houses occupied by the lower orders do not often exceed two stories in height, and it is rare to find families occupying less than two rooms. The more recent additions to the town—I speak of residences of the humbler class—have mainly consisted of rows of moderate cottages, having, the majority of them, gardens in front, and usually containing four rooms, commonly occupied by a single family. Some instances have, however, occurred of the building of a very inferior class of dwellings, which will be hereafter pointed out.

No interments now take place in the town, the present burying ground being at the distance of a third of a mile to the north of the church. The slaughter-houses are all, or nearly all, situated

in populous parts, and occasionally constitute a decided nuisance. No manufactories exist which can be looked upon as prejudicial from any effluvia to which they give rise. The gas-works and smelting-houses are so placed that no mischievous effects can fairly be attributed to them.

Having now touched on these particulars of the conditions under which they live, over which the poor can exercise little or no control, we may consider next their own habits and arrangements as influential on health. And here I must give a rather favourable report, though the full value of cleanliness and ventilation is as yet very far from being perceived. Ignorance and prejudice produce also here, as elsewhere, an extension and aggravation of epidemic disease when it arises. The catchpits, to which the inhabitants of the west of England are generally partial, are too frequent in Truro, being receptacles, for the most part uncovered, of whatever refuse may, by its decomposition, constitute manure, proximity to the house being rather aimed at than avoided. Pigsties also, kept in a filthy state, on the same principle of adding to the amount of dressing, are very numerous, and often pollute the air. The little heaps of dressing are commonly sold to persons who call for it at intervals of a month or two, the price of a barrowful being 2*d.* or 3*d.* Some landlords have wisely made the throwing of the refuse on a general heap an article in the agreement for letting the houses; in which case, if the heap is sufficiently distant from the tenements, much of the evil is avoided. Generally speaking, drunkenness and low debauchery do not exist to the extent of producing disease in any district of the town, their mischievous effects appearing chiefly in the shape of chronic structural changes, or acute phlegmasiæ. The existence of some taste for neatness, and even ornament, and of some notion of the benefits derived from space and ventilation, is in a great portion of the lower classes evidenced by the care taken of gardens, or of flowers in pots, by pictures on the walls, by the preference of cottages in open rows, by the freshness of whitewashing, by the separation of beds, and the cleanliness of clothes and children.

We may now pass to the consideration of the state of health of the population. My statement on this subject will chiefly rest on the authority of the register of deaths, of which an abstract, for the whole period it has been in operation, is given. I have added a summary of the pauper sickness from Lady-day, 1839, to the end of 1840. With the facts hence deduced are combined the results of my own experience, and the information derived from professional friends. The Cornwall Infirmary, the only medical institution in Truro, has no fever wards, and the greater part of the sick, deriving relief from it as in-patients, are brought from a distance; whilst the out-patients, not being attended at their own houses, consist of those who labour under forms of disease not much connected with the morbid influences to which the present inquiry relates.

No species of disease can be said to be endemic in Truro. Neither has it been for many years past the scene of any epidemic of very fatal character. The cholera appeared in the town at two or three intervals, but took no root, and did not number half-a-dozen victims altogether. Fever, presenting some typhoid symptoms, and an unusual tendency to intestinal hemorrhage, occurred in 20 or 30 instances in the beginning of 1839, and the worst cases were found in some of the confined quarters of St. Clement's; but I saw at the same time worse cases, and more in number, in the country, and was satisfied that some at least might be attributed to the effluvia from decomposing vegetable matter. Scarlatina has in some seasons occasioned a considerable mortality; but this has not so often arisen from the malignant type of the disease, or in connexion with crowding or want of ventilation, as it has from carelessness as to diet, and exposure during convalescence, and the consequent establishment of internal disease, which has usually induced chronic structural changes. This remark is fully applicable to measles and hooping-cough, which, by their *sequelæ*, add very much to the mortality of children. An illustration of this carelessness may be found in the relatively large amount of mortality of the very young and very old in the months of December and January, 1839, as shown in the printed Table which I append.

The information derived from the registers of deaths and sickness has been arranged in a series of Tables. The first gives a return of the condition in life, average ages, and the causes of death, with respect to all who died in Truro from July 1st, 1837, to December 31st, 1840. The occupation of the deceased not being stated in the register, except in the case of adult males, the condition of others has been inferred in the majority of cases from that of the parent or husband; in many from my own knowledge of the parties, and in others from the place of abode or other collateral evidence. Altogether I am confident that the statement is not materially erroneous. This Table is subdivided into four distinct portions. The first gives the above particulars for the parts of Truro situate in the parishes of St. Mary and St. Clement, not including the workhouses; the second the same for the parts of the town in Kenwyn parish; the third is formed by the combining of the two former, and is therefore a summary for the whole town; the fourth is a similar return for the workhouses of the Truro Poor Law Union, situate in St. Mary's and St. Clement's. To speak first of the general view afforded by No. 3, the number of deaths among *genteel and professional* persons is 33; among *tradesfolk and families similarly circumstanced*, 138; and among the *poorer* classes, 447. The average ages were respectively 40·47, 33·5, and 28·44. The advantage derived from easy circumstances, which is, as regards health and longevity, *chiefly*, I believe, *though certainly not only*, that of superior cleanliness and airiness of their dwellings, and of the quarter of the town inhabited by them,—this advantage is clearly enough

illustrated here. The two divisions of the town, severally concerned in No. 1 and No. 2, present some particulars of difference in these respects which merit notice. The average ages of the several classes in the parts of Truro in the parishes of St. Mary and St. Clement are for the *gentry*, &c., 43·53; for *traders*, &c., 35·89; and for *labourers*, &c., 28·90; in Kenwyn they are respectively 37·6, 29·99, and 27·28. The numbers of the *gentry*, 16 in one case and 17 in the other, are, perhaps, too small to secure the equalization of accidental differences. But as to those connected with *trade*, the greater wealth of that class in St. Mary's parish is probably, in part at least, the reason of its average age being higher in the first than in the second division of the town. With regard to the *causes* of death, the most prominent feature in the general Table is the large amount of mortality from diseases of the respiratory organs in proportion to that from febrile diseases, 190 of the former and 101 of the latter, being in the proportion of 54 and 29 to each year of the registration, or 1 in 185, and 1 in 345 of the population (10,000). The proportions for *Cornwall generally* were in 1840, according to the Second Report of the Registrar-General, nearly as 17 to 14, or 1 in 178, and 1 in 218 of the population; and those for the metropolis nearly as 142 to 137, or 1 in 112, and 1 in 116 of the population. This comparison is altogether calculated to place the healthiness of Truro in a favourable light. Comparing the two divisions *with each other*, the total number of deaths being about double in the first from that in the second (401 and 217), the deaths for the epidemic class are 75 and 26, or 3 to 1 (nearly). This difference will be elucidated hereafter. I have separated the deaths in the workhouses from the other classes, because it is difficult to institute a comparison between them. The workhouse in St. Mary's is chiefly appropriated to the reception of the aged and infirm paupers of the Truro union; that of St. Clement's, which is nearly a mile from the town, receives most of the children and their mothers; whilst the major part of the men in the vigour of life are taken into the house at Probus. *Consumption* and *decay* are the chief causes of death recorded, and the immunity from *fevers* is almost complete. One form of disease, however, partaking of this character, must be alluded to in the sequel. The deaths from small-pox (not very numerous in their total amount) occurred in by far the larger proportion in the parish of St. Mary. The facilities afforded for vaccination at the Cornwall Infirmary, and the uniform and highly creditable refusal of the medical practitioners to inoculate for the small-pox, have doubtless contributed very materially to confine that scourge within a range of extent and virulence very limited as compared with its prevalence in some other towns in Cornwall.

Table 2 exhibits a summary of the cases of *fever*, of *small-pox*, and of the *acute diseases of the respiratory* and of the *digestive organs*, attended in the course of duty by Messrs. Spry, Truran, and Paull, the medical officers of the Truro union for the parishes

of Kenwyn, St. Mary, and St. Clement respectively. I here beg to acknowledge the kindness of those gentlemen in assisting my inquiries. To Mr. Spry I am especially indebted for valuable information, and also for his zealous co-operation in the procuring a written statement of a permanent nature of the existing sewerage of Truro, the knowledge of which was, till, within these few weeks, almost dependent on the memory and life of one aged man. This Table of *sickness* is divided into two portions, the first comprising the period from March 25th, 1839, to the end of that year; the other embracing the entire year 1840. The *months* in which medical attendance commenced, the *sexes*, and the *parishes* in which the cases occurred, and likewise their *workhouses*, are distinguished. It would be rather beside our present object to trace the progress and decline of the several classes of disease through the seasons in each parish. The most remarkable points bearing directly on this inquiry, and on the Table already considered, are the decidedly greater number of cases of *small-pox* in 1839 (when it was epidemic), and of *fever* in 1840, in the parish of *St. Mary*; of the *former* there are 50 cases in *St. Mary's*, and only six in the two other parishes together; and of the *latter*, 50 in *St. Mary's*, 24 in *Kenwyn*, and 17 in *St. Clement's*. Of the cases of *small-pox*, 38 occurred in *September*. It may be worth remarking, that of the *small-pox* cases in *St. Mary's*, 30 were *males* and 20 *females*, while of the *fever* cases in the same parish, 14 only were *males* and 36 *females*. In 1840 there was a prevalent disorder of the digestive organs, and the parishes fared in this instance nearly alike, leaving the workhouses out of sight. The whole number attended was 72, whilst in the three quarters of 1839 it was only 14. In 1840 *Kenwyn* had 27; *St. Mary's*, 22; and *St. Clement's*, 23. From *St. Mary's* workhouse 16 cases are reported; and from that of *St. Clement's*, 68. Of those in the town, 23 occurred in *September*, and of those in the workhouses, 34. The disease was considered by the medical officer, Mr. Paull, to owe its origin in the *St. Clement's* workhouse to a *peculiar endemic influence*. However this may be, it was clearly very prevalent elsewhere. The cases might probably be classed under the head of *fever* without violence; but, judging from my own experience of the season, I have preferred placing them where they stand. The *sexes* were affected with these disorders in the proportion of 27 *males* and 45 *females* in the town, and 35 *males* and 49 *females* in the workhouses. The excess of *female* patients in the whole year was remarkable, being 123 *females* and 74 *males* in town, and 65 *females* and 43 *males* in the houses. In 1839 the numbers were 83 *females* and 71 *males* in the former, and 19 *females* and 7 *males* in the latter.

We may now proceed to localize more accurately the sickness and mortality which have hitherto been only apportioned to the three parishes at large. Tables 3, 4, and 5 exhibit the *pauper* sickness and mortality from *fever*, *small-pox*, and acute diseases of the respiratory and digestive organs in the parts of Truro in the

parishes of *Kenwyn*, *St. Mary's*, and *St. Clement's* respectively, from Lady-day, 1839, to December 31st, 1840; and the deaths among all classes in the same parts from July, 1837, to December 31st, 1840, from the same diseases; and also during an epidemic of *hooping-cough* in 1838, distinguishing the several localities and the sexes. These Tables, looked at in conjunction with the map, will explain themselves. But some of their most striking results are brought together in Table 6, and on these I will make a few comments. The perfect immunity from deaths by *febrile* and *acute* diseases enjoyed by Lemon-street during the long period of three years and a half is a strong testimony to the value of the breadth of its roadway, the openness of its site, and the judicious construction of the houses; for it has to contend with a great deficiency of sewerage. Fairmantle and Daniell streets are modern, and are occupied by small traders, and by decent artisans and labourers; the former lies rather low, the latter is on a considerable elevation; both are fairly drained, and are healthy. Charles, Calenick, and Kenwyn streets present some of the worst specimens of defective arrangement,—rendered worse still by the recklessness of the very poor,—which can be met with in Truro. The amount of *pauper sickness* is considerable, the deaths not few. The two latter streets are, in the greater part of their length, but little raised above high-water mark. Passing into *St. Mary's* parish, the proportion of sickness and even of deaths in Castle-street and Castle-hill is, to their extent and population, as great, perhaps, as that of any part of Truro; yet their situation is elevated and favourable. There is, however, no mystery in the causation. Ill-constructed houses, many of them old, with decomposing refuse close upon their doors and windows, open drains bringing the ooziings of pigsties and other filth to stagnate at the foot of a wall, between which and the entrances to a row of small dwellings there is only a very narrow passage: such are a few of the sources of disease which the breeze of the hill cannot always dissipate. Similar causes have produced like effects in the courts adjacent to Pyder-street, to the High Cross, and to *St. Clement's*-streets, and in Bodmin-street and Goodwives'-lane, the situations being all more or less confined. The benefits, on the other hand, derived from open rows, and cottages of a better construction, are evidenced in Boscawen and Paul's-row, and *St. Clement's*-terrace, which are well ventilated, and consequently suffer less from the scanty provision of drains and other conveniences.

To afford further means of estimating the relative mortality in the several divisions of Truro, I will introduce an extract from a table prepared* for the purpose of illustrating a different subject, the effect of the occupation of mining on the health. By this it appears that the distribution of the total male deaths in ten years was as follows:—

In *St. Mary's*, of which the male population was, by the census

* By Mr. R. Blee, of Redruth.

of 1831, 1280, the male deaths were 287, which occurred at the following ages:—

Under .	10	20	30	40	50	60	70	80	90	100
	<u>113</u>	<u>15</u>	<u>22</u>	<u>16</u>	<u>12</u>	<u>15</u>	<u>26</u>	<u>46</u>	<u>16</u>	<u>6</u>

And in St. Clement's, of which the male population was 1311, the male deaths during the same period were 185, the ages according to the same scale being—

Under .	10	20	30	40	50	60	70	80	90	100
	<u>79</u>	<u>9</u>	<u>10</u>	<u>14</u>	<u>10</u>	<u>12</u>	<u>21</u>	<u>12</u>	<u>15</u>	<u>0</u>

The difference between the two parishes is this; the population of St. Mary's is exclusively urban, whilst of that of St. Clement's about a third is rural. The mortality in the former is greater at every interval of age, yet the longevity of the inhabitants tends in a material degree to equalize the value of life; but this latter fact is perhaps chiefly caused by their superior condition in regard to wealth. This circumstance, together with the abundant supply of water, and the absence of that obstruction to ventilation, the steep hill between which and the stream much of St. Clement's is placed, renders it probable that the portion of Truro situated in the parish of St. Mary is really more healthy than that in St. Clement's.

We will now proceed to the notice of a few details of the actual condition of some parts of the town, which I shall borrow from a report just prepared by my friend Dr. Carlyon, as chairman of a committee of health, chosen from the town council. I may premise that Dr. Carlyon has practised as a physician in Truro, and very extensively throughout Cornwall for the last 35 years, and has paid special attention to the causes of fevers, concerning which, and for the recommendation of sanitary arrangements, he published some pamphlets many years ago, when diseases of that class were frequent and fatal. I shall introduce a few remarks of my own, which may help to illustrate his sentiments.

“A few years since,” says Dr. Carlyon, “when the alarm of cholera prevailed, great exertions, it is well known, were made to keep off so dreaded a calamity. Additional scavengers were appointed, not merely to sweep the streets more carefully, but to remove nuisances from courtlets and close passages; the gutters throughout the town were attended to; as large an additional supply as possible of running water was procured; and vast quantities of filth were drawn off, in one particular quarter, by means of sluices, erected at considerable expense out of the funds of the then existing corporation. It cannot be doubted that to these wise measures of precaution the inhabitants of Truro were greatly indebted for their comparative exemption from cholera; and it is to be regretted that so useful and intelligible a hint should not have led to more permanent and progressive improvement. But the fact is that, with the removal of the panic, the rules of cleanliness, of such perpetual obligation, were nearly lost sight of, and most of the nuisances which then disappeared are again in operation; and, what is expressly in point, febrile diseases have been almost entirely confined, for the last two years, to spots where least attention has been paid to cleanliness. Our two last summers, although remarkably wet, have been happily free

from extreme variations of temperature, and for that reason have been probably more than ordinarily healthy; and this may well account for the limited extent of febrile action, since infectious diseases, like fire, spread more or less rapidly according to the state of the atmosphere, and other circumstances opposed to, or in favour of, their propagation.

“ A stranger, passing through Truro, sees a river flowing on either side of the town, with a tide to receive its impurities, and remove them twice daily. He sees small channels of water running on each side of the principal streets, and he never would suppose that, with these striking advantages, there is scarcely a street against which some charge may not be made of inattention to cleanliness and health. Who would suppose, for instance, that so fine a street as Lemon-street was destitute of a common sewer? an evil which does not now admit of a remedy, from the circumstance that the basement stories of many of the houses are so low as not to be capable of deriving advantage from arrangements which ought to have been made before their foundations were laid.”

Dr. Carlyon here speaks of the absence of a sewer in the centre of the street. A sewer has been, within a few years, brought from Carclew-street, through John-street and Fairmantle-street, to the head of Tabernacle-street, where it opens on the surface. A small private sewer has been made from Dr. Carlyon's coach-house to the river. This is on the east. The western side of the street on which I myself reside has sewerage at the backs of the houses for some distance from the river, the ditch or drain of which Dr. Carlyon next speaks being laid in what is marked on the plan as Back-lane, or Lemon-mews. He proceeds:—

“ Till within a very few years there was an open and offensive ditch at the back of the houses on the western side of the street, from Charles-street downwards; and we are sorry to perceive that the nuisance, although much abated, is not yet wholly removed. Charles-street itself is unequalled in its variety and extent of nuisances. The street is flat, and entirely indebted for the approach which, as a thoroughfare, it makes to cleanliness to the catchpits, which are under the care of the scavengers, and which are, perhaps, of as much service as so bad a case admits of. It is, however, of the abominably filthy state of the back premises of this street that we have most reason to complain; and whilst we call attention to their foul and unhealthy condition, we are sorry to add that there is no part of Truro where the removal of such horrible nuisances would be attended with greater difficulty, in consequence of the nature of the ground and the wretched construction of the houses. This, however, principally applies to the south side of the street. On the lower side (the right hand side as you enter from Lemon-street) much improvement might be effected at little expense.”

The debt by which the commissioners of improvement are hampered has caused a delay in the construction of a sewer in Charles-street. The premises on the south side, which Dr. Carlyon stigmatizes, are, perhaps, the worst in Truro. They consist of a range of mere sheds, corresponding with the first floors of the houses opening on the street; for the ground, rising rapidly at the back of these houses, has been excavated to that extent to admit them. There is fortunately an open though steep piece of ground beyond these wretched hovels, which is indeed covered with filth,

but allows of ventilation. It was on a bed of loose reed, in one of these tenements, that I saw, in the autumn of 1838, a man, previously in vigorous health, die within 16 hours from his being attacked with symptoms similar to malignant cholera. The body was examined after death, and the state of the blood and viscera corresponded entirely with what has been found to exist in those who have died of that disease. These houses were built for the sake of the drawing from them a miserable profit, and they have been readily tenanted, the lowness of rent operating as a temptation, as is usual in such cases, though it is in fact high if we consider how very small has been the expense of construction. Persons, either very destitute or very abandoned, often both together, make these huts their homes; and their habits tend to bring all the defects of the dens in which they dwell into double relief.*

To return to Dr. Carlyon's report.—

“Complaints,” he says, “may be made of great part of Calenick-street, where many of the courtlets are shamefully neglected, and where there are two slaughter-houses, which are not in so offensive a state as formerly, but which still contribute to the contamination of the neighbourhood. In the back lane, running from the upper end of Calenick-street to Kenwyn-street, some of the houses have no backlets, and all manner of nuisances are exposed to view; while others, with a spacious common courtlet behind, are destitute of any arrangement that could obviate such accumulations of filth as are nowhere exceeded.

“These remarks might be extended to almost every row of small tenements throughout the town; but we question whether any good end would be answered by entering into minute description. Suffice it, therefore, to say, that the upper part of Pydar-street, with Goodwives'-lane, and other narrow streets branching out of Pydar-street, are wretchedly unwholesome; and when we pass into St. Clement's, the objectionable habitations are so numerous that to describe them in detail would be endless. We feel, however, bound to do Mr. Baynard the justice of thanking him for the improvement which he has made in the drains, &c., connected with tenements in several of the rows which belong to him; and, on the other hand, we cannot refrain from noticing, with more than common censure, the wretchedly filthy condition of some miserable habitations which lie between the east end of Rosewyn-row and Mitchell-hill.

“Long within our recollection, Coombe's-lane, Tippet's-backlet, Mill-lane, and a house or two on the West Bridge, were scarcely ever free from fever, often of a malignant and infectious kind. These are at present among the healthiest parts of the town, owing to their having received a supply of running water, the removal of old houses, and the adoption of other measures of cleanliness. At the West Bridge there used to be a great accumulation of filth, from the want of a sufficiently rapid fleet of water under the arches. This may have been partly remedied by improving the respective channels; but the most obvious benefit arose from the erection of two sluices (to which we have already alluded),

* I am happy to be able to state that these wretched abodes have, since the foregoing remarks were written, passed into new hands. They have been converted into appendages of the houses on the front of the street, and no longer constitute *houses* themselves. The profligate class who formerly occupied them have been compelled to hide themselves elsewhere.

which kept back the tide, and, on being suddenly raised, allowed a black torrent of filth, drawn out of the numerous sewers which open into the main channel between the two bridges, a ready escape, which could not fail of conducing greatly to the health and comfort of the neighbourhood. Unfortunately these sluices have not been kept in repair; but we hope soon to see them reinstated,* as otherwise we are persuaded that, if a sultry summer, such as we do not happen to have experienced for the last two years, were to come, the worst effects of neglect would be likely to follow. We also think that the gutters throughout the town might easily be kept in a cleaner state; and if the police were instructed to look well to this matter, they would soon, there is little doubt, increase the claim which they already have on the gratitude of the inhabitants for their useful services."

I feel great satisfaction in being enabled to furnish this statement of my excellent and venerated friend, especially as he had transferred to me the office of reporting to the Poor Law Commissioners on the sanitary state of Truro. I shall not add to his detail of particular nuisances and evils, though I might do so without any difficulty, but that of selection, conceiving that a catalogue of that description is not precisely what is most needed in furtherance of the present inquiry. There may, perhaps, be some apparent want of congruity† between Dr. Carlyon's list of things requiring amendment and my own generally favourable account of the town and its inhabitants. Such a diversity must necessarily arise where the object is examined from different points of view; the one at such a distance as to enable the observer to seize on the general bearings—the other so near as to lead to an almost microscopic accuracy of investigation into particulars. Hence it comes that, while there exist an infinity of imperfections, the arrangements of the dwellings and the practices of the people are in the great majority of instances such that they have not broken in upon that freedom from severe febrile diseases with which the neighbourhood has been favoured. It is certainly well to choose a standard as near perfection as possible, and to aim at rendering the dwellings of the lower orders a close approximation to it; but for the present the description of those existing in any particular town, in order to be just, must bear a relation to the average character of country towns throughout the kingdom. I trust that, at all events, a true notion of the condition of Truro will be gained from this report, taken as a whole.

CHARLES BARHAM, M.B., Cantab.

May 30, 1840.

Physician to the Cornwall Infirmary.

* Dr. C.'s hope has been realized. A sum was voted by the corporation for the purpose, and both sluices are now in effective operation.

† The additions made to this Report at the desire of the Poor Law Commissioners have produced a greater likeness between Dr. C.'s statement and my own; my point of view having by this particularizing of details been rendered nearly the same as his.

RETURNS of the Number of Persons whose Deaths are Registered, who died in the Town of TRURO, between July 1, 1837, and December 31, 1840, inclusive, distinguishing the Condition in Life of the deceased, the average Ages, and the Causes of Death.

No. 1.—Return for the parts of Truro situate in the Parishes of *St. Mary* and *St. Clement*.

Condition or Occupation.	Total Number of Deaths.	Average Age of the deceased.	Epidemic Diseases.					CAUSES OF DEATH.													
			Fever.	Small-Pox.	Measles.	Hooping-Cough.	Total.	Diseases of the Nervous System.					Diseases of the Organs of Respiration.					Diseases of the Organs of Digestion.	Decay of Nature.	All other causes of Death.	
								Hydrocephalus.	Apoplexy.	Paralysis.	Convulsion.	Total.	Pneumonia, Bronchitis, &c.	Asthma.	Consumption.	Diseases of the Heart and other Vessels.	Total.				
Professional persons or gentry, and their families	16	43·53	1	..	..	..	1	6	1	2	2	1	6	..	6	..	2	1	..	2	1
Tradesfolk, or persons similarly circumstanced, and their families	82	35·89	6	2	..	4	12	11	3	1	3	1	11	5	24	..	2	13	1	13	14
Labourers, artisans, and others similarly circumstanced, and their families	303	28·99	12	16	12	22	62	32	6	4	6	10	32	18	67	7	5	39	11	39	62
All classes	401	30·96	19	18	12	26	75	49	11	7	12	12	49	23	97	7	7	12	12	54	77

No. 2.—Return for the parts of Truro situate in the Parish of <i>Kenwyn</i> .																					
Professional persons or gentry, and their families	17	37·6	..	..	..	..	1	2	..	1	3	1	4	..	3	1	4	2	2	3	6
Persons engaged in trade, or similarly circumstanced, and their families	56	29·99	1	..	1	5	7	6	..	4	6	4	6	6	12	..	18	6	6	9	10
Labourers, artisans, and others similarly circumstanced, and their families	144	27·28	4	4	3	8	19	20	1	10	20	10	20	15	17	2	34	14	14	25	32
All classes	217	28·53 nearly	5	4	4	13	26	28	2	15	28	15	28	21	32	3	56	22	22	37	48

TABLE 2.—Summary of the Cases of the under-mentioned Classes of Diseases, attended by Messrs. the Workhouses of St. Mary's and St. Clement's, distinguishing the Parishes, Sexes, and December 31st of that Year. No. 2 embraces the entire Year 1840.

No. 1.—1839.	Fever.									Total Males and Females.	Small-Pox.						Total Males and Females.	Acute Diseases of Respiratory Organs.			
	Kenwyn.			St. Mary.			St. Clement.				Kenwyn.		St. Mary.		St. Clement.			Kenwyn.		St. Mary.	
	M.	F.	W	M.	F.	W	M.	F.	W		M.	F.	M.	F.	M.	F.		M.	F.	M.	F.
January . . .	..	..		..	..		..	..		..	..	..	..	..	..	..	..	..	..	..
February . . .	..	..		..	..		..	..		..	..	..	..	..	..	..	..	..	..	..
March . . .	2	1		1	..		..	2		6	..	..	..	..	..	..	..	..	..	..
April . . .	1	8		1	1		1	3	2	15	..	..	..	1	..	1	2	..	..	1	..
May . . .	1	..		1	2		..	3		7	..	..	..	..	..	1	1	1	1	..	1
June . . .	..	1		1	..		..	..		2	..	..	1	..	..	..	1	2	1	..	..
July . . .	2	2		..	..		..	1		5	..	..	3	3	..	..	6	1	1	1	..
August . . .	..	2		2	..	1	..	..		4	..	1	8	5	..	..	14	..	1	..	..
September . .	1	1		..	1		..	1		4	..	1	12	9	..	2	24	..	..	1	..
October . . .	..	1		..	1		..	..		2	..	..	2	1	..	..	3	1	..	..	..
November . . .	2	2	2	..	..	1	2	2		8	..	..	3	1	..	..	4	..	1	..	..
December . . .	..	2		3	3	3	2	1		11	..	..	1	..	..	..	1	..	..	2	..
Total . . .	9	20	2	9	8	5	5	13	2	64	..	2	30	20	..	4	56	5	5	5	1
No. 2.—1840.																					
January . . .	..	1		..	3		1	..		5	..	1	..	..	..	..	1	..	3	2	..
February . . .	1	1		..	1		..	..		3	..	..	..	..	..	..	..	2	..	..	..
March . . .	..	1	1	2	1		1	..		5	..	..	..	..	..	..	..	1	..	..	..
April . . .	2	1	1	1	2	1	1	2	5	9	..	..	..	..	..	..	..	..	1	1	..
May . . .	..	2		..	10	1	..	3		15	..	..	..	..	..	..	..	1	..	..	..
June . . .	1	2		..	5	2	..	2	1	10	..	..	..	..	..	..	..	1	1	..	..
July . . .	..	..		..	1		..	..		1	..	..	..	..	..	..	..	..	..	..	..
August . . .	3	2		1	..		1	1		8	1	..	..	..	..	..	1	..	..	..	..
September . .	..	1		5	..	1	..	1	2	7	..	..	..	..	..	..	..	..	..	..	..
October . . .	..	1	1	2	3		..	..	2	6	..	..	..	..	..	..	..	..	..	..	..
November . . .	2	..	1	1	5		2	..		10	..	..	..	..	..	..	..	..	1	1	1
December . . .	2	1		2	5		1	1		12	..	..	..	..	..	..	..	2	..	..	1
Total . . .	11	13	4	14	36	5	7	10	10	91	1	1	..	..	..	..	2	7	6	4	2

. The columns headed (W) show the sickness in the workhouses situated in the parishes,

...y, Truran, and Paull, the Medical Officers for the Truro Union, in the Town of Truro, and ...iods at which Medical Attendance commenced. No. 1 extends from Lady-day, 1839, to

Acute Diseases of Respiratory Organs.			Total Males and Females.	Acute Diseases of Digestive Organs.												Total Males and Females.	Total.												Total Males and Females.
				Kenwyn.			St. Mary.			St. Clement.			Kenwyn.				St. Mary.			St. Clement.									
M.	F.	W.		M.	F.	W.	M.	F.	W.	M.	F.	W.		M.	F.	W.	M.	F.	W.	M.	F.	W.		M.	F.	W.			
..		
..		
..	2	1	..	1	2	2	6		
11	..	1	2	..	..	1	..	..	..	2	1	..	2	1	1	8	1	2	2	..	2	3	4	5	20	..
..	1	2	4	1	..	..	..	..	..	..	..	1	1	3	1	..	1	3	..	..	..	5	3	13	..	..	
..	1	..	4	1	..	..	..	..	..	1	..	3	2	3	2	..	2	..	..	1	1	3	9	..	..	..
..	1	..	4	..	1	..	..	..	..	1	..	..	2	3	4	..	4	3	..	..	3	17	..	..	..	..
..	..	..	1	1	1	..	..	..	..	..	..	..	2	1	5	..	10	5	1	..	..	21	..	..	..	..
..	..	..	1	1	1	..	..	..	..	..	..	..	2	2	3	..	13	10	..	..	3	31	..	..	..	..
..	..	..	1	..	..	..	..	1	..	..	..	2	..	1	1	..	2	2	1	..	..	6	..	2	6	..
..	..	..	1	..	..	1	..	1	..	1	..	..	1	2	3	3	3	2	1	1	2	2	14	..	..	..
..	..	..	2	..	..	..	1	..	1	1	1	..	3	..	2	..	6	4	3	..	3	2	17	..	..	..
11	3	3	20	4	3	2	..	2	1	3	4	1	8	14	18	30	4	44	31	6	3	9	22	13	154	..			
11	..	..	6	..	..	..	..	..	..	2	..	1	2	2	6	..	3	3	..	..	4	..	1	18	..	..	
..	..	..	2	..	..	..	..	..	1	1	..	1	1	3	1	..	1	1	..	2	1	..	1	7	..	..	
..	4	1	5	..	1	1	..	..	2	1	..	..	3	1	1	2	2	1	2	2	1	4	4	11	..	..	
..	1	2	3	..	3	2	1	..	3	2	3	..	11	2	5	1	4	3	1	3	3	6	7	23	..	..	
..	..	..	1	2	2	..	1	2	2	..	..	1	7	3	4	..	1	12	3	..	3	1	23	..	..	..
..	1	1	3	..	4	..	1	1	..	..	..	..	6	2	7	..	1	6	2	..	2	1	18	..	..	..
..	..	..	..	3	..	1	..	..	1	..	3	..	6	3	..	1	..	2	1	..	3	8	..	..	..	..
..	..	..	..	..	3	..	3	..	5	1	1	9	8	4	5	..	1	3	..	5	2	2	9	17	..	..	
..	1	..	1	6	2	1	..	2	4	12	2	7	17	19	6	3	1	5	2	5	12	2	11	17	29	..			
..	..	..	..	..	..	2	2	3	..	4	..	..	2	5	..	1	3	4	6	..	4	..	4	11	..	..	
..	..	..	3	..	..	1	..	3	1	..	1	..	2	4	2	1	2	2	9	1	3	..	2	17	..	..	
..	..	..	3	..	1	..	1	..	3	..	..	3	2	4	2	..	3	6	..	3	1	1	3	17	..	..	
11	7	4	27	11	16	6	7	15	10	29	9	14	39	72	32	37	10	27	54	15	33	15	32	50	197	..			

... designation of which stands above the sex, the column for which is next adjacent.

Localities.	Fever.		Small-Pox.		Diseases of the Respiratory Organs.		Acute Diseases of the Digestive Organs.		Hooping-Cough.		Total Deaths from the foregoing Diseases.				Total Deaths from all Diseases in all Classes.									
	Pauper Sickness.		Deaths in all Classes.		Pauper Sickness.		Deaths in all Classes.		Pauper Sickness.		Deaths in all Classes.		Paupers.		All Classes.		M.	F.						
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.								
Castle Street	4	4	1	1	2	1	1	1	1	1	1	2	2	4	2	13	12							
Edward Street	6	5	1	1	1	1	1	1	1	1	1	1	1	1	1	6	2							
Castle Hill	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	7							
Castle Place	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	7							
Boscawen Row	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	7							
Magor's Buildings	4	10	1	1	2	2	3	1	1	1	1	6	1	8	5	20	26							
Pylar Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Pascoe's Buildings or Backlet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Sleeman's or Treleaven's Row or Court	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Hospital or Workhouse Lane	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Union Street	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Goodwives' Lane	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Lowry's Court	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Coombe's Lane	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Union Place	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Warren's Court	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Tippet's Backlet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
King Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
St. Nicholas Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Blee's Court	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Rouse's Yard or Court	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
High Cross	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Holland's Backlet	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Mill Lane	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Old Bridge Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
St. Mary's Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Church Lane	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Boscawen Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Lemon Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Prince's Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Quay Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Duke Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
New Bridge Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							
Totals	26	41	5	4	31	23	7	7	9	3	8	3	6	16	1	6	5	3	4	27	19	73	91	
Of the above Paupers died	67	9	54	14	12	11	11	22	1	11	1	1	7	46	164	164	164	164	164	164	164	164	164	164

TABLE 5.—Showing the same Particulars as in Table 3 for the Parts of Truro situate in the Parish of St. Clement.

Localities.	Fever.			Small-Pox.			Acute Diseases of the Respiratory Organs.			Acute Diseases of the Digestive Organs.			Hooping-Cough.		Total Deaths from the foregoing Diseases.				Total Deaths from all Diseases in all Classes.	
	Pauper Sickness.		Total Deaths.	Pauper Sickness.		Total Deaths.	Pauper Sickness.		Total Deaths.	Pauper Sickness.		Total Deaths.	Deaths in all Classes.		Pauper.		All Classes.		M.	F.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Mill Place.	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Campfield Lane or Hill.
Baynard's Court or Backlet	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Truroean Terrace
Paul's Terrace
Factory Lane 3	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cook's Row 5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Clement's Terrace	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Prospect Row or Place
Paul's Row	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rosewyn Row
Middle Rosewyn Row
Lower Rosewyn Row
Little Rosewyn Row
Rosewyn Lane
Mitchell Hill or Bodmin Street	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Thomas's Court or Backlet.
St. Clement's Street	5	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cock's Backlet, Row, or Court.
Old Bridge Street	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New Bridge Street
St. Austle Street.	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Eyre's Court or Backlet.
St. Clement's Hill	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fenis's Buildings or Terrace.
James Place, &c.
Trafalgar Row
Daniell's Meadow
Bennallack Row (now called Paul's Row)
Totals	11	21	3	7	10	32	6	5	11	8	27	7	10	..	..	32	13	19	68	94

TABLE 6.—Showing the Deaths from FEVER, SMALL-POX, and HOOPING-COUGH, among all Classes, in certain Localities, from July 1st, 1837, to December 31st, 1840; the Deaths from Diseases of Respiration and those of Digestion; in like manner the Deaths from all Causes in the same Localities, during the same Period; and, lastly, the Sickness among Paupers in the same Localities, from March 25th, 1839, to December 31st, 1840, from the above-named Classes of Diseases; and the total Sickness from all Diseases among Paupers during the same Period in the Medical District of East Kenwyn and of St. Mary, as determined by the Cases attended by the Surgeons to the Truro Poor Law Union.

Localities.	Fever, Small-Pox, and Hooping-Cough.		Acute Diseases of the Organs of Respiration and Digestion.		All Diseases and all Classes. Total Deaths. July 1, 1837, to Dec. 31, 1840.	Pauper Sickness. Total No. of Cases. March 25, 1839, to Dec. 31, 1840.
	Deaths. July 1, 1837, to Dec. 31, 1840.	Pauper Sickness. March 25, 1839, to Dec. 31, 1840.	Deaths. July 1, 1837, to Dec. 31, 1840.	Pauper Sickness. March 25, 1839, to Dec. 31, 1840.		
KENWYN PARISH.						
Lemon Street	17	} Total Pauper Sickness in East Kenwyn Medical District, 678.
Fairmante Street	3	..	4	2	18	
Daniell Street	1	..	1	3	16	
Charles Street . . . . .	..	11	4	9	20
Calenick Street	3	13	1	10	19	
Kenwyn Street	10	17	..	13	55	
ST. MARY'S PARISH.						
Castle Street.	5	22	1	1	25	} St. Mary's Medical District, 726.
Castle Hill and Place	1	24	1	8	8	
Boscawen Row	1	2	1	1	12	
Pydar Street and Courts adjacent	9	38	4	16	46	
Goodwives' Lane	4	11	1	3	11	
High Cross with Holland's Court and Mill Lane	2	12	1	2	16	
ST. CLEMENT'S PARISH.						
Paul's Terrace and Row, and St. Clement's Terrace	2	3	1	5	19	
Mitchell Hill or Bodmin Street	6	3	3	4	26	
St. Clement's Street with Courts adjacent	7	15	1	15	41	

No. 3.

ON THE DWELLINGS AND GENERAL ECONOMY OF THE
LABOURING CLASSES IN KENT AND SUSSEX.

BY EDWARD CARLETON TUFNELL, ESQ.,

Assistant Poor Law Commissioner.

GENTLEMEN,—As general statements on this subject seem to me of little value, I will give in detail the evidence I have collected on the above topic respecting the various parts of this district. In the Island of Sheppey, a cottage which would cost 40*l.* in erecting, lets for 2*s.* a-week. "I have built," said the relieving officer, "some myself for 75*l.* and 80*l.*, which bring me in 4*s.* weekly; they are without a garden, or with only a very minute piece. The usual rental is from 2*s.* to 2*s.* 6*d.* a-week. The land on which they are built is usually let on lease for years; a piece 30 feet by 90, on which four cottages may be built, is let for 3*l.* a-year. The landlord always agrees to repair, but very little expense is incurred in this way." Near Sittingbourne, the expense of building cottages is usually about 100*l.*; they are constructed with brick, and contain four rooms and a shed, and with one-eighth of an acre of garden ground, let for from 2*s.* to 3*s.* a-week, the latter being the rent if near a town. The landlord repairs, which may amount to 10*s.* a-year when the cottage gets bad. A privy is always built to each cottage. In Canterbury, several cottages have lately been built, at an expense of 80*l.* each, comprising four rooms and one-sixteenth of an acre to each cottage: they let for 3*s.* or 3*s.* 6*d.* a-week. In the neighbourhood of Faversham the usual cost of building cottages varies from 70*l.* to 80*l.* or 100*l.* They contain four rooms and a wash-house, and are rented at from 1*s.* 6*d.* to 3*s.* a-week. Before the Union came into operation, many cottages were rented at about a third higher than now; several, which now let at 2*s.* 3*d.* weekly, used then to bring in 3*s.* 3*d.* weekly. This is attributed to the suppression of the practice of parishes paying rents, and to the restriction of out relief. At that time speculators were in the habit of laying out money in building cottages, and getting, through the above mode of paying rents, a large percentage for their money. All this is now stopped.

A cottage in Dover, with four rooms, that will let at nine guineas a-year, or 3*s.* 9*d.* a-week, will cost, ground and all, 160*l.* The landlord repairs. Several speculators, I am informed, have built cottages at the above rate, and who thus seem to get less than 6*l.* per cent. for their money. In the country around Dover many of the cottages have but two rooms, and are rented at 1*s.* 6*d.* a-week, but from 12 to 20 perches of ground are generally annexed. In the Isle of Thanet, 100*l.* is the average cost of a decent labourer's cottage, and rental at 5*l.* yearly, unless

gardens are attached. About Hollingbourne, near Maidstone, good cottages may be built for 70*l.*, of chalk, and will let at 1*s.* 9*d.* or 2*s.* 6*d.* a-week. In Tunbridge Wells the poor seem to be worse off for cottages than in most other places, a cottage with four rooms letting at 10*l.* to 16*l.* a-year; consequently, the head tenant usually occupies only a couple of rooms and lets out the rest. Many old lodging-houses, originally built for the gentry, but now disused for that purpose, are often let out in single rooms at 2*s.* 6*d.* a-week, and frequently a whole family lives in a single room. Some miserable cottages have lately been built here, at an expense of from 40*l.* to 50*l.* each, with four rooms. They have no drainage, are very badly built, and let at 10*l.* a-year. The average rent paid by 222 paupers in the Cranbrook Union was 1*s.* 6½*d.* weekly.

In Sussex, at Hastings, the cottages have mostly two rooms and a wash-house, and are rented at 3*s.* to 3*s.* 6*d.* a-week; some with four rooms let at 4*s.* A cottage let for 3*s.* weekly would cost 120*l.* building; but if a dozen were built in a row, the expense would not exceed 100*l.* for each. In Rye, the cottages have always two bed-rooms, and let at from 2*s.* 3*d.* to 3*s.* a-week, and cost, on an average, in building, about 100*l.* In the surrounding country rents are lower, and the cottages usually comprise a kitchen, wash-house, pantry, and two bed-rooms, and from 20 to 30 perches of garden; the cost of erection being from 60*l.* to 100*l.* About Horsham, cottages are erected for about 70*l.* or 80*l.*, and rented at from 2*s.* to 2*s.* 6*d.* a-week.

To attain, however, an accurate opinion of the condition and mode of living among the labouring classes, it seemed to me that far more minute investigations are necessary. I have accordingly visited their cottages, and obtained specific accounts of their furniture, dietaries, wages, and numerous other circumstances, in minute detail, that affect their comfort, an enumeration of which appears to me the only satisfactory method of solving several difficulties that constantly puzzle inquirers on this subject. For instance, I have frequently heard it remarked, that it is quite inexplicable how the poor can live at their usual wages, since, in workhouses where strict economy is studied, and where, we are constantly told, that we give the inmates too little to eat, it is well known that a man, his wife, and five children, cannot usually be kept under 1*l.* a-week; and this is reckoning nothing for house-rent; and all the articles required, being purchased in large contracts, are obtained 20*l.* per cent. under the shop prices. Taking into account these two latter considerations, it appears that such a family could not to be maintained in a state of independence out of the workhouse with the same comforts they have in it, at a less cost than 25*s.* per week, and this is more than double the general agricultural weekly wages in England. Now though this simple arithmetical calculation at once proves to

demonstration that the newspaper outcry respecting the poor being starved in the workhouses cannot possibly be true, there would be no slight difficulty in answering the charge if the workhouse dietaries were reduced to one-half of what they are; and yet, if we contrast the expense of their maintenance in the workhouse with their wages out of it, it would appear that an independent labourer actually does live on one half or even less what an inmate of a workhouse receives. The difficulty consists in explaining this anomaly.

I will first describe the cottage and mode of living of a Sussex labourer, whose family is such as to make him one of the most distressed of his class. He has a wife and seven children, the eldest of whom is a girl aged twelve, and all the rest happen to be girls, except one boy, five years old.

I entered the cottage through a garden rather less than a quarter of an acre in size, which does not supply quite enough vegetables for their consumption. On the left, close outside the doorway, is a large pile of fagots for winter use, it being towards the end of October, and coals not used in this part of the county. These fagots were obtained by the man from his employer at a low price, and are not yet paid for, part of his wages being stopped for that purpose. They consist of 100 house-fagots, whose cost was 1*l.* 16*s.* and 100 kiln-fagots for baking, costing 15*s.* On entering, the cottage displays a room about 20 feet long by 15, paved with brick, and nearly divided into two by a partition; the fire-place is here, and it forms the sitting-room of the family. The furniture consists of one common looking deal table, a rather elegant round oak one, with moveable flaps, a mahogany cupboard, and six chairs; there are curtains to the windows. Adjoining is a pantry, which seems filled with all sorts of cooking utensils, and a bakehouse, where the family bake once a-week, as is the custom in these parts, bakers being rarely employed. Up stairs there are two bed-rooms, in one of which the man, his wife, and the baby sleep, and in the other, which contains three beds, the rest of the children. They purchase six gallons of flour weekly, which is made into bread or cakes with potatoes. They drink tea made with burnt crusts, China tea being too expensive now. Since the price of sugar has risen, they have been obliged to give up its use, but a quarter of a pound is bought weekly to sweeten the pap for the baby. They have no meat except on a Sunday, when a meat pudding is made, and none of the family ever tastes beer, except, perhaps, the man gets some now and then from his master. The man is in constant work at 12*s.* a-week, but sometimes he gets piece-work, and then earns 15*s.* weekly. The cottage, which is rented at 2*s.* weekly, is clean and well drained; its literary furniture consists of two Bibles and a New Testament; there is no Prayer-book, as the inmates are Dissenters. The distress of the family arises

from the unusual circumstance that the children are nearly all girls, and hence can earn nothing. Were the eldest or the second a boy, he would probably add 2*s.* or 3*s.* a-week to the general income by assisting his father.

The actual weekly expenditure is as follows :—

	<i>s.</i>	<i>d.</i>
6 gallons of flour at 16 <i>d.</i>	8	0
$\frac{1}{2}$ lb. soap	0	3 $\frac{1}{2}$
$\frac{3}{4}$ lb. candles	0	4 $\frac{1}{2}$
1 lb. butter	1	0
$\frac{1}{4}$ lb. sugar	0	2 $\frac{1}{2}$
1 $\frac{1}{2}$ lb. of meat	0	9
Yeast	0	3
Starch, pepper, and salt	0	2
1 lb. cheese	0	6
Worsted, cotton, tape, &c.	0	3
Total	11	9 $\frac{1}{2}$

Here, and subsequently in the accounts of the weekly expenditure of labourers, I shall not insert the rent or clothing, as I find that these are generally not paid for weekly, but are reserved to be paid off at harvest, or at odd times, when more than the usual wages are earned.

I now proceed to another cottage, also inhabited by a distressed family, consisting of a widower with two grown-up daughters, one of whom is a cripple, totally incapable of work; the other is prevented from entering service by a disease, which, however, does not incapacitate her from taking the management of the house; there is also one younger girl, who attends school, and a boy 10 years old, who earns, when employed, 6*d.* a-day. The first room on entering their cottage is the kitchen, about 18 feet square, and which contains five neat cushioned chairs, two rush-bottomed ones, a deal table, a mahogany one, a mahogany commode, a shelf neatly adorned with crockery. There are curtains to the windows, and a handsome clock *case*, the works of which are gone, I suppose, to pay a debt. A wash-house opens from this room. There are two bed-rooms up stairs, which I did not enter; there is no garden; the rent is 1*s.* 6*d.* a-week. They bake their flour in an oven common to three houses, the tenants of which use it in turn. The man earns 12*s.* a-week when in employment, which, however, is not constant, as he bears a bad character. There is no stock of faggots here for the winter, as in the preceding case, since, owing to the man's character, his master would not trust him for the payment, and he buys what he wants by single faggots. The distress of this family is entirely owing to the indifferent character of the man, which prevents his having continuous work, and deprives him of many little advantages which a trustworthy labourer can always obtain.

I have stated above that the labourers' cottages at Tunbridge

Wells seemed worse and higher rented than elsewhere; and I will now describe one of them:—

Here is a very old building of wood, quite out of repair, not weather-proof in any part, with a very small garden in front, the square of the front of the cottage. It is inhabited by a man, his wife, and six children, (the eldest a boy of 14,) who have been steady tenants for 20 years, having always paid 9*l.* yearly rent; but, from the man's inability to pay so much at present, the landlord has reduced it to 7*l.* It contains two rooms on each floor, looking out backward and forward; the front rooms measure 10 feet square, but the hinder ones are smaller. The up-stairs rooms are in the roof, one of them being no bigger than a chest, and contain one bed in each. This cottage cost in erecting 30*l.*

The furniture of the sitting room of the family is very old and shabby, and consists of a painted chest of drawers, a very rickety old oaken table, six old chairs, a bit of old calico by way of a window curtain, a swinging shelf, containing a Bible, Prayer-book, and one or two religious books: the chimney-piece is adorned with a broken teapot. The man's wages are usually 12*s.* a-week, but his work is uncertain; and the elder boys occasionally earn from 2*s.* to 4*s.* a-week; the wife seldom earns less than 5*s.* a-week, and sometimes more. The family consume weekly—

	<i>s.</i>	<i>d.</i>
7 gallons of flour, at 1 <i>s.</i> 6 <i>d.</i>	10	6
3 ditto of potatoes, at 2½ <i>d.</i>	0	7½
3 lbs. of salt butter, at 1 <i>s.</i>	3	0
2 lbs. of cheese, at 7 <i>d.</i>	1	2
2 ozs. of tea, at 3¾ <i>d.</i>	0	7½
1 lb. of sugar, at 7½ <i>d.</i>	0	7½
Milk	0	7
Total.	17	1½

The consumption of coals is very uncertain, as, when the parents are at work and the children at school, none is used till evening. One of the boys has an allotment of one-twentieth of an acre, by which he furnishes his parents with a considerable quantity of potatoes and other vegetables.

Here is another wooden cottage, in bad repair, containing four rooms, which cost 30*l.* to build, and is rented at 2*s.* 6*d.* a week. It is tenanted by a man, his wife, and four children,—two boys, a girl, and an infant. They sleep in the two upper rooms; the two boys in a bed in one room, and the man, his wife, and the baby in one bed in the other, a contrivance being made upon the floor for the girl to sleep. The sitting room is 10 feet square, and contains two plain deal tables and a very small stained one, a neat corner cupboard, three shelves with earthenware; a few small ornaments are on the chimney-piece, and above it hang some small prints in black frames. There is a calico window

curtain, two small bits of carpet on the floor, a cradle, four chairs, and an arm-chair. Some swinging book-shelves, with religious books. Altogether, this cottage has a neat, cleanly, and orderly appearance. The man's earnings are 13*s.* a-week, but he is occasionally out of work: the wife, from ill health, earns but little. The family consume weekly, 5½ gallons of flour, 3 gallons of potatoes, 1 lb. of cheese, ½ oz. of tea, 2 ozs. of coffee, ½ lb. of sugar for the infant, 3½*d.* worth of milk, ½ lb. of soap, 1 lb. of candles, 1 cwt. of coals.

I have at former times frequently collected information as to the precise method in which a labourer spends his wages; and, as the point seems to me very important towards understanding the condition and economy of the poor, I will give several of their dietaries.

In 1835, a man, his wife, and four children, spent their weekly wages of 10*s.* in the following way:—

	<i>s.</i>	<i>d.</i>
6 gallons of flour, at 9 <i>d.</i>	4	6
1 lb. of butter, at 10 <i>d.</i>	0	10
4 lbs. of bacon, at 4½ <i>d.</i>	1	6
2 lbs. of cheese, at 6 <i>d.</i>	1	0
½ oz. of tea, 5 <i>s.</i> per lb.	0	2¾
2 ozs. of coffee, at 2 <i>s.</i> per lb.	0	3
Salt and pepper	0	1
½ lb. of soap, at 6 <i>d.</i>	0	1½
¼ lb. of candles, at 6 <i>d.</i>	0	1½
1 lb. of sugar, at 6 <i>d.</i>	0	6
4 gallons of potatoes	0	6
Snuff or tobacco	0	4¼
Total	10	0

The following is the dietary, in 1837, of a family of precisely the same number as the above, when prices had risen; consequently it will be perceived that, though the wages are 3*s.* 2¼*d.* a-week higher, the family is, upon the whole, worse off. The rise in the price of flour makes it necessary that they should content themselves with 5 gallons of flour instead of six; and they purchase no potatoes. Hence it is probable that the result of the rise has been to deprive the labourer of a considerable quantity of solid nutriment:—

	<i>s.</i>	<i>d.</i>
5 gallons of flour, at 1 <i>s.</i> 1¼ <i>d.</i>	5	6¼
2 lbs. of butter, at 10 <i>d.</i>	1	8
½ lb. of candles	0	3½
3 lbs. of cheese	1	6
Meat	2	0
1½ lb. of sugar	0	10½
2 ozs. of tea	0	7½
½ lb. of soap	0	3
Pepper and salt	0	2
1 oz. of tobacco	0	3½
Total	13	2¼

In 1837, an aged man and his wife expended their weekly earnings of 6*s.* in the following way :—

	<i>s.</i>	<i>d.</i>
Bread, 2 gallons	2	2
Bacon, 1 lb.	0	7
Butter, 1 lb.	1	0
Tea, 2 ozs.	0	6
Sugar, 1 lb.	0	7
Coals, 1 cwt.	0	11
Total	<u>5</u>	<u>9</u>

It would be quite impossible for the old couple to live as well at present, in consequence of the increased price of provisions; but the tea, the sugar, and the bacon now disappear from their board, and the money so saved goes to pay the additional cost of the bread. At the same period, a man, his wife, and seven children, in Sussex, spent their wages thus :—

	<i>s.</i>	<i>d.</i>
6 gallons of bread	7	0
2½ lbs. of bacon	1	5½
2½ lbs. of butter	2	6
1½ oz. of tea.	0	6
1½ lb. of sugar	0	9
½ lb. of candles	0	3½
½ lb. of soap	0	3
Total	<u>12</u>	<u>9</u>

The following is the expenditure of a labouring man, with a wife and six children, at present. The contrast between these two cases is not so perfect as it might be; as, in the preceding case the labourer purchased bread; in the following, flour. The expense, therefore, of making the bread and baking it, should be added to the account; and this will more than make up the 6*d.* difference in the whole sum. Though there is one less in family than in the last case, it will be obvious how much the increased price of provisions has deteriorated the condition of the family :—

	<i>s.</i>	<i>d.</i>
6 gallons of flour	8	0
Yeast	0	3
1 lb. of meat and ¼ lb. of suet	0	8
1 lb. of butter	1	0
1 lb. of cheese	0	6
½ lb. of candles	0	3½
½ lb. of soap	0	3½
Potatoes	1	0
Worsted, starch, cotton, and tape	0	3
Total	<u>12</u>	<u>3</u>

I found, in October, 1840, that a man, wife, and five children, consumed daily, at Chatham :—

	<i>s.</i>	<i>d.</i>
Bread	1	0
$\frac{1}{2}$ lb. of meat	0	3
1 gallon of potatoes	0	3
Total	<u>1</u>	<u>6</u>

I might insert numerous other examples of labourers' dietaries, but I trust the above will be sufficient to show, in some degree, how their wages are expended. They, however, are insufficient, as they do not show the quality of the articles procured. For instance, since the price of corn has risen, many of the labourers have been compelled to resort to an inferior sort of flour, termed "sharps," in order to obtain a sufficiency of food. Tea, were it not an article so subject to adulteration, ought to have materially risen in price, as the importation in 1840, compared with that in 1836, shows a diminution of 17,571,762 lbs. I believe, however, the reason it has not is, that its place has been supplied by a deleterious mixture, of which some of the medical men make great complaints. It is now, too, usually drunk without sugar, as the great rise in price in the latter article has caused it nearly to disappear from the labourer's house. In some cases an infusion of burnt crusts has been substituted for tea.

I happen to have an account how a labourer's family, with four children, lived between 50 and 60 years ago, on what were then the usual wages of 6*s.* a-week. It will appear that they were then better off than now. It is right that I should remark that the Poor Law abuses, which it was the chief object of the amended Act to remedy, did not exist at that time:—

	<i>s.</i>	<i>d.</i>
4 $\frac{1}{2}$ gallons of flour, at 6 <i>d.</i>	2	3
Grinding, baking, and yeast	0	5
7 lb. of beef, at 2 $\frac{1}{2}$ <i>d.</i>	1	5 $\frac{1}{2}$
2 $\frac{1}{2}$ lbs. of cheese, at 2 $\frac{1}{2}$ <i>d.</i>	0	6
(Or, instead of cheese, 1 $\frac{1}{2}$ lb. of butter, at 4 <i>d.</i>)		
Oatmeal and salt	0	2 $\frac{1}{4}$
1 oz. of tea	0	2
$\frac{1}{2}$ lb. of sugar	0	3
Firing (mostly heath-turf, cut free from the common or wood)	0	3
Candles	0	3
Soap	0	3
Total	<u>6</u>	<u>0</u>

Much unnecessary distress appears to arise among the labouring classes, from their uneconomical habits and total ignorance of cookery. Those who bake, frequently eat their bread hot from the oven; a practice which, it is well known, materially diminishes the quantity of nutrition obtainable from a given quantity of flour. Several benevolent persons have endeavoured to introduce the use of rice among the poor, as it is one of the cheapest articles of diet, and would be of great assistance when the price of wheat is so high

as it has been during the last three years. The attempt, however, has usually failed; partly, I believe, because it requires a little more skill in cooking than they possess; though I know one landowner who has in some measure succeeded by ordering the poor to come to his own kitchen, cooking the rice before them, and then partaking of it with them. Sago is also one of the most nutritious and palatable articles of food, and, being frequently brought over to this country as ballast, is sold at times at the almost nominal price of 10s. 6d. per cwt., when it is the cheapest article of food that can be procured. It requires, however, a little extra skill in cooking, and therefore the poor will not use it. A short time back, I found a family in extreme distress, who had, however, so wretchedly managed their expenditure as to have no provisions whatever left, but half a pound of butter. One of the Malling surgeons says, in his sanitary report of the poor in his neighbourhood:—

“When they get money, they feast while it lasts, and fare so much the worse for the remainder of the week. The worst feature in the case is, perhaps, that they do not seem willing to be told how to do better with their means. The attempt has been zealously made, to my knowledge, to teach them how to make a good nutritious soup cheaply, and how to brew cheaply, but without effect.”

In the Island of Sheppey, cottages rented at 2s. a-week have only one room, which contains the fire-place, and in which all the family cook, sleep, and live. The only other apartment, if it deserves the name, is a *lean-to*, which is used for coals, wood, and the water-cask, as in this island the poor have generally to buy water at a farthing a pint. Here large families may frequently be seen sleeping together in one room. In the Hastings cottages, all the inmates generally sleep in one room, though sometimes the man and his wife have a separate apartment; but all the children, of both sexes, almost invariably use the same sleeping-room. In Tunbridge Wells, the poor have not often more than two rooms for a family, in one of which the boys sleep, and in the other the man, his wife, and the girls. Sometimes four beds may be seen in a room, divided by a curtain between each.

I have reason however to believe that the poor are generally far more decently accommodated. “I don’t know,” said the relieving officer in the Faversham Union, “one instance of children and their parents sleeping together in the same room.” The relieving officer of Dover speaks to precisely the same purport as respects that town, but says, that in the surrounding country one bed-room usually serves for all the inhabitants of a cottage. In Rye, the sexes almost invariably sleep in separate apartments. In the Battle Union, Mr. Breton, one of the medical officers, says, “there are but few houses where the poor have not a sitting-room

scullery, and pantry, with two or more sleeping rooms, according to the size of the family."

The practice as respects the rating of cottages is very various. In Sheppey no cottage is exempted from poor-rates, but the landlords have agreed to pay them. In the Milton Union, which comprises 18 parishes, all the rates are collected by one collector who acts under the Board of Guardians. The rates are enforced from every cottage, except where the inmates are in the receipt of relief. Considerable trouble was at first experienced in carrying out this regulation, but the guardians persisted in it, and in a short time all opposition ceased; the rates were regularly paid, and great saving as well as satisfaction appears to have resulted from the practice. At present not 5*l.* a-year is lost from excused rates in the whole union. The same regulation has been adopted in the adjoining unions of Faversham and Blean, with similar good consequences. In the parish of Herne, under the old system, about 300 persons were usually excused the rates, and the loss was of course considerable; at present the loss has been reduced to about 2*l.* on each rate. In Dover, all the rates are paid by the landlords, under 59 Geo. III., and about 4*d.* per week is added to the rent on these grounds. The abuses that have existed in rating are almost incredible. In Folkestone, for instance, out of 800 houses, only 180 used to pay rates; and in Deal, which is about a third larger than Folkestone, the tenants of 470 houses were excused payment.

Many of these abuses still exist, and the only effectual remedy seems to be the appointment of a collector under the Board of Guardians to collect all the poor-rates in the Union, and then if the guardians establish a regulation to excuse no one who is not in the actual receipt of relief, and are firm enough to resist the attempts that are always made for the first two or three quarters to break through this rule, the rents of the cottages slightly fall, and the business of collection proceeds in future with the utmost quietness and order, and little or no dissatisfaction. If the guardians once depart from this plain rule, and endeavour to find out and excuse those who are most poor, they invariably appear to fail both in doing justice and giving satisfaction; complaints arise on every side, and much time is consumed in attempting to do that which, from the vagueness of the principal laid down, is next to impossible, and which hence gives play to caprice and favouritism. I need not say that I should hail with satisfaction any law that should cause the landlords of cottages to be taxed instead of the occupiers, and such is the opinion of the majority of Boards of Guardians in this district.

The reports of the medical officers of the Unions contain numerous complaints of the generation and spread of diseases in consequence of malaria and insufficient drainage. Mr. Smith, the medical officer of part of the Bromley Union, states:—

“ My attention was first directed to the sources of malaria in this district and neighbourhood when cholera became epidemic. I then partially inspected the dwellings of the poor, and have recently completed the survey. It is almost incredible that so many sources of malaria should exist in a rural district. A total absence of all provision for an effectual drainage around cottages is the most prominent source of malaria; throughout the whole district there is scarcely an attempt at it. The refuse of vegetable and animal matters are also thrown by the cottagers in heaps near their dwellings to decompose, are sometimes not removed except at very long intervals, and are always permitted to remain sufficiently long to accumulate in some quantity. Pigsties are generally near the dwellings, and are always surrounded by decomposing matters. These constitute some of the many sources of malaria, and peculiarly deserve attention, being easily remedied, and yet, as it were, cherished. The effects of malaria are strikingly exemplified in parts of this district; there are localities from which fever is seldom long absent, and I find spots where spasmodic cholera located itself are also the chosen resorts of continued fever. I am moreover of opinion that the baneful effects of malaria are not merely shown by fevers. It is within my knowledge that in certain marshy districts in the county of Essex, where malaria was formerly sufficiently energetic to produce intermittent fevers; now, from improved drainage and cultivation, its intensity being lessened, it fails to induce that train of phenomena by which, in a degree, its more permanent and baneful effects were thrown off, but induces more insidious morbid actions, which eventuate in consumptions, dyspepsia, and a whole catalogue of symptoms designated strumous. Thus have I also observed in this district, in those places, more particularly the seats of continued fevers; such of the inhabitants as escape them bear in their countenances the stamp of ill-health, and are often the subjects of diarrhœa, rheumatism, glandular swellings (especially the children), mesenteric disease, and, in short, the train of morbid phenomena before enumerated. I do not affirm that malaria absolutely *generates* the whole of these maladies, but, by enervating the frame, develops a large mass of disorders and disease which, by maintaining the air pure, would probably be averted. Neither would I affirm that other causes do not exist to predispose the poor to illness; there are indeed many on which I am not called upon to report. The construction of cottages for efficient ventilation is either not well understood or often disregarded. The clothing of the poor is a point of vital importance, and in this ever-varying climate, a point, however, to which more attention has recently been paid than to many others. Having thus briefly indicated the sources of malaria and its effects, what remedy would I suggest?

“ For a short time during the prevalence of spasmodic cholera, a Board of Health was (by authority of the Privy Council) established at Chislehurst, in which parish that disease prevailed to an alarming extent: the alarm and cause of it speedily subsiding, the Board was not long in existence; it was, however, most gratifying to observe (and as its medical secretary I had ample means of doing so) the good it effected in that short space of time, without having recourse to any of the extraordinary powers with which it was invested, but simply by domiciliary visits and persuasion. The limited experience of that

period convinced me that similar, or, at all events, Boards of Health in some form, should be established throughout the rural districts. They should possess ample power to enforce their orders; but, if properly composed, recourse to their powers would be seldom required, the moral force of domiciliary visits and friendly explanations would be sufficient."

It appears to me, however, that inadequate attention is paid to the differences of soil, which will cause one district to be almost entirely free from disease, while the adjoining one, owing to a change of strata, will be subject to the above diseases in their worst form. The following is from *Mr. Cockell*, also a medical officer in the Bromley union; the total difference between his description and that just quoted appears to me to be capable of a more easy explanation by simply looking at a geological map, where I find that *Mr. Smith's* district is based on what is termed by geologists "plastic clay," and *Mr. Cockell's* on chalk:—

"With regard to my district, the diseases are of a general nature, and do not arise from any local disadvantages. The cases of typhus fever and ague which have come under my general practice in this district, have not had their origin in this locality, but in every case have been removals from other situations. I attribute the total absence of malaria, &c., to the circumstance of the district being a succession of hills, no stagnant pools, the cottages being generally detached, and manure, on account of its value, being carried away as soon as it is made.

"The cases of scarlet fever have been easily managed, and I know no remedy to counteract its influence but ventilation," &c.

I find precisely the same variety of reports, according to the nature of the soil, from the Dartford union. *Mr. Hunt*, who attends the Farningham division, where the soil is mostly chalk, says:—

"By the accompanying return it will be seen that diseases of the nature referred to in the circular of the Poor Law Commissioners do not prevail, to any remarkable extent, amongst the labouring population in this district; and I am not aware of the existence of any causes of disease affecting that class of persons in particular, of a nature to be remedied by any practicable sanitary measures."

The medical officers of the other divisions of this union, which are mostly clay and marsh, give very different accounts. The following is from *Mr. Tippetts*:—

"I beg to observe, that most of the cases of fever of a severe character, which have fallen under my care in this district, occurred in that part of Dartford termed Water-lane, a spot to which I am most desirous to draw your attention, as there I have had the greatest number of cases of fever, and mostly of a malignant character, arising from the extreme filthiness of the neighbourhood, with want of proper ventilation and cleanliness of the poor themselves. The alleys and courts in this lane are most imperfectly drained, and have little or no current of air passing through them. Webb's-court I would more

particularly notice, as at the top of it, is an open cesspool for the reception of *every* kind of filth, the effluvia from which necessarily contaminates the atmosphere, and is a source of disease to the poor inhabitants, of a most malignant character. The houses are likewise inhabited by persons of the lowest and dirtiest grade, and mostly with large families, the moral condition of whom, I regret to say, is low in the extreme, whole families herding together in a small house, breathing an originally pestilential air, and rendering it more so by the hot, unwholesome, and confined effluvia of their own bodies, thereby rendering any case of fever that might arise, in itself of a simple and unimportant character, one of a most malignant, contagious, and destructive character; for I have invariably found that immediately fresh people take possession of these wretched tenements they are attacked with fever; and I do not remember that I have ever been without a case of fever in that neighbourhood. There is a pathway (named Spare-penny-lane) leading from Water-lane to the east end of the town, on either side of which is a stagnant ditch, the receptacle of many drains of filth; animal and vegetable matter may at all times be seen here in a putrescent condition, and emitting the most fetid effluvia, and which I most strongly recommend should be removed. In the parish of Stone I am frequently in attendance on cases of fever, in King-street, where the houses are imperfectly ventilated and drained, and surrounded by filth."

Mr. Cottingham, the medical officer of the third division of this union, remarks:—

"My experience convinces me that cottage architecture may be made to contribute much to the health of the inmates, and also to their moral condition. I have had in my district incestuous intercourse between brothers and sisters, with the attendant consequences. A single dormitory for a whole family, and not unfrequently a single bed for both sexes at the age of puberty, must lead to a state of horrid demoralization. And the disproportion between the rental and income of the peasant drives him to a hovel of two rooms on a ground-floor, quite incompatible to the necessities of a family, or the maintenance of moral discipline."

Mr. Wallis, the medical officer in the East Grinstead union, speaking of five tenements in the parish of Hartfield, says:—

"Not one of these dwellings escaped the influence of malaria, supposed to have arisen from an uncovered drain of stagnant water and decaying vegetable matter. Fever was not common here before this."

Mr. Creasy, speaking of the sources of disease at Edenbridge, says:—

"Among fellmongers especially they suffer hides to putrefy in bran and water. I found this to be the case, not more than three weeks since, on the north side of Edenbridge, where I had patients with sore throats, &c. The atmosphere was impregnated with the most horrible stench, which took possession of my own nose and stomach, as well as those of my neighbours. There is also in Bond-lane a stagnant pool in the centre of the village, at the back of the houses; here we had fever and cholera. The absence of contagious diseases, except in those

localities mentioned, is fairly to be attributed to proper drainage, ventilation, cleanliness, and whitewash."

The largest town in this district is Brighton, the sanitary condition of which has been so fully and ably reported on to you by Dr. Jenks, that it is needless for me to do more than refer you to his paper.

The preceding are some of the worst cases presented by the medical officers in Kent and Sussex. I have the more pleasing duty to state, that throughout the greater part of these counties comparatively few diseases are found to arise from the want of sanitary precautions. *Mr. Evans*, the medical officer of part of the Ticehurst union, says:—

"Respecting the prevalence of contagious and infectious diseases in this district, I beg to state, that we have not for many years had any epidemic except the influenza, which afflicted both rich and poor.

"The situation of this district being high and dry, and the cottages of the labourers in general well ventilated and clean, and no accumulations of filth about them, we have no cause of complaint.

"You will perceive, in the return of cases, that only one of typhus mitior occurred in 12 months; this, in a population of 2000 (out of which about 1400 are paupers), shows the generally healthy state of the district.

"Four cases of malignant small-pox also occurred, the disease having been introduced by some tramps; it was, however, met by a general vaccination, and its progress completely arrested."

Mr. Bell, a medical officer in the same union, remarks:—

"I have not attended, neither am I aware of any case of typhus fever, scarlet fever, or small-pox, amongst the poor of this parish during the year ending September 29, 1839, notwithstanding the *general neglect of vaccination*. There have been only three cases of ague, two of which were subjected to the influence of malaria at a distance from home, the other resided in a low damp situation, which, combined with a deficiency of the necessaries of life, were sufficient to produce the disease. This locality is very healthy, and seldom visited with any fevers of a *typhoid* character; as a proof of which, there have been only three deaths among the paupers during the above period; one at the advanced age of nearly 90; another at 73, from paralysis, produced by irregular habits; the third, a child 12 months old, from convulsions."

Mr. Sanders, the Gravesend medical officer, says:—

"This town is well paved, drained, and lighted, and is in a very healthy state; even the three or four courts or alleys running from Church-street to West-street, which contain the most close and crowded houses, with poor inhabitants, have not suffered from any severe epidemic, being on a descent. The over-ground gutters contain very little stagnant water, an opening into the common sewer in West-street causing it to be conveyed to the Thames.

"I beg leave to suggest how extreme are the beneficial effects of a proper drainage, which shall prevent stagnant water and its deleterious

consequences accumulating in a crowded neighbourhood; this is exemplified in this town, and also in Tilbury Fort opposite, which is built on a marsh, and where, during the cholera period, then under my care, not a single case occurred.”

In the Faversham union the medical officers report very favourably of the sanitary state of the district, of which the following is a fair specimen:—“The marshes are well drained, and the houses of the poor generally well ventilated and kept clean.” The medical attendant of the country part of the Isle of Thanet declares that “want has never been the cause of disease in this district.”

It is a still more pleasing duty to narrate the successful efforts that have been made in several parts of these counties to annihilate the sources of pestilence, and the more useful, as they show how entirely these evils may be subjected to human control by the exercise of foresight and management. *Mr. Creasy*, one of the medical gentlemen in the Sevenoaks union, says:—

“Last year, during the prevalence of fever in the parish of Hever, the Messrs. Williams, of Boons, rendered valuable service by directing their bailiff to give notice to their tenants to attend to my directions for drainage, &c., or quit the premises, which had the desired effect. The cause being removed, the fever instantly ceased.”

Mr. Gregory, the medical officer in the adjoining parishes, says:—

“Agues were formerly more prevalent in this neighbourhood; but attention having been paid to the river Medway, the floods are not now so long upon the meadows as formerly.”

Mr. Emmerson, a medical officer in the Eastry union, writes:—

“There is, I believe, no locality which has been for some years so exempt from fevers of a malignant and contagious character as the eastern coast of Kent. Accordingly, idiopathic fever, under the form of synochus and typhus, very rarely occurs, and when it does appear is generally of an isolated kind. Intermittents also, which 15 or 20 years since were so generally prevalent in this district, have become comparatively of rare occurrence, and indeed have almost disappeared from the catalogue of our local endemics. This exemption from ague, and other febrile epidemics of an infectious nature, may be justly imputed to the total absence of malaria, and of all those causes which usually generate an unwholesome and contaminating atmosphere; viz., from the whole district being secured from inundations, by the most complete and effectual system of drainage and sewerage; also from the exposed state of the country, favouring a free and rapid evaporation from the surface of the soil, and more especially from the greater portion of the labouring classes, both in the town of Sandwich and the adjacent country, being employed in agricultural pursuits, and, with very few exceptions, living (as individual families) in well-built cottages, where cleanliness and free ventilation is very generally and creditably observed.”

Mr. Mason, the medical attendant at Deal, observes respecting that town:—

“The annexed list shows that, in this district of the union, fevers are not of a very prevalent occurrence, particularly of the severe kinds, for of the whole list only five of synocha, or inflammatory fever, occurred, and these were unattended with any unusual symptoms. The exemption from this class of diseases is mainly attributable to the absence of all miasmata, and a thorough attention to drainage and cleanliness throughout the town.”

Mr. Elgar, a medical officer in the same union, and in a district where, from its exposure to marsh effluvia, it might be supposed that disease would be prevalent, states:—

“The parishes forming the fifth district of the Eastry union are, with one or two exceptions, close to marshes separating the Isle of Thanet from this portion of East Kent, and, consequently, during the spring and autumn, the inhabitants are exposed to the malaria therefrom; but, for these last few years, owing to the excellent plan of draining, very few diseases have occurred (in my opinion) that can be said to be produced by malaria; there is very little ague, scarcely any continued fevers, and a case of typhus, I believe, has not been known along the borders of the marshes for these last three or four years. Some years back a great portion of the parishes adjoining the marshes was under water from the end of autumn to the early part of the following spring; then agues and fevers of all characters prevailed to a very great extent. Although the *malaria* does not produce diseases of any *decided character*, yet during a wet spring or autumn there are always cases of inflammation of the lungs or bowels, and rheumatism, both in acute and chronic forms. The houses in general are good, well drained, and well ventilated, having one or two sitting-rooms, as many bed-rooms, sometimes more, scullery, &c., and convenient receptacles for refuse and for fuel. The cottagers generally are *extremely cleanly*.”

Considerable part of the Newhaven union consists of marsh, the evil influences of which appear to have been effectually counteracted by the measures adopted. *Mr. Noakes* says:—

“Owing to the opening and improved state of the Ouse river, together with a perfect drainage of the levels, the agues and low fevers in this neighbourhood have very much disappeared. As to typhus, it scarcely ever occurs.”

Mr. Turner says:—

“The district which has been under my care comprises five parishes, three of which are situated in close proximity to marshes which were formerly, for a considerable part of the year, inundated; of late, very extensive improvements have taken place in the drainage of these levels, and, in consequence of that change, the diseases constantly engendered by marsh miasmata, viz., typhus and intermittent fevers, are not more common than in other districts.”

It appears to me to be one of the most important objects of this inquiry to discover how far the evils herein detailed are

within the power of the poor themselves to remedy, and to what extent they depend on causes beyond their control. It will be obvious, from what has been stated, that the drainage of marshes, with which, of course, the poor have nothing directly to do, has of itself been sufficient to annihilate certain diseases, but still it is equally certain that their virulence might have been much mitigated by some simple precautions among the labourers, and that their dirty habits, neglect of ventilation, and want of foresight, have tended much to add force and frequency to these pestilential attacks. This question, in fact, is the all-important one of whether the character of the labouring population depends on their circumstances, or their circumstances on their character? All causes, so closely connected as these are, of course act and react on each other, but my observation strongly impresses me with the opinion that the latter alternative presents the true sequence of cause and effect, and that the feelings, habits, and dispositions of the poor have an infinitely stronger influence on their comfort and condition than any of the natural evils that may surround them. On this point, *Mr. Sankey*, the medical officer of Margate, observes:—

“I cannot, however, but express it as my opinion, that most of these evils depend upon the poor themselves; but, at the same time, it has as repeatedly occurred to me to witness the effect of good example. I could instance many families, living in a row, and circumstanced for accommodation and inconvenience alike, possessing about the same means, receiving about the same pay, and having to support the same number of children, where one will be in comparative comfort and the other in filth. I have also known the introduction of a cleanly cottager into a row gradually improve the appearances of several around him, who will vie with the new comer in making an equally respectable cottage.”

Mr. Furley, one of the medical officers in the Malling union, remarks:—

“It is hardly to be credited how little care they take of guarding against infection. I have even been obliged to forbid children from being sent to school, within a few days after the commencement of scarlatina. I have actually had them removed from the other children of the village when the rash has been on the skin and the throat sore.”

But perhaps the strongest proof of this is seen in the total inadequacy of circumstances of considerable physical prosperity to ward off evils that would appear peculiarly appropriate to extreme destitution alone. *Mr. Fishenden*, the Sheppey relieving officer, says:—

“I know one case in which a man, wife, and six children sleep in one room. This family is the worst of managers; the children are all badly brought up by the mother; the father is a fisherman, in which business he is assisted by his eldest boy, aged 14; the mother sells the

fish, and collects mushrooms to make catchup. Their earnings may average 14s. a-week. They have all had the typhus fever, and all at the same time, except the mother. The house is dry and well drained, but the fever arose, I believe, from their living so many in one room. Those who inhabit good cottages are invariably the best characters; the *landlords* won't have bad characters in their houses. I myself offered to guarantee the rent of a better cottage to the family I just mentioned, and the wife of the landlord took them, in the landlord's absence, on the condition that they were to leave if the landlord disapproved of them as tenants; but, on his return, he immediately turned them out, because they would be so destructive to the property."

Thus the family could not obtain a fitting cottage, though they could pay the rent of one, because their characters were bad; and because they could not obtain a fitting cottage, they all had the typhus fever. *Mr. Tuppen*, the Chailey medical officer, also relates a similar case, where several members of one family died of a typhus fever that affected no one else.

"Their abode," he says, "was in a most dilapidated state, scarcely habitable, comprising a sitting and bed-room, on the ground-floor, with very little covering on their beds; notwithstanding which, on an average, they were in the receipt of 16s. a-week. Their deaths were no doubt accelerated by their improvidence and great want of cleanliness, and accumulation of filth around their dwellings."

I have frequently found instances where labourers, owing to defect of character, have not been able to hire cottages at all. Last year, at Tenterden, I inquired into the reason why the workhouse had 56 more inmates than in the corresponding week of the preceding year, when I discovered the increase to be entirely owing to eight able-bodied men, with their wives and families, who had been turned out of their dwellings in consequence of the badness of their characters, by reason of which no one would let them have a cottage. Some even had been refused though respectable persons had offered to guarantee the rent.

I beg to make one remark on a habit engendered by the old system of managing the poor, which has a most important effect on the social economy and happiness of those among the labouring classes who arrive at old age; I allude to the almost total neglect they experience from their younger relatives, which was so general and bare-faced, and marked by such a total absence of feeling and affection, as would hardly be credited by persons who have never witnessed the effects of lavish relief in a thoroughly pauperized district. And this was an evil that had spread not only through the lower, but many of the middling classes. I will give some instances of this, mostly taken from those a little above the labourers, as they are the most striking; and it must be obvious that such habits could not exist among these without being followed by those who are below them in the scale. The act however is undoubted, that the practice began with the lowest

and extended to those above them, and was entirely the result of a forgetfulness in the administration of relief, that much of this destitution among the aged poor ought to have been met by an exercise of the natural affection of their relatives, as it is and always has been in unpauperized districts.

I have seen an old man come with tottering steps before a Board of Guardians petitioning for relief whose grandson was at that moment mayor of one of the largest towns in the south of England. I have seen a chairman of a Board produce a note from a lady living in a handsome house in the union, and enjoying an income of 400*l.* a-year, which note was to induce him to use his influence with the guardians to allow her brother, aged 70, a weekly allowance from the rates. I have seen an aged woman in the extremest destitution, having lived several nights in barns, brought before the guardians, yet she had at that moment two unmarried sons, one earning 16*s.* a-week, and the other 1*l.* 1*s.*, both of whom had refused to contribute anything to her support. I remember a farmer who rented 180 acres of land coming before a bench of magistrates to be excused poor's rates, on the ground that the guardians had insisted that he should keep his aged mother, who under the old system had been supported out of the rates. He seemed to have no idea that it was his duty to do so, but thought that the keeping his mother should be fairly considered as a set-off to his rates. In another union an aged couple had a son earning 20*s.* a-week, and who was ascertained to be in possession of 500*l.*, yet he refused to give a farthing to his parents, and resisted to the utmost a magisterial order to pay them 2*s.* a-week. I remember another case of an old woman, past 80, seeking refuge in a workhouse, whose son was a farmer living in another part of the county, to whom the guardians wrote, requesting him to support his mother; the answer was, "I received your letter and am sorry to hear of my mother's distress." He then refused to do as requested, but at the conclusion of the letter, as if seized by a sudden impulse of affection, adds, "when I see her, I am not against giving her a shilling." She however died in a few days, and thus released him from a burden he was so unwilling to bear. I could add numerous examples of a similar kind, which would almost seem to prove, that the effect of the Old Poor Law had been to erase the Fifth Commandment from the catalogue of virtues. It would be the height of injustice to charge these moral failings on those who are subject to them. They were as the law, or rather the practice of the law, made them to be, the victims of mismanaged poor-rates. It is well known that such instances are rarely to be met with in parts of the country where relief had never been so indiscriminately bestowed; and being somewhat acquainted with Ireland and the Irish, I will venture to say that in that country, amidst all its vices and misery, such cases are hardly to be found, simply

because it has not been hitherto subjected to mismanaged poor laws. Yet they are constantly occurring in pauperized unions, and, I find, usually strike strangers as the most mournful and startling results of the former system.

In connexion with this subject, it may be relevant to remark that as good wages will not of themselves keep off misery, neither will they prevent crime. A gang of four sheep-stealers was some time back broken up in the Chailey union. The ringleader was a man with three children, in receipt at the time, of 12*s.* a-week; another was a man with a wife and one child, earning at the time 14*s.* a-week; the third had a wife and three children, and was receiving 16*s.* a-week: and the last, a wife and five children, in the receipt of 1*l.* a-week. This fact presents a curious comment on the assertion sometimes made, that the labourers have been driven to crime by the refusal of out-door relief. I have examined in other cases into the causes of the commission of crimes, and have never in a single instance been able to trace them up to destitution, and two of the most active chairmen of Quarter Sessions in this district have confirmed me in this conclusion.

I could present numerous other facts illustrative of the hopelessness of attempting to benefit the labouring classes by confining our attention to their physical wants, or by simply placing them in the highest state of physical prosperity. I remember once maintaining with a guardian at the Bridge workhouse, that if we could obtain a minute knowledge of the past circumstances of each workhouse inmate, we should find that the destitution of by far the majority was attributable to themselves. We accordingly commenced the inquiry, and in the first room we entered there was a middle-aged man cobbling shoes. He was single, and could at any time earn at his trade 12*s.* or 14*s.* a-week. Two years ago he had been left 200*l.*, yet the whole of this, as well as his earnings, had been spent. We inquired no further. Some time before, an able-bodied man had applied for relief in the same union, who acknowledged to have earned 2*l.* a-week for the previous 18 months. Last June there was only one able-bodied man in the Westfirk workhouse, with a wife and three children. A short time previous he had received a legacy of 300*l.*, the whole of which he had spent in a year. An able-bodied woman in the Dartford workhouse applied to me to procure for her means of conveyance to Van Diemen's Land, whither her husband had been transported for life. I asked her how he came to be convicted, when she replied, "We were left a legacy, Sir." Surprised at this answer, I inquired further, upon which she said, "We were left 150*l.*, and had great trouble to get it, so the lawyers got most; and all we had was 56*l.*, and that was our ruin. We were very well till then, but my husband immediately left off work and took to drinking, and when the money was gone, robbed his master,

and was transported." On the other hand, I have frequently found comfort and good conduct united with apparently wholly inadequate means. In Whitfield parish there are three agricultural labourers, each of whom have well brought up 14 children without any assistance, on the average wages of the county, which are about 12*s.* a-week. In another parish there are two married labourers, whose circumstances have been parallel for a series of years. They had each six children when I heard of their condition, and their wages averaged about the same. The family of one invariably presented a neat appearance, and his house appeared clean and respectable; the other was just the reverse, and was always running to his parish for relief, whence he received about 25*l.* yearly, in addition to his wages.

Of course I do not mean to infer that it is injurious to give the labourers the most extended means of physical comfort, I only protest against the common doctrine, that omits all reference to the fact, that they have minds as well as bodies to be taken care of, and implies that when the latter is attended to, and they have the means of material prosperity at command, all that is necessary for their welfare has been done, and it is their own fault if they do not rightly enjoy the good that is before them. So far from this being the case, it would appear that an exclusive attention to their bodily wants is just as likely to injure as to benefit them, and that some elevation of mind is necessary to their prosperity. Yet this opinion is far from being a common or popular one, and the true view is sometimes so injudiciously argued as to expose it to the attacks of ridicule.

The final conclusion to which I arrive is, that moral and material advancement ought always to go hand in hand; that circumstances are far more dependent on character than character on circumstances; and that all efforts to improve the condition of the poor, by making drains, building good cottages, increasing employment and increasing wages, may fail, may even end in a result precisely contrary to what was intended, unless, by the extension of a sound education, parallel endeavours are set on foot to improve the higher and nobler part of our natures.

I have the honour to be, Gentlemen,

Your obedient servant,

E. CARLETON TUFNELL.

To the Poor Law Commissioners.

1st March, 1841.

No. 4.

ON THE SANITARY STATE OF THE TOWN OF BRIGHTON, AND
ON THE CAUSES AND PREVENTION OF FEVER.

BY DR. G. S. JENKS.

GENTLEMEN,—Before entering upon a detail of the facts I have collected upon the sanitary state of the town of Brighton, it may not be deemed unimportant to give a brief description of its locality. If I rightly conceive the object and use of a report of this kind, it should present, fully and explicitly, the advantages and disadvantages of one district as compared with others. In order, therefore, to establish such a comparison, it would be necessary to comprise, in one point of view, all those circumstances which may affect the public health, and to consider them according as they may be independent of, or dependent upon, the powers delegated to man for his own protection.

In the first place, I propose to treat of the topography, geology, climate, soil, &c., and in the next, after an account of the site, exposure, and extent of the town, I shall proceed to describe, from personal inspection, those parts which are inhabited by the labouring classes. In this division of the report, the nature of the dwellings, the materials of which they are built, the convenience and size of the apartments, the cleanliness of the inmates, and the average number of persons to each tenement will be considered, and such remarks upon rent, wages, and expenditure interspersed, as I have been able to obtain. The proportion of paupers to the whole population, and the means provided for the relief in sickness and in health of all necessitous persons will then be given, founded on authentic documents. The account of the prevalence of various diseases among the poorer classes will be drawn from the reports of the parish surgeons, the dispensary, the self-supporting dispensary, and the hospital, including an account of all the cases of fever in one year, and the districts in which they occurred. The mortality in relation to the diseases treated will be shown by the reports of the public institutions; the mortality to the whole population from the public registers. Finally, I shall offer a few remarks upon the nature, causes, and extension of fever, and upon the means of prevention.

Brighton lies nearly in the centre of the southern declivity of the western division of the South Downs, on the margin of an extensive bay, comprehended between Beachy Head and Selsea

Bill, and is sheltered by a range of chalk hills on the north, north-east, and east. The greater part of the town is situated on an accumulation of water-worn materials, of which the uppermost and principal is what Dr. Mantell terms the "elephant bed." This is chiefly composed of broken chalk, with angular fragments of flint, consolidated by a calcareous cement of a yellowish colour, constituting a hard, coarse conglomerate. The proportion of chalk in this bed is so great, that at a distance it assumes the appearance of a regular stratum, but on a nearer inspection it is found to be a confused heap of diluvial materials. The hardest masses are provincially termed coombe rock. Beneath the elephant bed are shingles, then occurs a layer of fine sand, and, lastly, chalk. The elephant bed extends eastwards to Rottingdean; westwards it dips towards the valley of the Old Steyne. On the other side it rises again and covers the high ground of the western division of the town, becoming gradually thinner towards the coast. Beyond Regency Square it disappears, and its place is supplied by beds of loam, clay, brick earth, and gravel. A flat maritime district extends from the west end of Brighton to Shoreham. There are some low banks of shingles along the sea-shore towards Shoreham, and a ridge of sand and comminuted shells near the entrance of the harbour. A great part of the surrounding hills, formerly covered with turf, are now converted into gardens and arable land. No trees are to be seen, except in some sheltered spots at a distance from the sea. There is neither running stream nor stagnant water. The sea is the only source of ascending aqueous vapour, for the rain which falls runs off so rapidly, and the little moisture left behind is so quickly exhaled and dissipated by the constant winds, that it is not uncommon to see the dust raised in clouds within two hours of a heavy shower.

Chalk being the basis of the soil, it is manifest that the water will be influenced by it. From its great permeability it allows water to percolate and filter through it without being retained. All the springs are derived from the chalk. The water so obtained contains few solid ingredients; carbonate of lime is the principal one, amounting to between 0·01 and 0·03 per cent. It exists in a state of solution by the aid of free carbonic acid gas, which, escaping by exposure to the air, the water is freed of its carbonate of lime. Sulphate of lime amounts to half the proportion of the carbonate.

Water from a chalky soil is well known to be unfit for many domestic purposes, but as a beverage it is wholesome, provided it be not contaminated with foreign impurities.

To preserve the water used by the inhabitants of a district, pure, and wholly free from pollution, is of great importance in a hygienic point of view. At Brighton, where the chalk hills range from east to west, the springs will flow in a direction from north to south;

hence, in laying down drains, it is necessary to give them a contrary direction; for example, from east to west, or *vice versa*.

Such drains should be carefully bricked and cemented, lest the foul water they contain should ooze through and pollute the springs.

Owing to the imperfect and insufficient drainage of the town, the inhabitants are compelled to have recourse to numerous cess-pools as receptacles for superabundant water, and refuse of all kinds, and to save the inconvenience of frequently emptying them, they dig below the hard coombe rock till they come to the shingles, where all the liquid filth drains away. The consequence is inevitable; the springs in the lower part of the town must be contaminated.

A water-company, established within a few years, affords a remedy to the wealthier classes for this inconvenience. They have supplied the town abundantly with excellent water, and the benefit is not restricted to the wholesomeness of it, as a beverage, but it is useful in many other ways.

The climate of Brighton, as it affects the health of the inhabitants, may be stated as decidedly salubrious at all seasons of the year. In the autumn and winter, it is preferable to most places. It enjoys the natural advantages of constant ventilation, good surface drainage, and an absorbent and permeable soil. Neither stagnant air nor stagnant water is to be found within or near its precincts.

The meteorology of the district has never received due attention that I am aware of. I have not been able to obtain any information as to the mean state of the hygrometer, or as to the quantity of rain which falls; and I am indebted to private friends for such observations of the barometer and thermometer as I am about to make.

Registers of the weather, however, can only be made subservient to the great purpose of explaining the origin and progress of disease, by comparing the cause and effect together, and repeating the comparison faithfully and frequently. This can nowhere be better done than in large hospitals.

Dr. King, who has carefully observed the degrees of barometrical pressure for eleven years, states the mean pressure to be 29.95.

Mr. Lewis, who has a very good self-regulating thermometer, placed to the north, in a sheltered situation, and at an elevation of $12\frac{1}{2}$ feet from the ground, has obligingly furnished me with the following observations for the last two years, with the exception of the month of August of the year 1839:—

The mean temperature of the two years is 55° ; but as the relative differences of climate, in a medical point of view, are rather to be looked for in a comparison of seasons than of the whole year, it may not be unimportant to give the mean tempera-

ture of the seasons for the same period. The mean temperature of the spring is 53° ; of the summer, 66° ; of the autumn, 56° ; of the winter, $43^{\circ} 5'$.

At the Custom-house a log-book is kept by officers bred up in nautical affairs, in which the state of the weather, as well as of the wind, is daily inserted. The observations which follow refer to the last two years. The first thing which strikes one is the remarkable equality as to rain and fine weather, and as to the prevalence of certain winds.

The chief variations are to be found in the seasons, as was before observed with regard to the thermometer. Thus in one year there were 205 fine days, in the other 207. In the one 156 days, with rain or snow; in the other, 166. Easterly winds prevailed for 116 days in the former, for 123 in the latter year; in like manner south-westerly winds were as 148 in the one to 152 in the other.

The proportion of westerly winds to easterly winds for the two years was nearly as $1.75:1$. Of rainy days with westerly winds to rainy days with easterly winds, as $2.5:1$.

Calm days are rare, except when the wind is from the north. Light breezes occur upon an average once in five days. Hence there is a great prevalence of strong breezes, with frequent gales, chiefly from the south-west.

This constant agitation of the air cannot fail to exert an influence upon the health of the inhabitants.

Easterly winds, particularly the north-east, are most frequent in the winter and spring. West and south-west in the summer and autumn.

The superficies of the parish of Brighton consists of 1562 acres and 12 poles. That portion of it covered by buildings is estimated at 600 acres.

The chief part of the town extends along the sea-shore from east to west (including Brunswick Terrace) for two miles and a half. This is the favourite resort of the visitors. It is open to the fresh invigorating breezes of the sea; and during the winter months, the sun warms and illumines it throughout the day. At right angles to this splendid and unique terrace, which faces the sea, the town extends from south to north, that is, from the Albion Hotel to the Hare and Hounds, on the London road, for one mile and eighty-one yards. All this part of the town lies in a valley. Just beyond St. Peter's church, where the London and Lewes roads meet, there is an open flat space, called the Level.

The other parts of the town occupy a more elevated situation. The north-west contains the most numerous, the north-east the least reputable part of the population. This distribution of the buildings over an extensive and undulating surface is a general characteristic of the place. It does not want its exceptions, however.

The most incommodious, worst built, and disagreeable part of the town, with its adjacent streets, occurs upon the site of the ancient fishing-town. The boundaries of this district would be defined by a line passing up Great East-street, along North-street, through Bond-street, and Gardener-street, into North-lane. Thence returning by Spring-gardens, and across Church-street, into Air-street, you descend by Upper Russell-street, until you reach the western boundary in Great Russell-street.

This imaginary line would encompass a multitude of the most ill-contrived, undrained, narrow, thronged, and pent-up lanes, courts, and alleys. Within the limits described are such places as the Lanes, so called, Shuter's-gardens, Tribe's-buildings, Nelson's-courts (Upper and Lower), Kent's-court, Air-street, Petty France, Durham, Pimlico, Pym's-gardens, and Orange-row, names of places of significant import to those acquainted with the lowly habits of the poor, but possibly never heard of before by ears polite.

The nature of the dwellings of the poorer classes is a matter of some moment in considering the sanitary state of a populous district, and it is an object of special inquiry by the Poor Law Commissioners. I shall therefore proceed to describe them in different parts of the town, beginning with Tribe's-buildings. In this place there are two rows of small low houses, built of brick, with tiled or slated roofs, and separated by a very narrow lane. Each house contains two rooms, one above and one below. On the north side the rooms measure 10 ft. by 9 ft. 2 in., by 6 ft. 5 in. high; on the south 7 ft. 2 in. by 9 ft. 2 in., by 6 ft. 3 in. high; the sleeping-rooms are somewhat higher. These houses, according to the information received, have only been twice white-washed in 15 years.

Each house is provided with a small backyard, very damp and filthy, in which are privies, all requiring to be emptied. In front of the houses there is a pool of stagnant liquid filth and mud, in consequence of the overflowing of the cesspool. There is no common sewer. The average number of inhabitants to each house is five. They belong to the families of fishermen, shrimpers, or hawkers of fish. The average rent is 2*s.* 3*d.* per house, per week.

At this season of the year, the month of March, the earnings of a man and his wife, together with parish relief, amount to 8*s.* 6*d.* per week; but in more favourable seasons they can earn 2*s.* a-day.

Although the people inhabiting this place are upon an equality as to the chances of profitable labour, they vary most remarkably as to their appearance and comforts. Some keep their apartments exceedingly clean and neat, others with the same advantages exhibit all the signs of the most wretched squalor and misery. These last are commonly indolent, slovenly, and addicted to intemperance. They are ever ready to give up a day's work

to run after the casual bounty of some well-disposed persons, who bestow their charity with more profusion than discretion. The fact is, that the clean, careful, and hard-working people not only deserve assistance more than their more plausible and importunate neighbours, but require it as much, although the latter usually monopolize the bounty of the rich. The foregoing remarks apply not to Tribe's-buildings only, but to all the places about to be described.

Shuter's-gardens are in close proximity to the last-named place. There are 13 houses here, in one row, with more space in front, though much confined behind. Each house contains two rooms, one on each floor, and most of them an attic. The rooms are of the same dimensions in each separate dwelling. They average upon the whole 8 ft. by 11, by 8 high. The front premises are offensive from the state of the cesspool, and other recipients of ordure and refuse. The rents are from 3s. to 3s. 6d. per week. The inhabitants about six in each tenement.

In Suffolk-street and Great Russell-street, there are underground apartments, occupied by persons in indigent circumstances. Happily this description of dwelling for the poorer classes is very uncommon in Brighton, and is only to be found in a few streets. At the lower end of Great Russell-street there are two courts, one very close and confined, the other in a dilapidated state, without doors even to the privies. There is no drainage, and the refuse animal and vegetable matter is not removed as often as it should be.

At the top of North-street are Durham and Petty France. Durham is a court yard, with six houses (to appearance), but in fact there are 12 separate dwellings, the upper being divided from the lower, and having an approach by an outside wooden staircase, so little protected that the children are constantly meeting with accidents. Each dwelling has two rooms, but no back premises, and contains upon an average six persons. This place is unprovided with privies. The want of this convenience is supplied by a wide and very deep uncovered pit, part of which extends into Air-street, beneath the planked floor of the day-rooms of two wooden houses.

Petty France consists of several small confined courts and passages, and some of the houses are actually under Durham. It contains about 15 separate dwellings, with small, close, low and dark apartments. There is always a pool of stagnant water in one of the courts, deep enough, without exaggeration, to be dangerous to young children. This is owing to the cesspool having been for a long time full to overflowing.

After heavy rains the water flows over into an adjoining privy, which has likewise been full for years, and floods a second court, thereby corrupting the water in the well. Both this place and Durham are inhabited by very indigent people. The rent is 2s.

per week for each dwelling, and the average number of sickly and wretched-looking inmates six.

In the north-west part of the town, on the northern slope of the Church Hill, there is a district which, perhaps, contains the most truly necessitous part of the population. This district comprises Thomas-street, Pimlico, East and West, Pym's-gardens, Orange-row, &c.

Of these Pym's-gardens is the worst. It is a very narrow ill-ventilated lane, consisting of miserable dwellings, run up between the back premises of Pimlico East and Orange-row, and having a surface gutter always filled with sludge and filth. The inclination of the surface in some parts of this district is not sufficient to carry off all the water, consequently they are often flooded by rains, an inconvenience which might be easily remedied, as there is a good sewer in North-lane.

In Pimlico West the pavement is in a dilapidated state, and there is an uncovered cesspool, very unsafe for children. There are 29 houses in West, and 89 in East Pimlico, each containing one upper and one lower room, of rather smaller dimensions than those in Tribe's-buildings. The average numbers of inhabitants, adults and children, to each dwelling are five or six. The rents vary from 1*s.* 6*d.* to 2*s.* per week. In some of the dwellings in Pym's-gardens the inmates sleep on the floor, and there is no other furniture than a table and one or two chairs.

This is the least healthy district in the town, notwithstanding there is more free space between the houses, and that no narrow passages and pent up courts occur, as in Petty France, Tribe's-buildings, and the lanes.

This may be attributed to less ventilation and a worse drained surface. This part of the town does not enjoy in an equal degree the advantage of constant perfusion by the strong sea breezes which those do on the south side of the same hill, and hence the inhabitants may acquire that proclivity to sickness which stagnant air and moisture are known to produce. Measles, hooping-cough, scarlatina, and inflammatory affections of the respiratory organs, when prevalent, are more severe among the children in this district than elsewhere, though it does not appear that typhoid fever is at all more frequent.

To the north-east of the Steyne there is a quarter of the town, many streets of which meeting Edward-street at right angles on the north side, are in a most neglected and filthy state. The in-dwellers of these places unhappily figure but too often in the annals of the police office as the perpetrators of vice and crime.

Nottingham-street is the well-known haunt of tramps and beggars; Egremont-street of the lowest prostitutes and thieves.

Both streets are on elevated ground, with good surface drainage, sufficiently wide and commodious, and might easily be pre-

served in a decent state. But all manner of disgusting refuse is thrown out of doors, and but seldom removed by the scavengers.

In Nottingham-street there are eight or nine lodging-houses. Lodging-keepers have commonly three or four houses, for each of which they pay 2s. 6d. per week.

The following is a description of one of them, and may serve as an *instar omnium*. The keeper of the lodging-house rented four of these small tenements. One room, common to the whole of the inmates, who amounted to 30, including the children, served both as kitchen and sitting-room. This room was crowded when I visited it in company with the chief police officer, Mr. Solomons, with not less than 17 people covered with filth and rags. In the largest of the sleeping-rooms, 16 feet by 10 feet, by 7 feet high, there were six beds, five on bedsteads, and one on the floor, to accommodate 12 people of both sexes, besides children. Each person paid 3d. per night. Those who could afford more could be accommodated with a small room with one bed.

There are three beer-shops in this street.

In the adjoining-street, Egremont-street, there is not the same shockingly crowded state of the apartments. Rarely more than two persons occupy one room. A woman who keeps a beer-shop in this street rents 14 tenements, each containing two rooms, for which she pays 12s. per week, and she lets each room at 2s. 6d., sometimes 3s. per week.

There are other streets parallel to those just mentioned, in which lodging-houses are kept, and whither persons of suspicious character resort, but which are not so entirely occupied by them, such as Leicester-street, Chesterfield-street, Thomas-street. In a word, the streets in this neighbourhood have for many years been an intolerable nuisance to the town at large. They are the resort of tramps, begging impostors, thieves, and prostitutes of the lowest description, who daily and nightly take their rounds through the town.

Little St. James's-street is a very narrow, dirty, ill-ventilated lane between Edward-street and St. James's-street, chiefly inhabited by fishermen and labourers. They are poor, and frequent applicants to the Dispensary for relief, but do not appear to suffer from fever. Their occupations are out of doors, and their apartments not overcrowded.

I am informed that at no time was there at Brighton a greater number of cottage tenements unoccupied and going to decay than at present, and that this kind of property is more reduced in value than any other.

There are many cottages in the neighbourhood of Nottingham-street occupied by persons who have got possession, and never pay any rent, but, on the other hand, the rents in some places, though much reduced, were never better paid.

This may be attributed to the great temporary influx of railway

labourers, and to the crowded state of the cottages let to persons who take in lodgers.

Upon the whole, the dwellings destined for the poor in this town are built of durable materials, and afford good protection against weather. The objection lies more to their being crowded together in narrow lanes, small courts, &c., in the old parts of the town. A better general system of drainage is wanted.

The south-west part of the town has been always infected with noisome effluvia arising from the drains which are allowed to discharge their contents upon the open unwashed beach. This disgraceful and intolerable nuisance I have great pleasure in stating will shortly be removed.

It is settled that one large sewer, from west to east, shall be laid down to collect and carry off the whole drainage of the King's road, and convey it to the great north sewer near the Albion.

As any great amount or extension of the common forms of disease has always for its substratum the poorest classes of the population, so the spread of epidemic diseases is most rapid where great poverty and destitution prevail. It is necessary, therefore, to ascertain the proportion of paupers to the population, and the means provided for their relief.

By paupers are meant those persons who apply to the parish for relief:—pauperism and destitution, however, are not necessarily associated.

The population of the parish of Brighton, according to the census of 1831, is 40,634. Of these, 2679 persons of all ages received parish relief in the week ending March 3, 1840, being 1 in 15 of the whole population. It has been observed that the greatest number of persons apply for relief in this month. The wealthy visitors have by this time left us, and many people are consequently thrown out of work, particularly females.

The proportion of paupers here stated appears very high; in fact it is the maximum; the average proportion being 1 in 18, or thereabouts; but when we consider the kind of people who frequent Brighton, or reside there, this rate of pauperism will strike us less forcibly.

Brighton is neither a commercial nor manufacturing town—there is no populous class of operatives, as they are called—the employments of the labouring poor are chiefly out of doors.

Great numbers of wealthy people, of the highest and middle classes, visit it annually for health, or for amusement. The riches introduced by these people, while they contribute to the prosperity of the trading portion of the population, attract at the same time an immense number of the poorer classes. Besides those who follow in the train of the rich as domestic servants, many others come in search of places. By the population return, there are not fewer than 3859 servants, chiefly females. Of these, many having families, take houses, and by paying one year's rates obtain a

settlement; and others speculating as shopkeepers fail, as usual, and become a burden upon the parish.

The labourers and others who flock in, in search of employment, without including their families, amount to between 3000 and 4000. To these must be added many persons, from all parts, who, having been cured in the hospital, or at the other public institutions for the relief of the sick poor, remain and become residents, besides an average of from 250 to 300 tramps, professed beggars, &c., who infest the town, and constantly apply to the parish.

Notwithstanding the amount of pauperism here described—when we take into consideration the number of institutions for the relief of the poor in sickness and in health; the assistance afforded by the parish in money and in kind; the large sums distributed through the clergy; to say nothing of very extensive private charity—not only should there be no destitution in Brighton, but not even the likelihood of it. When it does occur, therefore,—and I grieve to say there are not wanting examples of it,—it is only too certainly to be traced, in the majority of instances, to the vicious conduct of the sufferers.

I am indebted to the kindness of Mr. Thorncroft, the assistant overseer, for much valuable information in this department of my inquiries. He has favoured me with the following statement of the average number of persons receiving in-door and out-door relief, from the parish, for the last twelvemonth.

The average weekly number of persons in the workhouse from 1st January, 1839, to the 12th January, 1840, was 497.

In the last week of the year, 1838, the number of inmates was 514.

In the last week of the year 1839 the number was 508, less by 6.

The admissions from 1st January, 1839, to 12th January, 1840, were 692.

The discharges during the same period amounted to 698, exceeding the admissions by 6.

The inmates maintained in the workhouse for the week ending 3rd March, 1840, are thus classed:—

MALES.	
Men	138
Children and boys under 16 years of age	138
	276
FEMALES.	
Women	154
Children and girls under 16 years	132
	286
	562

The average weekly number of families receiving out-door relief is 662.

The maximum for the year may be inferred from the following statement:—

The number of families provided with out-door relief for the week ending March 3, 1840, was 869, and consisted of—

Adults	982
Children	1,135
	<hr/>
	2,117
Add	562 in the workhouse.
	<hr/>
	2,679
	<hr/>

Thus 2679 individuals received parish relief in one week, being about 1 in 15 of the population; but if we take the average weekly numbers of in-door and out-door paupers, with the same relative proportion of adults and children, we shall find that the number of persons relieved out of the whole population is about 1 in 17.6.

Children, and aged and infirm people, constitute the greatest part of those receiving relief.

Of the 562 in the workhouse during the week ending March 3, 1840, there were 52 people from 70 to upwards of 90 years of age, 27 males, and 25 females, and 370 children, &c., under 16 years.

Of the 982 adult paupers who received out-door relief in the same week, 196 were from 70 to 90 years of age; 79 males and 117 females. The children, as we have seen, amounted to 1135.

The amount of expenditure out of the rates raised for the relief of the poor by the Directors and Guardians for the year commencing December, 1838, and ending December, 1839, was 18,275*l.* 16*s.* 8*d.*; it was disbursed as follows:—

	£.	s.	d.
On the poor out of the workhouse	6,764	18	11
„ in the workhouse.	6,118	8	6
For the county rate	3,437	10	0
Officers' salaries, including surgeons and medicines, poor-rate collector's commission, high constable's expenses, law expenses, &c.	1,954	19	3
	<hr/>		
	18,275	16	8
	<hr/>		

It appears by this document that the sum of 14,838*l.* 6*s.* 8*d.* is expended upon the poor, excluding the county rate. This gives a ratio of 7*s.* 3½*d.* per head for the whole population; but, as the whole population does not pay rates, and according to the collectors' books not more than 5000 do so, the proportion per head of the rate-payers is about 3*l.*

The directors and guardians have appointed three surgeons to take charge of the sick poor. Mr. Baldey has charge of the west district. Mr. Long of the east, and Mr. Rugg takes care of the patients in the infirmary and workhouse. These gentlemen have very onerous duties, besides providing all the medicines required.

Of the sick poor attended by the parish surgeons, there were treated, for various diseases,—

	Admitted.	Died.
In the Infirmary	285	35
By Mr. Baldey	360	20
By Mr. Long	238	14
	883	69

Thirty-one cases of fever are reported by Mr. Rugg in the workhouse; but as the names of diseases are required to be given in English, and in the plainest terms, for the information of the Board of Guardians, the parish surgeons have rather studied what might be intelligible than what was strictly correct in nomenclature. Hence, under the head of Fever, various complaints, attended with fever as a prominent symptom, are included. Mr. Rugg informs me that not one of the children under 10 years of age, amounting in all to 19 (8 males and 11 females) had anything like typhoid symptoms; but the fever in all these cases was symptomatic of catarrhal, gastric, or mesenteric affections. Of the adults six were cases of synochus, of which two died, and one of typhus in one of the nurses. The remainder were cases of symptomatic fever. Thus seven cases only should have been registered as fever,—1 in $40\frac{5}{7}$ of the cases admitted.

Measles and hooping-cough, which prevailed epidemically in the town, seem to have spared the children at the workhouse. Only two cases of hooping-cough are reported, of which one died; and no case of measles is registered.

Mr. Baldey, surgeon of the west and most populous district, reports 23 cases of fever, with the following remark: "The majority of cases have been children from two to ten years of age; they have not been confined to any particular part of my district."

This district comprises certain places before described,—Tribe's-buildings, Kent's-court, Petty France, Durham, Pym's-gardens, Pimlico, &c. He stated to me that cases of typhoid fever were rare in his district. Of the 23 cases 12 were children under four years, and seven from seven years to fourteen years. There were four cases of typhoid fever in adult subjects, one of which was fatal. Rheumatism appears to have been very common, and principally among the fishermen. Thirty-eight cases are reported.

Mr. Long reports 10 cases of typhoid fever, of which three died, and one case of typhus with petechiæ.

Measles and hooping-cough, as before observed, prevailed epidemically in this town, the former from January to June, the latter more or less through the year.

The former disease was generally mild; one death only occurred

in 25 cases attended by the parish surgeons; and I do not remember to have heard of any fatal cases in the private practice of the place. Hooping-cough, on the other hand, was very severe and fatal, being often complicated with convulsions and infantile fever. Three deaths occurred in 19 cases reported by the parish surgeons, and the registrar's books record a considerable mortality among the children of all classes.

Four cases only of scarlatina occurred during the year among the parish patients, and not one case of small-pox.

The house surgeon of the General Dispensary, Mr. Verrall, gave me every assistance and facility for making out a report of the diseases treated in that institution from the 1st July, 1838, to 1st July, 1839; but in the course of our researches we found that the name of the disease had been affixed to not more than one-half of the cases admitted. The total admissions for the year amounted to 2650, whereas the name of the disease had been given to 1326 only. Under the head of Fever 68 cases are reported. Many of these, according to Mr. Verrall's account, attended as out-patients, many more were children under 10 years of age; and, to borrow Mr. Verrall's expression, "certainly not more than a fourth part could be said to be cases of typhoid fever." Seven cases are registered as typhus fever, two males and five females; of these one male and two females died, all being children under ten years of age.

Out of the number having the name of the disease given, there were 74 cases of measles, of which one died. Twenty-six cases of scarlatina, 17 of hooping-cough, and one of small-pox.

Diseases of the respiratory organs constitute a large proportion of this report. Thirty-seven cases of phthisis occurred, 12 males and 25 females; of these 28 died. The remaining nine were either removed to the workhouse, discharged as relieved, or they left Brighton. Of bronchitis, including severe colds with cough, 61 cases occurred. Of pneumonia, 28 cases, almost wholly among infants.

Out of 1326 cases accounted for, 71 died, being one in 18·6; but the ratio of mortality in the dispensary practice cannot be safely depended on, as many of the bad chronic cases are removed to the workhouse, and of the unnamed cases no results are given. Under the head Debility, 16 males and 77 females are entered, of whom one male and one female, both above 50 years of age, died.

The cases entered under this head are said to have been examples of debilitated constitutions in both sexes, by exhaustion from severe labour, the want of sufficient nourishment, from intemperance, and among some of the females from lactation.

Notwithstanding a self-supporting dispensary has been established in the town, a greater number of patients than usual were admitted last year in the General Dispensary. During a period

of eight years, the maximum of admissions in one year was 2664 (in 1835), the minimum 1595 (in 1833). In 1839 the admissions were 2650,—nearly equal to those of 1835. The average for eight years amounts to 2230 per annum.

I cannot regard this increase in the number of admissions as any proof of more destitution or more sickness than usual.

The year included in the return was by no means unhealthy. Of small-pox there was none, of scarlatina very little, measles were mild, and constituted the prevailing epidemic; whooping-cough had not reached its acme, only 17 cases being reported among the labouring classes, and no other epidemic prevailed. On the other hand, the really destitute commonly apply to the parish, while a large proportion of the applicants to the dispensary are in no fear of destitution. Many subscribers send their servants to the dispensary when ill. Many of the inferior shopkeepers take advantage of it; and not a few people, now that the practice is wholly confined to general practitioners, seek for that advice gratis which they formerly paid for.

Under the heads Dyspepsia, Constipation, Hysteria, Disorders of the Sexual System, &c., 125 cases are entered occurring in persons by no means in bad circumstances. The real explanation of the increase in the number of admissions will, I believe, be found in the desire to avoid payment for medical advice by persons who, from their circumstances, ought to think it a degradation to apply to a charitable institution.

The Committee of the Self-supporting Dispensary have just published their Third Annual Report. The number of free members who have entered since the opening of the institution on the 18th September, 1837, to the end of the year, 1839, have been—

Widows and single persons	132	Left Brighton	58
Domestic servants	40	Withdrawn	78
Members of families	565	Defaulters	228
		Declared ineligible	1
		Deceased	15
		Present number of free mem- bers	357
	<hr/>		<hr/>
	737		737
	<hr/>		<hr/>

The MEDICAL REPORT for 1839.

Cases cured	627	Attended by	
Relieved	25	Dr. Plummer	109
Deceased	8	Mr. Wilton	231
Under attendance	66	Dr. Allen	187
		Mr. Richardson	199
	<hr/>		<hr/>
	726		726
	<hr/>		<hr/>

Since the 1st January, 60 free members have been admitted, making the present total 417. Yet the fact that 306 have withdrawn or become defaulters bears an ominous aspect. Now two of the medical men belong to the dispensary, and the other two appear to be in great favour with their patients; so that evidently, if this institution fail, it will be upon pecuniary, and not personal grounds. It is devoutly to be wished that the humane and benevolent persons who have taken so much pains in establishing this institution should not relax in their exertions. The object of the institution, "to promote a feeling of independence among the working classes," is most laudable, but probably not attainable in a short period. Time and perseverance may bring about beneficial changes in the habits and opinions of those for whom this institution is intended, and I most cordially hope to see the day when it will be duly appreciated.

I have obtained from the books of the hospital a return, comprising the admissions for two years. For this valuable document I am indebted to the diligence and kindness of Mr. Lawrence, jun., the house surgeon.

The readiness and ability with which he has assisted my inquiries deserve my best thanks.

The return itself, which I present with a few remarks, may afford useful data for statistical calculations. (See pp. 31 to 34.)

The annexed return comprises 726	}	Cases, all requiring medical treatment, or arising from constitutional causes.
To which add of accidents . . . 496		
	<hr style="width: 50px; margin: 0 auto;"/>	
	1222	Total admission for two years,
Of which in 1838		575
,, 1839		647

Of the whole admissions 80 died = 1 in 15

Of the 726 ,, 64 ,, = 1 in 113

Of the 80 deaths 13 were from phthisis = 1 in 6.

Of 30 cases of typhoid fever (21 the first year, and only 9 the second) 3 died = 1 in 10; that is, 2 out of 24 residents, and 1 out of 6 strangers.

Of 4 case of typhus, all of which occurred in the second year, 1839, and none in 1838, 3 died; 2 of the four were strangers, of whom 1 recovered.

Of 53 cases of scrofula only 8 were from Brighton = 1 in 6.6.

Seventy-three cases of rheumatism, nearly equally divided between residents and strangers.

In addition to the foregoing report, I have been favoured with an extract from the register of the hospital, of all the typhus and

Admissions from January 1, 1838, to December 31, 1839—continued.

Diseases.	Residents.		Strangers.		Ages.								Total Deaths of Residents.		Total Deaths of Strangers.				
	M.	F.	M.	F.	7 to 14		14 to 30		30 to 45		45 to 60		60 to 75		75 and upwards.		M.	F.	
					M.	F.	M.	F.	M.	F.	M.	F.	M.	F.					
Of the Organs of Circulation.	Pericarditis . . .	2	1	1	..	1	1	1	..	2	10	1	2	1	..	3	1	1	
	Cordis Morbi Varii . . .	7	3	7	..	4	1	4	..	4	4	1	2	1	..	1	..	1	
	Aneurism . . .	4	..	..	..	..	..	2	..	2	2	..	..	..	..	..	..	..
	Varix . . .	2	4	1	..	1	4	..	..	2	2	..	..	..	..	..	..	..
	Phlebitis . . .	..	..	2	1	..	..	..	..	1	1	..	..	..	..	..	..	..
Total . . .	15	8	11	3	6	6	8	2	2	10	1	2	1	..	3	1	1		
Of the Digestive Organs.	Peritonitis . . .	1	2	1	..	1	2	1	..	1	..	..	..	1	..	..	..	..
	Gastro-Enteritis . . .	3	1	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..
	Tabes Mesenterica . . .	2	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	..
	Colic . . .	3	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..
	Constipation . . .	..	5	1	1	..	3	1	..	..	1	..	..	..	..	..	..	..
	Hernia . . .	3	1	..	..	1	..	1	..	..	1	1	..	..	..	2	..	..
	Ascites . . .	5	2	3	..	..	1	4	..	2	2	..	..	1	..	2	2	..
	Total . . .	17	11	5	2	7	6	8	1	5	2	2	2	2	7	1	2	..	
	Liver . . .	Hepatitis	2	2	1	1
		Icterus . . .	1	2	1	1
Gall Stones . . .		..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Total . . .		1	2	2	1	..	..	2	1	1	2	1	2	2	1	2	..	..

Sporadic Diseases.

Admissions from January 1, 1838, to December 31, 1839—continued.

Diseases.	Residents.		Strangers.		Ages.								Total Deaths of Residents.		Total Deaths of Strangers.					
					7 to 14		14 to 30		30 to 45		45 to 60		60 to 75		75 and upwards.					
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Of the Urinary Organs.	Nephritis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Ischuria	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Diabetes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Granular Disease	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Cystitis	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Stone	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Stricture	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	12	1	9	2	3	1	2	10	1	2	2	3	3	1	4	1	4	1	1	
Disease of Spleen		..	3	..	..	2	..	..	..	1	..	..	..	..	..	..	..	..	1	..
	Total	..	3	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..
Of the Organs of Generation.	Orchitis	2	..	1	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..
	Chlorosis	..	8	..	8	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..
	Amenorrhæa	..	17	..	16	..	32	..	..	..	..	..	..	..	..	..	..	..	..	..
	Dysmenorrhæa	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
	Menorrhagia	..	3	..	2	..	5	..	..	..	..	..	..	..	..	..	..	..	..	1
	Ovarian Dropsy	..	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
	Hydrocele	4	..	6	..	7	..	..	1	2	..	..	..	..	..	..	..	..	..	..
Total	6	29	7	28	9	54	2	2	10	2	1	3	3	1	4	1	4	1	1	

Sporadic Diseases.

Admissions from January 1, 1838, to December 31, 1839—continued.

Sporadic Diseases.	Diseases.	Residents.		Strangers.		Ages.										Total Deaths of Residents.		Total Deaths of Strangers.						
						7 to 14		14 to 30		30 to 45		45 to 60		60 to 75		75 and upwards.								
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.					
Of the Organs of Locomotion.	Arthritis	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
	Gout	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Rheumatism	23	16	28	6	18	11	17	5	10	3	4	2	2	..	..	..	..	..	..	..	..	..
	Joint Diseases	8	8	20	18	9	8	3	4	3	1	1	..	..	..	..	..	..	..	..	..	..	..
	Diseases of Bones	11	..	16	5	5	..	13	5	6	..	3	2	..	..	..	..	..	..	..	..	..	..	..
	Total	44	24	64	29	16	9	28	9	16	4	7	2	2	..	..	1	..	..	..	..	..	..	..
Of the Integumentary System and Cellular Membrane.	Phlegmon	6	6	3	2	..	..	2	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Carbuncle	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Ulcers	17	16	30	14	..	..	11	14	19	9	4	8	3	..	..	..	..	..	..	..	..	..	..
	Fistula	6	1	5	..	2	..	3	1	3	..	..	..	..	..	..	..	1	..	..	..	..	..	..
	Cutaneous Affections	2	3	3	3	1	1	1	5	..	3
	Total	32	26	41	19	3	1	24	11	18	4	8	3	3	..	..	1	..	..	..	..	..	..	..
Of uncertain Seat.	Hæmorrhage	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Scrofula	2	6	22	23	10	8	1	14	6	1	..	..	..	..	..	..	..	..	..	..	..	..	..
	Carcinoma	1	2	..	3	..	..	..	..	3	1	..	..	2	..	..	1	..	..	..	..	..	..	..
	Debility	2	2	1	..	1	1	1	1
	Total	7	11	24	26	11	9	1	15	10	2	1	2	2	..	..	1	1	..	..	..	..	..	..

typhoid fevers admitted during a period of six years, which it may be useful to place in a tabular form, as follows:—

TABLE showing the Number of Patients Admitted, Cured, and Dead of Typhus and Typhoid Fever in the Sussex County Hospital for Six Years.

Years.	Typhus.					
	Admitted.		Cured.		Dead.	
	M.	F.	M.	F.	M.	F.
1834	1	..	..	..	1	..
1835	..	3	..	..	..	3
1836	2	..	..	..	2	..
1837	..	1	..	..	..	1
1838	..	..	..	..	..	..
1839	4	..	1	..	3	..
Total	7	4	1	..	6	4

Years.	Typhoid Fever.					
	Admitted.		Cured.		Dead.	
	M.	F.	M.	F.	M.	F.
1834	2	4	2	3	..	1
1835	9	5	9	5	..	..
1836	2	1	1	1	1	..
1837	2	3	1	2	1	1
1838	6	15	6	13	..	2
1839	4	5	3	5	1	..
Total	25	33	22	29	3	4

Years.	Totals.					
	Admitted.		Cured.		Dead.	
	M.	F.	M.	F.	M.	F.
1834	3	4	2	3	1	1
1835	9	8	9	5	..	3
1836	4	1	1	1	3	..
1837	2	4	1	2	1	2
1838	6	15	6	13	..	2
1839	8	5	4	5	4	..
Total	32	37	23	29	9	8

Total—Admissions, 69—Deaths, 17.

A separate building was erected at the hospital some years ago, intended exclusively for the foregoing diseases, scarlatina, and small-pox, which has rarely contained more than two or three cases at the same time, though it is to be observed that fever cases, like accidents, are admitted immediately, upon the recommendation of a governor. Both these advantages are well known; and I have no doubt, from the popularity of the institution, that the public are well disposed to profit by them.

It may be interesting to show how highly this excellent institution is valued by the working classes, by the fact, that in all the principal workshops they promote its means of usefulness by voluntary contributions.

The good care and management of the sick is well assured by the diligent superintendence of a weekly board, composed of influential persons, and by the appointment of men, as physicians and surgeons, eminent in their profession, able and zealous in the discharge of their duties. Under the considerations, therefore, of prompt relief, kind treatment, skilful attendance, and a willingness on the part of the sick poor to profit by these advantages, we may safely regard the last table of admissions into the hospital as expressing the comparative prevalence of the diseases there named in this town.

One exception ought to be made with regard to scarlatina; for this disease chiefly attacks children, adults having for the most part undergone it; and since no children under seven years are admitted into the hospital, it follows that we can form no idea of the diffusion of this malady from the cases treated in the fever wards. Neither can the sum of any of the diseases enumerated be exactly ascertained by partial returns like these; nevertheless the fever practice of the hospital for a series of years, will be a good exponent of the greater or less extension of the disease among the labouring classes.

The following is a tabular view of the cases of fever occurring at the public institutions for the last year; those cases having been deducted from the parish and dispensary returns, upon the authority of the medical officers themselves, which had been inserted under the head of fever, without partaking in any degree of the typhoid character. To avoid the error of a too favourable report, the maximum has been assumed in every instance.

Disease.	Hospital.	Parish Infirmatory.	Parish District.		Dispensary.	Total.
			East.	West.		
Tphus	4	1	1	2*	5	13
Typhoid Fever .	9	6	10	9	17	51
Total .	13	7	11	11	22	64

To the number thus obtained I should add 12 cases, which I am informed occurred in private practice. Thus 76 cases would give the proportion of fever for one year, to the whole population, of 1 in 534.

The Poor Law Commissioners have directed the attention of medical men to ascertain what localities are more subject to fever than others.

* Children under 4 years are not included, amounting to 12.

I have especially attended to this point. The constant reply to my inquiries has been, "I am not aware that fever is confined to any particular districts."

Having obtained the residences of the fever patients of the dispensary, I found they had all occurred in the north, north-west, and north-east parts of the town, with the exception of one case in Tribe's-buildings. Those bad streets, Nottingham and Egremont-streets, had each furnished one case. The remainder happened in streets free from the suspicion of any nuisance, but affording habitations to numerous importations of poor Irish in search of employment, to many unemployed and helpless poor, to labourers of all kinds, mendicants, &c. These people are spread over a large and often rudely ventilated surface; they are rarely found crowded together in a small space except in Nottingham-street.

This may account for the non-extension of fever when it occurs, while the actual occurrence of it, when it cannot be traced to foreign importation, may depend upon those depressing causes, mental and bodily, which oppress and vex the poor. The more seemingly unhealthy districts, Pimlico, Pym's-gardens, Petty France, Durham, &c., are not quoted. They are inhabited almost wholly by fishermen, boatmen, shrimpers, hawkers, &c., whose occupation is healthy, and gives employment to the whole family in the open air. Rheumatism is the prevailing disease among those following maritime pursuits. On the other hand, inflammatory affections of the organs of respiration, particularly in infants, and the worst forms of dyspepsia and debility, partly arising from intemperance, and partly from want, occur among the poorest of the labouring classes.

Our view of the prevailing diseases of Brighton has hitherto been confined to the more humble part of the population; when we come to consider the mortality, however, we find it necessary to widen the basis of our observations. The deaths registered by the registrars include all persons whatsoever, residents and strangers. If the rate of mortality of the parish were calculated upon these data, it would be too high; for the census does not include the constantly fluctuating tide of strangers. Let any one consider the number of invalids continually coming and going during the year for the benefit of sea air, warm and cold sea bathing, the German spa-waters, &c.—the many wealthy and fashionable people who prefer this place as an autumnal and winter residence—the crowds of retainers following them—the hosts of mendicants and impostors, who scent their prey from afar—the constant immigration during the same season of poor people from all quarters in search of employment, many of whom, helpless and ill, are compelled to seek an asylum in the workhouse, and die there, as the records of the house testify, within a short time after their admission. I repeat, when all this is considered.

it is plain that a large deduction of strangers should be made for the whole mortality. But since only those who are known can be deducted, and that servants and labourers cannot be included in the number, because they are not known, it is equally plain that the mortality registered by the registrars, after all deductions made, will still greatly exceed that of the permanent population.

The ratio of mortality to the number of sick among the poor is to be sought for in the records of the parish infirmary, and of the hospital, and from the returns of the parish medical officers. The ratio of mortality from different diseases to the whole population is found in the registrar's books.

TABLE of the Proportion of Deaths to the Number of Sick Poor.

		Resi- dents.	Deaths.	Stran- gers.	Deaths.	Total Admis- sions.	Total Deaths.	Ratio.
For 1 Year.	{ Parish Infirmary	199	34	86	22	285	56	1 in 5
	{ West District .	328	20	32	..	360	20	1 in 18
	{ East District .	192	10	46	4	238	14	1 in 17
For 2 Years.—Hospital		370	43	356	21	726	64	1 in 11·3
Total . .		1089	107	520	47	1609	154	1 in 10·4

The great mortality in the infirmary is thus accounted for. In the first place, two-fifths of the deaths occurred in persons upwards of 50 years of age; and secondly, of the strangers admitted, the majority were labouring under severe diseases at the time, had been suffering great privations, or were broken down by age and infirmity.

In the hospital the number of residents and strangers in the two years was nearly equal; the rate of mortality of the former is 1 in 8·6; of the latter 1 in 17, being 2·1 in favour of the strangers. This disproportion is accounted for, first, by the fact, that of cases of scrofula, affections of the bones and joints, and paralysis, diseases of a chronic nature, not likely to terminate fatally in a short time, 120 were strangers, and only 39 inhabitants; and, secondly, because many urgent and severe cases of disease are constantly and readily admitted from the town, but cannot be brought in from the country. The ratio of mortality here quoted does not include accidents, and many other surgical cases; including admissions of all kinds, they amounted in two years to 1222, of which 80 died, being 1 in 15·25.

In the following abstract of deaths from the registrar's books, I have included a period of two years from the 1st December, 1837, to November 30, 1839, both inclusive. This was done for the purpose of showing the comparative mortality at different seasons.

A TABLE, exhibiting the Deaths, from Epidemic and other Contagious Diseases, and from those of most frequent and fatal occurrence at Brighton, from 1st December, 1837, to November 30, 1839, both inclusive, the whole mortality for the two years amounting to 1779.

Area of the Town in Acres.	Population according to Census of 1831.	Families in 1831.				
		Employed chiefly in Agriculture.	Chiefly in Trade, Manufactures, and Handicraft.	Other Families.	Total.	
600	40,634	106	5146	3356	8608	
			Males.	Fem.	Total.	Proportion to Population, & Deaths.
Epidemic, Endemic, and Contagious Diseases.	Typhus	13	14	27	1 in 1505	1 in 67
	Synochus, or Typhoid Fever	16	9	25	1 in 1625	1 in 71
	Small-pox	14	9	35	1 in 1767	1 in 77
	Measles	32	26	58	1 in 701	1 in 31
	Hooping Cough	28	37	65	1 in 625	1 in 27
	Scarlatina	12	5	17	1 in 2390	1 in 105
	Croup	9	10	19	1 in 2138	1 in 94
Of the Nervous System.	Erysipelas	2	4	6	all under 14, except 1 adult female.	
	Eucephalitis	24	13	37		
	Hydrocephalus	31	24	55		
	Apoplexy	16	16	32		
Of the Organs of Respiration.	Paralysis	14	15	29		
	Convulsions	83	50	132	100 under 2 years, 27 from 2 to 14 years, and 5 adults, 2 m. and 2 fem.	
Of the Organs of Digestion.	Inflammatory Diseases	52	54	106	63 under 2 years, 21 from 2 to 14 = 84; nearly 7-9ths under 2 years.	
	Phthisis	155	180	335	3 under 2 years and 2 under 15.	
Of the Organs of Digestion.	Diseased Heart	14	8	22		
	Teething	31	17	48		
	Inflammation of Stomach & Bowels	40	36	76	20 males and 20 fem. 40 under 15.	
	Dropsy	29	32	61		
	Atrophy and Debility of Infants	63	44	107	{ 33 males and 20 females transferred from decline, being under 1½ yrs.	
	Decay and Age	62	66	128	{ 3 males and 1 female transferred from decline, being above 75 yrs.	
	Scrofula	m. f. { 2 5				
Tabes Mesenterica	{ 11 11	13	16	29	of which 3 adults of Scrofula.	
		752	685	1437	Remain of other diseases and violent deaths, 342.	

The results of the foregoing table are highly satisfactory as respects the prevalence of epidemic and contagious diseases in general, but of fever in particular. It cannot be objected that the two years included in the table may have been healthy beyond what is usual; the contrary may probably be affirmed. The medical officers of the public institutions before mentioned, consider that there has been more fever during the last twelvemonth than usual. Mr. Philpott, a gentleman of extensive practice among the middle classes, states that he treated more cases of typhoid fever last year than any two previous years for 15 years.

The greatest mortality at any age is under two years. This appears to be the case in all large towns. At Brighton the proportion for the two years is a fraction less than the third of the whole deaths, 3.6.

Out of 493 deaths in infants under 2 years of age, I could find only 13 which happened among the children of people in easy

circumstances. Hence the great mortality of the children of poor people under two years must be mainly owing to neglect in nursing, or bad management in weaning, or improper food, or exposure, or the want of early medical advice; perhaps, in some instances, to all these circumstances combined. I feel assured that the comparative security of children in a better situation of life is attributable to the better care taken of them, and to prompt and judicious medical assistance upon the very first signs of disordered health. This opinion receives some support when we look at the enormous amount of deaths from atrophy, debility, convulsions, and the inflammatory diseases of the organs of respiration and digestion in infants under two years of age. This subject deserves the serious attention of the legislator and the philanthropist. The evil is by no means confined to places where large factories are established.

The proportion of deaths from phthisis, or pulmonary consumption, it will be observed, is exceedingly high; and as this is a subject of deep interest, it is worthy of special attention. It is the more so just now, as the commonly received opinions regarding the influence of climate in producing it have been shaken, in no slight degree, by Major Tulloch's reports from all parts of the world.

In the following table I have separated, as far as could be done, the strangers from the residents, in order to ascertain to what extent phthisis may be an indigenous disease; but servants and labourers are included among the residents, as it could not be determined whether they were strangers or residents.

A TABLE of Deaths from Decline, Consumption, or Phthisis, extracted from the Registers, from the 1st December, 1837, to November 30th, 1839, both inclusive.

District.	First Year.						Second Year.					
	Residents.		Strangers.		Total.		Residents.		Strangers.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Kemp Town District . . .	13	11	2	7	15	18	18	8	4	2	22	10
Palace District . . .	30	33	2	10	32	43	16	22	..	4	16	26
North District . . .	47	49	2	7	49	56	55	48	1	1	56	49
Total . . .	90	93	6	24	96	117	89	78	5	7	94	85

General Total 392

Deduct Visitors 42

350 Residents.

Of 350 residents, 33 male and 20 female infants under $1\frac{1}{2}$ year old, and 3 males and 1 female upwards of 75 years, were registered under the head of decline; in all 57. These have already

been transferred to another table. There remain, therefore, 293 cases to be accounted for. Now, from the whole number of deaths, 1779, I subtract 148 well known as non-residents, and leave a remainder of 1631 residents; therefore 223 : 1631 :: 1 : 3.5.

But of the 293 cases registered as decline, consumption, or phthisis, 66 (36 m. 30 f.) were from 2 to 15 years of age; and 44 (21 m. 23 f.) were above 50 years = 110. No doubt many of these deaths were from tubercular phthisis. Nevertheless it may be safely inferred, from past experience, that two-thirds of them were from other diseases.

It must be recollected that the cause of death is generally put down upon the authority of parents, or friends, or nurses,—very seldom of medical men; and that the popular term, “decline,” affixed to these cases, is employed to designate all kinds of diseases attended with a wasting of the body. If the proposed deduction be admitted, which I think reasonable, the rate of mortality from phthisis, among the permanent inhabitants of Brighton, will be reduced to 1 in 7; a proportion which has been observed in other parts of the island. And when we consider that we live in a large town, where many circumstances favouring the development of a tubercular diathesis are not wanting, it cannot be expected that we should escape our share of this scourge.

I do not find that any one particular trade or occupation furnishes more victims to this cruel malady than another. The highest rate of mortality of the males occurs among persons under the denomination of “labourers.” These poor fellows have various employments. They are exposed to great privations and poverty, and their labour is often of a kind injurious to health. The lowest mortality, on the other hand, or nearly so, is among sailors, fishermen, shrimpers, boatmen, and others engaged in maritime occupations. These people constitute the most numerous class of persons following any special business or trade. They are probably not much inferior in number to the common labourers. In the register, the trade or calling of every person is regularly specified, but there is no mention of “fishermen” under the heads of “decline,” “consumption,” or “phthisis.” Three deaths are recorded from phthisis, among sailors, and 26 among labourers. This, at least, is a negative proof that a maritime climate, *cæteris paribus*, neither gives a predisposition to nor causes phthisis. The tubercular diathesis, as I believe, when acquired, is mainly owing to a deteriorated condition of the body, called by physicians “cachexia,” which is induced in our cold humid climate by impure air, unwholesome food, want of sufficient clothing and fuel, and living in dark, crowded, and ill-ventilated apartments.

The same circumstances suffice to produce tubercular deposits in animals. It is possible that the exemption from phthisis among fishermen and other seafaring persons, may be owing, in some degree, to their living so much in the open air; but in this respect

the inhabitants of Brighton, generally, enjoy greater advantages than those of other towns of equal population. There are few manufactories, and the trades carried on are only such as are necessary to the accommodation of the public.

Upon the comparative mortality from various diseases, at different seasons of the year, I have not had time to collect a sufficient number of facts to afford satisfactory data on which to establish any conclusion. The subject is interesting, and deserves attention. The observations should be made at different places at the same time. The following table exhibits the relative mortality of certain diseases at different seasons, and likewise the mortality from diseases of all kinds:—

Rate of Mortality for the Seasons of the Year.

Disease.	Spring.	Summer.	Autumn.	Winter.	Total.
Typhus . . .	5	4	9	9	27
Synochus . . .	4	7	3	11	25
Phthisis . . .	93	120	81	98	392
All Diseases . .	443	384	478	474	1779

Fevers of all kinds, according to former returns, including the gastro-catarrhal fevers of children, occur more frequently in the winter and spring than in the summer and autumn, in the proportion of 7 to 1, whereas the deaths are not very unequal. The greater mortality from phthisis in summer is probably owing to the disease having been contracted during the cold season, and being of a chronic character, had not exhausted the patient till summer came on.

The excess of deaths during the autumn is partly accounted for by the mortality from hooping-cough in the year 1839; but the latter end of autumn appears by the registers to be very fatal to old and decrepid persons, while the deaths from bowel disorders exceed those of all the rest of the year from the same affections.

So far as the sanitary state of Brighton may be inferred from the short periods included in the different returns I have been able to procure, the facts adduced in this report may serve to give an approximate estimate of its general salubrity; but I am well aware that a more copious induction of facts, from observations made during a series of years, would be necessary to establish any positive conclusions.

With respect to the subject of fever, it appears, not only by this report, but by the concurrent testimony of all the medical practitioners conversant with the diseases of the labouring classes, that we really have very little of it.

For this comparative exemption I believe we are indebted to the advantages of a good soil, thorough and constant ventilation, a dry surface, the out-of-door habits of the people, and the great care taken to save the poorest classes from destitution and disease,

by abundant charitable aid at all times, and by the establishment of numerous institutions for relief during sickness. It would not be safe to presume upon this immunity however. The causes supposed to generate and give extension to fever are not wholly wanting. They may not exist in a degree of intensity sufficient to cause fever, but I believe they contribute largely towards other forms of disease. Thus, after years of great scarcity, or other public calamity, there are predisposing causes enough, both independent of the poor and dependent upon their habits, to give rapid diffusion to typhus fever, should it be manifested at such a juncture. Times of scarcity are greatly to be dreaded in all climates and places, for by obliging people to live on unwholesome food they often prepare the way for the most malignant diseases. The various epidemic fevers, called nervous, typhus, and petechial, which have at different times desolated the Genoese, Lombard, and Tuscan States, succeeded to seasons of great dearth, "*carestia di ammoni.*"

Even in the southern States of Italy, where typhus fever is rare, and the tendency in other fevers to degenerate into a typhoid character uncommon, both the one and the other have committed great ravages after years of famine.

Upon the subject of the cause and extension of fevers I can add little or nothing to the very able reports already published. I would merely remark, that under the head of typhoid fever several distinct types of fever appear to have been occasionally confounded. There is a primary form of typhoid fever which is only a milder form of typhus, the contagious nature and the exanthematous character being alike during life, and the morbid appearances the same after death. There is also a secondary form, in which the typhoid or malignant symptoms appear to be ingrafted upon other fevers without the intervention of contagion, but depending upon predisposition, or a bad habit of body.

The typhus and typhoid fevers which prevail endemically and epidemically in the large towns of the British islands, and indeed in all large towns of the north of Europe, I regard as modifications of the same disease, in the same way that intermittent, remittent, and pernicious fevers are modifications of the same disease, produced by paludal miasmata. The differences are more in degree than in kind. The major part of the typhoid fevers occurring epidemically might be designated as typhus in a milder form. Fevers of this kind have been known from the earliest ages. It has been argued with great ability, against the celebrated author of the *History of Medicine*, Sprengel, that the plague at Athens, so graphically described by Thucydides, was a highly malignant typhus fever. The doctrine of the exanthematous character of this disease, first taught by Professor Von Hildenbrand, of Vienna, and now adopted by many able physicians of this country, somewhat favours this opinion. The fact likewise of its being a con-

stant attendant upon war, whence the term *pestis bellica*, of the middle ages, and as constant a follower of famine *λοιμὸς μετὰ λιμόν*, makes it probable that many of the pestilences we read of in history were no other than malignant forms of typhus fever.

Under peculiar circumstances a fever of this kind may arise spontaneously, and once generated, may afterwards be propagated by a contagious poison. The rapid diffusion or slow progress of typhus fever will depend much upon the predisposition of the population. Its ravages are frightful among a poor half-starved people after seasons of scarcity, amidst the horrors of war, in besieged towns, in ships, camps, gaols, hospitals, and all other places where human beings, the healthy and the sick alike, are too closely crowded together in a confined, humid, stagnant atmosphere. Abject poverty, desperation, excessive filthiness, and intemperance, likewise favour the development of typhus fever.

But there are other forms of fever distinct from that just mentioned, the bilious, or gastro-hepatic, the mucous, or gastro-enteric, the catarrhal, the rheumatic, and the hectic, all occurring often in this country, in which, if typhoid symptoms do occur, for they are by no means constant, and under favourable circumstances not frequent, they are purely secondary, and are to be regarded as accidental complications dependent upon predisposition.

The typhoid tendency is rarely seen in fevers with a topical phlegmon, or after accidents, wounds and operations, with the exception of inflammations of the veins, unless the constitution be greatly debilitated, or the predisposition very strong. Such a predisposition is sometimes owing to unknown atmospheric influences, or what is technically called the epidemic constitution of the season, when all the fevers, epidemic, endemic, and sporadic, in a district, contrary to their usual custom, will take on a typhoid character. The predisposition, however, is generally found in subjects of feeble health, of bad habit of body, for example in persons, especially females, worn and exhausted by previous disease, deprived of sufficient nourishment, or disordered by food of a bad quality, oppressed with the cares and anxieties of a numerous and ill-provided family, liable to chronic neuroses, and living in low unhealthy districts, exposed to various impurities of the atmosphere—all of them causes tending to pervert the healthy vital functions, to introduce changes in the composition of the fluids and solids, and thereby to weaken that power of resisting noxious agencies with which the body is endowed in a state of health.

A good medical police, joined to a careful and judicious administration of the means provided for the wants and comforts, as well as the health of the poor, will effect a great deal, not only in preventing the diffusion of fever, but in removing many of the causes supposed to engender it.

A Board of Health might be a very useful establishment in large towns, which would take cognizance of all matters affecting

the public health, and whose duty should extend to the inspection of the quality of provisions exposed for sale to the lower orders. The corporation or the commissioners should be empowered, upon the Report of the Board of Health, to carry their recommendations into effect.

I find that the commissioners of this town cannot interfere in many instances, unless a memorial be presented, complaining of a public nuisance. It should not be so left. We all know how long the indifference and indolence of people will lead them to put up with serious inconveniences, nor will they be stirred to exertion until the mischiefs to be apprehended are at their very thresholds. The public health is of the last importance, and would be best secured by the appointment of persons responsible for the strictest attention to it.

In the construction of houses, and the place chosen for them, the working classes should not be left to the mercy of speculators. In any future Building Act, care should be taken to insure a good supply of water, thorough drainage and sewerage, and free ventilation.

There are two things for the most part not sufficiently attended to in constructing buildings for the poor, viz., the admission of solar light, and the proper place for cesspools. Darkness is injurious to feeble lymphatic subjects; it produces pale bloodless faces and flabby flesh. There is reason to believe that the scrofulous and tubercular diatheses may be developed under its influence.

Cesspools should never be made underneath a dwelling, nor in a situation where they might contaminate the springs. These reservoirs should be kept carefully closed, and, except in warm moist weather, should be emptied as often as required.

Burying-grounds, slaughter-houses, boiling-houses, and certain manufactories and trades, which produce noxious and offensive effluvia, should be removed beyond the precincts of every town.

No trifling benefit may ultimately be obtained by instructing the industrious classes in the art of preserving health. Above all things they should be impressed with the necessity of attending to cleanliness in their persons and dwellings; and that for the preservation of life and health, not even an abundance of the necessaries of life can compensate for the want of fresh pure air.

I have the honour to remain, Gentlemen,

Your most obedient humble servant,

G. S. JENKS, M.D.

*To the Poor Law Commissioners,
Brighton, April 5, 1840.*

No. 5.

ON COTTAGE ACCOMMODATION IN THE UCKFIELD UNION.

By H. H. NEWNHAM, Esq., *Auditor*.

GENTLEMEN,—Before the commencement of the audit for this last quarter, a circular was forwarded to me in which I was requested to investigate the dwellings of the labouring classes in reference to the following points:—

First, “As to the common cost of erection and average rate of repairing each description of cottage tenements.”

The common cost of erection will average from 40*l.* to 60*l.*; and 1½ per cent., where the cottages are well looked after for the first 21 years, will be the extent of the repairs.

The original expense of the erection varies: much will depend on its locality,—a vicinity to, and a facility for, obtaining stone, will materially diminish the expense; so will also the thinning of a plantation of larch, where the trees are a mere drug, by which rafters, joists, and quartering are obtained with great facility and at a low rate.

Secondly, “As to the rents.”

These by no means depend on the amount of capital invested—the same principle governs the value of property throughout the country—it is the situation, and the advantages incident to that situation, by which the rent of a cottage is mainly regulated.

I could point out cottages built of bricks, with slated roofs, containing kitchen, wash-house, pantry, and two bed-rooms, with pig-pounds and every convenience, in addition to 20 rods of garden ground, which let for 4*l.* per annum; and others, containing but one bed-room, one kitchen, and a lean-to for a wash-house, costing 40*l.*, which are eagerly tenanted at the same rent.

A high, dry, and warm situation, with what is called “a good run” for chickens is considered a very great acquisition; and the profits derivable from that source of a cottager’s income may be in some degree estimated by the fact, that the gross returns of one dealer in chickens in this neighbourhood are equal to 1,200*l.* per annum.

As soon as the London season commences, or rather some time after game is out of season, about March and April, the careful cottager’s wife will obtain from 5*s.* to 6*s.* a couple for her chickens: three broods at that season will pay the whole rent.

If, in addition to this, a common right is attached, where they can have the run of a flock of geese, the profits are still further increased. I had a man pointed out to me who last year reared 21 geese, and sold them at 3*s.* each. Sometimes, in addition to this, a privilege of cutting litter on the waste is added: one or two pigs are kept, the manure made by them is sold to the farmer, and in part purchases the means by which the animals are fattened; when killed, they are either salted down for consumption, or sold to the shopkeeper to pay for grocery.

These are points which often escape the observation of those who sit down to calculate how it is possible for a labourer to subsist on 12s. a-week; and I advert to them more particularly because they may be equally overlooked in calculating the means by which a labourer may pay his rent.

I had almost forgotten to add, that often there is the privilege of cutting turf on the waste; and as this is much used for fuel in some parts of the union, it is a source of employment and profit to the labourer when he is not otherwise engaged. My attention was drawn to this long before the Poor Law Amendment Act was passed; turf-cutters were then almost always what was termed "on the road;" there was no supervision; they came and went when they pleased, for which they were paid 8s. a-week; they worked early and late, by which they earned 12s. per week more—netting 20s., while the labourer who received no parochial employment was struggling to obtain 11s. Fortunately, this is now a matter of history. I should not have referred to it, but that it is another item which regulates cottage rent.

I trust that these facts will show that it is not therefore the mere "cost of erection," or the description and size of the cottage, which regulates rent.

The proportion paid by way of rent on a labourer's total expenditure may average about 10 per cent.

There are a few instances in this union where the employers of labour have erected a better description of cottage containing three bed-rooms, viz., one for the man and his wife, one for the boys, and one for the girls, with the laudable intention of creating greater habits of delicacy among them; but unless the domestic arrangements of the cottage are under the constant supervision of the master or mistress on whom the family is dependent, I have reason to know that the mere construction of the cottage will not produce the desired effect; the prospect of obtaining a lodger at 9d. or 1s. a-week is too great a temptation, and boys and girls are immediately jumbled together in one room to make way for the inmate.

This result shows that no "Building Act" will ensure propriety in the domestic economy of the lower classes; the only way in which an Act of the description referred to could operate beneficially would be in the towns, by the proper construction of the drainage and ventilation, and by the appointment of an "inspector of health" for particular districts, invested with powers to ensure proper precautions in the event of any contagious or infectious diseases being manifested.

In the district comprised in this union, there is no prevalent disease which may be attributed to the soil, such as malaria, &c.; but a person who has considered the subject cannot have failed to remark that whenever there is any epidemic, or a pressure by which the labouring classes are abridged of their usual diet, then all those who live on a low and clayey soil, particularly such as

have brick paving to the cottage, and sleep on the ground-floor, are among the first to suffer, those on high and sandy soils the last.

As regards the moral effect produced on the labouring classes by the erection of cottages, I may observe that all *double* cottages should be avoided; and where, as is sometimes the case, an old farm-house is divided into three or four tenements, the effect is still worse; that sense of propriety which is innate and seldom absent from the isolated family, is soon destroyed by the society of the younger branches of opposite families, whose heads are not always present to correct any tendency to impropriety, or, as it may happen, would wink at the misconduct of the younger branches of his neighbour's family without reflecting, or possibly heedless of, what its effect may eventually have on his own.

With reference to the rating of the tenements, it may be observed that *here* the exemption from rates is grounded on the inability of the occupier, and not so much on the description of the property occupied. I think it would be a most salutary measure if the legislature could be induced to pass an Act authorizing the guardians (at their option) to require the overseers to assess all landlords to the rates where the rent does not exceed 10*l.* per annum.

I have, &c.,

H. H. NEWNHAM, *Auditor.*

*To the Poor Law Commissioners,
Uckfield, 27th January, 1840.*

No. 6.

ON THE SANITARY STATE OF THE COUNTIES OF BERKS, BUCKS,
AND OXFORD.

By W. H. PARKER, Esq., Assistant Poor Law Commissioner.

THE effects of the external atmosphere and exposure to weather do not so much operate to the injury of the health of the labouring classes in the rural districts as the state of the atmosphere in their dwellings. In parts of the country visited by me, where the cottages are good, and fuel is cheap, a general good state of health amongst the working classes is observable; whilst in other parts, where the cottages are inferior and firing is scarce, the labouring classes appear to be susceptible to complaints of an epidemic character. The drainage of surface water is a most important task for improving the climate of a district, but can scarcely operate to the benefit of the health of the labouring classes so long as the internal atmosphere of their cottages is charged with noxious vapours arising from damp or imperfect drainage, and decaying vegetable and animal substances. The effect of damp upon the constitution is often noticed in districts where the cottages are well constructed and the people remark-

able for the cleanliness of their habits, with ample means to procure the necessaries of life.

This is the case more particularly in some parts of Berkshire, and from inquiries made by me, I am induced to believe that the means taken to preserve cleanliness and the health of the inmates are the cause of sickness. The floors of the cottages are laid with red tiles, called "flats," or with bricks of a remarkably porous quality; and as each of these tiles or bricks will absorb half a pint of water, so do they become the means by which vapour is generated. The cleanly housewife, who prides herself upon the neat and fresh appearance of her cottage, pours several pails of water upon the floor, and when she has completed her task with the besom, she proceeds to remove with a mop or flannel so much of the water as the bricks have not absorbed.

After having cleansed the cottage, the fire is usually made up to prepare the evening meal, and vapour is created by the action of the heat upon the saturated floor. Thus the means adopted to purify the apartment are equally as injurious to the health of the inmates as the filth and dirt frequently too abundant in the cottages of labouring persons.

Those who are ignorant of the habits and dwellings of our rural population 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 uncleansed 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 indispositions amongst the inmates. At Long Crendon, near Thame, the state of these conveniences is as injurious to the health of the inmates of the adjoining cottages as the heaps of decaying animal and vegetable matter at the cottage doors. Fever is usually endemic in this parish, and during the past year the mortality has been alarming. Mr. Caporn, relieving officer of the Thame union, has taken some pains to point out to the inmates the cause of this mortality, but has not succeeded in obtaining the attention due to the importance of the subject.

In the parish of Shotteswell, in the Banbury union, fever prevailed

amongst the inmates of a row of cottages to such an unusual extent as to induce the guardians to institute inquiries to discover the proximate causes of the numerous cases occurring there. The medical officer (Mr. J. Wise) reported, "immediately in front of the houses containing five of the patients, a privy is situated which empties its contents on to the surface of the garden instead of into a sewer; this is exposed to a southern sun, and the stench produced is often intolerable. There is also a large drain blocked up, the contents of which are in a state of decomposition; these are probably the causes of the prevailing infectious epidemics, and, I think, require immediate attention." I could mention other instances of fever occurring under similar circumstances, but I know of none in which the consequences have been so serious as in the parishes above mentioned; at Long Crendon the severity of the epidemic has been particularly alarming during the past winter; few families have escaped its effects, and many have lost more than one member. An aged man who applied to the Board of Guardians for assistance to enable him to bury a son, stated that he had lost by the prevailing fever fourteen children and grandchildren, and this statement was corroborated by the relieving officer, who had made arrangements for lime-washing the cottages where this mortality took place.

I have also had brought to my notice the prevalence of fever in situations where the blood from slaughter-houses runs into stagnant ditches. Mr. Smellie, the medical officer of the Shipston-on-Stour union, mentioned to me three instances of fever from this cause in villages in the neighbourhood of Shipston-on-Stour; and Mr. Blick, medical officer of the Bicester union, mentioned two instances of disease generated from the same cause.

The improper materials of which cottages are built, and their defective construction, are also the frequent cause of the serious indisposition of the inmates. The cottages at Waddesdon, and some of the surrounding parishes in the Vale of Aylesbury, are constructed of mud, with earth floors, and thatched roofs. The vegetable substances mixed with the mud to make it bind, rapidly decompose, leaving the walls porous. The earth of the floor is full of vegetable matter, and from there being nothing to cut off its contact with the surrounding mould, it is peculiarly liable to damp. The floor is frequently charged with animal matter thrown upon it by the inmates, and this rapidly decomposes by the alternate action of heat and moisture. Thatch placed in contact with such walls speedily decays, yielding a gas of the most deleterious quality. Fever of every type and diarrhœa are endemic diseases in the parish and neighbourhood. Next to good drainage and thorough ventilation, the foundation of a cottage is the most important consideration. A foundation, to be good, must not only be sufficiently strong to bear the superstructure, and of sufficient depth to cut off all connexion with the surrounding vegetable mould and

that beneath the floor, but also be constructed of materials calculated to resist moisture. The best materials for this purpose are concrete and sound bricks, partially vitrified in the kiln or clamp. If such bricks be well laid with mortar composed of sharp sand, containing no vegetable substances, and the concrete be free from earthy particles, well mixed, and firmly thrown together, the admission of damp will be entirely avoided. Stone, chalk, bricks, which are not thoroughly burnt, impure mortar, and wood, have all a tendency to absorb moisture, which, if once received by such materials, ascends, or "creeps up," as it is technically called by builders, and thus affects the whole building. To avoid this "creeping up," builders are in the habit of placing a tire of slate in foundations above the surface mould, a remedy of a temporary character only, for the action of damp entirely destroys slate. Roman cement has also been used for this purpose, but the sand mixed with this material renders it in some degree porous. It has lately been suggested that a course of well-burnt bricks set in asphalte would effectually prevent this absorption of surface-water, and a favourable opinion of this plan has been expressed by two intelligent architects.

Under the old system of Poor Law administration the officers of rural parishes were in the habit of purchasing small tenements for the occupation of the labourers, and the recipients of relief. It was considered that they were bound to provide cottages for the parishioners, and hence the overseers were ever ready to burden the parish with the purchase of such unprofitable property. The rent of such cottages was seldom paid, and it was not likely that it should be, for overseers could not spare time and labour to collect it, and moreover, could not be expected to bear with the insults which invariably attended such demands upon persons who looked upon their occupation as a right. The occupants were careless of the property, which usually fell into the most dilapidated state, when the parish officers were obliged to patch it up, and render it habitable again. Many parishes still possess property of this description. The overseer of South Stoke, in the Wallingford union, told me "that the parish possessed three little cottages, like huts. The occupants are allowed to live there rent free. These cottages are built of wattle and dab, with hardly enough thatch upon them. The inmates have suffered severely from influenza."

The overseer of Warborough informed me "that the parish had 13 cottages, all very wretched places, and in a very filthy, dirty state; the windows are broken, and the floors are rough and patched up with stone and rubbish. The village is very dry, otherwise such places would be productive of fever."

"At North Moreton," says the overseer, "there are 20 parish tenements which were built of dirt by the parish; they were built because the overseers could not find places for the poor. Fever

prevailed there about two years since, and entailed a great expense upon the parish."

The parish of Middleton Cheney, in Oxfordshire, possessed 38 cottages, occupied by poor people, who made their dunghills in front of the doors. The windows of the cottages are much broken, although they are frequently repaired; and the inmates sometimes burn the wood-work. One of the inmates who paid no rent, actually pulled up part of the flooring for firing, and considered himself aggrieved at being committed to prison for this wilful destruction of the property.

At Hornton, Mr. Charlton, a relieving officer of the Banbury union, informed me "there are about 25 parish cottages in very bad repair, and many of the inmates have been attacked by typhus fever. The inmates destroy the cottages, and refuse to pay rent. The parish would put them in repair if the inmates would pay rent. In one of them the rain came in so much a short time since that the people could not remain in bed."

At Kirtlington, near Oxford, I visited a parish house called the College, inhabited by five families. It is a large building, containing eight good sized rooms, two of which are uninhabitable from accumulated filth, combined with defective drainage, and the destruction committed by the occupants. The doors, wood-work around the fire places, window-frames, and laths to which plaster had been attached, had been removed, probably for firing. In one of the apartments there were three persons suffering from typhus fever; in another, one person; and in a third room, two more; whilst in a fourth apartment two patients were convalescent. I inquired how it was that there was no glass in one of the windows, and an old woman replied, there never had been any within her recollection. Mr. Blick, medical officer of the Bicester union, who was present, contradicted the statement, saying he recollected the glass in the frame, and that not long before; subsequent inquiries proved that the windows had been repaired over and over again by the parish authorities, and as frequently broken by the boys of the village throwing stones at the old woman for ill-treating her husband, a practice in which she indulged whenever she was intoxicated.

But not only are parish cottages the frequent cause of fever arising from their defective construction and dilapidated state, but also from the manner in which the inmates are crowded together. The most dependent parishioners still claim a right to enter such cottages, professing to believe that they are entitled to shelter within the parish boundaries. At Monks Risborough there is a parish cottage of four small rooms, in which 14 persons are lodged;—a man with his wife and children, three old men, and a girl with a bastard child; the girl is a notorious prostitute, and receives men there in the day and night. At Hambleton (Bucks) the inmates of the parish cottages, says Mr. Lord, the respectable guardian of that parish, provide refreshment for all the bad cha-

acters of the neighbourhood at any time of the night. And at Little Marlow, the parish house which, though recently in good repair, is now in the most dilapidated condition, is the resort of all the evil-disposed persons of the neighbourhood, and some of the inmates have lately been detected taking an active part in the robberies committed in the neighbourhood.

In every instance of a sale of such property, I have found the cottages repaired, and the appearance of the inmates much improved. The parish of Blewbury, in the Wantage union, sold four mud cottages in which there were no windows. These cottages have been repaired by the present owner, and the tenants are careful to keep them in good condition. In the parish of Upton a sale has also taken place, and has been succeeded by similar improvements. This is not the case in one or two parishes only, but in every instance of the sale of such property with which I am acquainted.

These improvements in the cottages will prevent much illness, and tend to elevate the character of the inmates.

It is usual to insert in local Acts for the regulation of towns a clause prohibiting the use of straw and similar vegetable substances for roofing; and it appears to me to be desirable that some provision should be made for the rural districts, by which the thatch of cottages, when in a decomposed state, might be required to be removed. In the parishes of Binton, Dorsington, and Long Marston, in the neighbourhood of Stratford-on-Avon, simple continued fever, described to be similar in character to the form of fever which frequently occurs in the autumn and beginning of winter throughout England, prevailed very extensively in the winter of 1839. Of 31 patients attacked by it, seven died. Dr. Thompson, of Stratford-on-Avon, the physician who visited all the cases by the desire of the Board of Guardians of the Stratford-on-Avon union, observes:—"As almost all the cottages in which there has been fever are thatched, and the thatch in many of them is in a very rotten and insufficient condition, it is not improbable that slow decomposition in the thatch, from the unusual quantities of rain which has fallen, may have been going on, and contributed to the production and continuance of fever. It has been observed by others, I believe, that it is more difficult to get rid of fever in thatched than in slated cottages." Dr. Thompson also remarks, that in thatched cottages it is not usual to ceil or plaster the inside of the roof; and he recommends that this should be done, and that the plaster should be lime-washed once a-year.

With regard to the drainage of the towns in the counties of Buckingham, Oxford, and Berks, it may be observed that there is no town in which great improvements might not be effected. In Reading there are commissioners appointed under a local Act to make provision for cleansing the town and removing nuisances; but their duties do not appear to be performed with

due regard to the importance of the trust, for the Board of Guardians of the Reading union, by resolutions entered in their minutes, frequently point out nuisances, and remind the commissioners of the filthy condition of many of the courts and back streets. But extensive as the improvements in the state of the drainage of almost every town in these counties might be, there is no town amongst them in which there is so wide a field for improvement as Windsor, which, from the contiguity of the palace, the wealth of the inhabitants, and the situation, might have been expected to be superior in this respect to any other provincial town. Such, however, is not the case; for of all the towns visited by me, Windsor is the worst beyond all comparison. From the gas-works at the end of George-street a double line of open, deep, black, and stagnant ditches extends to Clewer-lane. From these ditches an intolerable stench is perpetually rising, and produces fever of a severe character. I visited a cottage in Clewer-lane in which typhus fever had existed for some time, and learnt from a woman who had recently lost a child the complaint was attributable to the state of these ditches. Mr. Bailey, the relieving officer, informs me that cases of typhus fever are frequent in the neighbourhood; and observes that there are now seven or eight persons attacked by typhus in Charles-street and South-place. He considers the neighbourhood of Garden-court in almost the same condition. "There is a drain," he says, "running from the barracks into the Thames across the Long Walk. That drain is almost as offensive as the black ditches extending to Clewer-lane. The openings to the sewers in Windsor are exceedingly offensive in hot weather. The town is not well supplied with water, and the drainage is very defective." The ditches of which I have spoken are sometimes emptied by carts; and on the last occasion their contents were purchased for the sum of 15*l.* by the occupier of land in the parish of Clewer, whose meadows suffered from the extraordinary strength of the manure, which was used without previous preparation.

The state of these ditches induced me to apply to Dr. Bryan to survey them, and favour me with his opinion of their condition and the consequent effect upon the health of the inhabitants. The following is the report received from him:—

“ Slough.

“ SIR,—At your request I forward you a brief statement of my opinion as to the present condition of the drainage of the town of Windsor, and of its probable effect upon the health of the inhabitants.

“ Under the existing state of the channels which receive the refuse matters from the different houses of the town, every condition necessary to an abundant generation of noxious effluvia is to be found. The channels themselves are too broad and too numerous, thereby presenting an extensive surface to the action of

the atmosphere, and materially increasing the decomposition of the matter they contain; their number and breadth also lessen the current through them, and offering so large a surface for evaporation, render their contents nearly stagnant, and of that semifluid state under which the putrefactive process goes on most rapidly.

“ Their situation also is such that none but the westerly and southerly wind can reach them; and then, accompanied as they generally are by a moist and warm state of the atmosphere, carry any miasm which may be formed by the decomposition of the animal and vegetable matters contained in these reservoirs through or over the town itself. The result of this state of things must be to render fever more or less prevalent, and to give a lower and more severe type to any epidemics with which Windsor may be visited. The locality of the town is, however, such that the evils above mentioned might be remedied speedily, and without any considerable expense.

“ I have, &c.,

“ T. B. BRYAN, M.D.

“ *To H. W. Parker, Esq.*”

The character of the fever prevalent in the neighbourhood of these ditches is usually extremely severe, and the relief given to the persons attacked is necessarily expensive, inasmuch as the nursing of such patients requires remuneration proportionate to the risk. The heavy expenditure which such cases entails upon the parishes, induces me to think that an efficient system of drainage would be an economical measure as regards the relief of the poor, independent of any other consideration.

I have, &c.,

W. H. PARKER,

Assistant Poor Law Commissioner.

To the Poor Law Commissioners.

No. 7.

ON THE DWELLINGS OF THE LABOURING CLASSES IN THE
COUNTIES OF GLOUCESTER, HEREFORD, MONMOUTH,
SALOP, WORCESTER, BRECKNOCK, AND
RADNOR.

BY SIR EDMUND HEAD, BART.,

Assistant Poor Law Commissioner.

GENTLEMEN,—In compliance with your circular of the 1st of November, 1839, I have employed myself in obtaining information respecting the dwellings of the poor within my district, and the other topics connected therewith. The result of these inquiries I have now the honour to submit to your board.

It appeared to me that any statement on such a subject which should be equally applicable to the whole of my unions, must

necessarily be so vague as to convey little or no information. On the north and the south-west, the unions under my care border on two of the most important of our manufacturing districts, while in the centre they are of a purely agricultural character.

The condition of the labouring poor in towns, too, differs materially from that of the same class in the country. I have, therefore, thought it well to arrange the places to be reported on into certain groups.

The first of these will consist of large towns, or manufacturing districts so thickly populated as to resemble towns in their circumstances, and comprises the following places:—No. 1. Borough of Cheltenham, city of Gloucester, borough of Tewkesbury, city of Hereford, town of Abergavenny, and the iron district adjoining, town of Chepstow, borough of Monmouth, borough of Newport and St. Woollos, town of Pontypool and Trevethin parish, town of Bromsgrove, township of Redditch and neighbourhood, borough of Kidderminster, town of Stourbridge, and the city of Worcester. The remainder, consisting principally of rural districts, and omitting the large towns, I have arranged as follows, endeavouring, as far as possible, to group together in each instance a tract of country similarly situated:—No. 2. Cheltenham, Gloucester, Newent, Tewkesbury, Westbury, and Winchcomb.—No. 3. Bromyard, Dore, Hereford, Kington, Ledbury, Leominster, Ross, Weobly, Hay, Knighton, and Presteigne.—No. 4. Abergavenny, Chepstow, Monmouth, Newport, Pontypool, and Crickhowell.—No. 5. Cleobury Mortimer, Ludlow, Droitwich, Evesham, Martley, Pershore, Tenbury, Upton, and the non-manufacturing portions of Bromsgrove, Kidderminster, and Stourbridge unions.

My wish has been, with reference to each group in succession, to state general conclusions on the following points, insofar as they could be deduced from the data before me:—

- a. Cost of erection and repairs of cottages.
- b. Accommodation, rent, proportion of rent to earning.
- c. Effect on health or habit of inmates.

I have then subjoined any special observations relating to particular unions in each set; and I have reserved the more general question of the rating of small tenements, and information connected therewith, to the concluding portion of my report.

No. 1. Town group, viz., Cheltenham, Gloucester, Tewkesbury, Hereford, Abergavenny, Chepstow, Monmouth, Newport, Pontypool, Bromsgrove Kidderminster, Stourbridge, and Worcester.

GENERAL RESULTS.

The average cost of erection of a labourer's cottage, as deduced from the returns for the 13 towns and districts above mentioned, is about 62*l.*

The average cost of repairs, about 10*s.*

Very few cottages in the towns have any gardens attached to

them; about three rooms would be the accommodation usually afforded.

In many towns there are privies only to three or four, and sometimes to eight or ten cottages.

The drainage and repairs differ so much as not to admit of any general description.

With the exception of lodging-houses for the accommodation of Irish or trampers, the largest number known to be living in one room seems to be about eight persons.

The rent of a working man's cottage averages from 5*l.* 10*s.* to 6*l.* Rates are seldom paid by the poorer occupiers.

The proportion which the rent bears to the earnings of the family is from one-sixth to one-eighth.

The rent is generally paid weekly. Complaints as to the difficulty of obtaining it are, as might be expected, frequent.

The majority of answers in No. 1 do not attribute any cases of fever to the state of the dwellings. The exceptions are Hereford, Newport, Pontypool, and Bromsgrove.

SPECIAL OBSERVATIONS.

1. *Cheltenham*.—The rent of the dwellings of the labouring classes in Cheltenham is particularly high, the average being stated at 9*l.*

2. *Tewkesbury*.—The relieving officer states that the rent is about one-eighth of the earnings of plumbers and glaziers, carpenters, bricklayers, stone-masons, nailors, cordwainers, and the families employed at the lace factory; but about one-sixth of those of the watermen, stocking-weavers, and other labourers. The stocking-weaving of Tewkesbury is a declining trade.

3. *Hereford*.—The relieving officer of the Hereford city district states,—

“ Cottages do not let so high as when the parishes were the tenants,” and adds that they “ are obliged to be kept in a better state than when parishes paid the rent, or they would remain void.”

Mr. Lemuel Llewellyn, collector of poor-rates for the parishes of the city of Hereford, gives the following evidence:—

“ The worst cottages in or about Hereford are in the parish of St. Owen, and in Blackmarston, in the parish of St. Martin.

“ The worst of those in St. Owen's parish, to the number of 30 or 40, did not probably cost more than 30*l.* a-piece building. There is generally a privy to the range of eight or ten houses, and the ground is not properly drained; the smaller ones consist of one room up and down. These would let at about 1*s.* 6*d.* a-week. Rent generally collected weekly.

“ There is a good deal of competition in cottages in Hereford, and in all the city parishes; there will generally be perhaps 100 vacant. I think the place is in some respects over-built. It is a kind of property which makes a bad return, more especially the lower kind of cottages; the best kind of cottage property pays much better than the

inferior houses; the tenants pay more regularly. There is no difficulty in letting good cottages, where a fair rent is asked; it is only the old and bad houses which generally remain empty. The best cottages almost all pay rates. (Signed) "LEMUEL LLEWELLYN."

4. *Abergavenny*.—This union comprises Bedwelty and Aberystwith, two of the most important and populous parishes of the Welsh coal and iron district. With reference to the dwellings of the population employed on the hills, I have been enabled, by the kindness of Mr. Seymour Tremenheere, to correct the information received from the relieving officers and others, and to afford more accurate details than I could have otherwise obtained. The average gross rent of cottages among the mining population may be stated to be as follows:—

	Per Month.		
	£.	s.	d.
1. Day labourers and those earning the lower rate of wages, or married persons without lodgers, earning the higher rates	0	9	0
2. Miners, colliers, earning from 4 <i>l.</i> to 6 <i>l.</i> per month	0	12	0
3. Furnace men and others gaining the higher rates (from 6 <i>l.</i> to 12 <i>l.</i> per month)	0	18	0

The first and last class are the most numerous. Gardens are rare; what there are, are generally neglected or used as drying-grounds.

The cottages rated at 9*s.* per month would contain two small rooms and a loft; those at higher rates, four rooms.

Very few, or none, have privies. Sewerage is entirely unknown, and the surface drainage imperfect. There is a great accumulation of filth around the houses; the roofs and windows are in tolerable repair.

There are a great many lodgers who pay about 1*s.* 6*d.* a-week for lodging, cooking, firing, and washing. Coals are, of course, of little or no value. I believe that these lodgers, single men earning high wages, are the portion of the population most easily led to join in any disturbance or outbreak. The population on the hills is very crowded, and little attention is paid to the separation of age or sex. My informant found in one room of a house, a man, his wife, a girl of 20, and a young child, who occupied one bed, while the only other room contained two beds, each occupied at night by three men; and another man, who worked at night, lay down in one of them during the day. The rents are generally paid monthly, and are for the most part stopped out of their wages. Very few cottages, in comparison, have been built by the workmen themselves. When they have done so, the dwellings are stated to be in better repair, and the gardens better kept and looked after than is the case with those belonging to the master. I am informed that this contrast is remarkably exemplified in two rows of houses in the parish of Mynyddyslwyn (in the Newport union). It appears from the evidence of Sir John Guest before

the Rating of Tenements Committee (1838), that in the parish of Merthyr they used to levy the poor-rate from the owner of a dwelling of 6*l.* a-year who lived in his own house, but exempted occupiers of houses of the same value (Answer 3607). This seems a little inconsistent with the desire which the same witness describes as existing to encourage the building of houses by the workmen themselves. The fact that the cottages owned by the workmen are in better order and repair than those rented, is rather remarkable, and certainly does not agree with what is observed in many districts. Thus, on the skirts of the Forrest of Dean, there are a number of small owners who have erected cottages on strips of land which were originally encroachments; some of these have now become, by the Act 1 and 2 Vict. c. 42, freehold or leasehold property. The relieving officer of the Newland district of the Monmouth union observes,—“These tenements are generally in a much worse state of repair, and have less accommodation than those that are rented.” This statement has been confirmed to me by Mr. Marsh, medical officer of the district. I think the difference may be accounted for in the following manner: probably no population acquires more irregular habits than one composed of borderers on a large extra-parochial tract like the Forest of Dean. Their notions as to the rights of property in land are rather loose. The power of raising a small sum by a mortgage of their house makes them improvident. No great amount of saving is originally requisite to erect a mud-hut, or, if it be inherited, to keep it in what is deemed by them habitable repair. The wretchedness of the dwelling re-acts on the habits of the occupier, and produces a recklessness as to filth and untidiness which probably ends in the formation of a character partaking of the Irish cottier and the English gipsey.

On the other hand, the workmen on the Monmouthshire hills are occupied in active industry, and gaining large wages from day to day; most of them spend their surplus earnings in drink. To save or borrow sufficient money to build a cottage of their own implies prudence, or a character which belongs to a small fraction only of the whole mass. It is no wonder that the cottage is well kept, when the man must have been a better character than his neighbours to have erected it at all. The previous condition of forethought and independence ensures a sort of respectability in the possessor of the tenement.

I should add, that fever has prevailed to a great extent on the hills in Monmouthshire during the last winter; and I have no doubt that the crowded state of the houses, and their imperfect drainage, has contributed not a little to produce it.

5. *Chepstow*.—The drainage of small houses in the town of Chepstow is described as very bad.

6. *Monmouth*.—There is one part of the town of Monmouth

which is exceedingly filthy. I went myself, in December last, into a house in what is called Wye-bridge-lane, which was then occupied by a pauper of the name of Tyler, who paid 2s. a-week for it; it has let as high as 8*l.* a-year. The whole tenement consists of one room down stairs and two up; there is no back door, yard, privy, or other convenience of any kind. The stone floor of the lower room was partly gone, and nothing but the earth remained; up stairs the wet came in, the roof being in very bad repair. The man belonged to a parish in Herefordshire, and came voluntarily to Monmouth, where, I believe, he gained a livelihood by carrying coals from the Forest of Dean on donkeys, until he was attacked by typhus fever. The state of the family, when visited by the relieving officer, is described in the subjoined report from him, being the first of the cases there adverted to:—

“ I visited a house in Wye-bridge-lane where there was a case of fever; I found the man and a daughter, about 18 years old, in one bed; a lodger, a young man about 20, in another bed, and all in one room up-stairs. There was no window to open out of it. The wife and two children were below in the kitchen, and two asses feeding in one corner of the room; there was no back-door to the house.

“ I visited another case of fever in Wye-bridge-lane. The family was living and sleeping in one room; the man was in bed, and two children with him, both girls, one about 14, the other about 11 years old; there was but one bed in the room; they were paying 1*s.* 6*d.* a-week for it.

“ There are many lodging-houses for trampers both in Wye-bridge-lane and in other parts of the town, in which there are four or five beds in one room, and they are often occupied by men, women, and children, of different families.

“ There are three old tenements joining our workhouse, and but one privy to the three; there is no draining from the privy, or any part of the premises; the nuisance is almost intolerable.

(Signed) “ J. BROWNING.”

7. *Newport*.—In the borough of Newport there is a spot called Friars-fields, which appears to be the receptacle of the dirtiest portion of the population. There are no drains or privies; the filth is allowed to accumulate in front of the houses in a ditch; many of the roofs are very bad, and no glass in the windows. As many as eight men and three women have been found in one room of a lodging-house in this place; they were Irish. The circumstances attending the worst case of fever which have come to the knowledge of the relieving officer were as follows:—

- | | |
|--|----|
| 1. Number of rooms in the house | 2 |
| 2. Number of inmates in the house | 10 |
| Number in any one room | 6 |
| 3. No pump, privy, yard, or back door. | |
| 4. Number of persons attacked | 5 |
| 5. Number of deaths | 2 |
| 6. Rent of house 2 <i>s.</i> 6 <i>d.</i> per week. | |

I am informed by Mr. Harris, the relieving officer, that there are in Newport and Pillgwenlly (which adjoins it) the following number of public-houses and beer-shops:—

	Inns and Public-houses.	Beer-shops.
Newport	55	84
Pillgwenlly	9	30
	—	—
Total	65	114
	—	—

Many of the beer-shops for which a rent of 9*l.* to 18*l.* is paid, are kept by mere labourers or “hoblers,” *i. e.*, persons who contract to unload a vessel at so much a ton, and employ men under them.

The population of Newport and St. Woollos parish (in which Pillgwenlly is included) was 7062, in 1831. What the increase has been it may be difficult to say, but assuming that the statement made by the Marquis of Normanby, in the House of Lords, on the 9th of March last, be correct, and that the population at present is 12,000, we shall thus have one beer-shop or public-house to every 67 persons—men, women, children, and infants. It must, however, be remembered that the number of sailors in the port is often large. The number of houses on the assessment (March 1840) was 1242 in the borough of Newport, and 606 in the parish of St. Woollos, making a total of 1848. The houses of public entertainment are therefore 9.6 per cent., or not quite one-tenth of the whole.

8. *Pontypool*.—The town of Pontypool, and parish of Trevethin, resemble in their circumstances those parishes already described as connected with the iron and coal-works in Abergavenny Union. The average rent appears to be about 9*s.* a-month. The drainage of the houses is described as being imperfect, and they are generally without privies. The rapid increase of the population in this district may be judged of from the following fact:—Mr. Hanbury Leigh, the present Lord-lieutenant for Monmouthshire, assures me that he recollects the population of the parish of Trevethin about 1200 persons; it has lately been ascertained to amount to 17,196!

9. *Bromsgrove and Redditch*.—The cottages in and near Bromsgrove and Redditch have no gardens, or very small ones.

At Bromsgrove they generally consist of one room down stairs and two up stairs, with a nail-shop attached. Those occupied by the principal workmen at Redditch, as needle finishers, have two rooms down stairs, pantry, and cellar, and in a few cases a brew-house and small garden. In one instance at Redditch there are two privies to ten houses, and those without doors: a similar case exists at Bromsgrove. The drainage is pretty good, except at Sidemore, and the new buildings, Bromsgrove, and at Wapping, Redditch. The cost of erecting a cottage is about 60*l.* to 65*l.*: with a nail-shop 10*l.* additional. The heads of families earn as

follows:—agricultural labourers, 8*s.*, to 11*s.* per week; needle-makers from 10*s.* to 24*s.*; nailors' children, at ten years of age, earn about 2*s.*; from that time till 16 add 6*d.* per week each successive year for girls, and 9*d.* for boys; much depends upon the kind of work performed by needle-makers; boys at 16 will earn from 5*s.* to 10*s.* according to the description of work.

Increased difficulty is experienced by the owners in obtaining their rents.

At Bromsgrove the price paid for making nails has been reduced to one-fifth within the last three years, cut nails being now much used. What is called the soft work branch, in the needle trade (eyeing the needles), is entirely destroyed by the use of machinery, and in the other branches there has been considerable reduction from other causes. A very serious case of typhus fever occurred at Redditch in the middle of November last, attributable to the want of proper drainage, and the filthy habits of the family, the cellar of the cottage (being a newly-erected one, the property of the occupier, James Lea,) standing at least three feet deep in water. The man, his wife, and all the children (seven) suffered from the effects of the fever, of which the father and two elder daughters died. The wife is reported as convalescent (February 7th). The rest have recovered, but the expense to the parish has exceeded 22*l.* I owe the whole of the above information to the very intelligent relieving officer of the Bromsgrove district, Mr. Thomas Cottrill, and I cannot forbear inserting the following report made to the clerk of the union for my use, by the same individual. I am also much indebted to Mr. Charles Creswell, guardian of the parish of Bromsgrove, for some useful answers to my questions.

“*Bromsgrove, 7th February, 1840.*

“SIR,—The rents of cottages at Redditch vary so much that it is difficult to fix upon an average rate, for while some are let at 2*s.* per week in one part of the town, owing to the disagreeable locality, in another part, with similar accommodation they, would let for 3*s.* per week.

“The rents of labourers' cottages in the agricultural part of Tardebigg parish are about the same as in the neighbourhood of Bromsgrove, but as you approach Redditch the rents are higher, and the gardens diminish in size. Some of the best workmen there (Redditch) earn 24*s.* per week, at finishing the needles, their wives and grown-up daughters from 5*s.* to 11*s.* as ‘paperers,’ ‘straighteners’ from 3*s.* to 7*s.* 6*d.*, ‘drillers’ from 2*s.* to 12*s.*, beginning from boys of 9 years of age to young men of 18 years of age. It should be observed with regard to those employed in the straightening the needles, that the nature of the work tries both the eyes and constitution of those who are employed in it, so that they become prematurely old and debilitated; there is another branch still more inimical to the health of the workmen, I mean the ‘pointers.’* It is difficult to find an old man among them;

* I am told an idea prevails that the magnetized wire-mask, invented as a protection to this class of workmen, injures the needles by slightly drawing aside the points. It is almost incredible that such *can* be the case.

they generally die consumptive before they are 45 years of age; some of these earn very high wages, but from their dissolute habits, their families are frequently very badly provided for. There are a few houses let to the best workmen as high as 15*l.* down to 8*l.* per annum. I know of one at the highest rent, that has two lower rooms, brewhouse, privy, soft and hard-water pumps, and three sleeping-rooms, and a small garden; several others at the next-mentioned rents, part of them with tolerable gardens and a share of a brewhouse, say one-half to each house; others are without gardens.

“The nailors in Bromsgrove do not pay nearly so much rent as the needle-makers of Redditch for similar accommodation; but their wages generally speaking are considerably less, the former, in but too many instances, are filthy and ragged in the extreme; the latter fact I think may mainly be attributed to the girls being put to the nail-block before they have learned to sew, and from their total neglect of the parents in never sending them to school; their excuse being that on week-days they cannot afford to lose their children’s earnings, however small; and on Sundays that they are so ragged they are ashamed to send them to school.

“In many instances the whole of the family, male and female, sleep in one room; two or three instances I will adduce, without mentioning names: first case, the man and his wife, (and till lately a son 19), a daughter 17, another son 12, another 10, another 7, occupied one room, both for sleeping and eating in, at most not more than 12 feet square; one bedstead and a heap of rubbish they called a bed, was all the accommodation I could perceive; the roof sadly out of repair, and large holes in the end of the mud-built hut. Second case, a widow with one son 22, a daughter 20, another son 16, another 14, and two young children, occupy the same bed-room; house their own as in the former case, and in wretched repair: both these are in the parish of Bromsgrove. As a set-off against these facts, I would wish to state that there are many who have within a few years put up brick-built cottages of their own, with much better accommodation, and that there appears to be a greater desire on the part of many of the parents to send their children to the Sunday-schools at least.

“As the system of apprenticeship is not observed amongst the nailors, as soon as the children (male and female) can earn their living, however scanty, they leave their parents’ roof, go to lodgings, contract early marriages, or do worse; by such means they will entail upon themselves and upon the rate-payers great incumbrances, and reduce themselves to hopeless poverty. As the nature of the return required by the Poor Law Commissioners is altogether new to me, I trust they and the guardians will excuse me if I have not answered the questions so fully as they could wish.

“I remain, Sir, your obedient servant,

(Signed) “JOHN COTTRILL, R. O.”

“THOMAS DAY, Esq., Clerk.”

Mr. Cottrill also says,—

“There are several poor persons in Bromsgrove parish living in cottages, the reputed property of the occupiers, in very bad repair; also at Rowney Green, in the parish of Alvechurch, cottages built on the

waste land, mere hovels, many of them have but one room. There is one family consisting of eight persons, at Chapman's Hill, in the parish of Bromsgrove, so situated."

Mr. Creswell remarks,—

"One half of those cottages situated in the country part of the parish, are occupied by the nominal proprietor, and they pay for interest nearly as much as they are worth to rent; with a few exceptions the accommodation and state of repairs is much about the same."

The latter part of these answers seems to want some explanation, and the miserable condition of some of these nominal owners may appear at variance with what has been stated above, as to the iron district of Monmouthshire and South Wales.

Mr. Laughton, the assistant overseer of the parish of Bromsgrove, says:—

"In Hinton field, in the parish of Bromsgrove, there are a number of persons who have built cottages, though it is well known that most of them have not a farthing in the world. Mr. ———, a solicitor in Bromsgrove, originally bought the land, but the people called the houses their own, and Mr. ——— is supposed to have advanced the money to build."

I am informed that many of the workmen who are anxious to live in cottages *nominally* their own, if they can borrow or scrape together a small sum, obtain the remainder on the security of the property to be bought from an attorney. The attorney charges for drawing the conveyance of the land and preparing the mortgage deeds, receives five per cent. on the whole amount due, and finally, if the interest is not duly paid, takes possession of the property. It is impossible in any other mode to account for the possession of freeholds by persons actually paupers, who have themselves purchased the ground and built the houses, and it is easy to see that little present comfort or future profit can result to the cottager from such a bargain. Independence bought at such a price is merely nominal.

With regard to the payment of rents from the poor-rates, a great reformation in the parish of Bromsgrove was effected by the select vestry. Twenty years ago the rents of cottages were paid at the parish pay-table. The overseers and many of the vestry were often themselves owners. The master of the workhouse paid the paupers at one end of the room, and his wife received the rents for the landlords at the other. As may easily be imagined, cottages then let at a high rate.

10. *Kidderminster Union*.—The officer for the Bewdley district says that in town districts rents are lower since the practice of payment by the parish ceased; in agricultural districts there is no difference. In Kidderminster itself there appears to be no perceptible decrease. In the latter place the cottages owned by labourers are said to be in *worse* repair than those rented. In

Bewdley the relieving officers state that they are for the most part in *better* repair. Nothing but very minute inquiry, which I have not had the opportunity of making, would enable us probably to assign the reason of this discrepancy.

11. *Worcester*.—It is satisfactory to learn that a large culvert is now being made through the eastern part of the city, which will materially improve the drainage of that neighbourhood.

No. II.—*Cheltenham Union (rural portion). Gloucester (rural portion). Newent. Tewkesbury. (rural portion). Westbury. Winchcomb.*

From the Westbury union the returns have by some accident miscarried, but fortunately the district which it includes is small and not very important.

GENERAL RESULTS.

The average cost of erection of a cottage, about 70*l.*

Repairs, 10*s.* per annum.

Rent, about 4*l.*

Most of the cottages have gardens.

Three rooms is the usual accommodation afforded, one down stairs and two up stairs.

They have generally privies, are tolerably drained, and in good repair.

Many of the cottage occupiers are excused from the payment of rates.

The rent takes from one-sixth to one-seventh of the earnings of the family.

Eight persons, man, wife, and six children, is the largest number known to occupy one room, but such a case seems very rare.

The rents are generally paid quarterly or half-yearly. One case of fever, supposed to originate in the dwelling, is reported, (that was in Kemerton in the Tewkesbury union).

1. *Newent*.—The cost of building a cottage is put low in this union, somewhere about 50*l.* One relieving officer says, "in some cases wattle and dab at about 10*l.*" Two of the parties answering my questions state, that the cottages owned by labourers are in worse repair than those rented.

2. *Tewkesbury (rural portion)*.—One relieving officer (Robinson, for the Overbury district) reports that the repairs of those cottages which were formerly rented by the parish is "much improved since occupied by independent tenants."

And he also says that the cottages belonging to the occupiers are much worse as regards accommodation and repairs than those rented.

3. *Winchcomb*.—The cost of building is here put at from 50*l.* to 60*l.* Stone is easily obtained. The union skirts the oolite range in Gloucestershire.

One relieving officer asserts that cottages formerly rented by the parish are now in a much better state of repair, while he says that he knows of no alteration in rents. The other says that the state of repair is much the same, but that rents are from 5s. to 10s. a-year lower. Equal accommodation at a lower rent, or a better tenement at the same rent, are to the labourers one and the same thing. In the parish of Alderton, in this union, several cases of typhus have occurred, which are probably attributable to the ditches and pools of stagnant water in the neighbourhood. In one instance some extraordinary symptoms showed themselves; livid spots appeared after death, with extensive suppuration of the glandular system.

The next district embraces the whole of the rural population of the county of Hereford, including the smaller towns, together with the parishes of Brecon and Radnor, on the western side. The whole district is purely agricultural, perhaps as much so as any area of the same extent in the kingdom.

The unions comprised in it are—

No. III.—*Bromyard, Dore, Hereford, Kington, Ledbury, Leominster, Ross, Weobly, Hay, Knighton, and Presteigne.*

GENERAL RESULTS.

The average rent of a labouring man's cottage may be stated at 3*l.* 10s., and contains three rooms, two up and one down stairs; in some cases four rooms.

It would have a garden of from 20 perches to $\frac{1}{4}$ of an acre.

In the majority of cases they would seem imperfectly drained and badly provided with privies.

The average cost of erection is about 45*l.*, varying, of course, with the nature and proximity of the materials.

Repairs may be put at 10s. annually.

The rates are to a great extent excused in the case of labourers.

The instances of a family occupying one room are very rare. One sleeping-room is not uncommon.

The rent is said to take $\frac{1}{6}$ to $\frac{1}{7}$ of the earnings; but I suspect in all these calculations my informants omit to reckon in the earnings of the family, the produce of the woman's and children's labour at hay and corn harvest. To ascertain the total with any certainty is most difficult.

In 15 districts of relieving officers, out of 29 cottages, rent is said to have fallen since the cessation of its payment by the parish: in 13 districts the officers report that there is no difference. One officer in the Ross union says that, if anything, they are increased, from want of confidence in the tenant. On the whole I think there are decided symptoms of a reduction.

Complaints of the difficulty of obtaining rent are frequent on the part of the landlord.

The rent may be said to be generally paid half-yearly; paupers often pay weekly.

There appears to be little or no difference in the state of repairs of cottages since the discontinuance of the rent paid by the parish.

In four unions cases are mentioned in which fever has resulted, it is supposed, from the state of the dwellings.

The greater part of the cottages owned by labourers in this set of unions are said to be in better repair than those rented.

SPECIAL OBSERVATIONS.

1. *Dore Union*.—The relieving officer of the Madley district says—

“We have had several cases of typhus fever, owing to the filthy state of repairs and want of drainage.”

2. *Hereford Union*.—The relieving officer of the Burghill district, in reply to the question, What should you say was the usual cost of building a labourer's cottage? thus distinguishes the different kinds of tenements:—

“It depends entirely of what materials they are built with. If of stone, about 60*l.*; but if of blackpoles, (*i. e.*, poles in a coppice, which have stood over a fall of underwood), and wattle and plaster, and thatched roofs, about 35*l.* This is chiefly the material they are built with.”

He also very properly observes, in stating the rent, that much depends on who is the proprietor.

Daniel West, officer of the Dewchurch district, reports—

“There have been several deaths in my district from fever, and I have heard the medical officers observe that filth was in a great measure the cause of it; having dirty pools of filth before their doors.”

3. *Kington Union*.—There are circumstances connected with this union which require to be particularly noticed. The town of Kington is in Herefordshire, but the limits of the union extend as much as 10 or 12 miles into Radnorshire. The Welsh population, at least in the more distant parishes, differs in some degree from that of the English portion of the union. They use turf for fuel, live more on potatoes, and occasionally work for farmers at small money wages (3*s.* or 4*s.* a-week), and the man's food, a system which generally implies great privation to the rest of the family. In this portion of the union we have the advantage of a very active and intelligent relieving officer, Mr. Thomas Shewell.

With reference to the drainage, &c. of cottages, he says:—

“Very few cottages are provided with privies; very little attention is paid to the important object of proper drainage in this district; many of the roofs are thatched, and those for the most part in an inefficient state of repair. *Those cottages of which the roofs are of tiles or slates are much better.* The windows generally very indifferent, particu-

larly in the old-built cottages. In others recently erected they are much better, and considerable improvement is making in the erection and construction of cottage building, *tiles and slates being generally adopted for the covers of roofs*, the windows larger, and the cottage better *ventilated* by having casements in the windows."

We are sometimes apt to forget that the poor man profits by good roads and facility of communication quite as much in his way as the farmer or the gentleman. The words in the above answer which I have underlined may serve to recall this truth. But for tolerable roads, tiles and slates, or the best materials for building, would be unattainable in a remote district, and the labourer's cottage must continue to be roofed with the material most accessible on the spot, in lieu of some more weather-proof covering. Owing to the improvement of the roads, the best Carnarvonshire slate is now used in Radnorshire, and is found in the long run to be the cheapest material of the kind.* Mr. Shewell says that cottage rents are rather lower, and he further states:—

"I consider there is an improvement in the repairs of cottages which were formerly rented for paupers, as under the old system the demand for cottages for paupers made the landlord careless of repairing them, as from their general local influence they were sure of their rents, whether the cottages were properly repaired or not."

I cannot forbear remarking, that the lowering of rents or improvement in the repairs of cottages is a benefit conferred not merely on the pauper but on the independent labourer, who never has received, and never intended to receive, relief.

When a parish monopolized dwellings for its paupers, the rent of the independent labourer was raised by competition, with a bidder whose means were unlimited. The pauper's rent came partly from his pocket.

It appears that several cases of typhus fever have occurred at Stocking, in the township of Evenjobb (parish of Old Radnor). There are three tenements under one roof, occupied by four families, in each of which fever of a very malignant nature has prevailed, and, in one instance, proved fatal. At another cottage, a few yards distant from the former, the wife of a labourer died of

* The following extract from a letter addressed to me by a magistrate residing near Radnor will show how good roads practically enable the poorer classes to obtain better materials, and consequently better dwellings:—

"Yesterday evening (July 14), about nine o'clock, I met in the road a boy sitting in a very good little cart on two small wheels, turning on a small iron axle. This being very unusual, I asked whence he came, and what he was about. The cart was drawn by an ass. The account he gave of himself was this:—He had started from Evenjobb at two o'clock on Monday morning; had gone fifteen miles beyond Rhayader; there he took in as many slates from Aberystwith as weighed 6 cwt., and these he was bringing home, where he would have been about two o'clock, so that he would have travelled 70 miles in 44 hours, paying half-toll for the ass, and baiting it occasionally on the road side as he went along. The boy appeared to be about 14 years old, so that the whole concern was the least expensive establishment I ever saw. Really the cost of carriage must have been little or nothing."

that disease, leaving him a widower with three small children. The cottages are situated in a narrow glen, at the west end of which is a stagnant pool or bog. They are said to be very deficient in proper drainage, and in a low situation.

4. *Ledbury Union*.—The relieving officer for the town of Ledbury union says—

“That some instances of typhus have occurred in that place, which are probably owing to filth or the want of drainage and ventilation. I have reason to think that typhus very frequently occurs in Ledbury; some of the houses are situated with the floors of the living-rooms below the level of the street.”

The officer for the district of this union which adjoins the Malvern hills, says that some of the cottages built on the waste or Malvern hills are in very bad repair,—those principally in the parishes of Mathon and Colwall; and all that has been said with regard to the occupiers of small tenements on the skirts of the Forest of Dean is applicable to the nominal owners of these encroachments.

Great Malvern, too, with its fluctuating population of summer visitors, and its precarious harvest of charity, often ill-distributed, tends to increase improvidence and beggary in the parishes around.

5. *Leominster Union*.—Mr. John Davies, the relieving officer for the Kingsland district of the Leominster union, states, with regard to the cost of cottages :—

“It varies according to materials used. I should say that a cottage with new materials of brick or stone and timber, two rooms on a floor, with staircase, lower rooms flagged, with a pump, pigsty, and privy, would cost 80*l*. Few build labourers’ cottages except for the convenience of their own workpeople. It will not do for profit but seldom, except to work up old materials.”

In answer to the question, whether he knows of any difference in the amount of cottage rents since the system of the parish engaging cottages has ceased? he says that there is “no difference,” but adds—

“Many that were assisted in rent by the parish now pay their own, and occupy the same cottage, as they know it is no use to teaze the overseer on that head. I do not now hear of so many distresses for rent, as they often formerly suffered their goods to be seized for rent, that the parish might assist them.”

6. *Ross Union*.—In reply to a question relating to cottage gardens in the Ross union, one relieving officer describes them as containing “from 12 to 16 perches, or thereabouts, generally thickly studded with apple-trees, which render the land otherwise unproductive, and drive the cottager to hire land to plant his potatoes, at an average cost of sixpence per score yards.”

It will be observed, too, that the cider-crop is a very uncertain

one, so that the sacrifice of the garden-ground to apple-trees partakes of the nature of gambling. I imagine, however, that the gardens *wholly* occupied by fruit are the exceptions. The same officer states that cottage rents are increased rather than otherwise, from want of confidence in the present tenants. This is the only answer to this effect out of the whole number which I have received, and I therefore question its accuracy very much, unless it be meant to apply to some particular places where the scarcity of cottages may give the landlord the power of a monopoly.

7. *Hay Union*.—The Hay union resembles in some degree the Kington union in its position, inasmuch as it unites a considerable number of Welsh parishes, both in Brecknockshire and Radnorshire, to an English district. Its administration has been very different from that of the Kington union. The Hay guardians have acted steadily on principle from the first, and abandoned relief to the able-bodied and non-resident without hesitation. The contrast at present is very striking; the business of the Hay board generally terminates at one or two o'clock; the Kington union is often besieged with applications till four in the afternoon. At the former the poor know what they have to expect, and are well aware that ill-grounded applications will only terminate in the offer of the workhouse. In the latter district the paupers well know that the guardians entertain a dread of the supposed expense of the house, and I fully believe they work on this fear to extort by importunity what should be denied on the ground of justice.

The three relieving officers of the Hay union report that cottage rents are lower. The one for the Brecknockshire district says, that they have been reduced full 20 per cent. They do not know of any cases of fever caused by the state of the dwellings.

No. IV. The next group of unions to which I shall call the attention of your Board is that consisting of,

<i>Abergavenny, rural portion,</i>	
<i>Chepstow,</i>	”
<i>Monmouth,</i>	”
<i>Newport,</i>	”
<i>Pontypool,</i>	”
<i>Crickhowel,</i>	”

This district includes the whole of the non-manufacturing part of the county of Monmouth, with some fragments of Herefordshire, and a small portion of Brecknockshire and Gloucestershire.

GENERAL RESULTS.

The average rent may be stated at 3*l.* 10*s.* Almost all cottages have a garden from 10 to 20 perches.

Three rooms is the general number which they contain. The

ordinary ones for the most part have no privies and are imperfectly drained.

£45 may perhaps be stated as the average cost of building, and the repairs may be put at 7s. per annum.

Excuses of rates are frequent; when paid they are usually paid by the tenant.

The proportion which the rent bears to earnings is so variously stated as to be valueless.

No difference in the amount of cottage rents is perceivable, except in the Pontypool union, and no general improvement in their state of repairs is reported. There do not seem to be many cases of disease known to originate in the state of the dwellings.

SPECIAL OBSERVATIONS.

1. *Abergavenny Union*.—Rent appears to be higher in the agricultural part of this union than in the rest of Monmouthshire; 5*l.* is given as the average, but a cottage let for this money would probably have a garden from 15 to 20 perches. The relieving officer, John Watkins, reports—"There are very few cases of fever in my districts, but many of the poorer classes suffer from damp and uncomfortable dwellings." The condition of cottages owned by the occupiers is said to be much better than that of the rented houses.

2. *Chepstow*.—The Chepstow union is divided into two portions by the river Wye, near the mouth of which the town of Chepstow is placed. On the Monmouthshire side cottage rents appear to be rather lower than in the Gloucestershire parishes. Both relieving officers report that the cottages owned by labourers are generally in worse repair than those rented; thus confirming the statement already quoted with reference to another portion of the borders of the Forest of Dean.

3. *Monmouth Union*.—The rural portions of this union consist of two tracts of country, one containing the parishes situated immediately on the river Wye above and below the town of Monmouth, and partly enclosed between that river and the Forest of Dean, and the other portion extending towards the west on both sides of the high road to Abergavenny; 3*l.* is returned as the average cottage rent in both districts. There are in the Ragland district a large number of labourers who pay what is called "cot rent," some as low as sixpence a-year, for the most part to the Duke of Beaufort. It may be well to quote the following answers made by Richard Morgan, the relieving officer of the Newland district; they convey much information as to the dwellings in that neighbourhood:—

"The houses of 5*l.* each contain two bed-rooms and two rooms on the ground-floor, one called a kitchen, the other a pantry. The houses of 2*l.* 12s. rent generally have two rooms on the ground-floor, one of them to sleep in, the other a kitchen.

“ Building materials are abundant and of reasonable value. The general expense of building a cottage renting at 5*l.* a-year would be about 50*l.* or 60*l.*, but those of the cottages at 2*l.* 12*s.* each would cost about 10*l.* or 15*l.*; there are several miserable huts in this part that have not cost above 5*l.* each. All the cottages are rated under the new Act of Parliament, but only a few of the 5*l.* cottages pay rates. The others are generally excused paying on account of the poverty of the occupier. The rates that are paid on them are always paid by the occupier. We do not know of more than one family living in a room. The largest number of persons known to occupy one room were 25, who slept in six beds in this one room. It belongs to Thomas Smith, at Coleford; it is a common lodging-house for beggars, trampers, &c. So many filthy persons sleeping in one room has a great tendency to create fever and other diseases. There are several lodging-houses in the Coleford district of the description just stated.

“ There are a great many cottages in this district built on waste land, and by the road side, that have no flooring, except the bare damp earth, and are built with rough stone and covered with straw or turf. They are very low and confined, and consequently very unhealthy. They are generally in a bad state of repair, and many of them have bad drainage; but these observations apply principally to those of the lowest value. There are numbers of poor persons living in cottages of their own in this district, and these tenements are generally in a much worse state of repair, and have less accommodation than those that are rented.”

4. *Pontypool Union*.—The Usk and Llangibby district contains a population almost entirely agricultural, and exhibits a good instance of that contrast of occupations so remarkable in Monmouthshire. At the foot of the hills the iron and coal-works cease: their proximity is indicated by the long trains of smoke sweeping along the sides of the mountain, or rising over the ridge, but there is at a mile off no appearance of anything but the ordinary agricultural pursuits, and little trace of the close neighbourhood of a dense and busy manufacturing population. The relieving officer, who resides at Usk, is active and intelligent, but his district furnishes few particulars worthy of notice. He states that those cottages which the parishes used to rent for the use of the poor are now let at less rent. That the rent is paid quarterly and monthly, and in some cases weekly, and adds, “ but before our union house was built the tenant in country places used to pay half-yearly, and in default of payment they applied to the parishes for assistance. He says also that poor persons living in their own cottages are altogether in a much worse condition than those who pay rent.

No. V. The remaining districts, which I have grouped together, extend over a wide range of country. They include the unions of—*Ludlow and Cleobury Mortimer, in Shropshire, Droitwich, Evesham, Martley, Pershore, Tenbury, Upton, and the non-manufacturing parts of Bromsgrove, Kidderminster, and Stourbridge, in the county of Worcester.*

GENERAL RESULTS.

The average amount of cottage rent in these districts may be stated at about 3*l.* 13*s.* 6*d.*

Gardens are universally attached to the cottages, varying in size from one-eighth to one-fourth of an acre.

The ordinary number of rooms is three, with sometimes a pantry attached.

The answers as to the arrangements for drainage and the state of repair are for the most part favourable.

The average cost of erection of a cottage is from 50*l.* to 55*l.*, and repairs may be put at from 10*s.* to 12*s.* annually.

Cottages are almost universally rated, and the rates are generally paid by the occupier.

The largest number of persons known to occupy a single room is in the Evesham union, viz., a man, his wife, and seven children.

In general there appears to be no difference in the rent of cottages since the discontinuance of the payment of rents from the poor-rates. The exceptions will be specially noticed.

The rent is for the most part paid half-yearly. Two or three cases of disease, supposed to arise from the state of the dwellings, are returned; but for the most part there seems to be no idea of the prevalence of any maladies originating in this cause.

SPECIAL OBSERVATIONS.

1. *The Ludlow and Cleobury Mortimer Unions*,—Although principally of a rural character, embrace within their limits the coal district of the Clee-hill. On the whole, cottage rent appears to be lower in the unions than in any other part of my district. The average is stated by the officers to be 2*l.* 10*s.* Almost all the cottages have gardens attached to them. The drainage is defective; but in other respects the accommodation and repair is said to be tolerably good. The Cleobury officer, however, reports:—

“On the Clee-hill many families live in turf cots, consisting of only one room on the ground-floor. I have known as many as ten persons of the same family living in such a cottage.”

2. *The Tenbury Union*—Comprises a portion of three counties, Worcester, Hereford, and Salop, and adjoins those of Ludlow and Cleobury Mortimer on the south. The average sum paid for cottage rent is about 3*l.* 10*s.* The Rev. Charles Turner, chairman of the Board of Guardians of this union, has favoured me with answers to some queries which I caused to be circulated. In reply to the question, “Do you hear any complaints from owners of cottage property of increased difficulty in obtaining their rents?” he states, “Owing to the increased price of provisions, and the unproductive seasons of fruit during the last two years, the owners of cottage property have in many instances complained to me of their difficulty in obtaining their rents.” This answer gives two very sufficient reasons why, in some instances, rent should be behind

hand. The produce of the garden is often relied on as the source whence it is to be paid. Mr. Turner also says, "When the parish property has been sold, a vast improvement in the external appearance of the cottages has taken place, and consequently a higher rent is demanded, and frequently obtained." We thus see one proof, among many, that the sales of parish property which have taken place under the orders of the Commissioners, have been beneficial to the public at large; a vast mass of small holdings (amounting, for instance, in the Bromyard Union only, to no less than the net worth of 3643*l.*) has been withdrawn from a state of dilapidation and decay and thrown into the market. Money has been expended on it; it has been put into tenantable and proper repair, and all parties have found their interest in the change. To the parish it formerly yielded nothing. The pauper lived on in filth and wretchedness, in a hovel of which he did not dare to complain, because he held it by sufferance; and the community at large were deprived of an opportunity for a profitable outlay of capital on tenements thus kept in mortmain of the worst kind. Such an outlay would not have taken place unless it promised a return, that is to say, unless the class for whose reception the cottages are fitted could in all probability pay for the improved accommodation. With regard to parties living in their own houses, Mr. Turner says, "There are many poor persons living in their own cottages, which are of a very inferior description, wretchedly comfortless, and have only one floor. They are decidedly worse than those which are rented, both as to accommodation and state of repairs; but these, for the most part, have been built on the waste and unenclosed land."

3. *Martley Union*.—The relieving officer of the Leigh district of the Martley union says,—

"The cottages in my district are generally provided with privies, and the drainage good. The cottages that pay from 4*l.* to 5*l.* rent are mostly in good repair, with few exceptions; but there are some, viz., those built by poor persons on the waste land, very miserable, ill-constructed huts: no window, nor scarcely a roof to them. There are a few cottages belonging to different parishes in my district which are in bad repair. The cost of a cottage (he says) is from 60*l.* to 70*l.*; but this would vary 10*l.* or 12*l.*, according to the distance the materials had to be drawn. The above sum would build a good brick and tile cottage." He states that he knows one case of a man, his wife, and six children living in a single room; but neither officer is aware of any case of fever or illness which can be attributed to the state of the dwelling.

4. *Droitwich Union*.—The average rent of this part of the country is high, being about 5*l.* Almost all the cottages have gardens. Mr. Granger, one of the relieving officers, says, "I should think, from the observations I have made, there are few districts where the cottages are so comfortable as the one under my charge." None of the officers report any case of disease supposed to originate in the defective drainage or repair.

5. *Pershore Union*.—Mr. Harris, relieving officer of this union, says,—

“I perceive a great improvement in labourers’ cottages since the sale of parish property;” thus confirming the view expressed before.

Neither this nor the adjoining union of Evesham presents any facts which require to be specially reported.

6. *Upton-on-Severn Union*.—Both the relieving officers in this union report that cottage rents are lower since the payments made out of the poor-rates ceased; and that those cottages which were formerly rented by the parishes appear now to be in better repair. They also describe the accommodation and repairs of the cottages which belong to the labourers themselves as worse than that of the cottages rented. One of the officers states that two cases of fever, arising from want of proper drainage, have occurred in his district.

7. In the Belbroughton and Hagley district of the Bromsgrove union, the officer says there is one family consisting of ten persons living in a cottage which has one upper and one lower room, some part of this family are often ill in consequence of their dwelling being out of repair.

I have now gone through the principal facts which my inquiries have enabled me to collect on the very interesting subject of the dwellings of the poor. On the whole I may say, that if we make allowance for a time when the dearness of provisions has pressed somewhat hardly on the labouring population, there is no evidence of any deterioration in their condition, or of a diminished ability to provide themselves with comfortable dwellings. Nothing, perhaps, exercises a more important influence on the character of the labouring classes than the comfort of their homes. I am satisfied that it is always better for a poor man to pay a somewhat higher rent for a substantial good cottage than to submit to the degrading and filthy habits which are sure to arise from a crowded and dilapidated tenement. A neat and tidy home is the most powerful counter-attraction to the beer-shop, and by its moral action on his character, as well as by money actually saved from the public-house, such a cottage far more than repays the larger proportion of his earnings which its rent consumes. Of course much will depend on the dispositions and capacity of his wife to avail herself of these comforts. The want of moral education and housewifery on her part may render useless any superior accommodation afforded by his dwelling, and succeed in driving him to the beer-shop under any circumstances.

I shall now proceed to consider a subject which I approach with misgiving, on account of its difficulty and its importance—the rating of small tenements.

The first objection to the present practice of excusing the occupants of small tenements is its gross unfairness. I am fully aware that the burden of the poor-rates does not fall equally on all kinds of property, and that abstract fairness cannot now be looked for.

The mode of assessment has grown up from statutes of which the framers never saw the extensive consequences, and from decisions on individual cases which it is often difficult to reconcile. Still, on the whole, the object is or ought to be, that the burden should fall with as much equality as is practicable on those kinds of property which admit of being assessed to the poor-rates. Neither is the technical objection that the rate is not imposed on property, but on the person in respect of the property, of any real importance. Particular tenements were exempted by the doctrine that beneficial occupancy was required; but if we judge from the case of *R. v. Wallingford union*, the courts seem lately to have been disposed to overthrow the whole mass of former decisions on this subject. For our present purpose we may consider the poor-rates as levied on property. The unequal burden resulting from the exemption of whole streets and suburbs is pointed out by Mr. Bishop in the report of the Commissioners of Inquiry (8vo, p. 15, 19), and is dwelt on by Mr. Gulson in his evidence before the rating of Tenements Committee of 1838, (Answers 493, 607, 643). The following evidence from Tewkesbury, Monmouth, and Kidderminster, strikingly illustrates the point:—

Mr. Ricketts, clerk to the Tewkesbury union, says,—

“ In the Oldbury in this town there was a good deal of land which used to pay rates before it was built on, but since it has been built on, little rate is collected from that district. I should think there are more than 60 cottages built on the land in question, which cannot have cost less than 50*l.* each. Sometimes a person who is himself in pretty good circumstances, who lives in one of these houses, will, when summoned for the rate, state as a reason why he should not pay, that the landlord told him the house was exempt from rates. I have heard this repeatedly, when attending as clerk to the directors of the poor before the formation of the union. I have often heard the rate-payers complain that so large a mass of property is exempted from payment of rates, by the excuse of poor occupants.”

The assistant overseer of the borough of Monmouth states as follows:—

“ There are 73 houses in Wyebridge-lane, exclusive of Swift’s buildings. Mr. ———’s houses have been lately built to the number of 33; none of the occupiers of those houses now pay rates. The land on which they stood paid rates up to 1832. There was, I should think, about 3000*l.* laid out on the premises when the houses were built. They are well drained; there is a large sewer-down to the Wye, and there are back yards. The average rent of them is about 2*s.* 6*d.* a-week; some are below that sum, and others above. None of the occupiers of houses situated in Wyebridge-lane, except Mr. George Watkins, ever pay rates.

“ The land on which Swift’s-buildings stands formerly paid rates. Swift’s-buildings consists of 19 houses, worth about 7*l.* a-year each, and erected at an outlay of about 70*l.* a house. They consist of one room on the ground-floor, two rooms on the first-floor, and two on the second. They have small gardens not joining the houses, and privies; the drainage is good; none of the present occupiers pay rates.

“ Mr. ——— built ten houses in Monnow-street, about six years ago ; they let for about 9*l.* a-year each ; the land paid rates before they were built ; nine of the ten occupiers of these houses do not usually pay rates. Mr. ——— built on some land over Monnow, on which there formerly stood a large house and out-buildings. These used to pay about 4*l.* to each poor-rate at 4*s.* 6*d.* in the pound, making generally 8*l.* a-year. The buildings were pulled down about seven or eight years ago, and 14 houses built upon the site. The average rent of those houses would be about 8*l.* a-year each ; they must have cost at least from 500*l.* to 600*l.* Of these houses eight of the occupiers pay poor-rates. The other six are excused. The whole poor-rate collected from the premises now is about 4*l.* 4*s.* in the year, instead of 8*l.* as previously.

“ There is a place called the Burgage, near the Old Dixton Gate, which was formerly a large garden and paid poor-rates ; ten houses now stand on the same ground, and not one of the occupiers of them pay rates. The houses let for about 4*l.* a-year. A person has bought a piece of land over Monnow, which belonged to the late corporation, and which he rented of that body. At that time he used it as a garden and paid rates for it. He has lately built on it six houses, worth 9*l.* a-year each, at an outlay of about 300*l.* The occupiers of two of these now pay rates ; those living in the other four have been excused.

“ The non-payment of rates by so large a number of rate-payers (to the amount of 100*l.* on a shilling rate of which the total is 794*l.*) is loudly complained of by many of the inhabitants. I got a parish meeting called, and proposed that the landlords of such houses as were within the statute should compound for the rates, under the 59 Geo. III., c. 12. The meeting was numerously attended ; by far the greater number of the parties present were owners of cottage property, and the proposition was scouted.”

At Kidderminster the state of things is far more serious, and it is to be hoped that no town in England could exhibit a statement like that given in the subjoined table :—

BOROUGH OF KIDDERMINSTER.

ASSESSMENTS made on Property within the Borough of Kidderminster, for the relief of the Poor, the Municipal Borough Rates, County Rates, &c., for the Year commencing September 22, 1838, and ending September 22, 1839.

	Amount of Rate.	Amount Collected.	Uncollected and not Collectable.
	£. s. d.	£. s. d.	£. s. d.
Arrears of former rates not collected, but considered collectable	277 14 10½		28 1 8½
No. 1. Amount of rate for quarter ending December 22, 1838, at 2 <i>s.</i>	3,158 8 7½	1,870 11 8½	1,573 9 7
No. 2. Do. do. do. March 22, 1839, at 1 <i>s.</i> 8 <i>d.</i>	2,949 2 9	1,640 12 8½	1,297 7 7½
Shire Hall Rate	73 2 0		
No. 3. Do. do. do. June 22, 1839, at 1 <i>s.</i> 6 <i>d.</i>	2,681 13 9	1,635 5 10½	1,140 0 8½
No. 4. Do. do. do. Sept. 22, 1839, at 1 <i>s.</i> 6 <i>d.</i>	2,648 18 4	1,444 17 11	1,152 18 7
	12,149 0 4	6,591 8 3	5,191 18 2½
Also uncollected, but collectable.			365 13 11
Total number of properties assessed	3,049		5,557 12 1
Total number of which rates have not been paid	2,150		
	£. s. d.		
Amount collected	6,591 8 3		
Uncollected	5,557 12 1		
Total amount of rates	12,149 0 4		

The total amount assessed is 12,149*l.* 0*s.* 4*d.*, the amount uncollected is 5,557*l.* 12*s.* 1*d.*, or 46 per cent. of the whole. The following is the evidence of *Mr. Charles Walford*, the assistant overseer of the borough, on this subject:—

“There are a large number of houses of which the occupiers are excused rates within the borough. There is land in Lion’s-field, where the whole field used to pay rates. There has been as much as 10,000*l.* laid out in houses upon it. By far the greater number of these houses are occupied by persons who pay no rates. There may be 20 who pay. *Mr. Ellis*, of Sedgeley, has 13 houses in Bromsgrove-street. The houses being tolerably good, let for 4*s.* a-week, and we make the occupiers pay rates. The consequence is, *Mr. Ellis* has a difficulty in finding tenants, and his receipts have diminished, as parties give the preference to houses for which rates are not paid. A man of the name of ——— owns a house in Queen-street, assessed at 6*l.*, occupied by one *Ainsworth*, who keeps a horse and cart. We called on *Ainsworth* to pay the rates, and, on his refusal, distrained. He said he would leave the house and the borough. *Mr. ———*, rather than lose his tenant, agreed to allow him a certain sum per quarter to cover the rates; in fact, to diminish his rent to that amount. *Mr. ———* has some houses of a better description in Clensmere. There was a sawyer and a woollorter, each living in one of these houses, whom we compelled to pay rates. *Mr. ———*, rather than lose his tenants, having tried in vain to come to a compromise with the parish, agreed to allow them a certain sum each, and they now pay their rates.

“From these and other instances, I am therefore of opinion that the whole benefit of the exemption from rates goes to the landlord in this borough.

“There are, I believe, three building-clubs at present in Kidderminster. The houses built by these clubs are in general slightly and badly built.

“The result of the large mass of property excused from rates is, that if individuals or a building-club wish to speculate in building good houses, they always do it in the ‘foreign,’ beyond the limits of the borough. The exemption acts thus as a great discouragement to the outlay of capital in the parish, and the burden of maintaining the poor is becoming gradually heavier on the property which remains.

“In many cases the manufacturers own cottages, and deduct the rent from the wages when the work is taken in. I know one case of a foreman to a large carpet manufactory, who owned a number of small tenements, and would not employ men unless they lived in his houses. He accumulated a large property by this means chiefly.

“From 1822 to 1825 there was great speculation in building small houses in this borough. In 1828 there was a general turn-out of weavers: and since that the trade has fallen off, and at this moment there are numbers of houses void.

(Signed) “*CHARLES WALFORD.*”

We have thus repeated instances of property which is exempted from poor-rates only because it has become more valuable. An outlay of several thousand pounds in the visible form of brick and mortar is not only untaxed itself, but actually serves as a reason

for taking off what the land previously paid. If it be pretended that we should carry out the old principle of rating inhabitants according to ability, and extend the rate generally to all personal property, the proposition is intelligible at least, but while in practice real and visible property is for the most part the only subject of assessment, so far as we go, the rates should be imposed equally. Now, in the borough of Kidderminster, the consequences of the system of exemption are most formidable; not only is the rate really doubled on that property which does pay, but the outlay of future capital which might assist in bearing the parochial burdens is effectually prevented, and the capital which, being already invested, cannot be transferred from the spot, is overwhelmed by the accumulated charges.

The fairness of rating some one for so large a proportion of the hereditaments of the country will probably not be disputed, but the difficulties are to determine—

1st. Where to lay the burden in the first instance.

2nd. Where will it ultimately fall?

To enforce the rate against the poorer occupiers in large towns, though in some respects beneficial (see Report of Commissioners of Inquiry, 8vo, p. 255, 256), would be attended with great difficulty and expense. If payment is obtained, the cost of collection is very large, and much bad feeling would be excited among the lower classes. Many, it is argued, would be driven to a state of permanent pauperism if compelled to pay their share of the poor-rates. The truth of these assertions must be admitted to a certain extent, and the obvious resource is to levy the rate from the landlords of houses below a certain value. The ultimate incidence of the tax yet remains to be discussed. Who now gets the benefit of the exemption? Probably no one answer to this question will be universally true.

In the rural districts cottages are not generally too abundant. (See Report of Committee, answer 1594.) The settlement laws had a tendency to prevent their erection: the inducement to build them is the necessity to afford accommodation to a certain number of labourers, rather than the immediate profit from the rent. The occupiers, too, are less capable of shifting for themselves, and obtaining another house within reach of their usual work. In short, many circumstances, local and personal, may fetter the action of competition in the country, and accordingly the landlord will often possess the power of throwing any additional charge on the tenant, just as he might, whether the cottage were rated or not rated, raise the labourer's rent. Thus the *Rev. Charles Turner* says, speaking of the Tenbury union:—

“The cottages are now generally rated, and the tenants, instead of the landlords, as formerly, are compelled to pay the rates, without any allowance or drawback from the rent made by the landlord.”

I do not think this state of things exists everywhere, but it is

obvious that the smaller the number of cottages in proportion to the demand, the greater the power of throwing the charge on the cottager. In some cases, too, the rent is stopped out of the wages, or included in them. These instances are analogous to that given in the evidence of the assistant overseer of Kidderminster, where the foreman of a factory let his houses to the workmen. They are exceptions to all rules, and are one of the manifold forms in which the "truck system" exhibits itself. However, if in the rural districts the landlords have the most power, they have generally the least inclination to use it harshly. Immediate pecuniary gain is not the only thing looked to in the disposal of cottages, and the farmer or the country gentleman is unwilling to press hardly on an industrious man and good workman.

Moreover, if the labourer escapes the payment of the poor-rate, such exemption is not clear gain to him. If he pay a shilling less, that shilling must be made up from some other source, and the fund from which it comes in agricultural parishes is the very fund on which the labourer depends for his daily subsistence. Money, which would be expended in the immediate employment of labour, goes to supply the deficiency caused by his exemption from rates: and the probable profit from that labour will not be added to the capital hereafter to be laid out in the same way.

Again, if the labourer is compelled to pay what his landlord puts upon him, because cottages are scarce, that very circumstance is probably the cause of his having fewer competitors in the labour market. If cottages were plentiful and cheap, a greater number of workmen would reside near him, and the encouragement to improvident marriages, by detaining young men at home who might seek work abroad, as well as by the actual increase of population, would place him in a worse position than that which he now occupies. If he paid less rent he would have less wages to pay it with.

The problem, therefore, "What is best to be done as regards the rural districts?" is by no means a simple one.

In towns the case is somewhat different. Cottages are the favourite mode of investing money by those who have saved a few hundred pounds. They generally are to be had in considerable number. (See the evidence of Mr. Curling before the Committee, answers 1403, 1404.) The rents are already put as high as competition will allow them to be. If the owner asks more rent, or (what comes to the same thing) refuses to make a deduction on account of the payment of rates, the occupier looks out for another house which is either cheaper in itself, or in which he hopes to escape the poor-rate. The evidence of the assistant overseer for Kidderminster, quoted above, gives actual instances of this process, which are very instructive.

Mr. Ricketts, the clerk to the Tewkesbury union, says—

"There are generally plenty of cottages to be let in Tewkesbury. I

have no doubt that in most cases in which rates are excused on account of poverty, the landlord, and not the occupier, gets the benefit of the exemption. I believe that generally the rent is fixed on the supposition that the rate will not be levied on the house, and that a landlord who professed that such would not be the case with his cottages would get less rent for them, or would not so easily get tenants."

Now it is certainly possible, in single instances, that a man who took a house on the supposition that he would not have to pay rates, may, when the pressure comes, and the landlord refuses to make any deduction, find a difficulty in obtaining a house at a lower rent which suits him as well, and, in fact, continue on at the higher amount. Such a case is supplied in the evidence of the assistant overseer at Monmouth:—

"The occupiers of two of these now pay rates. Those living in the other four have been excused. The landlord has refused to pay the rates, and says that the tenants must pay the rates in addition to their rent, if not excused; the two who have paid rates pay the same rent as the others. The tenants say that the houses were let to them on condition that there were no rates to pay for them."

In this instance the higher rent seems to have been obtained on a ground which afterwards proved false; the two tenants who were importunate enough or miserable-looking enough to get excused, do certainly in this case, for the present, reap the benefit of it. The witness, however, considers these instances exceptions, probably of a temporary nature; the parties cannot give up their houses at once.

"This kind of property is universally let on the understanding that no taxes are to be paid. In some few cases the parties have not succeeded in getting excused, but in the majority of instances, by one representation and another, often false, they get the magistrates to excuse them. An owner of cottage property said to me a little time ago, that unless the houses were exempted from rates he should be unable to procure tenants. In five or six cases in which his tenants were not excused by the magistrates, he paid the rate for them. They were excused the next rate. I know some few cases in which parties have lately been compelled to pay rates who did not pay them before, and no deduction on that account has been made from the rent by the landlord. —'s tenants above alluded to are of this kind. On the whole, however, I consider it certain that the exemption of poor occupiers from rates is generally gain to no one but the landlord, and goes entirely into his pocket."

The means, therefore, by which a tenant defeats the attempts on the part of his landlord to make him pay the rate, are by removing to another house, where he hopes to escape the charge; in short, just the same means which he would avail himself of to avoid an increase of rent.

But it would appear that if no such house is to be found, that is, if all are made to pay rates, he will lose his hold on his landlord,

and must be content to submit to the tax. If all cottage property were taxed, would not the effect be similar to that of a tax on any other commodity, viz., that the consumer must pay an increased price, and thus the tax will fall on him and not on the seller? This result seems at first sight inevitable, but I am by no means convinced that peculiar circumstances do not exist in the case of cottage property in towns, which make that article an exception to the general rule. The principle on which a tax on any commodity is paid by the consumers is simply this; profits of capital in the supply of any given article are supposed to have been already reduced by competition to the general rate; consequently if the same amount of capital is to continue to be employed in producing the commodity in question, the tax must be paid by the consumer; if he cannot or will not pay it, capital will speedily be diverted to other channels, and the price be raised by a diminution in the supply.

Now can it be shown that the profits of cottage property in towns are still so much higher than the ordinary return from other investments that a landlord might pay a tax and yet find it worth while to lay out his capital in this form in preference to any other? if so the ordinary principle does not apply in this particular case. Thus before the Rating of Tenements Committee, Sir Harry Verney asked Mr. Gulson, with reference to cottages in Coventry (No. 548)—

“Would those cottages have been built if the owners had been liable to be rated?”

The answer was—

“I think they would, for this reason; that although as it was, they got 12½ or 15 per cent., yet if they paid the rate and got 10 per cent., as capital would still be laid out to so much greater advantage in that way than any other, I think they would do it.”

Thus, too, it appears from Mr. P. Williams's evidence (from No. 412 to 491), that in Hardwick the occupier still pays the same rent that he did for the same species of property five years ago, although the owners have been subjected to heavier burdens from the price of land being increased in value, and other rates coming upon them. Building materials and the cost of erection have increased, but as yet it would seem that these charges have not reached the occupier; they are defrayed out of the wider margin of profits which this outlay of capital yet affords over and above any other, for Mr. Williams still considers cottage property as the investment which pays best.

However, I do not wish to enter on the comparative value of the testimony for and against the more profitable return from small tenements as compared with other property. A reference to the following answers in the Report of the Committee will show that the difference of opinion is great, and probably with some truth on both sides, often, however, from causes of a local and

temporary nature. (Nos. 413 to 491; No. 548; No. 644; No. 659; No. 1112; No. 1546; No. 1640; No. 1808; No. 2013; No. 2063; No. 2325; No. 2383; No. 2916.) There is one peculiar circumstance connected with the rent of cottage property, which must be considered with reference to the point now under discussion. The return is really made up of two portions; one consists of the profit on capital invested, the other of what may be termed the wages of superintendence and collection; a remuneration, in fact, for the trouble of constantly calling for small sums, watching over petty repairs, and taking care that the tenants do not abscond. Now a large proportion of the builders of cottages in country towns are retired tradesmen, or persons with their time wholly at their disposal, for the exercise of all this watchfulness—time comparatively valueless in any other way. They have laid out their savings in this particular form. The rate would, in most instances, I believe, be paid out of what may be called their “wages,” without encroaching on the interest and profit of the investment, and therefore, in many cases, without in any degree affecting the cost to the consumer, as a tax under ordinary circumstances would certainly do.

But it will be said, if part of the rent of cottages is remuneration for labour, it is analogous to that part of the farmer’s profits which is compensation for the superintendence of his farm, and ought not to be rated unless all personal ability is rated.

This claim I grant, but it affords no reason why the other portion of the rent, viz., the profit for capital invested in real and visible property, should also be omitted from the rate. If the landlord is to pay the rates, a considerable allowance should be made to him.

On the whole, I am of opinion that in towns the landlord would practically pay the rate, and that he alone, for the most part, now gets the benefit of the exemption.

In the rural districts, although a sort of indirect compensation would exist, I think the immediate effect of exacting rates from cottages might be to place the burden on the labourer.

As a matter of policy, therefore, and as an approach at least to fairness, with little or no disadvantage to the poorer classes, I should be contented to see the recommendations of the Committee of 1838 (with the exception of the 2nd) applied to all parishes containing towns of more than 3000 inhabitants, but their adoption should be made compulsory, and not dependent on the majority of cottage owners in a parish vestry. In case of future unions for the purposes of rating, the scheme must be extended, of course, to the whole united district.

I have the honour to be, Gentlemen,

Your obedient servant,

EDMUND HEAD,

Assistant Commissioner.

To the Poor Law Commissioners.

No. 8.

ON COTTAGE ACCOMMODATION IN BEDFORDSHIRE,
NORTHAMPTON, AND STAFFORD.

BY ROBERT WEALE, ESQ.,
Assistant Poor Law Commissioner.

February 2, 1841.

GENTLEMEN,—In pursuance of the directions contained in your letter of the 22nd of December last, I addressed the annexed letter to the clerks of the Unions of Ampthill, Bedford, Leighton Buzzard, Hemel Hempstead, Watford, Oundle, Towcester, and Stafford; and appended to this you will receive the replies I have received from the chairman of the Bedford, and the clerks of the Ampthill, Towcester, and Stafford Unions.

I have the honour to be, Gentlemen,

Your most obedient servant,

ROBERT WEALE,
Assistant Poor Law Commissioner.

To the Poor Law Commissioners.

Bedford, January 1, 1841.

SIR,—In the return made to me by your Board, on the sanitary condition of the labouring population of your union, it is stated that some employers of labour have erected improved cottages, and that a marked improvement is observed in the moral conduct, as well as in the personal appearance, of the tenants of these cottages.

This appears to me to be a satisfactory result, on which it is important that the most ample illustrations should be given; and I shall feel obliged by being informed, as fully as you are enabled to do, in what particular acts the improvement in moral conduct is displayed.

On the other hand, it appears that within the union there are cottages which are of an inferior description, in which there is little or no convenience for cleanliness, no separate apartments for the preservation of decency, and that these apartments are besides overcrowded. With respect to these cottages, I wish to be informed more particularly what is the moral contrast afforded by the inmates?—what are the charges entailed by them on the poor rates in the shape of application for relief on account of sickness, or otherwise, as compared with the charges arising from the cottages of the other class?—and especially what is the comparative character of the female inmates, and the children of the two descriptions of cottages, as far as they are manifested?

It may, perhaps, be desirable to consult the relieving officer on the subject of this communication, and I have to request the

favour of your furnishing me with the information required at the earliest possible period.

I have the honour to be, Sir,

Your most obedient servant,

(Signed) ROBERT WEALE,
Assistant Poor Law Commissioner.

To the Clerk of the Guardians of the Union.

(Copy.)

Amphill Union.

LETTER from Clerk to the Guardians.

“ Amphill, January 23, 1841.

“ SIR,—In replying to your letter of the 1st instant, I beg to forward the following observations:—

“ On referring to the retained copy of the return made by the Board of Guardians relative to the sanitary condition and cottage accommodation of the labouring classes of this union, I would observe that it appears to me scarcely to accord with the inference you have drawn, as expressed in the former part of your letter, which says, ‘ That some employers of labour have erected improved cottages, and that a marked *improvement* is observed in the moral conduct as well as in the personal appearance of the occupiers of these cottages.’ I would submit, that the more exact inference from the return is this, that there are cottages in the union (not of recent erection) belonging to landed proprietors, which are of a superior description, and that in the occupiers thereof a marked *difference* is observable, both as regards their personal appearance and moral conduct, as compared with the occupiers of cottages of an opposite description. Now the fact is, the proprietors of such superior cottages invariably select their tenants. When a cottage of this class becomes empty, the owner has immediately a great number of applications for it, and it follows, as a matter of course, that that applicant whose character for honesty, industry, and sobriety, stands the highest, will be the successful one; so that it can scarcely be inferred that superior cottage accommodation *has, in such instances*, produced an apparent improvement as regards moral conduct or personal appearance; nevertheless, from diligent inquiry and observation, I think I may affirm it to be an established fact, that the occupiers of comfortable and convenient cottages are, generally, in all respects superior to those of tenements of an opposite description, which is displayed in their being better clothed, their more orderly deportment, their more regular attendance at a place of worship, their greater anxiety to maintain a good name, the more respectable and comfortable appearance of their families, &c. From them also there are proportionably fewer applications for parish relief, I should say especially on account of sickness. It is generally seen that labourers whose homes are clean, comfortable, and convenient, do not frequent the beer-shop so much as those whose homes are wretched, filthy, and miserable, and cannot by exertion be much improved. It may reasonably be expected that a man, after his day’s work, should resort for those comforts which his home does not

afford, somewhere else; that place, in most cases, will be the beer-shop, and the result is an increase of wickedness and depravity. From these facts I feel fully persuaded that, were it practicable, a general improved cottage accommodation would certainly tend to produce amongst the labouring classes a general corresponding moral improvement.

“A large proportion of the cottages in the union are very miserable places, small and inconvenient, in which it is impossible to keep up even the common decencies of life. I will refer to one instance, with which I am well acquainted. A man, his wife, and family, consisting in all of 11 individuals, resided in a cottage containing only two rooms. The man, his wife, and 4 children, sometimes 5, slept in one of the rooms, and in one bed, some at the foot, others at the top, one a girl above 14, another a boy above 12, the rest younger. The other part of the family slept in one bed in the keeping room, that is, the room in which their cooking, washing, and eating, were performed. How could it be otherwise, with this family, than that they should be sunk into a most deplorable state of degradation and depravity? This, it may be said, is an extreme case; but there are many similar, and a very great number, that make near approaches to it. To pursue a further account of this family. The man is reported to be a good labourer, the cottage he held was recently pulled down, and, being unable to procure another, he was forced to come into the workhouse. After being in a short time, they left to try again to get a home, but again failed. The man then absconded, and the family returned to the workhouse. The eldest, a female, has had a bastard child, and another, younger, also a female, but grown up, has recently been sentenced to transportation for stealing in a dwelling-house. The family, when they came in, were observed to be of grossly filthy habits and of disgusting behaviour; I am glad to say, however, that their general conduct and appearance is very much improved since they have become inmates of the workhouse. I without scruple express my opinion that their degraded moral state is mainly attributable to the wretched way in which they have lived and herded together, as previously described. I have been thus particular in my account of this family, knowing it to be a type of many others, and intending it to apply to that part of your letter inquiring respecting the comparative character of the female inmates and children of the two descriptions of cottages in question.

I think it was an omission in the return called for respecting cottage accommodation, that there was no inquiry as to whether the number of cottages in each parish was sufficient for the population requiring them. It is to be regretted that in almost every parish of the union the number of cottages is quite inadequate to the demands of the population: the consequence is, that, in many instances, more than one family are seen huddled together in a hut whose dimensions and conveniences (if they have any at all) are insufficient for one; in such cases wretchedness and immorality must be a consequence. I have known some, and have heard of others, who were compelled to live in barns or outhouses, because they could not procure a cottage. The erection of new cottages in this locality is a thing of rare occurrence. I should suppose this may arise from cottage property not being deemed a profitable investment of money; perhaps also the fear of affording facilities to the settlement of families who might become

a burden to the parish may be another reason, especially before the passing of the New Poor Law. Since writing the above, I have learnt that ten or a dozen of comfortable cottages have been erected, or are in the course of erection, in the parish of Shitlington, as also of four in the parish of Marston, which are already taken, although unfinished.

“ I am, Sir, your obedient servant,

(Signed)

“ GEORGE ROBINSON.”

“ *To Robert Weale, Esq.,
Assistant Poor Law Commissioner.*”

(Copy.)

Bedford Union.

LETTER from the Chairman.

“ *Turvey Abbey, January 4, 1841.*

“ MY DEAR SIR,—I beg to acknowledge the receipt of your letter of the 1st of January. You there state that, in a return made to you by the Board of Guardians of the Bedford Union on the sanitary condition of the labouring population, it is reported that, in a few instances, cottages of an improved description have been erected by the employers of labour, the advantages of which have had a salutary influence on the moral habits of the inmates: and you request to know in what particular acts the improvement in moral conduct is displayed.

“ I have much pleasure in saying that some cases of the kind have come under my own observation, and I consider that the improvement has arisen a good deal from the parties feeling that they are somewhat raised in the scale of society. The man sees his wife and family more comfortable than formerly: he has a better cottage and garden: he is stimulated to industry; and, as he rises in respectability of station, he *becomes aware* that he has a character to lose. Thus an important point is gained. Having acquired certain advantages, he is anxious to retain and improve them; he strives more to preserve his independence, and becomes a member of benefit, medical, and clothing societies, and frequently, besides this, lays up a certain sum quarterly or half-yearly in the savings' bank. Almost always attendant upon these advantages we find the man sending his children to be regularly instructed in a Sunday, and, where possible, in a day school, and himself and family more constant in their attendance at some place of worship on the Lord's-day. I know of more instances than one where, in consequence of encouragement of the kind above mentioned to the father of a poor family, the children were regularly sent to school, and there became so much improved in character and learning that they are now filling situations of high respectability (one a confidential clerk in a large mercantile house in London), and are assisting to support their parents in a manner as delightful as it is creditable.

“ A man who comes home to a poor, comfortless hovel, after his day's labour, and sees all miserable around him, has his spirits more often depressed than excited by it. He feels that, do his best, he shall be miserable still, and is too apt to fly for a temporary refuge to the ale-house or beer-shop. But give him the means of making himself

comfortable by his own industry, and I am convinced by experience that, in many cases, he will avail himself of it.

“ Believe me, my dear Sir, sincerely yours,
To Robert Weale, Esq., “ CHARLES LONGUET HIGGINS.”
Assistant Poor Law Commissioner.

(Copy.)

Towcester Union.

LETTER from the Clerk of the Towcester Union.

“ *Towcester, January 22, 1841.*

“ DEAR SIR,—In reference to the returns of the sanitary condition of the labouring population of this union, I have communicated with the relieving officers, and have much satisfaction in being enabled to point out what I conceive to be one of the chief causes that have led to the improvement there spoken of.

“ It is remarkable how little trouble some of the parishes, considering their size and population, give us, the Board seldom or never receiving an application from them; Blakesley, Gayton, Blisworth, and Whittlebury are instances. There may be others, but these occur to me at the moment. In these, I am told by the relieving officer, and my own experience confirms it, there is a strong dislike amongst the labouring classes to apply for parochial aid unless driven by serious illness or some other pressing calamity. Their appearance, too, is more clean, decent, orderly, and healthy. Applications for medical relief are unfrequent, and there is a marked love of home, and an attention to its wants and comforts here, which leave the beer-shops nearly forsaken.

“ In these places some cottages of an improved description have been built, and others enlarged, for the labourers by their landlords; and I entertain no doubt that the advantages afforded by such cottages have had a very great and salutary effect upon the health and moral habits of the people.

“ That other causes have combined to produce so desirable a result in these instances cannot be doubted, but that this is a most important feature in any attempt to better the condition of the poor, I think no one who will take the trouble to compare a well-regulated parish with its reverse, will deny.

“ In haste, yours faithfully,
To Robert Weale, Esq., (Signed) “ J. A. SHEPPARD.”
Assistant Poor Law Commissioner.

(Copy.)

Stafford Union.

LETTER from the Clerk.

“ *Marston, Stafford, January 20, 1841.*

“ SIR,—I beg to acknowledge the receipt of your letter of the 1st instant as to the return made by the Board of Guardians on the sanitary condition of the labouring population of this union, in which it is stated that improved cottages have been erected by landed proprietors

for their labourers, and the advantages afforded by such cottages have had a salutary influence on the moral habits of the inmates, and requesting to be informed in what particular acts the improvement in moral conduct is displayed.

“ In answer thereto, I will endeavour to illustrate the remark of the Board of Guardians by contrasting the habits, the condition, and prospects of a labourer occupying an improved cottage with the occupier of a cottage of a contrary description. If we follow the agricultural labourer into his miserable dwelling we shall find it consisting of two rooms only; the day-room, in addition to the family, contains the cooking utensils, the washing apparatus, agricultural implements, and dirty clothes, the windows broken and stuffed full of rags. In the sleeping apartment the parents and their children, boys and girls, are indiscriminately mixed, and frequently a lodger sleeping in the same and the only room; generally no window, the openings in the half-thatched roof admit light, and expose the family to every vicissitude of the weather—the liability of the children so situated to contagious maladies frequently plunges the family into the greatest misery. The husband, enjoying but little comfort under his own roof, resorts to the beer-shop, neglects the cultivation of his garden, and impoverishes his family. The children are brought up without any regard to decency of behaviour, to habits of foresight, or self-restraint: they make indifferent servants; the girls become the mothers of bastards, and return home a burden to their parents or to the parish, and fill the workhouse. The boys spend the Christmas week’s holiday and their year’s wages in the beer-shop, and enter upon their new situation in rags: soon tired of the restraint imposed upon them under the roof of their master, they leave his service before the termination of the year’s engagement, seek employment as day labourers, not with a view of improving their condition, but with a desire to receive and spend their earnings weekly in the beer-shop; associating with the worst of characters, they become the worst of labourers, resort to poaching, commit petty thefts, and add to the county rates by commitments and prosecutions.

“ On the contrary, on entering an improved cottage, consisting, on the ground-floor, of a room for the family, a wash-house, and a pantry, and three sleeping-rooms over, with a neat and well-cultivated garden, in which the leisure hours of the husband being both pleasantly and profitably employed, he has no desire to frequent the beer-shop or spend his evenings from home, the children are trained to labour, to habits and feelings of independence, and taught to connect happiness with industry, and to shrink from idleness and immorality: the girls make good servants, obtain the confidence of their employer, and get promoted to the best situations. The boys, at the termination of the year’s engagement, spend the Christmas week’s holiday comfortably under the roof of their parents; clothes suitable for the next year’s service are provided, and the residue of wages is deposited in the savings’ bank; a system of frugality is engrafted with the first deposit, increasing with every addition to the fund: they are gradually employed in those departments of labour requiring greater skill and implying more confidence in their integrity and industry, and they attain a position in society of comparative independence.

“ I have selected an extreme case to show more fully the advantages

derived from improved cottages, and the immoral effects of inferior dwellings, unfortunately too numerous, in this union.

“ I have the honour to be, Sir,

“ Your obedient servant,

To Robert Weale, Esq.,

(Signed)

“ PETER LOWE.”

Assistant Poor Law Commissioner.

March 9, 1841.

GENTLEMEN,—Since the date of my last Report, (No. 281,) on the above subject, I have received a communication from the clerk of the Leighton Buzzard union, a copy of which I now beg to forward to you.

I have the honour to be, Gentlemen,

Your most obedient servant,

(Signed)

ROBERT WEALE,

Assistant Poor Law Commissioner.

To the Poor Law Commissioners.

(Copy.)

Leighton Buzzard Union.

LETTER from the Clerk of the Leighton Buzzard Union.

“ Leighton Buzzard, February 23, 1841.

“ SIR,—In reply to your communication of the 1st ult. as to the demoralization produced by overcrowded tenements, and wishing to be informed what was the moral contrast afforded by the inmates; the charges entailed by them on the poor rates, in the shape of application for relief on account of sickness or otherwise, as compared with the charges arising from cottages of a superior description; and the comparative character of the female inmates, and the children of the two descriptions of cottages,—I herewith forward you the particulars of several of the most prominent cases by way of examples.

“ I am, Sir, your most obedient servant,

To Robert Weale, Esq.,

(Signed)

“ J. WOODMAN.”

Assistant Poor Law Commissioner.

Parish of Leighton Buzzard.

“ Several of the worst of the cottages are disposed of, and it is supposed will be pulled down this spring; but there are several now occupied, that are wholly unfit for dwelling-houses: having no bed-rooms, families are living and sleeping in the same apartment, some of which are without any other flooring but the bare ground, consequently cannot possibly be cleaned. One cottage in particular, now occupied by the family of William Smith, (Smith himself being in the workhouse, as he is afflicted with a disorder that requires cleanliness, which it is in vain to hope for in the wretched hole his family are in,) the room, if so it can be called, is about ten feet long by six wide; one end of it is formed by part of the boarding of a large barn, very much out of repair, through the holes of which any one having access to the barn can see the family at any time; there is no back-door nor privy, all the filth

being thrown out close to the front door. The poor woman's confinement is approaching, which may occur in the night when the four children are in the bed with her, and, having no other place to go to, must of course remain.

"*In the parish of Edlesborough* the poor have been for some time past permitted to build hovels in the waste, and, although some of them are much better than others, the whole of them, with the exception of one built by a wheeler, are without upstairs rooms; in some instances these places are formed by being excavated in the banks, over which a lean-to roof is placed; these are necessarily extremely damp. It is feared that a poor woman of the name of Room, who has three children, is at this time suffering from consumption. From another of these wretched places, more than a year since, a child of the name of Cooper was brought to the workhouse suffering from disease brought on by filth and improper lodging; a short time afterwards the mother was also admitted, sinking from the same causes: neither the mother nor the daughter have as yet recovered, and it is questionable if they ever do. There are other cases of extreme wretchedness existing amongst these places: applications for relief are very frequent from the inmates of them; and which, however liberally or carefully bestowed, is never followed by any marks of improvement or permanent benefit. Much immorality and crime invariably exist amongst these people, some of whom are quite lost to all feelings of decency and virtue, which must be attributed to the promiscuous intercourse of the sexes of all ages, numerous instances of which might be adduced.

"*In the parish of Slapton* a case occurs that demonstrates the evil produced by the want of separate apartments. James Wesley occupies a house belonging to a charity in that parish, which has but one bedroom, and that a very small one, occupying which are himself and wife and six children, four girls and two boys, the eldest 26 years, the youngest five years; the two eldest girls have each had a bastard child, and one of them is near her confinement with the second. Fortunately no epidemic has yet appeared amongst those miserable places at Edlesborough; should such a visitation occur, the consequences cannot be imagined.

"*In the hamlet of Egginton* there are twelve tenements, belonging to a charity, formed originally out of two barns; these are always inhabited by paupers of the lowest grade, and who in their present condition would find a difficulty in obtaining any decent cottage as tenant to a private individual; they are generally the resort of persons who are turned out of their houses for non-payment of rent, &c. &c. Two only of the tenements have a room up stairs, and all, except these two, have dirt floors; the other 10 tenements consist of one room each. In two or three instances this room is divided by a sort of partition put up by the inmates. The largest number of persons occupying one of these tenements is eight, viz., a man, his wife, and six children; the eldest child aged 16, the youngest an infant. There is no bed in the house, the whole family sleeping on two heaps of straw confined in two corners of the room by stakes driven into the ground; none of the tenements are ceiled; there are no back-doors nor windows for ventilation; the filth is thrown out into stagnant pools in front of the tenements; the stench is at all times great, and in hot weather is of course

proportionally increased. With the exception of one, the rest of the tenements are occupied by families with children of all ages. The number of persons in the whole is 55.

“*In the parish of Soulbury* a building, formerly used as a work-house, is now occupied by persons of depraved habits; one room is occupied by a man, his wife, and three grown-up daughters and a son; two of the daughters have bastard children.

“It can readily be shown that the persons residing in these holes are much more burdensome to the parish than the same description of persons residing in places of a superior kind.”

No. 9.

ON THE DWELLINGS OF THE LABOURING CLASSES IN THE
COUNTIES OF NORFOLK AND SUFFOLK.

BY EDWARD TWISLETON, ESQ.,

Assistant Poor Law Commissioner.

Norwich, December, 1840.

GENTLEMEN,—In obedience to the directions contained in your circular of the 8th of November, 1839, I desire to offer a few observations on the various heads of inquiry to which you have therein adverted. The magnitude of the interests involved in such an inquiry, referring as it does to the condition of the labouring classes, who in every country are, and always must be, the great mass of mankind, makes me deeply lament that the constant pressure of my ordinary duties has prevented me from devoting to it that exclusive time and attention which its importance deserves. I have, however, seized every favourable opportunity of visiting the dwellings of the poor in various parts of the country, and in all the principal towns of this district, and it may be permitted to me to state my general impressions resulting from such personal inspection, although they cannot pretend to vie with formal statistical documents. I have moreover issued questions to all the Boards of Guardians respecting the rents of the various descriptions of cottages and the common cost of erecting them; the various practices in each as to the excusal of rates, together with the rate of ordinary and of harvest wages, and the granting of allotments to labourers; and I herewith transmit to you the answers drawn up in a tabular form. I have likewise carefully perused the Sanitary Returns of the medical officers with regard to the prevalence of certain causes of disease amongst the labouring classes of the population, and I shall avail myself, in the course of this Report, of the information thus collected. I now propose to notice some general features in the condition of the poor with reference to their cottages, their wages, and their food. I will then briefly discuss the

question of exempting labourers from the payment of poor-rates, and will finally consider how far the causes enumerated by Dr. Arnott and Dr. Kay in the Fourth Annual Report, p. 108, as affecting the well-being of the poorer classes of towns operate equally in villages.

I. With respect to the various kinds of cottages, they may be regarded as rising in the scale of excellence in the following manner:—

1. There are cottages consisting of only one room; a few of these are to be met with in all the principal towns, and here and there in villages, but they are, as might be expected, the least common of all. In fact, except in being stationary and durable, they are not many degrees superior in accommodation to the gipsy's tent, and they are obviously very inconvenient. Everything must be done in the one room,—sleeping, washing, cooking, and eating. It must contain bedstead and bed, chamber utensils, chest of drawers, chairs, tables, candlesticks, crockery, and coals. They frequently present an appearance of great confusion, but I have seen some of them kept in a state of the most admirable order and cleanliness. It is seldom that they are inhabited by more than two persons.

2. The next class is that of cottages with one room on the ground-floor and a chamber or bed-room above; and a considerable proportion of the labouring population live in such cottages. Although they may be sufficiently commodious for a man, and wife, and very young children, they are manifestly uncomfortable, and the having only one bed-room is even indecent for a man and wife and large growing family; but I have seen many instances where a man, his wife, and six children, of different sexes, have slept together in one room on three and sometimes only two beds. The annoyance of thus herding together must be almost insufferable, and several mothers of families among the labourers have spoken to me with great propriety and feeling against the practice, saying, “that it is not respectable or decent, and that it is hardly bearable;” “that they scarcely knew where to turn or how to shift;” “that such a thing is not right for a Christian body in a Christian land;” and they have used other expressions of a similar import. In order to diminish the evil, they have recourse to various expedients, such as putting curtains to the beds or dividing the room into two parts by pinning old counterpanes together, and sometimes by cutting up and sewing together old gowns and stretching them across the room; all of which schemes are attended with the inconvenience that in a crowded apartment, where pure air is a scarce luxury, they have a tendency to check still more its healthful circulation. The having only one room below is almost equally inconvenient, and where it is necessary to wash linen, to cook, to bake, and to perform all the ordinary household work in the same room, with children running and

playing about, it is difficult for even the most tidy persons to prevent their house from being, to use a favourite phrase of the district, in a constant "muddle." However, it not unfrequently happens that two or three of such cottages have a bake-house and wash-house in common, which of course lessens to a certain extent the discomfort of having only one day-room.

3. The next class is of the same description of No. 2, with an additional room used as a kind of wash-house, scullery, or, as it is frequently termed, a back-house, not to be confounded with bake-house. This appears to be the most common class of cottages, but I have no statistical data to give an idea of their exact proportion to the rest. In regard to their having only one bed-room, the same objections, strictly speaking, apply as to No. 2, but the back-house, which has frequently been added as a sort of lean-to subsequent to the originally building, is a decided improvement. In the class now under consideration (No. 3), it sometimes happens that the upper room is divided into two parts by a wooden partition, and in this case it forms a link of transition to No. 4.

4. The 4th class comprises the best cottages in which labourers reside, viz., those which have, at least, four regular rooms, two below and two above. This is the model class, with which all would be contented, unless in the case of very large families, when three bed-rooms would be desired. New cottages are most frequently built after this fashion, and in progress of time it may supersede all the other, but at present two-roomed and three-roomed cottages are decidedly more numerous.

The rents of the several description of cottages vary so materially, not only in different parts of the country, but likewise in adjoining villages, and sometimes even in the same village, that every general statement on the subject must be received as necessarily imperfect. Gentlemen of landed property sometimes let their cottages very much under their value (a measure, though benevolent, of doubtful expediency), and sometimes, at the same time, in order to keep down the number of fresh settlements, will not allow more than a certain number of cottages to be built on their estate. The consequence is that if they possess nearly all the parish, other cottage owners in the same parish are enabled to obtain a disproportionately high rent, which in one case that I am acquainted with amounts to just double the rent of the others.* Subject to those variations it may be said that in villages the rent of cottages No. 1 varies from 6*d.* to 9*d.* per week; of No. 2 and No. 3 from 2*l.* to 5*l.*; of No. 4 from 3*l.* to 6*l.* or 7*l.* In towns the rents may be safely set down as at least 25 per cent. higher than in villages. The cottages are built of all kinds of materials, of lath and plaster, of clay, of stone, (when in the

* In such cases the gentleman may be praised for his liberality, and the small owner of cottages censured for his covetousness—but in fact the former is in one sense the cause of the high rents.

neighbourhood of quarries) and of brick. They are roofed with thatch, with tiles, or with slate. The *predominant* style of buildings in Norfolk and Suffolk is of bricks roofed with tiles. It is, I believe, generally considered that brick cottages roofed with slate are on the whole preferable, and many of this kind are to be met with here and there. At the same time there appears to be a great liking amongst the poor themselves for thatched roofs, provided that the work is well done. They say that thatch is warmer in winter and cooler in summer than slate, and as the latter is a better conductor than the former, I suppose there can be no doubt of the fact. On the other hand, thatched roofs are less durable and more subject to be infested with vermin.

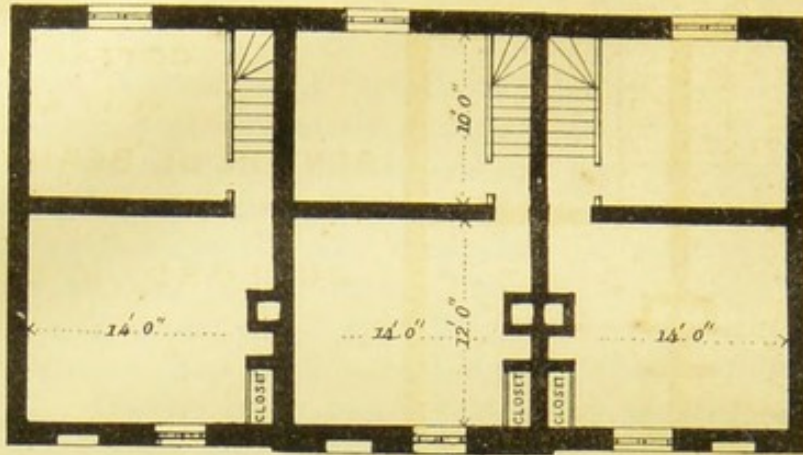
With reference to inquiries respecting the common cost of erecting two-roomed and four-roomed cottages respectively, the answer must of necessity be vague, as so much depends upon the price of building materials, the nature of the materials employed, and the strength of the work. In towns, speculators in cottage property build light cottages at a comparatively trifling expense. "Everything hinges," said a builder to me, "on whether you build a cottage to *sell* or to *keep*. If you build one to *sell*, and you do not care about not making use of the very best materials, you may run up a cottage for almost nothing." A single two-roomed cottage might cost from 40*l.* to 70*l.*, and a single substantial four-roomed one, with all proper conveniences of pantry, coal-hole, and cup-boards, from 70*l.* to 95*l.* But the cost of building two cottages is, of course, less, inasmuch as a saving is effected by erecting one party wall instead of two outer ones; and the cost of erecting two four-roomed cottages may vary from 100*l.* to 180*l.*

Although the general aspect of the cottages in Norfolk and Suffolk is pleasing and attractive, I do not think that these counties can be generally cited as abounding with model cottages. Some of the best which I have seen belong to the Earl of Stradbroke, at Henham, near Halesworth in Suffolk: to the Earl of Leicester, at Holkham: and to the Rev. Mr. Benyon, at Culford, about five miles from Bury St. Edmonds. Those of the Earl of Stradbroke are built of brick, roofed with tiles, have four rooms at least, and have all proper conveniences of pantries, cupboards, and out-offices; but, at the same time, as they are principally with only one story, so that the bed-rooms are on the same floor with the parlour and kitchen, such cottages would only be built where land is no object; and they must be considered in the light of luxuries and ornaments. Some of the cottages of the Earl of Leicester, at Holkham, are, perhaps, the most substantial and comfortable which are to be seen in any part of England, and if all the English peasantry could be lodged in similar ones it would be the realization of an Utopia. I have obtained from Mr. Emerson of Holkham, their builder, drawings of the plans and of the ele-

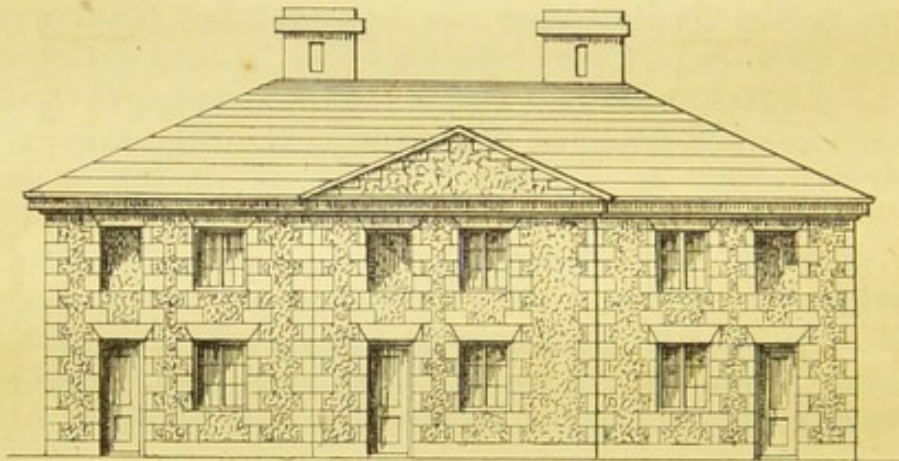
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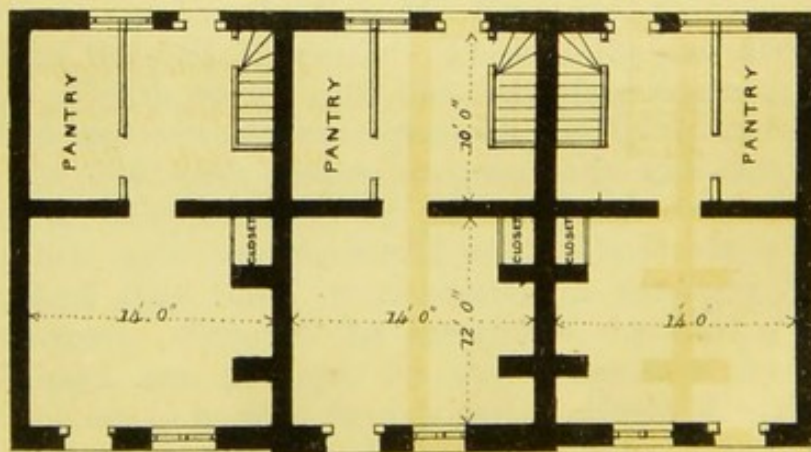
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CHAMBER PLAN OF THREE COTTAGES.

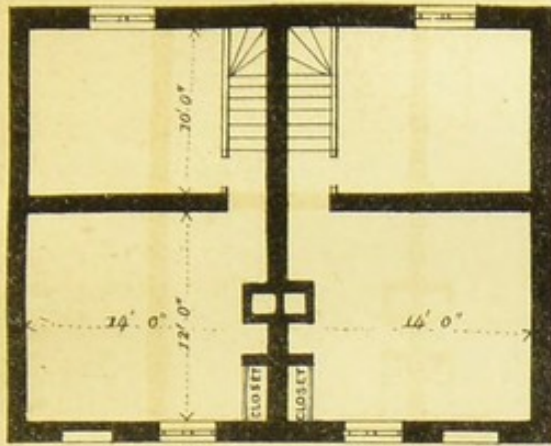


ELEVATION OF THREE COTTAGES



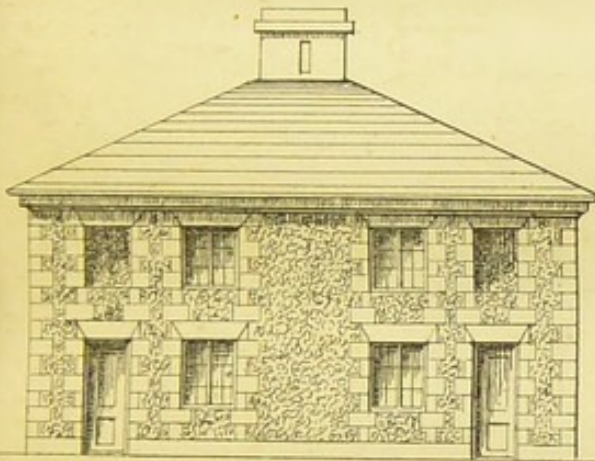
GROUND PLAN OF THREE COTTAGES.

b. E.

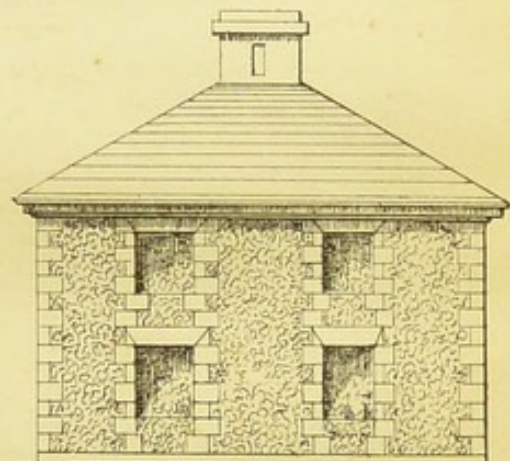


COTTAGES
BUILT BY
BENYON DE BEAUVOIR, ESQ^r
AT
CULFORD IN SUFFOLK.

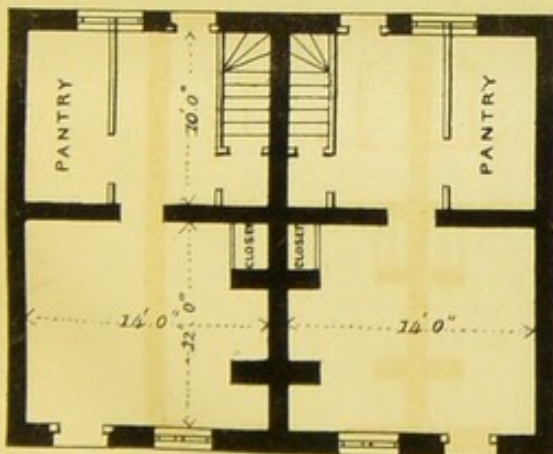
CHAMBER PLAN OF TWO COTTAGES



ELEVATION OF TWO COTTAGES



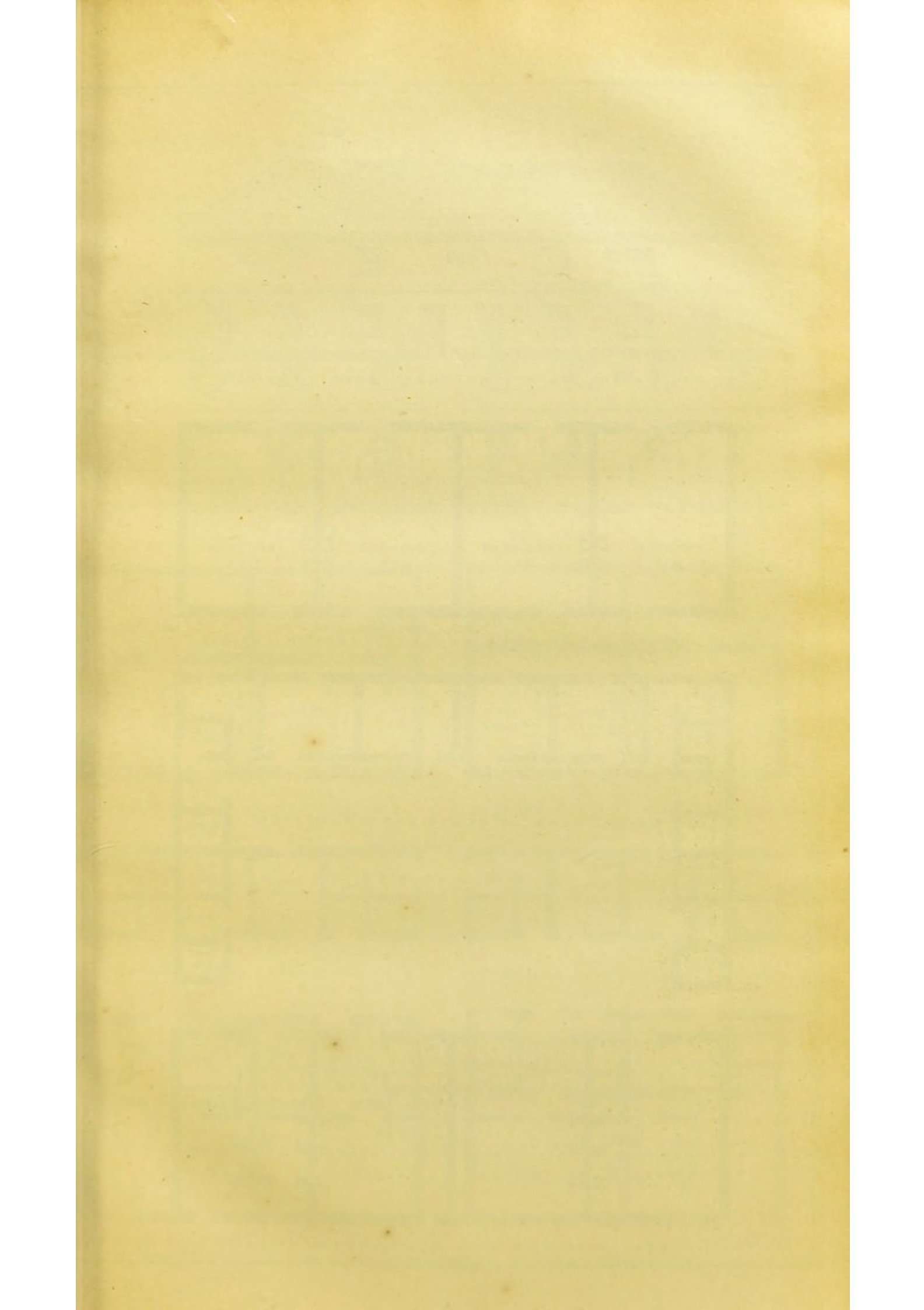
END ELEVATION.



GROUND PLAN OF TWO COTTAGES

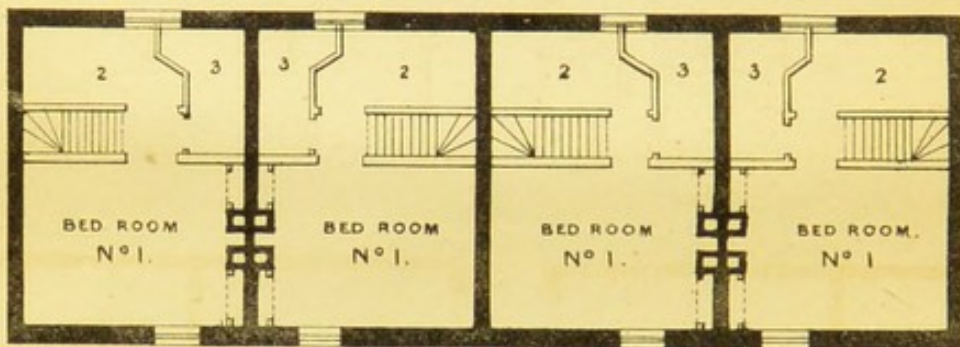
The whole Village, consisting of 50 Cottages, has been built in a similar style. Rent from £2.10^s to £3.3^s.



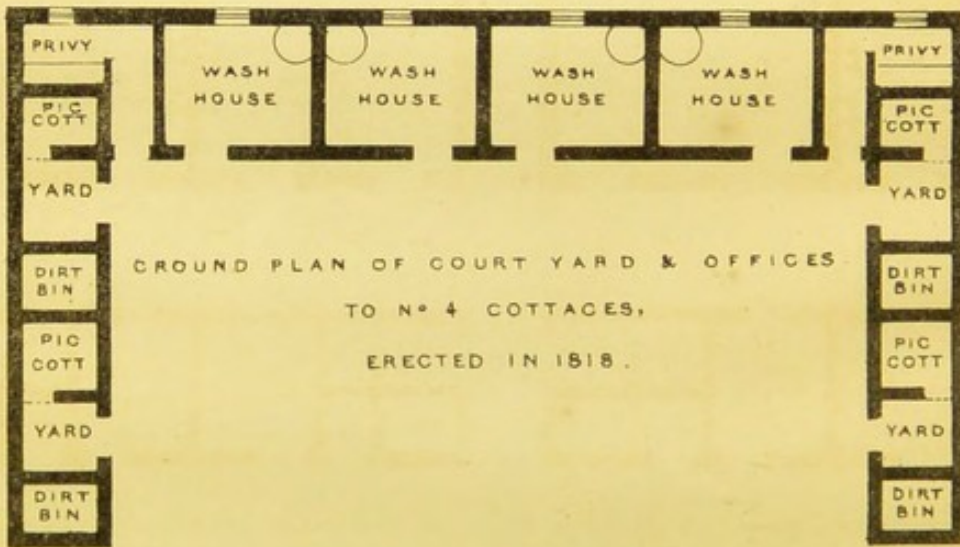




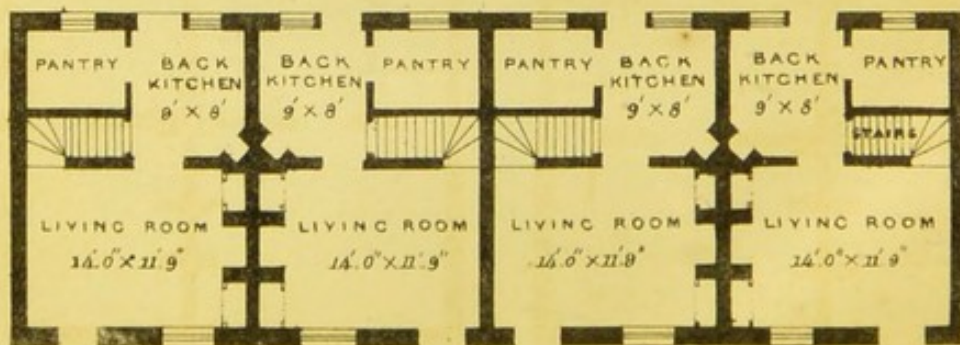
ELEVATION OF N° 4 COTTAGES, ERECTED IN 1818.



CHAMBER PLAN OF N° 4 COTTAGES, ERECTED IN 1818.



GROUND PLAN OF COURT YARD & OFFICES
TO N° 4 COTTAGES,
ERECTED IN 1818.



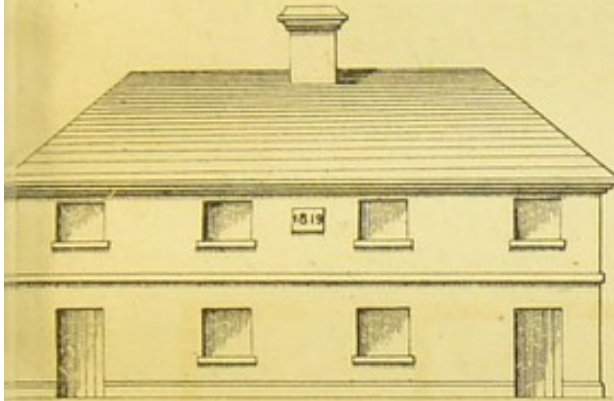
C-E.

GROUND PLAN N° 4 COTTAGES, ERECTED IN 1818.

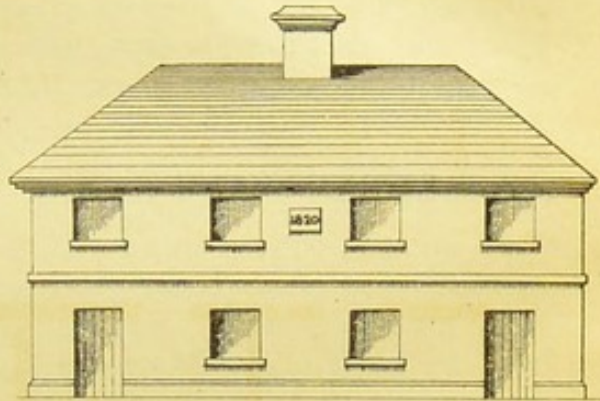
Mr Twisleton's Report on Cottages &c.

COTTAGES BUILT BY THE EARL OF LEICESTER.
AT HOLKHAM, IN NORFOLK.

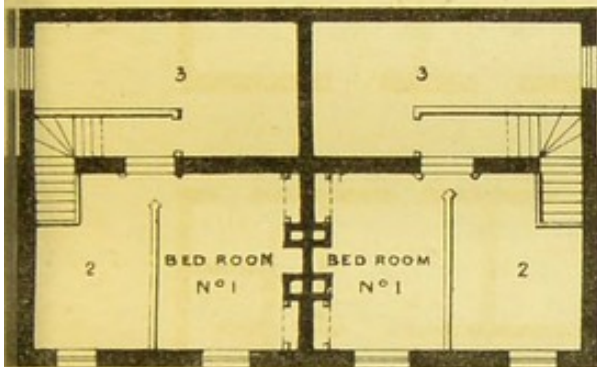
The Rent for them, (including Garden Ground) is 3^l 3s. a year.



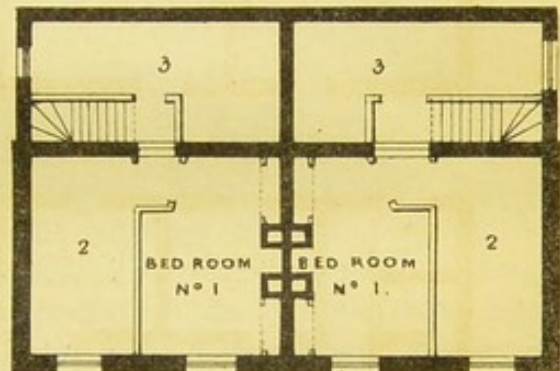
ELEVATION N°2 COTTAGES, ERECTED, 1819.



ELEVATION N°2 COTTAGES, ERECTED 1820.



CHAMBER PLAN N°2 COTTAGES, 1819.



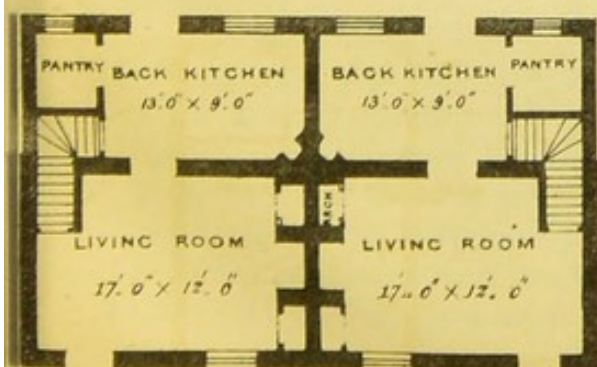
CHAMBER PLAN N°2 COTTAGES, 1820.



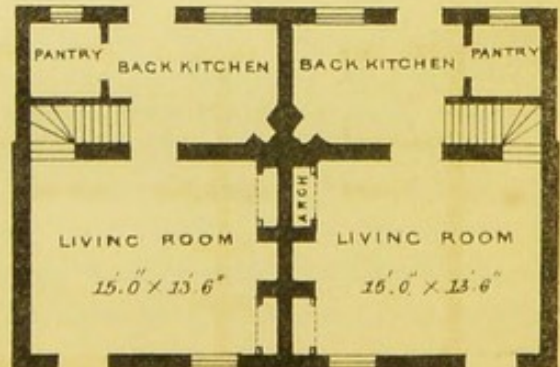
PLAN OF OFFICES N°2 COTTAGES, 1819.



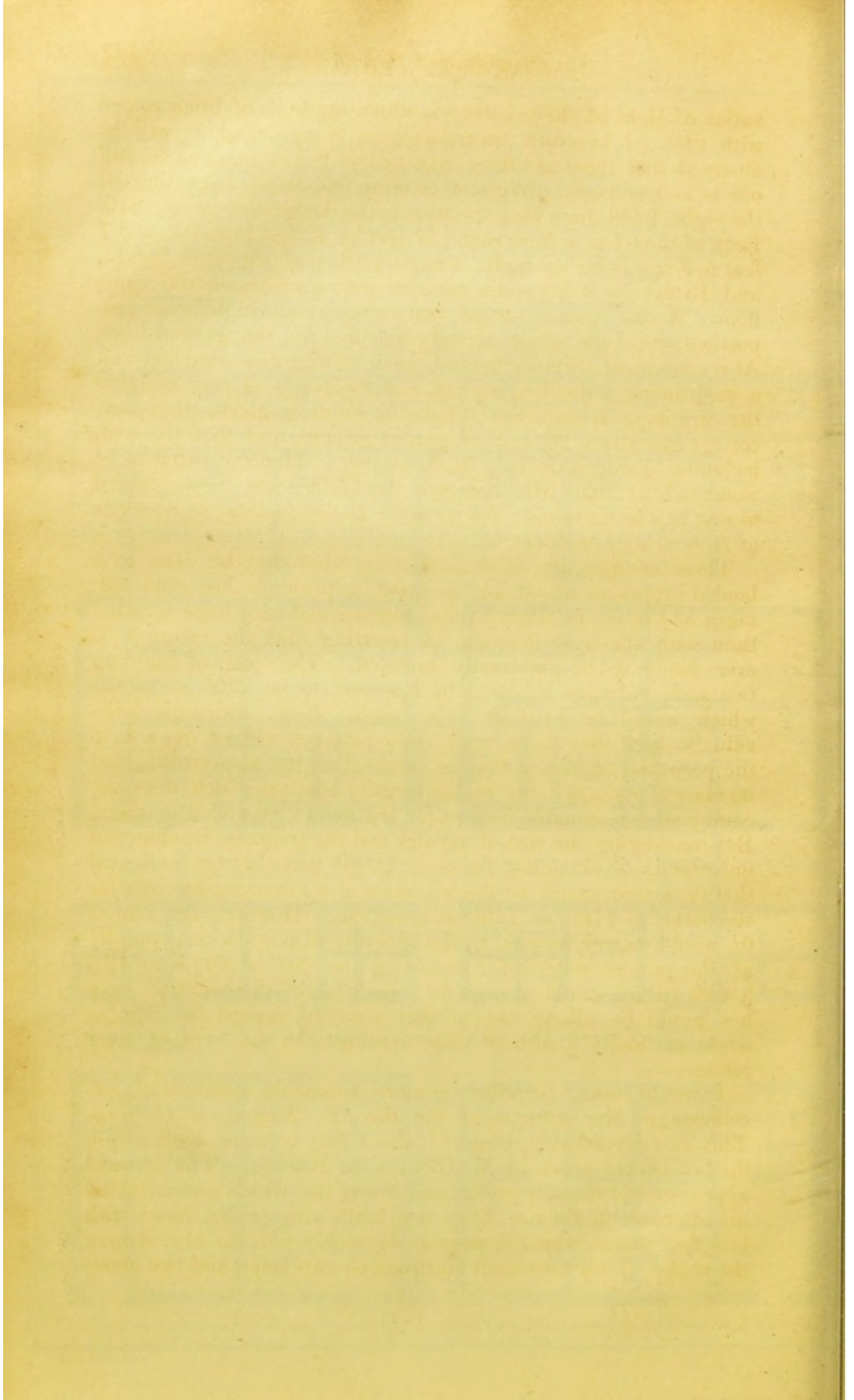
PLAN OF OFFICES N°2 COTTAGES, 1820.



GROUND PLAN N°2 COTTAGES, 1819.



GROUND PLAN N°2 COTTAGES, 1820.



vation of eight of these cottages, which are built of brick roofed with tiles. I herewith transmit them to you, and it will be observed that there are three sets, two of two cottages each, and one of four cottages. Without entering into details respecting all the eight, I will draw your attention to the double cottages of 1819. Each of these has a front room, 17 feet by 12 feet in width, and 7 feet to 7 feet 6 inches high; a back kitchen of the same height, and 13 feet by 9 feet wide, together with a pantry on the same floor. Above these are three bed-rooms which, in different proportions, cover the space already specified for the ground-floor. At a convenient distance behind, each cottage has attached to it a wash-house, a dirt-bin, a privy, and a pig-cot. I may add that the drainage is excellent; that the water is good; that each cottage has about 20 rods of garden-ground, and that the rent, including gardens, is only 3*l.* 3*s.* a-year. Hence it is not to be wondered at that Mr. Emerson the builder has been enabled to say, in a letter to me: *I have never known in them an instance of fever or any epidemic.*

These cottages are cited as showing what may be done by a landed proprietor who takes as great a pride in his good cottages and farms as others in fine hunters and race-horses, rather than with the least intention of asserting that the example is ever likely to be universally imitated. The cost of building two such cottages is stated by Emerson to be 220*l.* or 230*l.*, which would be 110*l.* or 115*l.* each. Now, although individuals, here and there, may build cottages without regard to the pecuniary return, it may be assumed as incontrovertible, that no class of cottages will be universally adopted which does not command a reasonable interest for the money expended on them. But considering the cost of repairs and the frequent trouble and uncertainty of obtaining the rents, it will probably not be denied that 6*l.* a-year would be the *minimum* as a remunerative rent for the outlay of 110*l.* or 115*l.* on a cottage. However, the rent of 6*l.* would scarcely be paid by the agricultural population generally at the present wages: for reckoning the rate of wages at 12*s.* a-week (which would be high for some parts of the country), very few would be willing, out of that sum, to expend 2*s.* 3 $\frac{3}{4}$ *d.* a-week, or nearly a fifth of their earnings, for the rent of their cottage.

I would take, therefore, a more attainable standard of excellence in the cottages of the Rev. E. Benyon, at *Culford*. This is a remarkable village of about fifty cottages, built within the last twenty years by Mr. Benyon de Beauvoir. The outward appearance of them is pretty, and it was this which first attracted my attention to them. They are built with bricks, faced with blue flint stones, which harmonize agreeably with the blue slate of the roofs. They have each four rooms—two below and two above

—with a pantry and cupboard. I herewith transmit to you plans and drawings of five of these cottages in two sets—one consisting of double tenements, and one of three tenements. It will be observed that the principal room is 14 feet by 12 feet *wide*, and 7 feet high, which is inferior in size to those at Holkham, and that they have only two bed-rooms, while those at Holkham have three. At the distance of a few feet from each set of cottages there is a wooden building, roofed with tiles, which comprises a space for fuel, and a privy for each cottage, and a common oven. The average cost of the double cottages at Culford is stated to have been 170*l.*, or 85*l.* each.

With regard to the question, whether the advantage of improved dwellings has been observed to have any salutary influence on the moral habits of the inmates? I am afraid that the experiment has not been tried in the district on a sufficiently large scale, *without disturbing causes*, to admit of a satisfactory answer. The labourers of Holkham are a fine race, but they are not, I believe, considered superior in moral habits to the peasantry of the neighbouring villages. If they have had many advantages, they have likewise been necessarily exposed to many temptations. At present, owing to a combination of circumstances, there is actually a superabundant population at Holkham; and I am acquainted with few parishes which would benefit so much by emigration.* On the whole, I am inclined to doubt whether the intellectual and moral culture of the adult population of Holkham, who profited by the Earl of Leicester's improvements, was sufficiently advanced to make their external advantages an unmixed good. Similar remarks may, perhaps, be applied to Culford; for Mr. Benyon, in answer to some inquiries from myself, after having stated that, in a pecuniary point of view, his cottages were not profitable (though as tending to keep the labourers healthy, he thought a good roomy cottage most essential), proceeds to state:—

“As to contentment—I am sorry to say here they do not consider that enough; but my uncle, being away so much from hence, the labourers, though more than fully employed, have been left pretty much to themselves; and having a public-house close to them, and high wages, they have become very much demoralized. I should say, generally speaking, that where the cottagers were well looked after, a good cottage would make them more contented.”

From all which the inference to be drawn is not, of course, that the high wages of labourers are in themselves an evil, but that no external and mechanical benefits can supply the place of good moral

* The Earl of Leicester has made liberal offers to induce some of them either to emigrate or to migrate to other rural districts, but generally without success. There is now a juvenile school at Holkham, and an infant school has been established there by the Countess of Leicester.

training; and I would say, as a corollary, that at the same time that you build first-rate cottages, you should establish first-rate schools.

The furniture of the cottages in this district is generally of a very simple kind. On the brick floor of the principal room there may be five or six strong wooden chairs, two or even three tables, a chest of drawers, and sometimes a clock. On the chimney-piece there may be bright brass candlesticks and neat pieces of crockery. On the walls, pictures are not uncommon, but they are for the most part of an antiquated fashion, and without any pretensions to excellence as works of art; modern engravings of any sort or kind are exceedingly rare; even new subjects are treated in the old style. The majority of the pictures relate to religious subjects, such as the History of Joseph, of David, or of Christ. Allegorical pictures are not unfrequently met with, such as Spring, Summer, Autumn, and Winter, represented as persons. Besides those, we may notice portraits very unlike the originals, among which the first place is due to Her Majesty and Prince Albert.

In point of cleanliness, although the cottages in the district fall short of the most noted in some parts of Holland, the general standard seems to me respectable, and decidedly higher than in most parts of the continent. Some cottages, of course, are in a very filthy state; but the fact has been very strongly pressed upon my notice, that the cleanliness of a cottage bears no direct proportion to the wages of the inmates. The earnings of a family may amount to 17*s.* or 18*s.* a-week; but if the man is a drunkard, or the wife has slovenly and tawdry habits, the children look neglected and dirty, and their cottage presents the most repulsive aspect. If with such habits in the heads of the family the wages are comparatively low, extreme suffering and misery may be the result. I have witnessed an instance of this kind in the parish of Roydon, in the Guilteross union, where Thomas Lefley, an able-bodied man (aged 36), his wife (aged 40), and five children (under 14), live together in a miserable parish hovel. The case is thus accurately described by Mr. Rackham, relieving officer of the union:—

“ On visiting this case, I found the poor woman and children without food or firing, and not a sufficiency of clothing to cover their nakedness. Their furniture consists of an old table, one chair, and a form below stairs: a bedstead and three bunches of rags, miscalled beds, but without sheets, blankets, or coverlids, and in a state of filth, and covered with vermin, that cannot be described. The house is without two panes of the girth-lights, their place being supplied with a piece of sacking and rags; the walls and roof is in a most wretched dilapidated state, the wind and weather penetrating in every direction; the floor below entirely broken up; one-third of the chamber-floor is also broken up: there is no door to the chamber, its place being supplied with a piece of ragged pickling.”

It is true the wages of this man are said to have averaged only 9s. a week; but then, owing to what is undoubtedly an abuse, which has been no real gain to him, he lives in a parish house rent-free; and some families, in the same pecuniary circumstances, present a respectable appearance. Thus next door, under the very same roof, there lives a man, his wife, and *seven* young children; the wages of this man being only 1s. a week more, but there is nothing either in the looks and dress of the children, or in the furniture, cleanliness and state of repair of the cottage, from which you would infer extreme poverty. But Thomas Lefley has been an improvident man; the wife, who was a farmer's daughter, and who brought her husband 250*l.* as a marriage-portion, is a bad manager; and the consequence is, that they live in a state of misery such as I have scarcely ever beheld.

On the other hand, some of the dwellings of paupers with small allowances are exquisitely clean and neat. "Sir," said a pauper of this class to me, when I was praising her for the neatness of her cottage, "if I have not a morsel of bread to eat, as long as I can move about I will keep my house sweet and clean." It is easily understood that such instances are not very numerous, but still they occur sufficiently often to prove that dirt and filth are not the necessary companions of poverty, and they may tend to put benevolent persons on their guard who might be inclined to infer unmerited privation and suffering from the neglected and squalid appearance of a dwelling.

There are in the cottages very few books of any kind, except testaments or prayer-books; and there can be no doubt that the peasantry of Norfolk and Suffolk are on the whole an illiterate race. It appears from the Second Annual Report of the Registrar-General, that of the parties whose marriages in Norfolk and Suffolk were registered during the year ended June 30th, 1839, 49 per cent. in Suffolk and 46 per cent. in Norfolk (*i. e.* nearly one-half of them) could not write their own names; and giving all due weight to the caution of the Registrar-General, that we must not hastily draw any decided inference from the Returns of a single year, I do not anticipate for the next few years that the Returns will show any material variation in this respect. And if an accurate account could be taken of the number of those who, although they can write, cannot *spell* correctly, it is probable that the number of these would be found to be at least 80 or 90 per cent. At the same time I should be very unwilling to speak disrespectfully of the Norfolk and Suffolk peasantry. Although, owing to the neglect of those above them, they have not been well instructed in reading, writing, and spelling, they are a manly, industrious race, with great practical intelligence and skill—who have spoken their mind by doing things well—who in trimming a hedge, in felling a tree, in ploughing a field, in reaping or mowing, could not easily be surpassed by the peasantry of any other county. I deem it right, moreover, to add, that the

Lord Bishop of the diocese, and other individuals, have, within the last few years, given an impulse to the improvement of the schools, although the means are still very inadequate to supply existing deficiencies.*

The wages of the agricultural labourers are rarely as low as 9s., and they vary, generally speaking, from 10s. to 12s. a week for day labour. There are about 2s. or 3s. more for task-work. In the hundreds of Samford, and of Mutford and Lothingland, two well-managed old incorporations, and in some other districts, it is usual for the labourers to have beer in addition to the above wages. The usual harvest-wages vary from 5l. to 6l. 10s., and the rent is generally paid from this source.

The ordinary food of the population consists of the best wheaten bread. I am told, indeed, that in the neighbourhood of Brandon some of the poor still eat rye-bread, or bread of rye and wheat mixed; and one reason, in addition to their poverty, assigned for this is, that they are in the habit there of keeping pigs to sell, and the bran of the rye can be economically used for feeding these animals. However this is an uncommon exception, and it may be confidently stated as the almost universal fact, that wheaten bread is the food of the very poorest inhabitants, including paupers. Bread and butter, together with tea, is the usual food, even for dinner, of the aged and infirm, and of widows with children. The principal meal of the labourers is in the evening, after the day's work is over; when many of them sit down to a comfortable supper of Norfolk dumpling, potatoes, and, now and then, a little bacon or other meat. I am afraid, however, that the greater number do not very often eat meat more than once a week; but this is in a great measure owing to their habitually eating the best wheaten bread, under the conviction that the best bread is cheapest in the long run, and that they can do more work on such a diet than on a mixed diet of meat when the bread is of an inferior description. Opinions will probably differ as to the correctness of their judgment on this point; as no one has so much at stake as themselves at arriving at a sound conclusion, the presumption is in their favour. But it is very necessary to bear in mind the *quality of the bread*, which they now eat, when comparison is made between their diet and the diet of their forefathers. Complaints are sometimes raised as to the deterioration of their condition, founded on the assumed fact that the English agricultural labourers formerly lived habitually upon meat; but supposing that this fact were indisputable, a question would still remain as to the quality of the bread, and the quality as well as quantity of the meat which formed their supposed diet. The important point to be ascertained is, which of the two diets would

* On this subject I would wish to refer to the petition to the House of Commons from the Rev. George Sandby, jun., chairman of the Wangford union. In that petition the failure of voluntary subscriptions to provide good schools in small parishes is pointed out, and something in the nature of an Education Rate is suggested.

maintain the labourer in the highest condition of health and strength, and no satisfactory inference can be drawn from a mere statement (even supposing it to be perfectly accurate), that English agricultural labourers formerly lived upon meat. And here I would observe that, to the best of my belief, there is scarcely any country in Europe, except England, in which the labourers eat good wheaten bread as their ordinary food. In Holland, where the standard of comfort among the peasantry is reckoned comparatively high, the labourers eat rye-bread, such as English labourers and even English paupers would be unwilling to accept. It is true that probably no other European labourers work so hard as the English, and it is desirable that the diet of the latter as well as of the former should be still better than it is at present; but still there is enough to make us sceptical as to a supposed deterioration in the condition of English agricultural labourers, and a comparison of their food with that of their neighbours on the continent might have a tendency to check discontent.

The system of granting allotments of land to labourers seems to exist in a few unions in Suffolk, and here and there in Norfolk; but it cannot be said to be generally prevalent. On the other hand it is very common indeed for cottages to have a small slip of garden-ground attached to them. The size of an allotment rarely exceeds a quarter of an acre, for which the usual yearly rent is 10*s*. The beneficial effect of allotments appears to be universally admitted, provided that they are restricted to the size of a quarter of an acre; but the general opinion seems to be, that when they exceed that limit they are more than one labourer can manage, and are apt to be rather injurious to him than otherwise. Admitting this to be true, and assuming that the present system of large farms and of comparatively good wages is on the whole the best for the labourers, it is difficult, regarding the paucity of small farms from another point of view, not to give way to a feeling of regret. The English agricultural labourer, even if he has transcendent abilities, has scarcely any prospect of rising in the world and of becoming a small farmer. He commences his career as a weekly labourer, and the probability is, whatever may his talents and industry, that as a weekly labourer he will end his days. If he cherishes the ambition of becoming a small farmer, his wisest course is to emigrate to Canada or New South Wales: or some other of the colonies, where alone he can put forth all his energies for the attainment of that object with a reasonable prospect of success.

With respect to the rating of cottages, this district affords specimens of almost every variety of practice. In some parishes all the labouring population are excused from paying rates; in some, all who inhabit cottages under a certain value; in others, those only who, in the opinion of the magistrates, are unable to pay; in some, paupers only are excused; and in some this exception is not allowed, and even paupers are compelled to pay.

As the subject is one of great importance with reference to the promotion of satisfaction and good-will amongst the poor themselves, and as there is a very strong feeling amongst the majority of the Boards of Guardians, and I believe amongst the poor, to have the present system altered, I will briefly notice three modes of dealing with the question, which embrace, more or less, all the varieties of practice, and which are the only possible in the present state of the law.

1. A few labourers only may be excused according to an opinion of their inability to pay ;
2. Or all the labourers may be excused ;
3. Or none of the labourers may be excused.

And I now propose to offer a few remarks under each of these heads :—

1. It sometimes happens in legislative changes, from a desire of not doing too much at a time, that old laws, founded on ideas no longer recognized as sound, still maintain their place in an uncongenial neighbourhood. This seems to be the case with regard to the law of the 54 Geo. III., c. 170, passed in 1814 ; by which magistrates in petty sessions are empowered, “with the consent of the churchwardens and overseers of the parish, or of such other persons as are competent to act under the authority of any Act of Parliament for the ordering, management, control, or direction of the poor of the parish, to excuse persons from the rates on *proof of their inability, through poverty, to pay.*” This law appears to have contemplated that some labourers, as distinguished from others under certain circumstances, should be excused ; and in one or two points it breathes the spirit of the old poor law, when it was thought safe to empower justices at their discretion to order relief to industrious poor persons at their own houses. The legislature, in framing both these laws, seem to have proceeded on the supposition that it was generally possible to arrive at a tolerably accurate knowledge of the means, resources, and capabilities of the poor, without having any test of destitution in reserve. But experience has abundantly shown, and the new Poor Law is founded on this experience, that such an idea is frequently delusive ; and that no accurate knowledge can, speaking generally, be attained even of what a man and his family do earn, much less of what they might earn, without some test, and without making the condition of the recipient of relief less desirable than that of the independent labourer. The practice, however, of excusing rates according to the meaning of the present law sins against sound reason in those two important particulars—that, 1st, it permits a magistrate, with the consent of the parish officers, to pronounce without any test in reserve upon inability to pay ; and, 2ndly, that it renders the situation of an excused person more desirable than that of one who is not excused. It is true, indeed, that where magistrates require the previous consent of a Board of

Guardians, there is some protection against abuses in this respect; but it is very common for magistrates to rest satisfied with the consent of the parish officers, and then the question of what degree of poverty constitutes "inability to pay" arises with all its difficulties. The consequence is, that the practice of excusing rates on this ground has a tendency to produce jealousies and heart-burnings among the poor themselves, inasmuch as many of those who are compelled to pay think themselves (and often with justice) quite as unable to pay as those who are excused; and I must confess that this intermediate system seems to me the most objectionable.

2. In many parishes, as has been already observed, it is customary to excuse the rates of all the labourers, and this system has certainly the advantage of avoiding the dissatisfaction and bickering which result when some are excused upon the alleged ground that proof has been given of their inability to pay. But on the other hand it is quite evident that, in the long run, and in parishes where cottage property is regarded as a profitable investment of money, the rents will be proportionably raised, and the cottage owners will be thus benefited at the expense of the other owners and occupiers of the parish. Now it is difficult to see any valid reason why speculators in cottage property should be exempted from parochial taxes more than the owners of any other description of property. For as to the idea which some have entertained, that this leads to the erection of a better description of cottages, it is, I believe, contrary to experience that this is the result. I myself have never been able to discover, and I have not met with any one who has observed the slightest difference in this respect, between the parishes where all are excused and parishes where none are excused. Indeed the contrary position is sometimes laid down, and it is maintained that the exemption from rates has a tendency to deteriorate the quality of tenements which are erected. But perhaps neither of these theories would be true, except on the supposition that it was the practice to excuse rates solely on account of the value of the cottage, and that the continuance of such a practice, where known to exist, could be safely calculated upon. It is, however, far more usual to make the exemption depend, not upon the value of the cottage, but upon the condition in life of the tenant; such as whether he is a labourer or a mechanic, and whether he has or has not a family. And there is such fluctuation in the modes of dealing with the subject, that it is almost always uncertain whether the practice prevailing in any parish at any given time will last for a definite period.

It may be added, in reference to the systematic excusal of all labourers from paying rates, that precisely the same kind of objections may be urged against it as against systematically paying out of the poor rates the *rents* of cottages. And as the latter practice is now almost universally admitted to be injudicious, and is in fact exploded in all well-managed unions, it is difficult to

understand on what principles the excusing all labourers from the payment of poor rates can be seriously defended.

3. The plan of excusing none from the payment of the poor-rates has been tried, and has been signally successful in some parts of this district. It has been sometimes asserted that an attempt to enforce the payment of rates by all parties must be impracticable; but as the system has been actually enforced, both in manufacturing towns and in villages, there seems to be no reason why, with intelligence and a resolute will, it should not be adopted elsewhere. In Sudbury, previous to the year 1835, almost all the cottagers were exempted from the payment of rates, till at last some of the inhabitants, feeling convinced that the owners of cottage property were the principal gainers by such exemption, and by no means acknowledging the justice of this arrangement, set themselves deliberately to work to alter the system. They acted with prudence and steadiness—they appointed a paid collector—they resolutely issued summonses to those who refused to pay—and, in the course of a year, produced such a total revolution in the system, that at present even paupers are compelled to pay; their allowance of out-relief being calculated with reference to these circumstances. In like manner, with some slight modifications, the payment of rates is enforced in the rural unions of Blofield, (in which only actual paupers are exempted,) of Hartismere and of Guiltcross. The same is the case in the greater part of Depwade, and in many parishes of many other unions. Considerable advantages result from thus enforcing the payment of rates by all cottagers without any exception.

1. No complaints can arise on the part of the labourers of unfairness and favouritism in the excusal of rates.

2. No objection can be raised by the owners and occupiers of other property, that owners of cottage property are unjustly exempted from parochial burdens.

3. As every labourer contributes to the poor-rates, he has a direct interest in endeavouring to prevent imposition in the recipients of relief.

4. In the long run, under ordinary circumstances, the rent of cottages will be in some measure adjusted with reference to the rates, so that the labourers, generally speaking, will not be great losers in a pecuniary point of view; while, on the other hand, the subjecting them to precisely the same kind of liabilities as other classes has a tendency to encourage in them ideas of independence and self-help.

For these reasons the plan of allowing no exemptions from the rates seems to me the best of the three plans which alone are practicable in the present state of the law. At the same time the advantages of that plan are counterbalanced by so many disadvantages, many of the labouring classes are so improvident, they have such a dislike to anything in the nature of direct taxation; such a long period of time would elapse before the rents would

universally be lowered in exact proportion to the rates paid by the tenants, and the irritation, discontent, and even suffering, during the period of transition would frequently be so great, that I cordially subscribe to the recommendations of those who are desirous that the owners of tenements exceeding a certain annual value should, with certain limitations, be made liable to the payment of rates instead of the occupiers. I may add that, to the best of my belief, a decided majority of almost every individual Board of Guardians in this district desires this alteration of the law as to the rating of tenements; the wishes of the poor themselves run strongly in the same direction; and although some intelligent individuals are content with the law in its present form, I have little doubt that at least nine-tenths of all classes in this district would hail with pleasure such an enactment as was recommended by the Rating of Tenements' Committee of the House of Commons of 1838.

In reference to the question how far the causes of disease enumerated (Fourth Annual Report, p. 108) as injuriously affecting the well-being of the poorer classes, apply equally to the country, I desire to make the following observations. Although many of the medical officers, in their Returns, speak highly of the cleanliness, healthiness, and comfort of the greater number of the cottages in their districts, they furnish, at the same time, abundant evidence that external causes of fever (which might in a great measure be removed) are constantly at work, even in rural parishes. Amongst these causes the following may be specified:—

1. Accumulations of refuse from the houses, deposited in situations where the exhalations are destructive of health. Complaints of this evil are very common amongst medical officers. Of these I will select a few:—*Mr. Dix*, of the Tunstead and Happing hundreds, referring to thirty-five cases of continued fever, says:—

“From the observations I have made, I am induced to consider all the cases of continued fever which are met with among the poor in the year 1839, in the district which I attend (consisting of thirteen parishes), as arising from malaria, and in all the cases, except six, I consider the malaria to have been produced by the collection of filth and stagnant water in the immediate vicinity of each residence, which might be almost entirely prevented if surveyors of highways were more strict in the performance of their duties.”

Mr. Copeman of St Faith's union, says:—

“In the parish of Wroxham typhus fever made its appearance, and continued for some weeks. *It broke out in a yard almost surrounded by buildings inhabited by cottagers, and attacked almost every individual residing in that situation.* The yard was a common receptacle for the refuse water and dirt from the houses; and at the lower end there was a hollow place into which the fluid portion of these matters drained, so as to form a pool of stagnant filth at times highly offensive. Several of the cottagers had also made holes in the yard for the purpose of

depositing manure collected from the roads, and *at the time of the fever the yard was intolerably offensive, and undoubtedly furnished the cause of the disease.*"

Mr. Cooper, of East and West Flegg hundreds, says:—

"A practice prevails among the poor of depositing the rubbish of the family just out of door, generally at the front, until it accumulates to a large heap, which becomes desirable for the farmer to purchase. This practice is, I am of opinion, highly injurious to the health of the inmates, and ought to be remedied, which it easily could if insisted on by the parish authorities."

Mr. Girling of the Aylsham union, in alluding to twenty-one cases of typhus fever, says:—

"The cases of fever here mentioned commenced in the parish of Foulsham in the first week of February, and terminated in the first week of June, occurring successively. The parish of Foulsham contains about 1,000 inhabitants. The first cases of fever certainly began in the most unhealthy part of the village, in a line of eight cottages under one continued roof. There were accumulations of filth both before and behind these dwellings, consisting principally of stagnant ditch water, into which was thrown all the refuse on the spot. Privies also opened into it. The cottages contained two lower rooms and two bed-rooms. In the eight cottages adjoining those which are referred to, some members of every family were attacked by fever."

2. *Uncovered Drains.*—On this head *Mr. Beals* of the Blything union cites the case of a cottage situated in Linstead Parva, of which he says:—

"It is a single-built house, situated upon the edge of a drain which is uncovered, coming from the declivity off the lands above, terminating at the back of several cottages in one small cesspool or bog, into which the refuse of the aforesaid cottages is thrown, and into which the common privy of all the inhabitants is allowed to enter, and remain exposed. By this means I have no hesitation in stating that the necessary fall of water from the lands is stopped, and *the effluvia from the stagnation is thrown back along the line of open drain upon the first cottage, where typhus has existed every autumn for the last three years, and has never spread to any of the cottages in front.* There was one death in this same cottage last autumn, 1839, and one in 1838. Four others of the family are recovering. I have twice made a complaint before our county magistrates, who issued orders for the removal of the nuisance, but it *still remains probably to add another victim to its number some time hence.*"

3. Stagnant pools of water are also mentioned as sources of fever. Of these *Mr. Bree* of the Stow union states as follows:—

"There is no subject in my opinion which requires a more prompt and efficient remedy than that which is connected with the origin and progress of contagious or infectious diseases. In the summer of 1838 I had numerous cases of a severe and fatal form of typhus fever in one of the parishes under my care (Finborough Magna). *In every case I could trace the origin of the disease to miasmata arising from stagnant pools of water containing vegetable matter in a state of decomposition, and situate in the immediate neighbourhood of the dwelling-houses*

of the deceased individuals. I was sensibly struck at this period with the absolute necessity which existed of some responsible power by which the grievance might be at once removed. The inhabitants themselves, being chiefly poor people, were unable to effect the necessary drainage, nor could they have done so without the consent of the various owners of the properties which abutted upon each other; and the owners themselves, not residing upon the spot, could not be induced to see the necessity of correcting an evil which they had not experienced. By the assistance of an active magistrate in the neighbourhood some good was effected, but unfortunately it is, generally speaking, too late to commence any work of this kind when once the fever is established."

4. Undrained moist land and marshes are frequently referred to as a cause of fever, although the greater part of Norfolk and Suffolk is healthy and well drained. *Mr. Pedgrift*, of the Loddon and Clavering union, says:—

"The district of which I have charge is bounded on one side by marshes, with a narrow tract of low meadow-land running through it. The few cases of typhus fever, and also of continued fever which I have had this year, have occurred mostly in wet and springy situations, and where the inmates have allowed small pools of stagnant water and filth to accumulate near their houses. The cases of intermittent fever have, with one exception, occurred in borders of the marshes."

Mr. Randall of the Plomesgate union notices this evil, but shows, at the same time, how it may be remedied. After saying that the state of residence of the poor of his district is for the most part cleanly and comfortable, and that the cases of fever which occurred there in the year 1838 appeared to have resulted more from the condition of the atmosphere than from malaria or any other local cause, he proceeds to observe:—

"There is a considerable tract of marsh-land in the neighbourhood which, from its position, is liable to the occasional eruptions of the sea or river; such inundations take place upon an average about once in every five or six years, and the spring and autumn following are usually characterized by the prevalence of intermittent, remittent, synochus, and typhus fevers, but *from the improved system of drainage those diseases are not so general as formerly.*"

Mr. Dix, who has been already quoted as saying that of thirty-five cases of continued fever in his district, all except six were produced by the collection of filth, &c. near each residence, says of those six cases:—

"The inhabitants are living in small huts containing not more than three rooms, about eight or nine feet square on an average, on the borders of extensive marshes, which are undrained and likely to continue so. They are flooded in the winter, but gradually become dry in the spring, at which season cases of fever commonly make their appearance. As a proof of malaria being the fertile cause of these fevers (which are of a low or typhoid character) I wish to mention that, *in the adjoining district which has been drained within the last ten years, although formerly abounding in cases of remittent and continued fevers during six months of the year, namely, spring and autumn, those diseases are now very rarely met with.*"

Mr. Acton, of the Woodbridge union, offers the following observation on the same subject:—

“I have found from my twelve years’ experience in the neighbourhood in which I reside, that *there are certain localities where fevers of the continued and intermittent type rage to a greater extent than elsewhere, arising from the situation in which the houses are placed, being either on the borders of meadows frequently flooded in the winter months, or placed in low boggy situations where malaria is constantly generated.* The intensity of the febrile attacks is increased in those houses where the parties are unclean in their habits, thickly crowded in their sleeping apartments, and allow accumulations of manure and refuse in the vicinity of their habitations.”

Instances of peculiar Localities where Fever rages.

“**WITNESHAM.**—Turtle’s cottage and the adjoining one, situated in a valley with low meadows in front and a stream running by the house. Inhabitants dirty in their habits and thickly crowded in their bed-rooms; frequently exposed to attacks of intermittent fever.

“**TUDDENHAM.**—Scarlett’s house and others situated in a valley with low meadows in front; an accumulation of filth from the overflowing of the necessary upon the path leading up to the house. Inmates dirty in their habits, and sleeping apartments crowded.

“**GRUNDESBURGH.**—Tucker’s house and others, on the borders of meadows; constantly flooded; the house constantly damp; the inmates of tolerable clean habits; bed-rooms crowded.

“**GREAT BEARINGS.**—Shepherd’s house and others, placed in rather a low situation, with meadows in front frequently flooded, and water constantly flowing in streams about the house; inhabitants cleanly. In some of the houses where the families are large, the bed-rooms crowded.”

5. The crowded state of some of the dwellings of the poor has been already referred to. That the medical practitioners regard this as a frequent source of disease may be shown from the following passages:—

Mr. Wallis, of the Mitford and Launditch union, in referring to 31 cases of typhus and mixed fevers, says:—

“In many of these cases the dwellings were particularly unhealthy from dirt and want of proper rooms, so that father, mother, sisters, and brothers, and perhaps a lodger, were all crowded into one apartment, perhaps not more than 12 feet square. In most of the cottages there is but one sleeping apartment, one lower room, and perhaps a little back place or shed. In many instances the muck or dirt-hole, which is the receptacle of all the refuse and filth of the cottage, is opposite the door. I do not say this is the case in every instance, but in many.”

Messrs. Mayhew and Gooch, of the Hoxne union, in allusion to 14 cases of continued fever, state as follows:—

“The continued fever of this district does not appear to arise from malaria particularly, but to be generated in small cottages where the inmates are naturally of filthy habits, and are obliged, or want of pro-

per accommodation and sufficient change of linen, to sleep thickly crowded together. We have however remarked that since fever wards have been erected (*i. e.* attached to the workhouse) for the reception of contagious disorders, by removing all paupers to them as early as possible, the disease has been prevented spreading, and the patients improved by the good nursing and free ventilation of the apartments, of which they would otherwise have been deprived.”

Mr. Martin, of Samsford hundred, in his observations on 27 cases of continued fever in the parish of Holbrook, remarks :—

“Some parts of Holbrook, near the Stour river, are low and very damp, and in the upper part of the village the cottages are much too thickly inhabited, with high rents, consequent on there being deficient cottage accommodation. Under one roof a building, measuring 111 feet long by 24 feet wide, is divided into 13 tenements in which 91 persons live. A vast number of pigs are kept by one or two of the occupants, and the utmost inattention to cleanliness in the out-door premises ; the marvel is that no appalling sickness has at present visited this spot. To crown these instances of the crowded state of some of the dwellings of the poor I will conclude by quoting Mr. Wales of the Downham union, who observes: ‘An instance occurred in the parish of Downham where in one room from 12 to 14 persons were in four beds upon the floor ; these persons paid generally 5s. a-week to the occupier of the dwelling, who was rented at 4l. per annum. *It is almost unnecessary to state that typhus fever took its residence in due season under this roof, and has been for many months attacking the inmates.*’ ”

In conclusion, I desire to state that, on reviewing the external causes which tend to shorten life amongst the labouring classes, and which are thus said to be constantly in operation, even in rural districts, it is difficult to reflect without sorrow on the fatal notion that the correction of such evils may be safely left to individual intelligence and forethought. In commercial dealings the principle of non-interference may be undeniably sound, but in extending it to the toleration of the sources of death above alluded to, we seem to forego some of the principal advantages of a state of social life. Nature deals out death with terrible severity to those who violate her laws, even in ignorance, and it is for the most part only through dearly-bought experience that those laws are ascertained. A boat’s crew of eight persons are detained from their ship for only one night in a low flat of a foreign island, and of the eight seven die of fever before the end of the week.* A wife and three children sit at an open window, nearly over a place where a neighbour is removing an accumulation of filth ; two of the children die of the poison before 36 hours, while the mother and other child narrowly escape.† A garrison is quartered near an unhealthy half-stopped-up pond. In ten days half of the soldiers sicken and die.‡ Now these deaths and thousands of others of the same kind are instances of pure misery, attended by none except possibly a moral and religious benefit to the survivors,

* 4th Annual Report, p. 104.

† *Ib.* p. 106.

‡ *Ib.* p. 148.

unless intellect is at work to note the facts, to treasure them up, and to hold them forth as warnings to mankind. But the mass of the population in this country have not hitherto had the learning, the opportunities, or the leisure, fully to appreciate all the insidious agents of sickness and death which are in activity around them; and even, although they had the requisite knowledge, they have not, in the present state of the law, the requisite power to counteract the influence of those agents. Hence arises the expediency of the legislature interfering with a wakeful forethought, to profit by the sufferings and death of those who have already fallen victims in the common battle of the human race against material evil, and to formalize and systematize in institutions the information thus obtained at such a heavy cost.

As it seems proved that filth and crowded apartments, and accumulations of refuse near cottages, are central deposits, as it were, of poison for the injury of the surrounding neighbourhood, it is just and wise to appoint, by law, a local agency for the prevention of these mischiefs, and to proclaim aloud that the occupier of a house shall be bound to keep it in such a state of cleanliness as is compatible with the health of his fellow-creatures. And in like manner as it seems demonstrated that narrow streets, confined courts, and imperfect drainage produce disease, the legislature has a right to say to a builder: You shall not, in your cupidity and hurry to be rich, endanger the lives of the ignorant poor whom choice or necessity may lead to dwell in your cottages; you must give us proofs, before we can allow you to build at all, that you will leave ample space for the pure air of heaven to circulate, and that you will provide sufficient drainage to carry off the noxious matters which are necessarily engendered in the dwellings of men.

The admission of the views thus briefly alluded to, carries along with it important deductions. It involves the admission of the principle of a Building Act, and also of an extension to rural districts (I trust in time with increased powers) of the provisions of the Act 2nd and 3rd Vict., c. 71, sec. 41, for the cleaning of houses which are in an unwholesome condition. It would also lead to a favourable consideration of the proposition for permitting parishes under certain limitations and restrictions to take effective measures, when the expense would not exceed a certain proportion of the rates, for draining marsh lands which are proved to be the causes of fever and other diseases to the inhabitants. But I am aware that this latter subject is not yet ripe for an immediate settlement.

It does not appear likely that the mere extension to rural districts of the provisions above alluded to of the New Police Act would meet with any serious oppositon. It is however to be presumed that those provisions are in the nature of *experiments*, for, although highly valuable in themselves, they only apply to the cleaning of filthy and unwholesome houses, and leave un-

touched some of the most fatal sources of fever. With regard to a Building Act, by which it should be rendered penal in building houses to dispense with the observance of certain conditions which are necessary for ventilation and drainage, considerable difference of opinion may arise in settling the details of such an Act; but no difficulties can arise equal in magnitude to those which have been overcome in other cases (such, for example, as in the Regulation of Infant Labour in Factories) where supposed rights of property have at first sight appeared irreconcilable with the rights of humanity.

As a direct precedent for the principle of a Building Act, I would call attention to the Act passed in the last session of Parliament for the Regulation of Chimney Sweepers and Chimneys, (3 and 4 Vict.). By that Act very minute rules, enforced by a penalty, are laid down as to the size of all chimneys and flues hereafter to be built or rebuilt; and it even enters so much into details as to enact that no chimney or flue shall be constructed with a less obtuse angle than one of a certain number of degrees: and that every salient or projecting angle in any chimney or flue shall be rounded off a certain number of inches upon pain of forfeiture of a defined amount, by every master-builder or other master-workman who shall make such chimney or flue. The justification of this merciful and considerate Act of Parliament consists in the circumstance that it is intended for the protection of poor children who cannot protect themselves, and some of whom have contracted diseases for life from having been compelled to climb up and to cleanse chimneys which were constructed in an ignorant or selfish disregard of their future sufferings. But it is only carrying out this principle a little further to pass a Building Act of the kind now proposed. Many of the labouring classes, though full grown men in stature, are still children in knowledge on these important questions, and, practically speaking, they are unable to protect themselves, for they are frequently compelled to live in cottages which have been erected hastily by builders, solely with a view to immediate pecuniary profit. Under these circumstances Parliament can with equal propriety interfere in both cases: and with this additional reason in favour of a Building Act, that the poor boys who are apprentices to chimney sweepers, although they justly claim our sympathies, are comparatively few in number; whereas the whole of the labouring population, without any exception, would in progress of time derive advantage from a General Building Act.

I am, Gentlemen, your obedient servant,

EDWARD TWISLETON, *Assist. Poor Law Com.*

To the Poor Law Commissioners.

No. 10.

ON THE CAUSES OF DISEASE AFFECTING THE LABOURING CLASSES IN THE COUNTIES OF LEICESTER, LINCOLN, NOTTINGHAM, AND RUTLAND.

BY EDWARD SENIOR, ESQ.,

Assistant Poor Law Commissioner.

GENTLEMEN,—In compliance with your instructions, directing me to report to you on the causes of disease which affect the labouring classes as influenced by the state of the dwellings they inhabit, I have to remark—

That a cottage tenement in my district usually consists of a common sitting-room, on the ground-floor, of from 12 to 14 feet square, with a small kitchen and pantry, and has one or two sleeping-rooms on the first-floor. A garden is frequently attached, containing from 20 to 30 perches of land.

The common cost of erecting a building of this description is about 50*l.*, and the average cost of repairs from 5*s.* to 10*s.* per annum.

The usual rent for a cottage of this class varies from 3*l.* 10*s.* to 4*l.* per annum, with a garden; the lowest from 30*s.* to 2*l.* 10*s.*, without either garden or accommodation for a pig.

From 6*d.* to 1*s.* is paid weekly by unmarried labourers for the use of a single room.

The general proportion of rent paid by the labourer, as compared with his total expenditure, varies from one-sixteenth to one-tenth.

There are few instances in my district where the employers of labour have erected a superior description of cottage tenements, such an employment of capital not being generally considered remunerative; I annex plans of the most perfect I have seen, situated at Harlaxton, the property of Gregory Gregory, Esq.

Cottage tenements are not usually rated, and this exception I believe to be on the whole injurious to the labouring class, as this exemption makes the worst description of cottage property the most remunerative to the owners, who receive both rent and rates, and thereby prevents the erection of a better class.

I conceive that it is most desirable to rate the proprietor of cottages, under the annual value of 5*l.* in rural districts, and 8*l.* in boroughs, or large towns, instead of the occupier.

No interference of the legislature in the shape of a general Building Act is, in my opinion, required in the rural districts under my charge. In towns, on the contrary, such an enactment appears absolutely necessary; on which subject I append the evidence I have received from the clerk of the Nottingham union.

A law enabling Boards of Guardians or private individuals to bring under the cognizance of the magistrates local nuisances, and to charge the rates with the expense, might in some instances be useful, although I believe it would rarely be put in force.

Among the many evils which have been entailed on the labouring classes, from the previous mal-administration of the Poor Laws, few have been greater than their want of cottages in parishes where the property is in few hands.

To have many tenements on one's estate, implied having many labourers, and it is to be regretted, many paupers. A cottage generally gave a settlement either by hiring or apprenticeship, and thence a heavy burden. The proprietor, therefore, built none, and took the first opportunity of pulling down those he had; but still labourers were wanted, and the overseer built the meanest and cheapest description possible; as the parish expected no rent, the tenant could not grumble if it was little better than an Irish cabin. Repairs were wanted, the rain came in at the roof, and the health of the inmates became affected: the tenant did not venture either to complain, or to go in search of a better, lest he should have to pay rent. He lived in apparent misery, and avoided all outward appearance of neatness in his cottage, to avoid being accused of being well off. There was the same objection to keeping a pig. The parish might, if he appeared in prosperous circumstances, ask for rent, or, if he lived in a cottage not the property of the parish, they might decline paying it for him.

It frequently happened that in small parishes, in the hands of few owners, no cottages were allowed to be built, and the labourers were compelled to come from a distance to perform the necessary work, from the larger villages, where houses were to be had, and had the fatigue of a long walk in addition to their daily labour. Nor is the result of this state of things yet extinct—half-ruined cottages are still to be found where the inmates live at the risk of their health,—the parishes to which the houses belong will not repair, and as they are worthless, the overseers do not attempt the collection of rents. These are, however, rapidly disappearing, and a steady enforcement of the collection of rents by the overseers through the medium of the auditors will destroy the rest.

On the sale of this description of property, it frequently happens that the original pauper tenant becomes the proprietor, to the no small surprise both of himself and of his fellow-parishioners. As the parish no longer finds cottages rent free, and as the acquisition of a fresh settlement by the labourer is now almost impossible, many persons are induced to build cottages of a better description.

The principal causes of diseases which affect the labouring classes, appear to be a want of personal cleanliness—a disposition to place the manure they have collected for their gardens close to their houses—intemperance—small and overcrowded dwell-

ings—imperfect drainage and ventilation—a too exclusively bread diet—and insufficient clothing. In this view I am supported by the annexed evidence of the medical officers in my district.

The great remedy for all these evils appears to me to consist in providing for the rising generation a religious and secular education. It is especially desirable that the female sex should receive at school some household knowledge, both in cookery and the economy of fuel; and that with the view of training both sexes to habits of usefulness, small plots of land should be attached to school-houses.

It may be hoped that with such a previous training the future generation may grow up more provident, that they will contract marriage somewhat later in life, with a previous provision, and that they may be sufficiently high in the scale to fear the loss of caste.

I have the honour to be, Gentlemen,

Your obedient servant,

EDWARD SENIOR,

Assistant Poor Law Commissioner.

To the Poor Law Commissioners.

Mr. A. Barnett, the clerk of the Nottingham union, remarks in reference to that town:—

“That the houses are built back to back, with no means of wholesome ventilation, nor are conveniences, as privies, &c., provided in proportion to the number of houses, or inhabitants. Many dwellings are erected over privies, a still greater number form the lower stories of masses of building of which the upper stories constitute large dressing-rooms, heated to a very high temperature by stoves, hot water or steam, so that the sleeping apartments are excessively hot, and the crevices filled with vermin. The houses generally are very small, and many families are crowded on flats of three or four stories.

“That a Building Act which secured wider streets and thorough ventilation would be of infinite service to this town; there are 8,000 houses built back to back with no other outlet than the street-door.

“That the houses are generally too small to afford a comfortable reception to the family, and the consequence is, that the junior members are generally in the streets. Girls and youths destitute of adequate house-room, and freed from parental control, are accustomed to gross immoralities.”

Messrs. Crammack and Vise, the medical officers of the Spalding district of the Spalding union, in the county of Lincoln, state—

“Before the introduction of the present Poor Law, many small tenements had been erected, some consisting merely of a day-room and sleeping-room, and having in numerous instances no entrance backwards, the rents of many of which were paid by the parish. Since the rents of so many of the poor cease to be paid out of the public purse, a large

number of tenements have been built of a more commodious description, consisting of a day-room and kitchen, with two chambers, a back entrance, and yard, or small garden. These let for 5*l.* or 6*l.* a-year, and are chiefly occupied by single families. There are many inferior, but this is the general character of those lately built, and now erecting."

W. Watts, Esq., M.D., medical officer of the Nottingham union, deposed to me at an inquiry I was making:—

"I distinctly recollect the case of Mary Mills; the first day of my attendance at her house was dated the 31st of August. My first attendance was at the dispensary on the 28th of August, she was at the latter period labouring under fever; I prescribed for her; she lived in two rooms, one on the second story, and one above it; the ground-floors are privies, and open places for the reception of ordure. They are small rooms, eight or nine feet square; I consider them extremely unhealthy from their proximity to these receptacles.

"I find in my experience that persons living in such neighbourhoods are the first to be attacked by epidemics. I could perceive in the room that the atmosphere was tainted by the effluvia arising from the filthy receptacles before mentioned."

Mr. Stiles, a medical officer of the Pinchbeck district of the Spalding union, in the county of Lincoln, states—

"It is my opinion that the accumulation of filth, &c., are not at all ascribable to the slovenly or indolent habits of the inmates of the cottages, but of a total ignorance of the baneful effects they give rise to, as cleanliness prevails generally *within* the cottages.

"Vaccination is gratuitously offered the poor, yet there is very great difficulty in overcoming their prejudice against it."

Mr. William Bennett, medical officer of the Brigg district of the Glanford Brigg union, in the county of Lincoln, observes:—

"Fever has been very prevalent a few years since during the hot weather in a range of paupers' houses, situated upon a drain, called the *town drain*, situated very near the centre of the town of Brigg, which is never to my knowledge cleaned out, and is during the summer a complete mass of animal and vegetable decomposition; we have no public or private authority for interfering. Near this are many pigsties, close to the houses; all of which are never noticed, merely because fever has not been prevalent these few years, but should our summers become unusually hot, I am convinced fever must be very common.

"Another observation I wish to make, is the very common occurrence of tramps bringing the small-pox to our town; they arrive at the lodging-houses (where they are without scruple taken in) almost in the height of the complaint, and this occurs repeatedly, so that our town is never long free from the small-pox. We are inundated with tramps of every description, who make a regular trade of feigning sickness wherever they meet with tolerable quarters."

Mr. Robert Eminson, medical officer of the Scotton district of the Gainsborough union, in the county of Lincoln, observes:—

"By a reference to the list of diseases, it will be found that the number of the sick bears a pretty accurate relation to the badness of the habi-

tations in which they have dwelt, hence there is no place in the district which has produced so many names on the sick list, during the last twelve months, as Scotton, and yet its population (neither generally, nor particularly, of the poor and labouring class) is not near that of some other villages in the district. The tenements of the poor and labouring class at Scotton are almost without exception bad or faulty. Several of them have but one room, which must serve, of course, for day-room, scullery, bed-room, and partly, perhaps, for refuse, and for fuel; and what makes this additionally worse, is, that this room is small, damp, and without a window that will open.

“The cottages, also, which have more than one room, are extremely faulty; inasmuch as they have no chambers, so that the bed-room or bed-rooms are on the ground-floor, which cannot but be injurious to the inmates of such houses. And it is lamentable to think, that future generations must be subjected to the same source of evils, which the present are exposed to, because, as the old houses of the poor or labouring classes in Scotton and other places are being taken down, the new ones erected in their room are many of them constructed on the same plan, viz., two rooms on the ground-floor, and perhaps a pantry, *but no chambers.*”

Mr. T. P. J. Grantham, medical officer of the Brough in the Marsh district of the Sleaford union, in the county of Lincoln, states with reference to the typhus fever in the family of an agricultural labourer:—

“The domestic economy in this house was deplorable, eight persons slept in one small ill-ventilated apartment with scarcely any bed clothing; the smell arising from want of cleanliness, and the dirty clothes of the children being allowed to accumulate, was most intolerable. Considering the situation of the house, its filthy state, and the vitiated air which must have been respired over and over again, by eight individuals sleeping in one confined apartment, it is not surprising that this family should have been afflicted with fever, and that of a very malignant type; the mother and one child fell victims to it in a very short time.”

Mr. Smith, medical officer of the Leadenham district, of the Sleaford union, in the county of Lincoln, observes, with reference to nine cases of typhus fever, mentioned in his return:—

“These cases occurred all in one family during the disease which prevailed in this village (Wellingore) in September, 1838. I have no doubt the reason of this serious attack in one family was in consequence of gross inattention to cleanliness, &c., notwithstanding the house in which they resided is capacious, and capable of being freely ventilated.”

Mr. Handsley, medical officer of the Withern district of the Louth union, in the county of Lincoln, states—

“That the typhus fever originated in a family in his district from infection, one of the children having been brought home from a distance when suffering from typhus. The situation of the house is low and damp, and surrounded by filth of every description, from the dirty habits of the people. The interior was most filthy, very much crowded, and no attention paid to ventilation. The consequence was, that a very bad form of typhus prevailed, and one of the family (the mother) fell a victim to the disease.”

Mr. Charles Simpson, medical officer of the Stamford district of the Stamford union, in the county of Lincoln, states:—

“ This, also the Ketton district in the above union [under my care, has been severely visited with typhoid fever, just previous to the date of this report. So generally has it prevailed throughout the neighbouring country, that no local origin, nor any obviously general cause, can be strictly assigned it; nevertheless, the extension of its progress, and the severity of its character, have been much increased by local causes, particularly such as yards densely populated, ill ventilated, and where filth accumulated for the want of public convenience for its deposit; many of such yards have cesspools covered over with open grating, into which filth and moisture of every description find their way. In such localities as these the fever has not only been most prevalent, but its fatality far greater. This conclusion is drawn not only from general, but particular observation, and is statistically correct. In villages, the poor are in the habit of depositing filth in the immediate vicinity of their dwellings, and since this is done for the money (to them no trifling sum) they obtain for it, there is great difficulty in (as there ought to be much consideration in any enactment that may be contemplated) its prevention.

“ In temporarily cleansing a village in the Ketton district, during the prevalence of the above epidemic, the committee for that purpose could only obtain the removal of those heaps of dirt by purchase. Since then they have accumulated again. Very many of the dwellings of the poor are but ill ventilated, much too small, and miserably deficient of those advantages which are requisite for cleanliness. The smallness of the dwellings of the poor is not merely physically an evil in its influence over health, but is morally a subject deserving the most mature and earnest consideration. It will be evident that, among other circumstances, I here allude to the occasional occurrence of there being but one sleeping-room for the whole members of a large family.”

Mr. Spencer, the medical officer for the Earl Shilton district of the Hinckley union, in the county of Leicester, remarks:—

“ That in Earl Shilton, which lies high, on a gravelly soil, which is also well drained, we had but eight cases of scarlatina, two of which proved mortal, I should say in a great measure from the filthy state of the house, and a known want of attention to the directions of the medical attendant. It is a custom with the stocking-weavers who have a portion of ground allotted for the growth of potatoes, to collect and condense together heaps of manure for at least six months, close to the houses in many instances, from which of course proceeds an unhealthy stench. The houses of the poor would be much benefited by getting them sometimes washed with lime and water, many not being cleansed for years.

“ Twelve cases of scarlatina occurred at Barwell, two of which died from sloughing of the throat; one case occurred within a few yards of a horse pit, which is so scantily supplied with water in the summer time, that the sun completely dries it up, which renders the air very unwholesome. On another part called the common is a large uncovered ditch, conveying a great deal of the filth from the whole village, also large heaps of decaying vegetable matter, and it was near this place that the

second case of sloughing occurred. ¶ Consumption is here very frequent and synochus seldom absent."

Mr. Thomas Cotterell, the medical officer for the Hinckley district, states:—

"That the locality of Hinckley is exceedingly good, but from the poverty of the manufacturing classes, and their indifference to cleanliness, their dwellings and conveniencies are not so wholesome as they might be from the advantages of situation."

Mr. Samuel Argent, the medical officer for the Sapcote district in the same union, observes:—

"That scarlet fever broke out in the village of Sapcote, in the beginning of December, 1838, and continued till the following spring. The population of the place is about 600, and the inhabitants are for the most part employed in the manufacture of stockings, several of them working together in a small shop containing three or more stocking frames. Their habits as well as their habitations are extremely dirty; their houses adjoin each other with filthy yards attached to them, and privies close to their doors or windows. The situation of the village itself is high, and dry, and surrounded by a rich and well-cultivated country, nearly a mile from a small stream of water (the river Soar) and the meadows."

Mr. F. Wilson, medical officer of the Great Easton district of the Uppingham union, in the county of Rutland, states:—

"I have been in this neighbourhood about 10 years. When I first came here I was very much struck with the prevalence of two classes of diseases, typhus and intermittent fever, both frequently running one into another; a very slight observation convinced me that they arose entirely from the filthy state of the houses, the want of proper ventilation, and the accumulation of wet and dirt about the premises."

Mr. T. D. Greaves, medical officer of the Great Easton district of the Uppingham union, states:—

"Intermittent fever prevails frequently in this neighbourhood from the malaria of flooded meadows. The great evil to the poor generally, is in the want of proper places to deposit the refuse and dirt from their houses in, instead of accumulating it as they do about their doors. The houses generally are low, and the floors of mud. There is seldom more than one bed-room, and rarely any out-house."

Mr. Thomas Johnson, medical officer of the Bassingham district, of the Newark union, in the county of Nottingham, states:—

"Generally speaking, the situations of the poorer classes here are good, and most of them cleanly kept; in some of the parishes, and near the residences of the paupers there are several gutters running either directly in the front, or at the back of the houses. The cottages, generally speaking, are low. The houses of Bassingham are bad, very low, much crowded, so thickly inhabited that there is scarcely room. The ventilation is bad, with a gutter directly in front of the houses, which is always full of filth; fever never raged in this row, there not having been one case.

“The houses at Thurlby are provided by Sir E. F. Browhead, Bart., and are exceedingly comfortable, well ventilated, lofty, and well ordered. In this parish nothing of fever has occurred.

“The houses at Broughton are much crowded, but the situation is dry; there is a gutter running in front of the houses, about ten yards from them, which is generally in a filthy and bad state.”

Mr. W. C. Poole, medical officer of the Bennington district of the Newark union, states:—

“Almost in every case which I have attended there has been great want of attention with respect to cleanliness as regards both the person, and in and about their residence. I have found this to be most particularly the case during the last three months, when fevers of all descriptions and grades have been unusually prevalent, but these cases do not come within the limits of the present returns.”

Mr. J. P. Lacy, medical officer of the Newark district of the Newark union, states:—

“The eight cases of continued fever which occurred in the families of the labouring class was not confined to one particular locality, but occurred in different parts of the town inhabited by the lower orders of the people, and the authorities are attentive to the removal of filth and the keeping open of the drains.”

Mr. Lilley, medical officer of the third district of the Southwell union, in the county of Nottingham, states:—

“In the above-mentioned report you will find very few cases of fever, only one of small-pox, and none of scarlet fever, or ague; the two first cases of synochus were those of a married woman, deserted by her husband and her daughter, they live in a miserable hut at Wellow, entirely unfit for a human habitation. In several villages in the district, there are houses which are unfit for human beings to reside in, and they are generally what are called parish houses, where the inhabitants have *no rent to pay*, and they will sooner put up with their inconveniencies than pay rent for a better house. In many instances this class of houses are thatched, and the chamber above, when there is one, is open to the thatch.

“The general health of the inmates of the superior class of cottages, I have observed, is much better than that of the inmates of the inferior class. In autumn, 1836, there were an immense number of cases of scarlet fever in Wellow; at that time many accumulations of filth existed, and there was a great want of sewers to carry away the water, &c. Means were taken to obviate these evils in a great degree, and the town has not been similarly afflicted with any contagious disease since that time; those families suffered the most who lived in the most confined and ill-ventilated situations, and whose accumulations of filth were allowed to remain, and the inmates of the inferior class of houses before alluded to.”

Mr. Douglas, medical officer of the Clawson district of the Melton Mowbray union, in the county of Leicester, remarks:—

“That the parish of Nether Broughton contains many paupers, several of whom live in a row of cottages, opposite to which there are pigsties,

and heaps of filth of all descriptions; such was the case at least in the summer, when the disgusting stench arising from these nuisances was sufficiently obvious to induce me to mention the fact in the quarterly report to the guardians; I believe that the slovenly habits of some of the inhabitants in the row may, in part, be justly blamed for this; I found two of the houses clean and descent, others were much the reverse.

“There can be no room to doubt the pernicious, nay, poisonous influence of the miasmata, engendered by putrefaction in foul drains, and there is no occasion for me now to enumerate such repeated instances of this as have fallen under my notice; but with reference to a remedy, I can only suggest that it would be most desirable to have all such drains thoroughly cleansed periodically, and to cause all those in the vicinity of dwelling-houses to be covered in.

“Authority might be given to enforce a perfect cleansing of any house inhabited by paupers, on a proper representation of its propriety.

“I believe that in a majority of instances, the accommodation of the poor, as regards their residences, is very inadequate to their wants. Considering that the object of the Commissioners is the acquisition of facts relating to the state of the poor, as regards those *general circumstances* tending to affect their health, I may be permitted to allude to one, which has of late forcibly attracted my attention; although the chief field of observation has been without the Clawson district of the Melton union, viz., the frequent overcrowding of the houses of the labouring class, the class most liable to the necessity of demanding relief from the union.

“During the last four months there has been a prevalence here of scarlet fever, not usually of a severe character, excepting in such families as are deficient in house-room, where, for instance, a man and his wife, with four or five children, are obliged to sleep in the same small apartment, and that too often very ill ventilated. In such places when the fever has occurred, it has often been of a malignant type, and not unfrequently fatal to one or more at the house thus occupied. I have no doubt that the *general health* of the poor would be better, and that their habits would improve, were they more comfortably situate in respect to their dwellings; for I have almost uniformly observed that those who have good tenements are much more decent and cleanly, and are usually more loth to make any application for parochial relief than those badly cared for in this particular.”

Mr. Joseph Bentley, medical officer for the Wymondham district of the Melton Mowbray union, observes:—

“With respect to the prevalence of fever in my district, I never saw less, as will appear from a correct list taken from my Register of Sickness and Mortality. During the three years I have been practising, I have known fevers pass through villages several times during a year, visiting every house, and in many cases proving fatal. I have attributed it to the unventilated and crowded manner in which the poor are compelled to sleep; no doubt if more bed-rooms with chimneys were given them, this would stop the rapid progress of disease. In addition to this evil, many of them, for want of back ground, place their manure-heaps in front of their houses. In Buckminster, before 24 houses there are as many heaps of dirt, &c.; in hot weather the effluvia from which is sufficient to create fever.

“In Edmanthorpe most of the houses are low and damp, several have from one to two wells, from which buckets of water are taken daily. I have seen the beds dried by the fire before the patient could be placed after her confinement.

“I have observed that fevers prevail most in the summer and autumn, and am persuaded, that attending to the improvement of the residence of the poor, and removing those nuisances, will much promote health and relieve suffering humanity.”

No. 11.

ON THE SANITARY CONDITION OF THE TOWN OF DERBY.

BY WILLIAM BAKER, ESQ., M.D.

SIR,—In reply to your letter of December 12th, 1839, I beg to offer for the information of the Poor Law Commissioners, the accompanying observations on some of the most prominent causes of disease, as occurring in the town of Derby. I only regret that the sketch here presented should be, as I fear it is, so unworthy of the important subject to which it relates.

I. I shall begin by observing, that the town of Derby has increased rapidly in extent since the year 1831, the period of the last census; and as at that time its population was found to have increased upon the preceding ten years, at the rate of rather more than 35½ per cent., I conceive its subsequent increase will not be overrated at 38 per cent., which, on allowing for the nine years that have elapsed since the census of 1831, would raise the present population of Derby to about 31,700.

II. The situation of Derby is for the most part low, for although the north and south suburbs occupy rising ground, the central and larger portion either follows the course and nearly the level of the river Derwent, or lies on each side of a brook running at a right angle to, and falling into the Derwent; and in wet seasons both these streams are subject to considerable overflows.

III. The labouring class or operatives of Derby are for the most part engaged in the following occupations, and the proportion employed in each probably corresponds nearly with the order of enumeration:—

Silk-mills	China-workers.
Cotton-mills.	Foundry-men.
Net-lacemakers.	Lead-mills.
Stockingers (silk).	Paper-mills.
Silk-weavers.	

IV. Although the two first classes predominate, the employment for operatives is happily more varied in Derby than in most manufacturing towns; and it is consequently less liable than they are to have large numbers of hands thrown out of employ at any one time by the fluctuations of trade.

V. The causes tending to injure the health of the town, I shall endeavour to describe in two classes, namely, general causes, and particular causes, but leaving unnoticed in both classes, as foreign to the present inquiry, such causes as are not remediable by legislative means.

VI. First, and most prominent, I fear I must place the factory system as a whole. It is not my intention here to meddle with its details; they have already been inquired into by the legislature, and with results that have not, as I presume to think, been very profitable; results which have, in some respects, done much injustice to mill-owners, while they have done little justice to mill-hands. Viewing the subject professionally, I regard the factory system as producing the most extensive and the deepest rooted injury to the health of the labouring population, because beginning with childhood, and going on to youth (in both sexes), it breeds up puny parents of a future puny race, who, in their turn, perpetuate, and increase the evil. As regards the factories themselves, I witness with pleasure that wherever a new one is erected, it is sure to be far superior in construction to the old; and with respect to the duration of labour, I am also glad to observe (at least in the silk-mills) a disposition to limit their hands to ten hours of labour.

VII. I shall conclude this part of my subject by suggesting what I conceive would be a great boon to the mill-hands, as regards both their health and comfort, namely, that in whatever arrangement may hereafter be made as to the daily duration of labour, that twice in each week (say Wednesday and Saturday) the hands should work only half a day; in fact, that like children at schools, they should have two half-holidays in each week. Although such an arrangement might render it necessary to add somewhat to the hours of labour on the other four days of the week, in order to avoid thereby loss of time to the manufacturers, and reduction of wages to the operatives, I nevertheless consider that the latter would gain much by the longer interval obtained on the Wednesday and Saturday, both as regards rest or recreation for health; or as affording leisure for domestic duties, which is at present obtained only by robbing themselves of hours which should be devoted to sleep.

VIII. The next general cause of injury to public health, and connected with the foregoing, is the corruption of the air caused by the torrents of black smoke that issue from the manufactory chimneys, the nuisance from which is much augmented in heavy and moist states of the atmosphere. There is a law by which those who most offend, as regards their chimneys, can be punished, but of course the magistrates are not also prosecutors, whilst private individuals, being unwilling to become informers, little is done to check this nuisance; and such is the state of the air that, in gardens in the town, none but deciduous shrubs can be kept alive; evergreens become never-greens, and a miserable existence

of three or four years is the usual span of their lives. Now as trees (and flowers, many of which thrive as ill as the trees) are not nervous, or fanciful, the fact just stated is alone sufficient to show what sort of atmosphere we *enjoy* in manufacturing towns.

IX. A third and most serious source of general sickness, and more particularly of fevers, is the unfavourable situation and faulty construction of a large proportion of the houses inhabited by the labouring class, and indeed unknowingly by many of the middle class likewise.

X. The first fault of situation which I shall notice is the building houses on *marshy land*, which does not admit of being drained. Of course houses so placed cannot have cellars, and in such the ground-floor rooms are always charged with more or less of moisture, exhaled from the wet soil beneath these floors.

XI. There are parts of Derby thus circumstanced on each side of the Derwent, and of the brook already mentioned as running into that river; and as some portions of each of these streams have weirs, or dams, thrown across them to keep them bank full (for the use of mills), the adjacent land is of course kept perpetually saturated with moisture; and likewise not unfrequently flooded.

XII. The next evil of situation to be noticed is that of *courts* and alleys. Some parts of Derby are very ancient, and abounding in courts; indeed this evil is an extensive one, for I am sorry to add, that this fault has been copied in streets of more recent erection, the object aimed at being rent for the landlord: on which account many courts are crowded to the utmost possible extent.

XIII. The principal faults of these courts are want of space, a narrow entrance, often no wider than an ordinary house door; want of pavement, numerous filthy privies, and pigsties, the latter entailing also the accompaniment of an offensive wash-tub; deficient supply of water; deficient drainage; perhaps none. The area of some courts lies lower than the level of the streets upon which they open.

XIV. Moreover the courts and alleys which contain the worst description of houses, or which are most objectionable as to situation, are sure to be tenanted by persons who are dirty, reckless, and profligate. In short, those whose irregularities and improvidence are keeping them in a state of perpetual ebb and flow between intemperance and destitution, and whose habits would be destructive of health, even in situations the most salubrious, are to be found living in abodes where neither the utmost temperance nor regularity could long succeed in keeping off disease.

XV. Lastly, the inmates of courts, by herding together, countenance and encourage each other in their faults, for being alike withdrawn from observation, and the influence of good example, they are neither shamed out of what is reprehensible, nor stimulated to improvement.

XVI. I come next to faults in the *construction* of houses, and these being very varied in kind and degree, I shall, with a view to

avoid being tedious, confine myself to the description of one which is far too general, and at the same time highly injurious to the health of the poor who live in such buildings; namely, those which are called *single* houses.

XVII. *Single* houses have only one room in depth, that is, from front to back; they usually consist of a room on the ground-floor, with a bed-room over it. But the back wall of the house has neither door nor window in it; it is entire and without any opening; indeed houses of this description are generally built against some other larger building, or two rows of them are built back to back. Any approach to free ventilation in such houses is of course impossible, their inhabitants are always unhealthy and the prey of every epidemic: as I shall prove in another part of this Report. (*Vide* Table I. and District 12. and observations on District 12.)

XVIII. A new row of these single houses has been lately built in Derby, and as they have not any back premises, a whole regiment of privies is placed in front of them, as if purposely to contaminate the only wind that can blow into the houses.

XIX. *Sewers*. On these I have not many remarks to offer, as I do not consider myself well acquainted with this part of my subject. I shall, however, just observe that there are some parts of the town where the sewers are at all times offensive, in consequence, as I believe, of their communicating with adjacent slaughter-houses or privies.

XX. The sewerage is of course a public work, and I believe well conducted; but there is a circumstance connected with the formation of new streets that I incline to think productive of disease; it is, that the Commissioners of Paving, &c. do not take a new street under their charge until a certain proportion of houses is erected in it, consequently such unfinished streets are for a long time (a period often varying from one year to many) left without any sewer, and without any effectual drainage; and indeed often without any formed or regular carriage-way, the only road being earth cut up into deep ruts and holes full of water. And when this state of things is allowed to exist in parts of the town that are also unhealthy from situation, of course the evil consequences will be much increased. In short, this mode of making streets is, in my opinion, beginning at the wrong end.

XXI. *Drains*. It might be supposed that the importance of effectual drainage was sufficiently known and acknowledged, but certainly it is not sufficiently attended to.

XXII. The want of drains or their faulty construction may render any situation unhealthy; nor must it be supposed that because high lands in the open country seldom require draining, that it is therefore little needed in elevated portions of a town, for in the latter there are always dirt and slops that require carrying away from the houses that produce them. And inasmuch as drains

in high situations never get such a thorough washing out by rain and natural moisture as those do which, from being in lower grounds, receive a swollen and accumulated stream, the former require the greater attention to keep them from becoming foul and obstructed: and it is not a little remarkable that three elevated parts of the town of Derby are hardly ever exempt from fever. They are the Burton-road (District No. 2, in the Table), Litchurch-street (District No. 3), and Parker's Flats (District No. 12).

XXIII. In the latter end of the year 1837 and beginning of 1838, Litchurch-street afforded a striking instance of a situation which promised exemption from malaria and disease, being heavily visited by typhus fever, caused, as I shall show, by the most wilful inattention to drainage.

Litchurch-street is situated in the southern suburb of Derby, from which indeed, although forming a part of the Derby union, it is separated by intervening fields and nursery-grounds belonging to the General Infirmary. Its course is nearly east and west, running down the side of a gentle declivity. The houses in Litchurch-street have not been built many years; are rather small, but are double houses, having a front and back room on the ground-floor, and over these a front and back bed-room.

At the back of the whole row (on the north side of the street) there runs a series of little gardens, each house possessing one, in width equal to the frontage of the house it belongs to, and in length 56 feet. To every five houses there is a pump; and at the bottom of each garden a double privy, answering for two houses, the cess-pool shallow, and open to the air; and to this nuisance many have added a pigsty, and dung, or rubbish heap. The inhabitants of this street are poor people, chiefly silk-weavers, and what are here called frame-work-knitters or stockingers.

There are on this (the north) side of the street 54 houses, and between October, 1837, and the latter part of March, 1838, the families inhabiting six adjoining houses in the middle of the row were grievously afflicted with typhus fever, whilst those who dwelt in the remaining 48 houses were comparatively healthy.

The following list will give at one view the details of this visitation.

The houses are numbered from the bottom of the hill towards the top.

Number of the House.	Name of the Family.	Number of Persons ill with Fever.	REMARKS.
No. 25	Langton .	3	Children, all of whom recovered.
" 26	Dearn . .	4	Man and wife, the former died.
" 27	Bailey . .	1	Man, who recovered.
" 28	Nettleship .	4	Three children, and subsequently their mother. The children, after many weeks, recovered, but the poor mother (who was pregnant) being much weakened by the fever, and long attendance upon her children, died soon afterwards in child-bed.
" 29	Curzon . .	5	First a lodger, named Elizabeth Sherwin, (recently confined,) and her infant, both died. Then three of Curzon's children, who recovered.
" 30	Hatfield .	1	A girl, who recovered.

In all, sixteen persons attacked with typhus fever, of whom five died.

XXIV. Here then we have a very interesting subject for investigation; namely, how was it, that in a row of 54 houses, uniform in situation, size, and construction, tenanted by the same description of persons, the inhabitants of the six centre houses should have been attacked by a malignant fever, from which those who lived in the 24 houses above and 24 below them, altogether escaped?

XXV. By a careful inspection of the whole row, I obtained the following information and facts:—that before this street was built, the natural moisture of the land, and any sudden rush of water caused by rain, was carried away by a ditch running down the whole length of the hill, where the present gardens terminate. Also, that in the gardens of the upper twenty-one or twenty-two houses this ditch had been filled up: and sinks and drains, communicating with the main sewer, that passes down the middle of the street, had been placed between each garden and the dwelling-house. At this point too there is a brick wall, carried down to the bottom of the garden, and dividing this property from the adjoining, and it is very probable that this wall assisted in checking the spread of the fever from the six infected houses, at which part of the row we have now arrived.

The state of the premises belonging to these ill-fated houses was as follows:—The ditch already alluded to as passing at the bottom of the gardens was here not filled up; there were not any sinks and drains, and the cesspools were overflowing into the ditch, which, here and there obstructed, formed a succession of foul and stinking pools, from four to six feet wide; whilst the earth of the gardens was perpetually saturated with the offensive moisture exuding from them.

Descending the hill to the remaining twenty-four houses (below those infected) and which, from their standing upon lower ground,

might reasonably be expected to have fared worse, I soon discovered from whence their protection came. The land adjoining the Litchurch-street gardens belongs, as I have already stated, to the General Infirmary, and the governors of that institution had eight years before built a wall in the former course of the ditch, before spoken of, which wall extended from the foot of the hill as far up as the house No. 24; at the same time they had filled up the ditch, carrying its contents by a drain, away from the gardens below, and into the nearest public sewer: now reference to the list detailing the amount and progress of the fever on this occasion will show that No. 25 was the first house affected. The connexion, therefore, between the facts here furnished, and the tragedy of the six houses, is too obvious to require further comment.

I shall conclude this part of my subject by adding, that, from motives of both humanity and economy, the Board of Guardians and the governors of the Infirmary jointly exerted themselves to get rid of so serious a nuisance, that the latter, at an expense of more than 50*l.*, extended the wall of separation between Litchurch-street and their own lands, but that, in all other respects, the evil remains now (two years since) as it was then; nor was there found any law that would compel its removal, the place complained of being private property.

XXVI. My friend, Mr. Harwood, surgeon of the Derby Union, informs me, that in Canal-street (District 5, of Table 1), five sisters in one family were successively attacked with typhus fever, caused by the escape of foul air from a drain.

It appears that a drain, coming from some neighbouring privies, had been carried so near to the house in which they resided as to form part of the boundary wall of the cellar, which had for some time previous become too offensive to be used.

Four months elapsed before this family became free from disease; no return of which, however, has taken place since the removal of the drain, which now passes at a greater distance.

Taken altogether, I think, that in large towns (and villages also) there is hardly any source of disease more powerful as to its pernicious influence, or more general as to extent, than defective drainage.

XXVII. *Nuisances.* Of these the following are perhaps the most numerous, and the most injurious to health. Privies placed near to, and not unfrequently forming part of dwelling-houses; also their cesspools, badly drained; or not at all. There are instances of the wall of a cesspool forming part of the wall of a lodging-room.

Pigsties, often, as already mentioned (Sect. XIII.), in confined courts.

Butchers' slaughter-houses with deposits of offal. This last is often boiled twice a-week, in order to extract thereby any re-

maining fat; this process, of course, causes a most offensive smell to be diffused throughout the neighbourhood; to say nothing of the state of such filthy accumulations, between the times of boiling the offal, which is subsequently given to pigs; and this disposal of it entails the additional evil of pigsties near the same spot.

Cows kept in stalls in the heart of the town; streams which run through the town, being polluted by filth from slaughter-houses; privies of private houses, and factories; also by the water from gas-works.

I feel that some apology is necessary for venturing to offer any suggestions of my own as to measures which might, I conceive, be adopted for the removal of nuisances; but having witnessed that, since the year 1832 (when the cholera prevailed), the nuisances then reported to the Board of Health have many of them been allowed to continue until this time, I have occasionally set about devising in my own mind some plan for their extinction.

Plan proposed for the Removal of Nuisances.

XXVIII. Upon this subject I beg to make the following observations, founded upon what I have witnessed. If the removal of a nuisance is to depend upon an information laid by the individuals who are neighbours to it, and probably to the nuisance-maker also, then it will be allowed to go on as heretofore; or if the legal measures for its correction are left to the vigilance of the public surveyor (as in the case of smoky chimneys, Sect. VIII.), who is to inform against persons who have, perhaps, been the most influential in electing him to his office, and who are at all times to be the judges as to whether he discharges his trust well or ill, then also the nuisance will remain unnoticed. Moreover, there are many nuisances most injurious to health, which are not known to be such by the persons most exposed to them; such, therefore, will go uncomplained of; yet doubtless they ought to be done away with.

Few persons, perhaps none, see so much of the evils in question as medical men, but they cannot be expected to come forward and say, "This landlord should drain; that should remove his dung-heap," &c. &c. But convinced as I am that many existing causes of disease might be put an end to, I conceive a power of doing so should be vested in some body of men, who, on learning, either by their own observation, or by information received, whether direct or *anonymous*, (for they would have to deal only with facts,) should search into, and, as far as might be, remedy the evil brought to their notice.

XXIX. I shall now present a Table, (marked No. 1,) intended to show how steadily sickness prevails in certain districts and peculiar localities in Derby; and moreover that this disposition to haunt particular spots is not confined to contagious and epidemic diseases, but extends to diseases of every kind.

The numerical details of Table 1, though not inconsiderable, would have been still more ample, were it not, that the infirmary registers do not afford the means for tracing the cases treated at that institution; and as regarded the sick poor of parishes, I could not carry my search further back than July 1st, 1837, the period at which the New Poor Law Act first came into operation in Derby. Fortunately, however, the registers of the "Derby Self-supporting and Charitable Dispensary" contained not only the name but also the resident of each patient. I am therefore greatly indebted to my friends, the medical officers of that charity, for the free use of their books, from which I have taken 8049 cases of disease, occurring in a period of eight years; viz. extending from July 1st, 1831, to June 30th, 1839;* and from the Medical Register of the Derby Poor Law Union (kept by Mr. Harwood), comprising two years, viz. from July 1st, 1837, to June 30th, 1839, I obtain 1367 additional cases, making, with those before mentioned, a gross total of 9416. From these I have selected and inserted in Table 1 all the cases of fever, diarrhœa, dysentery, cholera, measles, small-pox, and scarlet fever, amounting together to 1535.

Explanation of Table 1.—In explanation of this Table, I shall just observe, that the first part gives the names of places, in which the respective diseases existed; they are grouped in districts, comprising streets adjacent to each other; or similar in situation and circumstances.

Prefixed to the name of each street (or parish, in the case of District 17), I have given, with the kind assistance of Mr. Moody, clerk to the Board of Guardians, the number of houses in each street, and, what will be shown to be more important, the number of courts likewise. I have already, in Sections XII., XIII., XIV., and XV., spoken of the courts in Derby, generally, and shall hereafter (Section XXXI. Dist. 19) have occasion to allude to them again. Next in Table 1, after the names of places, are eight columns arranged in four pairs; and each pair placed under one of four classes, headed 1st, Fever; 2d, Diarrhœa, Dysentery, and Cholera; 3d, Measles, Small-pox, and Scarlet-fever; 4th, Diseases of every kind.

I have given two columns to each class of disease, in order to exhibit separately the Dispensary cases, and those belonging to the Derby union; thereby to show that, although the former were scattered over a period of eight years, and embraced in their lists what are called *Free Members*, that is, prudent persons not of the lowest class, but paying for their privileges (and these persons usually amount to nearly one-half of the Dispensary patients); and on the other hand, whilst the Derby union cases

* The year, in the Dispensary Registers, is taken from Michaelmas to Michaelmas; but in whatever statistical facts I have collected for my own private use, I have, to afford a facility for comparison, made the year begin and end at the periods observed under the Registration Act.

include only two years, and are confined to a very poor, and too generally improvident class, it will still be found that the greatest amount of disease is met with in the same places in either case. This fact is forcibly shown in the 4th or last class of Table 1, headed "Diseases of every kind."

TABLE No. 1.—Showing the usual haunts of Disease amongst the Working Classes, in the Town of Derby.

Districts.	Number of Houses in each Street.	Number of Courts in each Street.	Names of Streets.	Fevers.		Diarrhoea, Dysentery, and Cholera.		Measles, Small-pox, and Scarlet Fever.		Diseases of every kind.	
				Dispensary in 8 years.	Derby Union in 2 years.	Dispensary in 8 years.	Derby Union in 2 years.	Dispensary in 8 years.	Derby Union in 2 years.	Dispensary in 1024 cases.	Derby Union in 1323 cases.
1	8	..	Abbey Barns . . .	11	..	4	..	..	..	24	18
	155	8	Kensington . . .	..	4	..	..	..	..	7	17
2	26	1	Curzon-street . . .	..	2	..	..	..	..	3	19
	94	2	Burton-road . . .	34	8	19	7	6	..	9	38
3	32	..	High-street . . .	..	..	..	2	..	..	6	9
	19	..	Cannon-street . . .	..	2	..	..	..	..	2	38
4	62	2	Waterloo-street . . .	..	3	..	4	..	..	..	15
	88	..	Litchurch-street . . .	16	3	7	1	2	..	3	14
5	63	..	Leonard-street . . .	6	..	..	2	..	..	4	5
	73	..	Grove-street . . .	2	1	..	..	..	..	1	3
6	20	1	Hill-street . . .	..	..	1	1	..	..	2	5
	47	4	Spring-gardens . . .	0	2	0	1	2	..	35	9
7	47	..	Canal-street . . .	1	7	..	4	..	..	..	15
	84	4	Siddal's-lane . . .	6	..	6	..	..	..	3	3
8	29	..	Rivett-street . . .	16	..	0	1	..	..	2	4
	51	..	Burrows-walk . . .	18	5	..	..	..	..	2	1
9	67	2	Castle-street . . .	5	5	..	..	..	..	27	27
	101	7	Morledge . . .	20	7	8	1	2	..	13	27
10	47	1	Cockpit-hill . . .	2	..	..	..	..	..	1	5
	88	..	Devonshire-street . . .	10	1	4	..	2	..	5	5
11	45	1	Albion-street . . .	3	3	..	..	1	..	3	16
	15	..	Albion-place . . .	5	..	..	..	2	..	16	2
12	130	7	Eagle-street . . .	20	4	10	..	2	3	10	37
	45	3	Bloom-street . . .	9	2	..	..	..	..	4	7
13	107	9	Bag-lane . . .	17	2	11	4	1	..	23	27
	42	3	Thorn-tree-lane . . .	7	..	1	..	3	..	5	6
14	21	2	Cross-lane . . .	..	6	2	3	..	..	..	21
	41	2	St. James's-lane . . .	8	1	5	..	1	5	6	18
15	160	11	Sadler-gate . . .	16	7	4	5	1	2	17	52
	60	7	Bold-lane . . .	4	10	2	2	..	1	5	38
16	145	11	Willow-row . . .	12	10	17	6	7	..	29	52
	135	11	Walker-lane . . .	38	24	7	10	2	..	23	215
17	66	2	Goodwin-street . . .	6	1	4	3	..	..	23	13
	25	2	Orchard-street . . .	3	..	11	..	..	..	8	1
18	51	3	St. Helen's-street . . .	10	1	8	6	..	..	16	25
	26	1	St. Helen's-walk . . .	9	..	..	..	4	..	2	7
19	182	12	Bridge-street . . .	33	3	25	2	28	11	58	74
	40	4	Lodge-lane . . .	11	2	3	1	2	..	35	14
20	118	..	Parker's-street . . .	..	1	2	..	..	..	11	2
	..	..	Parker's-flats . . .	7	..	15	..	7	..	17	2
21	136	2	Nunn-street . . .	15	..	12	7	2	..	28	30
	49	1	Green-street . . .	20	1	8	2	11	..	26	17
22	48	3	Ford-street . . .	13	1	5	..	..	..	8	8
	80	6	Agard-street . . .	..	..	..	..	..	..	..	..
23	18	2	Short-street . . .	21	7	20	4	8	2	48	49
	97	9	Brook-street . . .	42	3	36	3	9	..	68	25
24	30	2	Brook-walk . . .	11	4	8	5	5	..	6	27
	51	1	Mundy-street . . .	5	2	8	5	..	1	15	20
25	61	..	William-street . . .	4	..	..	..	..	..	1	2
	39	1	Leaper-street . . .	3	1	..	..	..	..	1	4
26	37	8	St. Michael's-lane . . .	11	4	2	3	..	..	14	26
	138	9	Bridgeway . . .	21	1	9	3	4	..	32	19
27	57	2	River-street . . .	16	1	7	2	9	..	21	10
	40	2	Bath-street . . .	6	..	1	..	1	..	4	3
28	..	Duke-street . . .	29	1	9	..	..	..	21	4	
Carried forward . . .				512	153	291	103	125	30	753	1150

Diseases amongst the Working Classes—*continued.*

Districts.	Number of Houses in each Street.	Number of Courts in each Street.	Names of Streets.	Fevers.		Diarrhœa, Dysentery, and Cholera.		Measles, Small-pox, and Scarlet Fever.		Diseases of every kind.	
				Dispensary in 8 years.	Derby Union in 2 years.	Dispensary in 8 years.	Derby Union in 2 years.	Dispensary in 8 years.	Derby Union in 2 years.	Dispensary in 1024 cases.	Derby Union in 1323 cases.
17	184	. .	Brought forward .	512	153	291	103	125	30	753	1150
	37	. .	Darley	52	1	15	. .	. .	. .	67	3
18	52	. 3	Chester-place	29	. .	17	. .	2	. .	57	6
	74	3	City-road	12	2	. .	7	1	1	14	3
	81	3	Nottingham-road . . . . .	. .	2	6	1	6	. .	18	10
	110	7	Osmaston-street . . . . .	. .	3	8	10	. .	1	9	66
	76	6	St. Peter's-street	1	2	6	1	. .	. .	25	5
19	58	5	Full-street	2	2	. .	. .	. .	. .	5	. .
	154	6	St. Mary's-gate . . . . .	. .	. .	2	. .	1	4	8	9
	42	4	Friar-gate	3	4	1	1	2	. .	4	14
	58	3	Queen-street	2	. .	. .	. .	. .	. .	17	. .
20	92	2	King-street . . . . .	. .	. .	. .	2	1	. .	5	7
	46	. .	Ashborne-road . . . . .	. .	. .	2	2	2	. .	12	1
			Uttoxeter-road . . . . .	. .	. .	. .	. .	. .	. .	30	56
			Elsewhere, that is, solitary cases occurring in other parts of the town	76	5	13	. .	12	4	30	56
			Total	689	174	361	127	152	40	1024	1323

XXX. Observations on the foregoing table:—

—	Fevers.	Diarrhœa, Dysentery, and Cholera.	Measles, Small-pox, and Scarlet Fever.	Total.	Gross Total.
In the Table No. 1 there are registered, cases occurring in the places named	782	475	168	1425	} 1535
Cases occurring elsewhere	81	13	16	110	

Thus there were only 110 cases out of 1535, or one in every 14, that were not found in the usual haunts of disease; and this not taking place in any particular year or season, but embracing a term of eight years.

Had I laboured to make out a still stronger statement, I might have added from the Derby union Register no less than 141 cases more, which are entered as "febrile," nearly the whole of which were to be found in the same places as the decided fevers.

Next to the first class, which contains fevers, I have placed bowel complaints. The close connexion between the two, whether in tropical or temperate regions, is well known to medical men, and this table affords some additional evidence that they are generally to be found in the same situations.

With regard to measles, small-pox, and scarlet-fever, the numbers in these columns are but few. Small-pox, I am happy

to say, seldom exists to any great extent in Derby. And of measles and scarlet-fever, numberless cases go unrecorded; because medical assistance is not sought for unless the disease takes an unfavourable turn. This is more especially the case as regards measles, and leads to many a death that might have been averted by more timely help.

The fourth and last class, "diseases of every kind," contains in its first column, 1,024 cases of every kind, taken, but at hazard, from the middle of the Dispensary Register; and in the second column, 1,323 cases of every kind (being all) that occurred in the Derby union in the two years formerly mentioned. The two together amount to 2,347, of which only 86, or one in 27, were not found in the places named, but elsewhere.

Observations respecting the Districts contained in Table 1.

XXXI. The unhealthiness of the districts and places set forth in this Table is, for the most part, traceable to obvious causes, many of which could be done away with. Indeed, in some of the streets and courts named, the sources of disease are confined to a few faulty houses.

The following observations will be of a general kind only, because to describe every fault in every district would lead to tedious detail and perpetual repetition. I also abstain from pointing out particular nuisances, as I have already (Sect. XXVII.) named those that are the most universal; and I feel that it would be both invidious and unjust to particularize the few that come within my own cognizance, and omit, as I doubtless should do, many more that are unknown to me.

District No. 1.—Both Abbey Barns and Kensington are on low ground, and insufficiently drained. At the back of the former there is a shallow brook that receives all the slops and waste water from the houses. Curzon-street is also low; has a court with *single* houses; and there is likewise a nuisance in this street.

District No. 2.—Burton-road. The thirty-four cases of fever here entered belong in part to the district generally, but I was unable to appropriate to each street its share. The whole district, although on the summit of a hill, is very unhealthy, as has been before mentioned in Sect. XXII. The chief causes of which I have reason to think are, faulty construction of some of the houses, together with their premises and drains; the last-named being the most prominent evil.

District 3.—Litchurch-street has been made sufficiently memorable by the fever of 1837-8, detailed in Sect. XXIII. *et seq.* It is rarely free, or, in its present state, likely to be free from fever; except on its south side, where every proper attention has been paid to drainage.

District 4.—Situation favourable, but rendered partially unhealthy by nuisances and other remediable causes.

District 5.—Unfavourably situated, being low and near the canal and river, but made much worse by faults in the construction of the houses.

District 6.—Also low and near the river. Dirty, full of faults; and having, as shown in the Table, eight courts.

District 7.—Not so unhealthy from situation as from some ill-constructed houses, with privies and cesspools close adjoining them: also from the narrowness of some of the streets; two of which, Eagle-street and Bloom-street, are nearly closed at one end: in addition to which there are, in the former street, seven courts; in the latter, three. And the result is sufficiently shown by the Table.

Bag-lane.—Low, and abounding in unhealthy courts.

District 8.—Thorn-tree-lane. Low. The houses, which are all on one side, are backed by the filthy brook. It is also narrow, badly paved; and, in short, little has been done in any way to remedy as far as might be the evils of an unfavourable situation.

Cross-lane.—The court here has a great share in producing the disease found in this lane.

District 9.—St. James's-lane is in the centre of the town: it is narrow, crowded, dirty, and made worse by courts and by nuisances.

District 10.—Sadler-gate. Also in the heart of the town. It is one of the principal streets of business; but, with its neighbour Bold-lane, abounds in courts (eleven in the former, seven in the latter) that, for dirt and disease, may vie with the next district. Its lower part is near to the brook, from which proceeds much offensive exhalation.

District 11.—Willow-row and Walker-lane consist for the most part of wretched houses, and still worse courts; the latter 22 in number. Willow-row also faces the dirty brook so often mentioned. Walker-lane is the St. Giles's of Derby; a principal haunt of our own poor and of vagrants coming into the town, who too often import disease also. The sickness in the remaining four streets of this district is to be found chiefly in the courts they contain; this is remarkably the case in St. Helen's-street,—a wide, open, and short street, of good houses, with the exception of those in the courts.

District 12.—Bridge-street is wide, and consists of a respectable class of houses, but it has in it 12 courts, the entrances to all of which, except one, are very narrow. The interior of most of them is confined, and they contain numerous *single* houses, together with their share of nuisances. The amount of disease is in proportion to these evils.

Lodge-lane has dirty and crowded courts, and nuisances in the main street.

Parker's Flats, although so named, are on high ground. This spot, as has been previously noticed in Sect. XXII., is unhealthy, which is mainly attributable to the houses here being all *single*. They stand in three rows, two of which are placed back to back, and the third has its back built against larger houses.

Green-street.—Several of the houses in this street also are *single*, and more are to be found in an unhealthy court on the south side of the street, in which I have lately witnessed severe fever and other sickness.

District 13.—A small district, as may be seen in the Table, but containing 11 courts, that furnish much sickness. At the back of some of these courts there is a pool of standing water, kept full by a weir placed across the adjoining brook.

District 14.—Brook-walk runs close alongside the dirty brook so often mentioned as passing through so much of the town. There are also here confined courts containing single houses.

Of the remaining three streets in this district, Mundy-street appears to be the most unhealthy. It is nearer to the brook and to the meadow lands that flank the whole district towards the west, which lands are frequently irrigated from two adjacent mill-dams. Mundy-street, William-street, and Leaper-street, are also new streets; and, from their lying under the disadvantage attaching to new streets, mentioned in Sect. XX., they have hitherto been insufficiently drained.

District 15.—St. Michael's-lane has in it eight courts. The houses in it are also many of them of an inferior sort: there is a slaughter-house likewise. The pavement is bad, together with a general want of cleanliness.

District 16.—In Bridge-gate there are nine courts, most of them confined and dirty, containing houses of the most inferior sort and very old. The area of some of these courts is much below the level of the street. River-street, Bath-street, and Duke-street, are all built upon marshy land near to the river Derwent. They are without any cellars, and incapable of being thoroughly drained, the river here being artificially kept up bank full, in consequence of which this neighbourhood is occasionally flooded.

District 17.—The situation of Darley is unfavourable, being low down, on the side of a hill, facing to the north-east; at the foot of which lies the river Derwent, and beyond it extensive meadows. The houses are all good, with general cleanliness throughout the village. The working classes are all employed in the cotton-mills of this place, and destitution is hardly possible amongst them, the utmost attention being paid to their wants by their employers; they are, therefore, not often to be found seeking parochial relief. Nevertheless, their general health is bad, as may be seen by reference to the Table.

District 18.—All that has been said of River-street, Bath-street, and Duke-street, in District 16, is applicable to Chester-place and

City-road, they being on opposite sides of the same portion of the Derwent. Nottingham-road is situated on the same tract of meadow-land as the two places just mentioned, but adjoins a canal instead of the river. The whole of this district is not unfrequently under water in wet seasons.

District 19.—This district differs from all the preceding, indeed it is rather a class than a district; for, instead of consisting of adjacent places, I have here grouped together seven of the principal streets of Derby, containing the best and most expensive description of houses, whether of business or private residences. The Table shows how infested they are with courts, there being 34 in the seven streets, and in these was found nearly every case of sickness registered in this division.

Indeed, throughout the whole Table, if the column containing the number of courts is examined in connexion with the amount of disease recorded, their relation to each other in the way of cause and effect will be sufficiently established.

St. Mary's-gate, in this division, is a handsome and airy street, but contains (unknown perhaps by nearly all the respectable inhabitants of this street) one of the most inferior courts in all Derby, consisting of *single* houses only; and in one corner of the court as miserable a shed, for a house it is not, as was ever the abode of a human being. One family alone in this court has recently furnished three or four cases of typhus fever to our General Infirmary, although, in my Table, but four cases of fever are entered against this street in eight years.

And here, in concluding my observations on the various districts, I wish again to impress upon the memory of those who study the foregoing Table, that it does not pretend to give the real amount of cases that occurred in the time specified, (except in the Derby union,) but that it is a mere relative scale as to the diseases named in it, and intended to show, so far as my means of inquiry would carry me, the constancy with which sickness attacks, and returns to, particular places; clearly proving thereby that, in those places, there exists a something decidedly injurious to the health of those who dwell there.

I might here conclude this Report; but, before doing so, I shall add two more Tables, marked No. 2 and No. 3.

No. 2 was composed for this Report, and with the view of ascertaining whether fever is more prevalent at one season than another; and if so, what that season is. The Table in question contains 855 cases of fever, selected from a Register of Diseases of every kind, and embracing nine successive years.

TABLE No. 2.—Showing, of 855 cases of Fever, the Proportion that occurred in each Month of the Year.

Months.	Cases.	Months.	Cases.
January	94	July	59
February	66	August	68
March	80	September	75
April	61	October	86
May	62	November	74
June	55	December	75

Judging from the above Table, there would not appear to be any very marked difference in the amount of fever prevailing at one *season* of the year as compared with another, when the comparison made extends over a series of years. But, as regards the months, there seems to be less fever in the four months of April, May, June, and July, than in any other four consecutive months.

The next and last Table, No. 3, is one which I drew up for my own use some little time since; and I insert it here as bearing upon the subject of the public health in the town of Derby, or rather in the "Derby union," as formed under the New Poor Law Act and the Registration Act. It is compiled from the Register of Deaths in the Derby district, and includes two years, viz., from July 1st, 1837, to June 30th, 1839. It will be seen that each year is recorded separately as well as collectively.

TABLE No. 3.—Showing, in every 100 deaths in Derby, the Number of Deaths from Consumption.

	Males.	Females.
In the year 1837—8	23·478	24·150
In the year 1838—9	20·400	30·966
Average in Derby, on the two years	21·778	27·422
„ in London	15·783	15·730
„ in Manchester	18·377	21·811
„ in Liverpool	19·092	20·472
„ in Leeds	21·324	22·955
„ in Birmingham	25·435	24·047

The averages here given for the five last-mentioned places are copied from the Tables published by the Registrar-general, T. H. Lister, Esq. They are founded, however, on half a-year only; namely, the last six months of the year 1837; and it is highly probable that the influenza of that year will be found, in succeeding tables, to have increased the proportion of deaths from consumption, of which, in many instances, it laid the foundation.

Having here concluded my remarks, I have only to request you will do me the favour to present to the Poor Law Commissioners

this attempt to assist them in their interesting and important investigation.

I have the honour to be, Sir,

Your obedient servant,

Derby, March, 1840.

WM. BAKER, M.D.

Derby, February 5th, 1841.

SIR,—In compliance with your request I have endeavoured to follow out the suggestions contained in the Minute of the Poor Law Commissioners, bearing date of November 13th, 1840, and I accordingly return my Report of last March, with such supplementary tables and remarks as will, I hope, meet the wishes and aims of those gentlemen; and, so far as relates to Derby, render some additional assistance in the general “Sanitary Inquiry.”

In the first place, for the better understanding of Table 1, pp. 164-5, of my Report, I now add a map of the town of Derby, coloured so as to illustrate the following particulars:—

- | | |
|---|-------------|
| 1st. The usual haunts of disease, coloured | Red. |
| 2nd. The parts inhabited chiefly by labourers, coloured | Yellow. |
| 3rd. The parts inhabited chiefly by trades-people and
the middle class, coloured | Green. |
| 4th. The parts inhabited chiefly by gentry and pro-
fessional persons, coloured | Purple. |
| 5th. The course of the brook, river, and canal . . | Light Blue. |

In this map, one of the first features calculated to excite surprise is, that the red, or mark of disease, is so generally diffused; and this would probably lead to the opinion (an erroneous one) that locality has little influence.

The explanation of the mark of disease appearing so generally is to be found in the existence of a *variety of causes*, rendering each place either generally or partially unhealthy, according to the nature of the agent; such as malaria, and the impossibility of effectual drainage caused by a low situation, as at the northern parts of the town, where the river Derwent enters (District 16, Table No. 1); or as in Bridge-street, Brook-street, and the Sadler-gate, where the streets are not so much in fault as the courts abounding there; for example,—in the first, 12; in the second, 9; and in the third, 11; in all 32 in those three streets, and for the most part replete with all the evils, (detailed at page 157, Sect. XII., XIII., XIV., XV.,) as belonging to courts: and again in the high ground of the Burton-road, (District 2, Table No. 1,) where defective drainage is the chief source of the sickness abounding there. These, and other such like causes, are sufficiently explained in my observation on the districts of Table 1, (commencing at page 165.) It must likewise be borne in mind, that the small scale of the accompanying map neither permitted

the engraver to introduce the several courts, nor that I should always confine my colouring to the particular portion of each street where only partially unhealthy.

In this map, Darley (mentioned as District 17, Table No. 1) is omitted; but I have marked its situation by name, as it is included in the union and parishes of Derby, and forms a part of our manufacturing population. Litchurch-street (in the south) I have sketched in its proper place, and marked with red that portion which was the seat of the eventful attack of typhus, the narrative of which is to be found at page 159, Sect. XXIII., *et seq.*

I have recently witnessed in a street, called Short-street, a very similar visitation of fever, which lasted about four months, namely, from the commencement of October, 1840, to the end of January, 1841: indeed, several persons who were the subjects of it continue at this time (February) patients in the General Infirmary.

Short-street will be found in the map (coloured-red) a little to the west of Litchurch-street, than which it is upon much higher ground, is also upon a bed of gravel, and is open and airy.

Short-street crosses and connects Leonard-street and Grove-street at the distance of about one-third from their lower end, and consists of 16 houses only; whilst in Leonard and Grove-streets, together, there are 116 houses. These three streets are inhabited by persons of the same class, viz., factory hands, silk-weavers, artisans, and labourers. Such being the case, they are all much upon a par as to their pecuniary circumstances and condition; notwithstanding which, during the four months already mentioned, (October, November, December, and January,) whilst there was only now and then a solitary case of fever existing in the 116 houses of Leonard and Grove-streets, there were 22 cases in the 16 houses of Short-street, as shown below:—

No. of the House.	Side of the Street.	Name of Family.	Number of Inmates.	Cases of Fever.	Number of Deaths.	Remarks.
2	East side	Clarke	4	1	..	The fever began on this side.
7	Ditto	Knifton	7	1	..	
11	West side	Haywood	6	2	..	
12	Ditto	Slater	11	2	1	
13	Ditto	Taylor	10	7	2	
14	Ditto	Sowter	8	6	..	
15	Ditto	Briggs	5	3	..	
		Total	51	22	3	All three young children, and Remittent Fever.

The prevalence of fever in this street may be thus accounted for:—The course of the street has not any fall either way, but is horizontal, and therefore unfavourable for carrying off moisture. Moreover, it has not any sewer of its own; but the drains on each side of the northern half are laid into the Leonard-street sewer,

whilst the southern terminate in the sewer of Grove-street. The whole of the drains on each side of Short-street were, however, choked up and obstructed, and they had been in this state for a long time past.

One result of this stoppage of drains was, that the water yielded by a pump standing at the back of the houses Nos. 11 and 12, from having been excellent, had become so offensive as to oblige the neighbours to desist from using it. Then again, in addition to this accidental cause (the obstructed drains), there are others always existing which are prejudicial to the health of the inhabitants of Short-street as compared with those of Leonard and Grove-streets; for, whilst these last have attached to their houses gardens of a considerable length, at the extremity of which are the privies, those in Short-street are without gardens, and have only a small yard about 20 feet deep, with the privies about 17 feet from the dwelling-houses, to the inmates of which they prove a great annoyance in hot weather.

It will be observed that, although the fever commenced on the east side of the street, the cases occurring on the west were the more numerous, as 20 to 2, which I believe to have been partly caused by the adjacent ground being higher than the west side, and lower than the east side of Short-street, thereby causing the earth's moisture to drain towards the houses of the former and from those of the latter side.

The houses in this street are not faulty in construction, but cannot afford accommodation for the large families that often tenant them; for instance, at No. 12, the Slaters are 11 in family, and of these, eight members of it sleep in one room measuring 14 feet by 11, that being the larger of two bed-rooms with which each house is provided. Much the same state of things exists at the next house, No. 13; and in each there is a great want of bedding, and, indeed, of every domestic comfort.

One great object throughout this Report has been to show that much of the sickness that too frequently prevails amongst the labouring class is attributable to the unhealthy habitations to which they retire when their daily tasks are done; but there is also another cause of sickness to be found in their houses, and which, like the former, is in constant operation: I mean the want of domestic comforts, a want which the wages they earn would, in many instances, enable them to remove, if their means were not, as too often happens, expended viciously or improvidently. It is with regret that I speak unfavourably of the poor, whilst my whole aim, in this communication, has been to awaken a sympathy towards those sufferings of which I have been so often a witness. But several years' experience of the habits of the poor, derived from my situation as an hospital physician, and backed by the additional evidence I have obtained by acting for three years as a guardian of the poor in this large town, has, I am sorry to say, served but to confirm me in the opinion I have just now expressed

and, in support of which, I shall instance the family of the Slaters mentioned at No. 12, in Short-street.

The earnings of four members of this family were as follows:—

	£.	s.	d.	
The father	0	14	0	per week, at gardening, &c.
The eldest son, aged 20	0	12	0	ditto, at a brewery.
Daughter . } Twins {	0	6	0	ditto, at a factory.
Son . . . } aged 18 {	0	9	0	ditto, at the same factory.
<hr/>				
£2 1 0				per week.

The mother of this family, it appears, is left disengaged from all but her household duties and the care of the younger children; the house, nevertheless, is nearly destitute of furniture, and presents a picture of disorder and want. On the other hand, at No. 15 (Briggs), although the husband has for some years past been a weak and ailing man, the family is well ordered and cleanly; and to this fact I mainly attribute the milder and modified form of fever which affected the children.

I have, according to the best of my means, filled up the Table sent to me by the Poor Law Commissioners, containing the deaths that occurred in Derby in the year ending June 30th, 1840, classed according to the rank or occupation of the deceased, and also as to the assigned cause of death. But I am sorry to add, that I do not attach to it much importance; first, because in numerous instances I have been unable to detect the parties named, and to learn whether the deceased were masters, journeymen, or labourers, the registers not containing a column for inserting the residence of each individual,—a defect which I have much regretted whilst prosecuting my search after healthy and unhealthy localities. Secondly, this Table is less instructive than it might have been, because I see too much reason to believe that the causes of death assigned are very frequently erroneous, the blame of which, I fear, attaches to the members of my own profession (who neglect to assign the cause of death); certainly not to the registrars, who, I believe, do their best to obtain the truth, but their informants (as shown by the entries in the registers) are too often illiterate and ignorant persons of the lower class, who were relations of, or who had acted as nurses to, the deceased parties. To both the registrars (Mr. Swanwick and Mr. Jay) I am much obliged for various civilities rendered to me whilst engaged in the present inquiry; and to Mr. Moody I owe many thanks for his assistance, not as superintending registrar only, but more particularly, and on numerous occasions, in his capacity of clerk to the Board of Guardians, by every member of which, in common with myself, his services are highly esteemed.

I have the honour to remain, Sir,

Your obedient servant,

WM. BAKER, M.D.

To E. Chadwick, Esq.,

Poor Law Commission Office.

RETURN of the Number of Persons who have died from the under-named Diseases in the Derby Union, during the Year ended June 30, 1840.

CONDITION OR OCCUPATION.	Total number of Deaths.	CAUSE OF DEATH.																							
		Average age of deceased.		Epidemic disease.				Disease of Brain.				Disease of Lungs.			Disease of Digestive Organs.				Decay of Nature.	All other causes of Death.					
		Fever.	Small-pox.	Measles.	Hooping-cough.	Total.	Hydrocephalus.	Apoplexy.	Paralysis.	Convulsions.	Total.	Pneumonia.	Asthma.	Consumption.	Total.	Disease of Stomach, Liver, and Intestines.	Marasmus.	Teething.			Total.				
Professional persons, or gentry } Tradesmen . . . Labourers and artisans } Paupers in the workhouse }	10 125 752 22	49 38 21 1			1 9 2 2	1 19 132 3	2 2 36 1							2 9 141 1				1 7 15 1	1 19 242 6	1 12 28 1			1 12 36 1	3 12 52 4	2 45 149 6

No. 11.

REPORT ON THE SANITARY CONDITION OF THE PARISH OF
BREADSALL IN THE SHARDLOW UNION.

BY J. P. KENNEDY, ESQ., M.D., of Ashby-de-la-Zouch, and
EDWARD SENIOR, ESQ., Assistant Poor Law Commissioner.

THE parish of Breadsall lies north-eastward of Derby, from which it is three miles distant. It is situated in a deep hollow, almost surrounded with hills of a moderate height; hence, from its very low position, it suffers the disadvantages arising from dampness of the land, humidity, and denseness of the atmosphere, frequent fogs, and unwholesome terrestrial emanations.

According to the census of 1831, this parish contains 30 houses, and these are occupied by 560 inhabitants, who reside chiefly in the village of the same name. Now it is remarkable that this fact assigns to each of the houses an average of precisely eight persons—a proportion higher as eight to five than the general average throughout England, and in so much the more favourable to the evolution of bad air, to the neglect of personal cleanliness, and to the production of various other causes of disease.

The village of Breadsall stands at the bottom and on the declivities of those eminences by which it is overlooked on three sides. Throughout its site, the subsoil consists chiefly of red marl, which is impervious to water; and this issues to the surface as moisture, or in irregular springs. In this way it exposes the inhabitants to the influence of a noxious dampness, except in a

few instances where the houses are protected by soughs and clear water-courses.

Breadsall possesses a south-westerly aspect. The drainage takes the same direction, and depends entirely on the flow of one sluggish brook. This is formed by the confluence of two small streams, which unite at the lower end of the village, bringing with them the whole of its refuse in their filthy open channels. One of these streams traverses the place from east to west, having many of the dwellings built on its margin; the other runs from north to south, and joins the former in its south-westerly course. Thus their mingled waters, loaded with impurities of every kind, move tardily onward to the Derwent, through meadows and flat grounds, which, from their lowness, are often inundated by storms and floods at the rainy season, and thus exposed to the deposition of every kind of putrescent matter, which gives rise to noxious exhalations.

Within the last two years the preceding natural impediments to a free and salutary drainage have been materially increased by the construction of the North Midland Railway; for, since its completion, there have been frequent floods and a constant overflow of the meadows with stagnant water extensively charged with decaying animal and vegetable matter from the neighbouring houses. Here it may be observed that, previously to the recent obstruction of its drainage, the village of Breadsall is not known to have suffered more than once from epidemic fever within the remembrance of its oldest inhabitants; and that, with the exception of the effluvia arising from the partially dried meadows floating in the south-west wind during the droughts of summer and autumn, there are no appreciable causes of fever connected with this locality which have not been in constant and occasional action for ages. There is no evidence, however, to connect the fever of Breadsall with any simple exclusive cause, although the disease may undoubtedly have been promoted by the effluvian miasms, engendered in the mud resting on the surfaces of its flooded meadows, and on the sides of its half-dried brooks.

It may also be observed, as a fact frequently noticed, that deleterious exhalations abound most where the stagnant waters are nearly or quite evaporated from the surfaces of inundated lands; and it is another well-ascertained fact, that in many countries the "malaria" does not rise until all the surface water has disappeared, and left the face of the ground a parched and barren desert.

With few exceptions, the cottages at Breadsall are poor and in bad repair. They are low, small, ill ventilated, and crowded with inmates; most of them have thatched roofs, and, from decay or other causes, these are in a condition unfit to exclude the rain and weather. Hence generally, the roofs, walls, and floors are damp and chilling. On the outside, the cottages are either im-

perfectly drained, or altogether without drains. In many instances there are two or three feet of earth, often there is a pigsty leaning against the walls, and supplying the cottagers freely, though imperceptibly, with the seeds of discomfort, inactivity, and imperfect health, or positive disease.

Many of the villagers keep pigs, and have dunghills with heaps of manure and offal close to the houses; from such practices incalculable mischiefs necessarily proceed: they create offensive odours, unwholesome air, and malarian miasms of various and noxious kinds. No pigsty or collection of garbage ought ever to be allowed within several yards of a dwelling-house, street, or public thoroughfare.

Magistrates or churchwardens, or boards of guardians, or other authorities, should be everywhere empowered by a special law to enforce proper drainage, and free ventilation: and to remove all nuisances to a determinate and secure distance from the habitation of man.

We learn that Breadsall, about 10 years ago, was visited with a fever similar to the present in its nature and effects, but since that time, the parish has not been particularly unhealthy.

The epidemic now prevailing, broke out in the month of September last, and up to the time of our inquiry, there had been 76 cases: of this number, five [persons, males and females, had died. We found several advanced in their convalescence, and some under active treatment.

From careful inquiry, and from the observations we were able to institute on the occasion, we could not perceive any characteristic feature in this epidemic whereby to distinguish it from the common typhoid fever of this country; unless the frequency and severity of diarrhœa, or over-activity of the bowels and the petechial eruptions may be mentioned.

Mr. Buxton, the medical officer for the Breadsall district, states as his opinion, that Breadsall has been free from fever since the year 1830, at which period it was very severe. He further attributes its introduction, on the present occasion, to the fact of three servants, one woman and two men, having caught it at a distance in service, and who returned home ill, and that it then spread, owing to the peculiar locality of the place and the bad living. Mr. Buxton, however, observes, that a case of fever had occurred previously, but of a different nature, and which did not communicate to any other parties. There were nearly 60 cases of fever in one week, about the first week in November.

He has attended in all about 75 to 80 cases: several of whom were not paupers. Breadsall has been under my care since July, 1839.

We add an extract from Mr. Buxton's medical report, as being calculated to throw additional light upon the origin and development of the epidemic, on which we are reporting.

“The fever,” he says, “assumed the most typhoid kind: but it is not of a very malignant character, a few bad cases have very sore throats; it is contagious. The first case was that of one Slater, a working man on the railroad; it began about the middle of September. None caught it from him; but at the latter end of November, John and Charles Dolinane came home ill of this fever; the adjoining houses began on the following week: and from these the whole village. I have twelve more cases than mentioned here. It has not attacked the more respectable and cleaner houses.”

At our request for information concerning its nature and character, Mr. Buxton has furnished us with the following communication:—

“Symptoms of fever at Breadsall, December 29th, 1840.—Lassitude and anxiety, followed by rigors with alternate flushes, great thirst, white tongue with red edges, quick and frequent pulse, high-coloured urine, costiveness or diarrhoea, hurried respiration, great anxiety, and in a few cases petechiæ have appeared.

“Treatment—antimony, calomel combined with jalap or opium, as the case required; cinchona, at the termination of the fever, has been found very beneficial.”

We are indebted to the Rev. Mr. Crewe for a valuable document, in which he describes the origin and progress, the symptoms and treatment of most of the cases, with great conciseness and perspicuity. It merits the best attention in this Report, and we give it as follows:—

“In the month of November a solitary case of fever appeared at the north end of the village; the patient was a labourer on the railroad; he continued ill several weeks, but ultimately recovered. No more cases occurred until the end of October, when I was informed that there were several persons ill in the cottages on the hill above the church, but that it was only the influenza. On the 1st of November I went up to see the sick persons, and found two or three individuals ill in each of the five cottages, and I immediately perceived that the symptoms were those of typhus fever, and of a very severe character. From this date the disease seemed to break out in different parts of the village with the most extraordinary rapidity. On the 3rd of November I visited 20 individuals attacked with the fever; in two cases every member of the family was down. On the 5th of November Dr. Bent came over from Derby at my request, and visited seven or eight families. He prescribed the tartarized antimony, two grains to the half-pint, a table-spoonful every four hours, and afterwards *hydrarg. cum cretâ*, three or four grains every four hours. This treatment has been adhered to in most of the cases for a few days, with the addition of some simple fever draughts, and has proved very successful. In some cases blisters at the back of the neck have been found necessary.

“The symptoms of the disease have been in most cases as follows: commencement heaviness and chilliness, giddiness in the head, and pain in the loins, several days before the patient has quite knocked up. Then violent vomiting and diarrhoea. Tongue at first very white, in a few days like a piece of raw beef, then changing to a dark brown; stools

black and offensive; urine in small quantities, very thick, and if not immediately removed, becoming quite putrid. In favourable cases, and where an emetic or brisk purgative has been early administered, the disease at the fortnight's end has assumed a favourable crisis, and convalescence has taken place, though very slowly, the patient being left in a state of extreme debility. In many cases the patients have been in a state of raging delirium for several nights together. One poor man destroyed himself in one of those fits at the hospital, and another poor woman has been obliged to be sent to the lunatic asylum. Five deaths have occurred in the space of one month, but they have been cases where, from the first, the disease assumed the most aggravated form, and in previously unhealthy constitutions. In these cases the symptoms were obstinate diarrhoea from the commencement, in the latter stages extensive ulcerations of the throat and fauces, and expectorations of bloody mucus. In one case there was violent bleeding from the nose and mouth, and petechiæ previous to death. We have had in all 76 cases, nearly the whole of the poorer population of the place, and fresh cases still occur.

“ Previous to the appearance of this severe epidemic we have had no typhus fever for ten years, and the village has been in a most healthy state. I cannot in any way account for the severity with which it has raged amongst us, unless it is owing in some measure to the large quantity of standing water which has been left in our meadows by the operations of the North Midland Railway, and which, if not in some way carried off, will convert the surrounding country into a swamp.

“ The rapid spread of the fever may also in a great degree be attributed to the large families congregated under one roof, and sleeping in the same room, and when so many were ill at the same time, it was found impossible to separate them.

“ Every precaution has been used, such as providing proper change of bed-linen, chloride of lime, and fumigation of sulphuric acid, and manganese, &c., &c.”

With the object of affording a distinct view of the facts whereon this report is founded, we exhibit them in a summary, as preferable to a tabular sketch of the observations noted during our inspection of the several cottages, and our investigations respecting the general condition of the village, the houses and inhabitants.

Cottage No. 1. Head of the family a widow: house good, and dry; its apartments small; rent 10*d.* a-week; six persons, three men and three women, labourers, slept in it; two sleeping-rooms, three persons in each. Parish relief is received, and attendance of the union medical officer. The fever broke out here in October, and one person, a girl, died of it. At this time the cottage must have been overcrowded with seven inhabitants. This girl, aged 14 years, worked at a mill for 15*d.* a-week; this mill being some miles distant from her home, she was usually engaged in walking, and at work from four o'clock in the morning till eight o'clock in the evening, being 16 hours in the day; she would thus be exposed to great and frequent alternations of temperature,

besides the fatigue of travelling to and from her daily occupation. These circumstances, in connexion with the deficient sustenance and clothing obtained by the miserable pittance of her wages, were causes quite sufficient to render this poor creature unusually liable to fever of the worst kind.

No. 2. Head of the family a waggoner, with 9*s.* a-week, and food, for wages; has two sons in farm service; does not receive parish relief; house good and dry, with the apartments small; rent 10*d.* a-week, or 2*l.* a-year. Five persons sleep in two rooms. There were four cases of fever in this house, and one of indisposition, suspected to be febrile; no deaths, nor previous illness. The first case of the epidemic in this row on the hill occurred in this cottage.

No. 3. Head of the family a labourer, at 15*s.* a-week wages. House good and dry, with the apartments small; the weekly rent 10*d.* Six persons sleep in two rooms. The fever attacked them about five weeks ago, and the whole family have had the disease: five of them are recovering. They receive 21 pounds of bread, with porter, and 7*s.* a-week of parish relief, besides assistance from private sources. Out of these six cases there was one death—the subject, a male, committed suicide in a lunatic asylum, having been sent to that institution while labouring under the febrile delirium at an early stage. Porter, as given in these cases, is a good restorative. Where gentle and diffusive stimulants are eligible in fevers, or other diseases, wine is generally exhibited with advantage; but where sustenance is required at the same time with moderate excitement, as in some chronic affections, and in convalescence from fever, the most beneficial results may be derived from the regulated and liberal administration of porter. Wine cheers, and keeps life from languishing; but it is innutritious. Porter is a generous nutriment; it revives, strengthens, and recruits the whole animal economy.

No. 4. Head of the family a labourer, earning 7*s.* a-week; state of the house good, being nearly similar to the three before-mentioned cottages: three persons sleep in it. They have all had the fever; the first, a girl, was seized about three weeks ago; no deaths, no parish assistance.

No. 5. Head of the family a labourer, with good wages: house constructed as the four preceding ones; three persons sleep in it. Two of them have suffered from the fever, and recovered without parish assistance.

These five cottages, forming a continuous row, have been built within a few years: they are in good repair, with slate roofs, and have a fair appearance. They are situated on a steep declivity, overlooking the church and east end of the village, with a southerly aspect. Behind them, on the north, the ground rises high, and covers the wall to some height, without proper drainage, and the removal of manure and pigsties to a safe distance. These houses

will, ere long, if they are not so already, become exposed to foul air and dampness. Their occupants would seem rather to have been impregnated with the febrile poison, by contagion, through personal intercourse, than by the infection of malaria, or other volatile miasms.

No. 6. This is "The Old Hall," now used as a public-house. It is large, well ventilated, and has a drain through the middle of it: ten sleep here, but not more than two in a room; one boy, aged 12 years, has had the fever; the case was mild.

No. 7. Head of the family a stocking-maker, with earnings about 7*s.* a-week, subject to deductions. Three sleep in this cottage in one room; it is in very bad repair, with the walls damp and decaying. It overhangs an impure gutter, and is surrounded with masses of vegetable matter in a state of decomposition; the place seems quite a hotbed of "malaria." The rent is 2*l.* a-year. One boy has had the fever, and is now recovering: he requires relief: but this being refused by the Guardians, the Rev. H. Crewe kindly affords him assistance. This boy's case is entitled to parochial relief, which he has since received.

No. 8. Head of the family a labourer, with wages of 11*s.* a-week: has not asked for parish relief; the house damp, and not clean; a pig is kept close to the cottage, which stands in a very low situation, and has much water about it. It contains two sleeping-rooms: one person has the fever; it is severe, and continues under treatment.

No. 9. Head of the family the parish clerk; earns about 13*s.* a-week as a labourer on the highway. His house is pretty good, clean, and without any appearance of poverty. There are four inmates, and they all sleep in one room; one had fever, and recovered.

No. 10. Head of the family a labourer, with 11*s.* a-week wages. The house is good, and contains seven persons, who all sleep in one room. Rent 6*l.* 4*s.*, including land for a cow: no appearance of poverty, nor application for relief. One person, the wife, has had the fever; but she is now getting well: there is a pigsty close to this cottage, and the effluvium from it is unwholesome.

No. 11. Head of the family a labourer, at 11*s.* a-week wages, but in uncertain work; has a wife and six children: two of his girls used to go to "the mill" at a distance. The house is damp, and built with lath and plaster; the rent is 9*l.* a-year, with land. The "grandfather" is tenant: nine persons sleep in this cottage, in two rooms, with only two beds. Five had fever; but they are all recovering: relief has not been asked, but the family appear to be poor.

No. 12. Head of the family a blacksmith in good circumstances, rent 7*l.* with a small garden; the house is deep, and in bad condition. Eleven persons sleep in four bed-rooms, which are wretched apartments with barely room for the beds. Six had the fever;

they were attended by their "own doctor," and are recovering: close to the house is a farm-yard, in the worst possible state, with offal and heaps of putrescent matter, well calculated to yield abundance of deleterious miasms.

No. 13. Head of the family a stocking-maker, earning about 7*s.* a-week; his house has a bad roof through which the rain comes in; he pays 1*s.* of weekly rent. Six persons sleep in this cottage, in two rooms, with three beds. Three had the fever, and are now convalescent; close by the house, is a pigsty with much manure, offal, and garbage heaped together.

No. 14. Head of the family a labourer with 11*s.* of weekly earnings; the yearly rent of his cottage is 13*s.* Six persons sleep in it in two bed-rooms: one child had the fever, and is getting better under the care of the union medical officer. No parish assistance: a pig is kept close to the house, with abundance of the usual sordid and unwholesome accompaniments.

No. 15. Head of the family is servant to the clergyman of the parish, house good and dry, but the pigsty is too close to it, the rent is 8*l.* a-year, with two fields; no parish relief applied for; the family comfortable; six persons sleep in this cottage, in three beds, in two sleeping-rooms. Three had the fever, and are now convalescent.

No. 16. Head of the family a furnace man at high wages. The house in a very bad condition, from dampness and defective ventilation; the air in it so oppressive that we were obliged to hurry out of it; the rent is 9*l.*, with land to keep a cow. Seven persons sleep here, in four beds, in three bed-rooms; in this cottage one person had fever and died.

No. 17. Head of the family a stocking-maker; his house is good, but near it are heaps of decaying substances as manure. No relief required; ten persons sleep in this cottage, in three rooms, in four beds; four had the fever, and recovered.

No. 18. Head of the family a stocking-maker; nine persons sleep in this house, in three beds in two sleeping-rooms; there were five cases of fever in this cottage, and one of them, a little boy, died: petechial eruptions attended some of the cases. Parish relief was not asked for.

No. 19. Head of the family an old soldier with a pension of 8*s.* a-week; his cottage is very wet, with the roof unfit to exclude the rain and weather; all round it are accumulations of putrescent substances; the rent is 26*s.* a-year; four persons sleep in this place, in two beds, in one sleeping-room; two of them, a lad of eighteen years, and mother, had fever, the former died. No parish relief.

No. 20. Head of the family a labourer in the gas-yard, wages 15*s.* per week; his cottage is situated in a hollow quite close to the brook, at the foot of a wet declivity; it is very damp, with a bad roof and altogether unfit to live in; four persons sleep in two

beds in one sleeping-place ; the head of the family is very ill of fever at present. No application for parish relief.

Nos. 21 and 22. Heads of the families are stocking-makers, earning each about 7*s.* a-week ; the houses stand low, and in a damp situation close to the brook : they have a pigsty and heaps of manure too near them ; there has been a case of fever in each house ; they are terminating favourably. This brook runs over a broad gravelly bottom, having its waters loaded with refuse from the houses ; it is shallow, and becomes narrowed in dry weather, leaving much of its channel covered with mud, and other filthy depositions, ready to taint the atmosphere with " malaria," and pestilential vapours.

No. 23. Head of the family a labourer with the weekly wages of 11*s.* ; house very damp, the roof quite insufficient ; there are heaps of manure close to it. The rent is 6*d.* a-week ; four persons sleep in two beds, in separate rooms ; there is one case of fever, with unfavourable appearances. No application for parish relief, but 6*s.* weekly is received from a club.

No. 24. Head of the family a stocking-maker, and occasionally a labourer with weekly earnings about 7*s.* ; house in good repair, three persons sleep in two beds in two different rooms ; one, a girl, is now ill of the fever ; they receive relief from the union, of a quartern loaf, and 2*s.* a-week for the girl who is sick.

No. 25. A labourer, with a large family ; three cases of fever, no particulars.

No. 26. Head of the family a stocking-maker, who earns about 7*s.* a-week ; his cottage is in fair condition, with a piece of garden ground ; the rent is 26*s.* a-year, four persons sleep in the house, in two beds, in two bed-rooms ; two cases of fever have occurred, and one of them is still in progress.

No. 27. This cottage stands in a low, damp situation, close to the brook ; there is much manure, refuse, and offensive matter near it. One of the inmates had fever : this case occurred in September, and was the first of the epidemic which appeared in the parish.

We were unable to undertake the inspection of ten other houses, in which 13 cases of fever had prevailed. Five cottages only escaped this severe visitation.

When we reflect attentively on the insalubrious position of the place ; the abundance of animal and vegetable matter in progress of decomposition close to the cottages of the villagers ; the bad state of the brooks, with morbid exhalations emitted from their margins, in dry weather ; the large quantities of feculent water stagnating and evaporating on the adjacent meadows ; the crowded state of the houses, and the great number of persons who sleep in the same room, and even in the same bed ; we see evidence to justify us in concluding that the epidemic fever of Breadsall was dependent on two sources for its origin and propagation ; and these are, the habits and circumstances of the parishioners creating

the predisposition to fever, and the profusion of malarian elements, implanting the essence or seeds of the disease and originating its development in deteriorated constitutions. In further support of this conclusion, we would mention the fact, that the fever did not show itself in a single farm-house, although the farmers and their servants must have had daily communications with the sufferers, or even visited their houses. On the strength of this fact also, and on that of others exhibited in the foregoing histories, we might rest the opinion as at least probable, that the typhoid fever at Breadsall was not propagated by contagion.

Whoever has duly considered in a right spirit the varieties of intense disease and the crushing weight of misery so extensively endured by the labouring classes, whoever has done this faithfully and charitably, must have yielded to the conviction, that nearly all their afflictions, misfortunes, and maladies originate in the inveterate sources of ignorance, and improvidence or profligacy.

We would therefore earnestly recommend the institution of rules and laws adapted to protect our less fortunate brethren from the lamentable consequences of their own defects, faults, or errors. We would give them simple and concise instructions how to exercise a decent economy in the care of their persons, food, dress, labour, earnings, houses and families; how to apply rational means for the preservation of health, the prevention of epidemic inflictions, and the moral management of their sick, infirm, and disabled; and how, by the application of intellectual and religious knowledge, to avoid the evils which result from residence in unwholesome habitations, from insufficient wages, and from excessively protracted or oppressive labour. For the attainment of such desirable purposes we would have these rules and laws imperatively exposed and known in all mills, factories, and public works. We would have them constantly taught and practically recognized in every school, house and cottage throughout the kingdom, and we would have fit persons empowered to ensure and superintend the proper distribution of these rules and laws in every parish, for the use of its inhabitants. We, in fine, would have peremptory enactments providing that all low-rented cottages shall be secured from dampness and the weather, by adequate drainage and roofing. We would have their tenants restricted from crowding their sleeping-rooms and especially their beds. And we would have these "Health Laws" enforced with regularity by legally constituted authorities.

We plead, in behalf of these suggestions, the right claimed by Christian states to protect the helpless, the friendless, and the imbecile; and the object of our suggestions is to procure additional security to the "productive classes" from the ills created by ignorance, and improvidence, or profligacy.

No. 12.

REPORT ON THE STATE OF THE PUBLIC HEALTH IN THE
BOROUGH OF BIRMINGHAM.

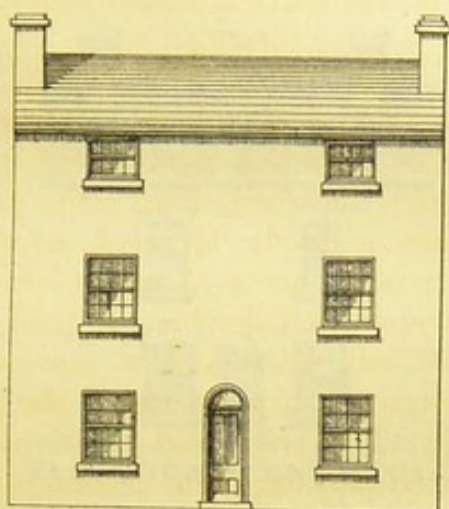
BY a COMMITTEE of PHYSICIANS and SURGEONS.

THE borough of Birmingham is situated on an undulating country composed of new red sandstone, covered very generally with gravel and sand, intermixed in some parts with formations of clay. The town is chiefly situated on the top and sides of hills, from which rivulets arise opening into a small river called the Rea. This river, which discharges itself into the Tame about two miles from Birmingham and is one of the sources of the Trent, passes through the lower part of the town in the direction from west to east. The river and the rivulets which open into it constitute a natural and excellent drainage, which is much promoted by the porous nature of the sand and gravel of which the adjacent high ground is principally composed.

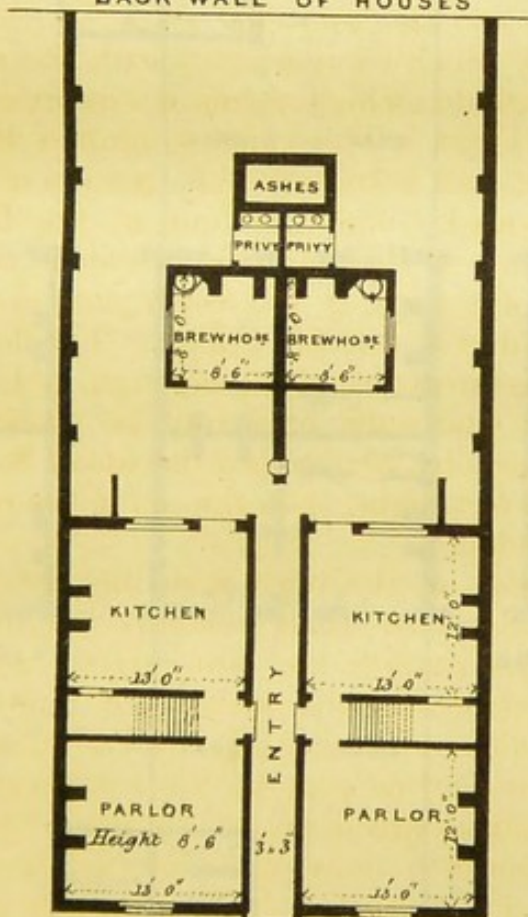
The situation of the greater part of the town is very elevated. Within it is the summit of two canals which form communications with the ocean on the opposite sides of the kingdom—the Worcester Canal, which communicates with the river Severn, and the Old Birmingham, which forms a connexion through other canals with the Trent. This canal summit is 460 feet above the level of the sea, and a considerable portion of the borough is much more elevated. The terminus of the London and Birmingham Railway in Birmingham, which is not situated in an elevated part of the town, is 376 feet higher than the low-water mark of the Thames at London-bridge. The floor of St. Philip's church, nearly in the centre of the borough, is 475 feet above the level of the sea, and some idea may be given of the elevated situation of the town by stating that the site of St. Philip's church-yard is about 50 feet higher than the top of the cross of St. Paul's cathedral in London.

The great sewers of the town open into the Rea, or into the rivulets which discharge their contents into that stream. In some places these rivulets are now covered over and constitute sewers. The present sewers, which are numerous and large, appear to be sufficient to carry off any storms or floods to which the town is liable, and no part of the town is subject to inundations. The principal streets are well drained, but this is far from the case with respect to many of the inferior streets, and to many, or rather most of the courts, which, especially in the old parts of the town, are dirty and neglected, with water stagnating in them. These require immediate attention, and care ought to be taken that the depth of the main drains is sufficient to drain the cellars of the adjoining premises, which is not the case in some parts of

ELEVATION AND CROUND PLAN OF TWO THREE-QUARTER HOUSES,
IN TENNANT STREET, BIRMINGHAM.



BACK WALL OF HOUSES



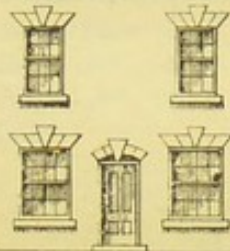
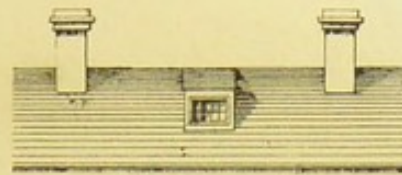
Rental, Each House 18£ per Annum.

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CHICAGO, ILLINOIS



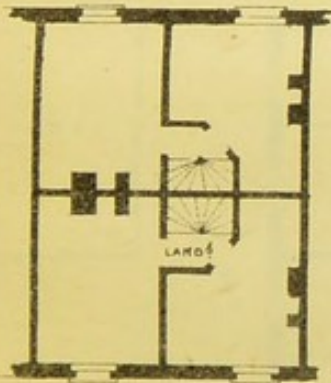
ELEVATION AND PLANS OF HOUSES, IN GREAT RUSSELL STREET,
BIRMINGHAM.



ELEVATION OF ONE HOUSE.

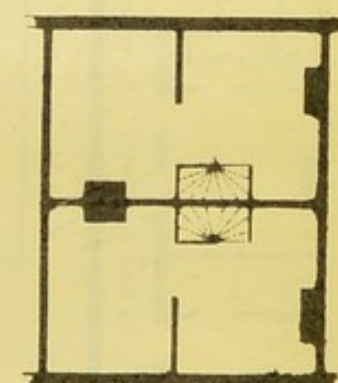
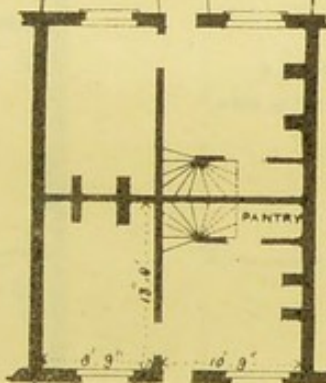


Mem. One Brewhouse and one Privy to every four Houses.



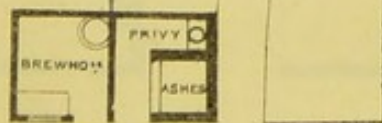
FIRST FLOOR PLAN
2 HOUSES.

Height of Rooms 7.9'



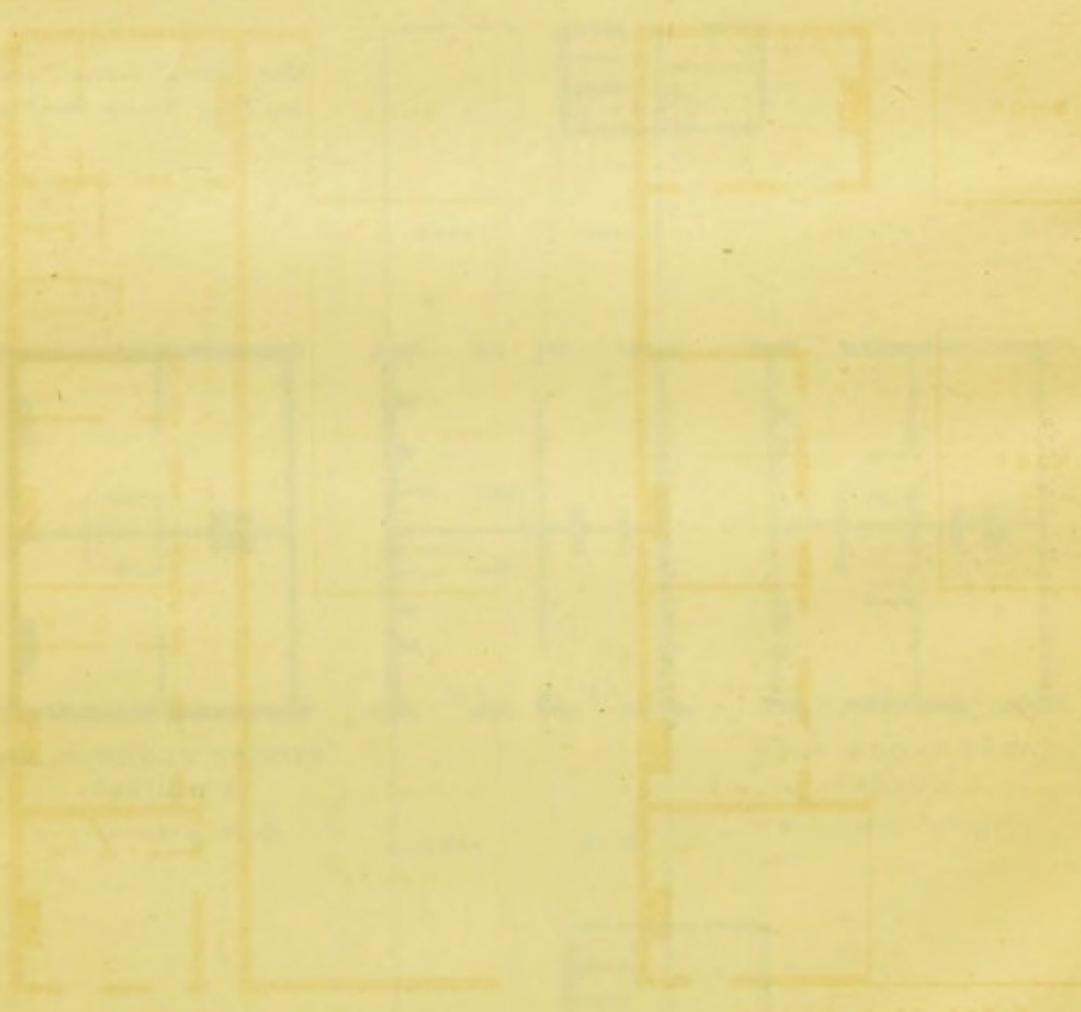
SECOND FLOOR PLAN
2 HOUSES.

Height of Rooms 5.2'



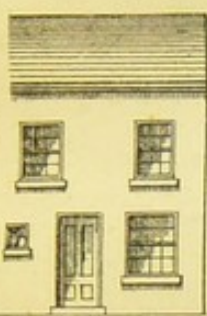
GROUND PLAN
2 HOUSES

Height of Rooms 8.5'



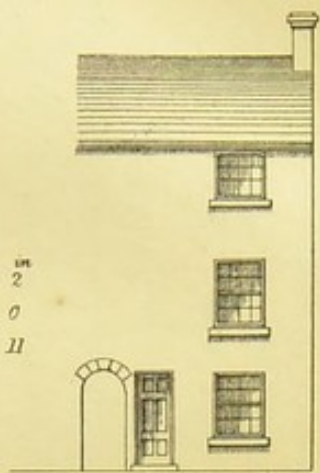
ELEVATIONS AND PLANS OF HOUSES IN BROMSGROVE STREET BIRMINGHAM.

HEIGHTS
 Chamber } 3.1²
 Floor }
 Ground } 7.9
 D°



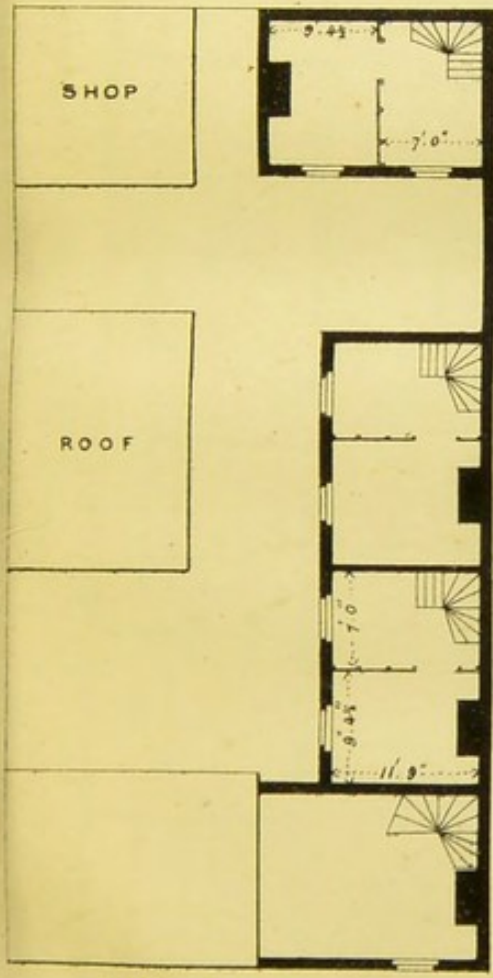
ELEVATION OF BACK HOUSE
 A TO B.
 Rental 3/6^d p^r Week.

HEIGHTS
 Second Floor } 8.2
 First D° }
 Ground D° } 7.11
 Cellar

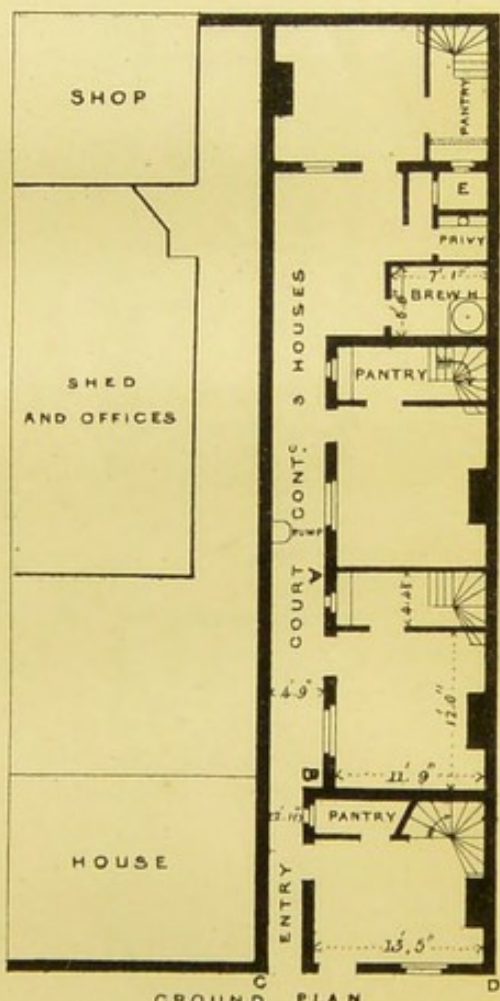


ELEVATION OF FRONT HOUSE
 C TO D.
 Rental 4/6^d p^r Week

E. Bag Hole continued under the Pantry



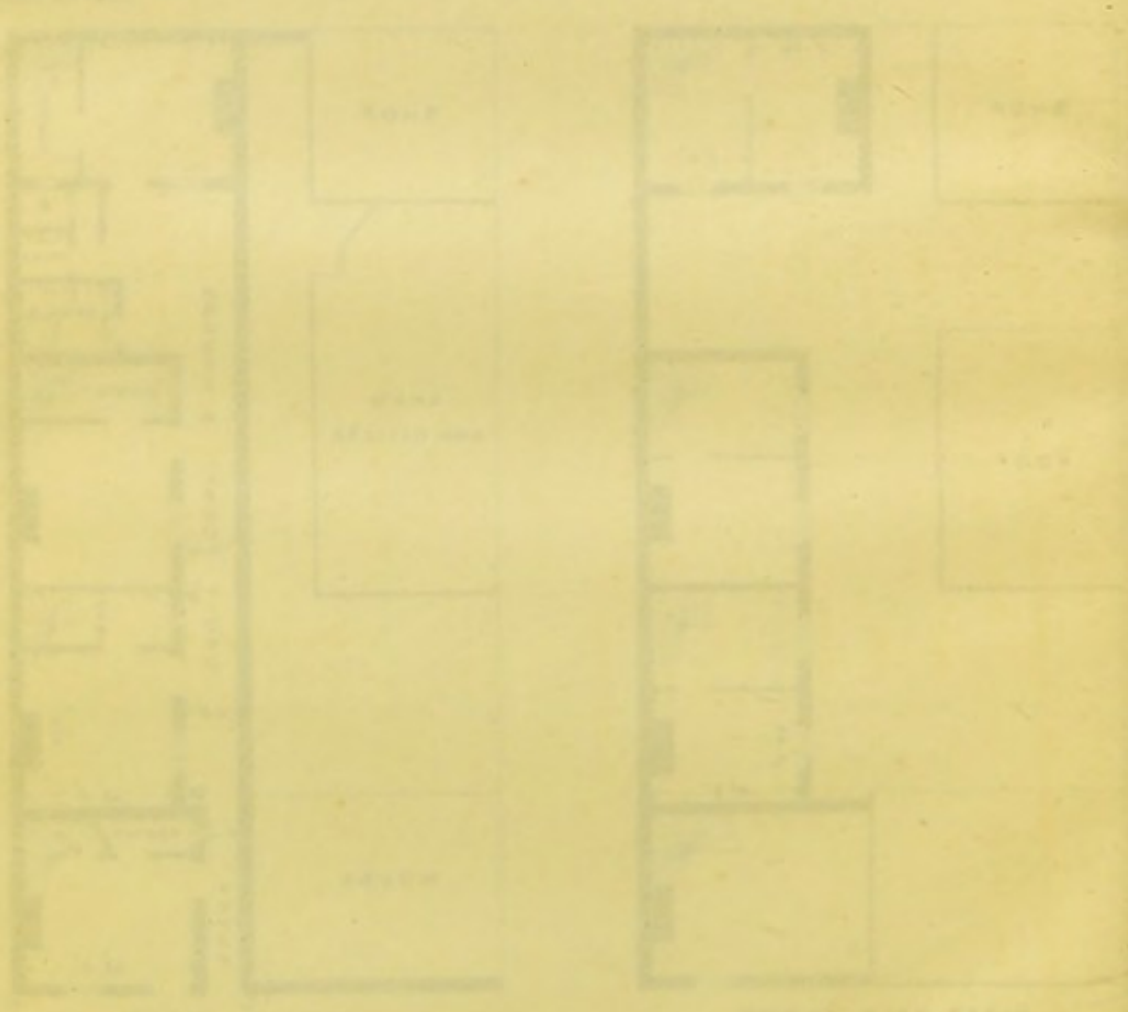
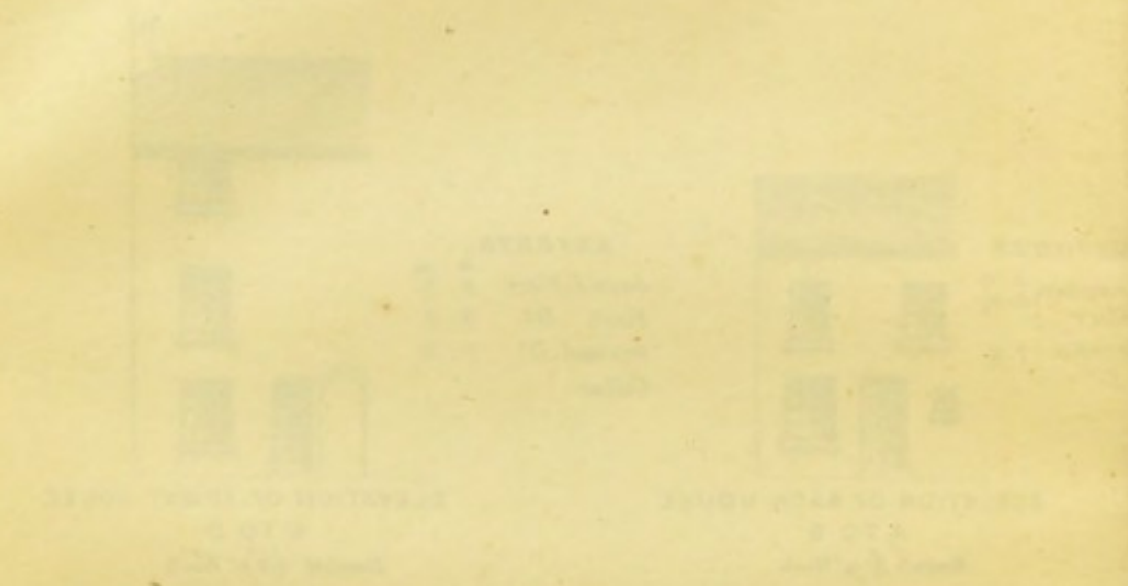
FIRST PAIR FLOOR



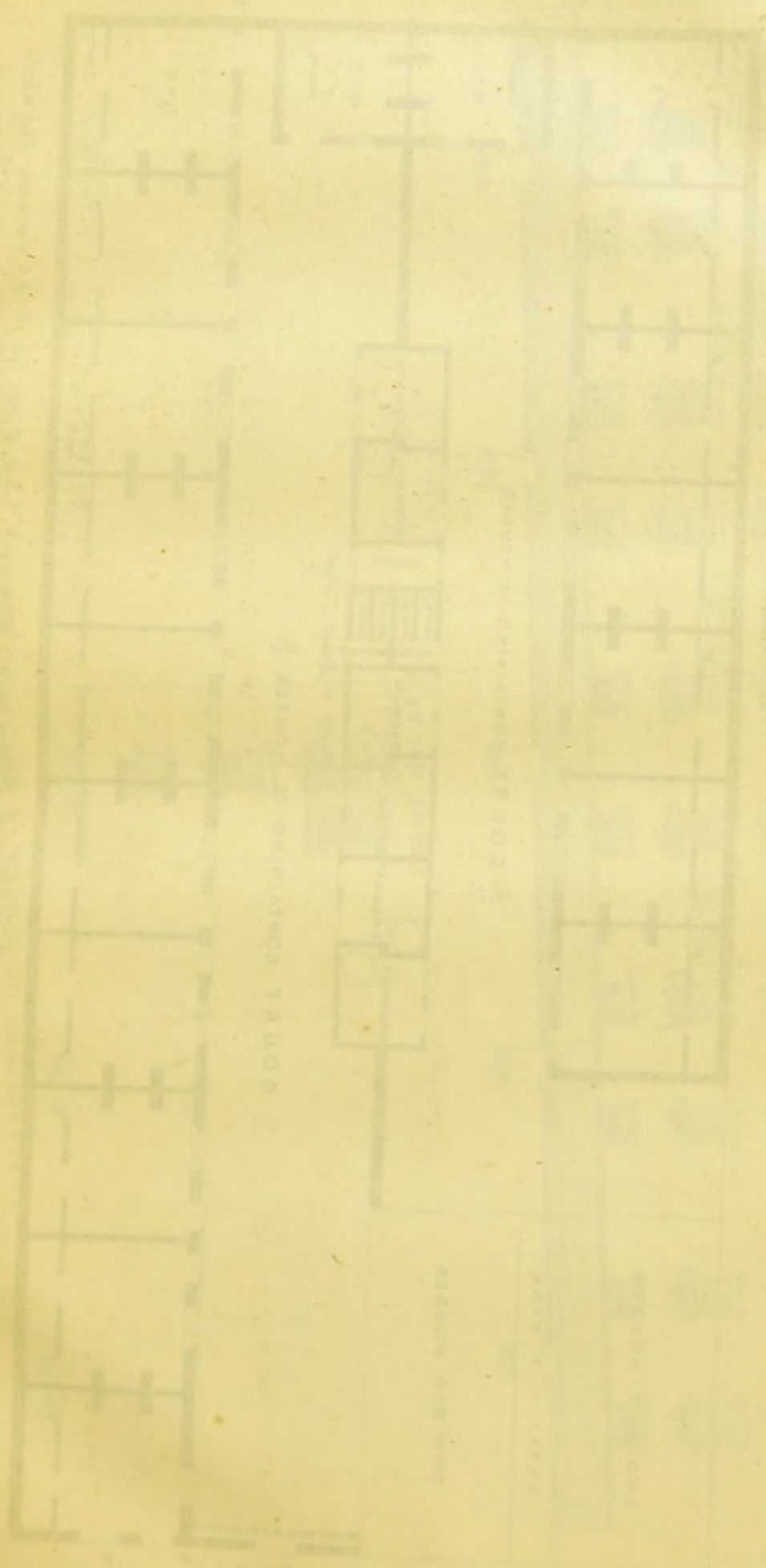
GROUND PLAN
 BROMSGROVE STREET.

PLANS OF AN OLD COURT IN BIRMINGHAM.

ELEVATIONS AND PLANS OF HOUSES IN ROBERTSON STREET
 BIRMINGHAM



PLAN OF HOUSE NO. 12
 PLAN OF HOUSE NO. 13
 HOUSES IN ROBERTSON STREET, BIRMINGHAM



PLAN DE LA MAISON DE M. LEBLANC

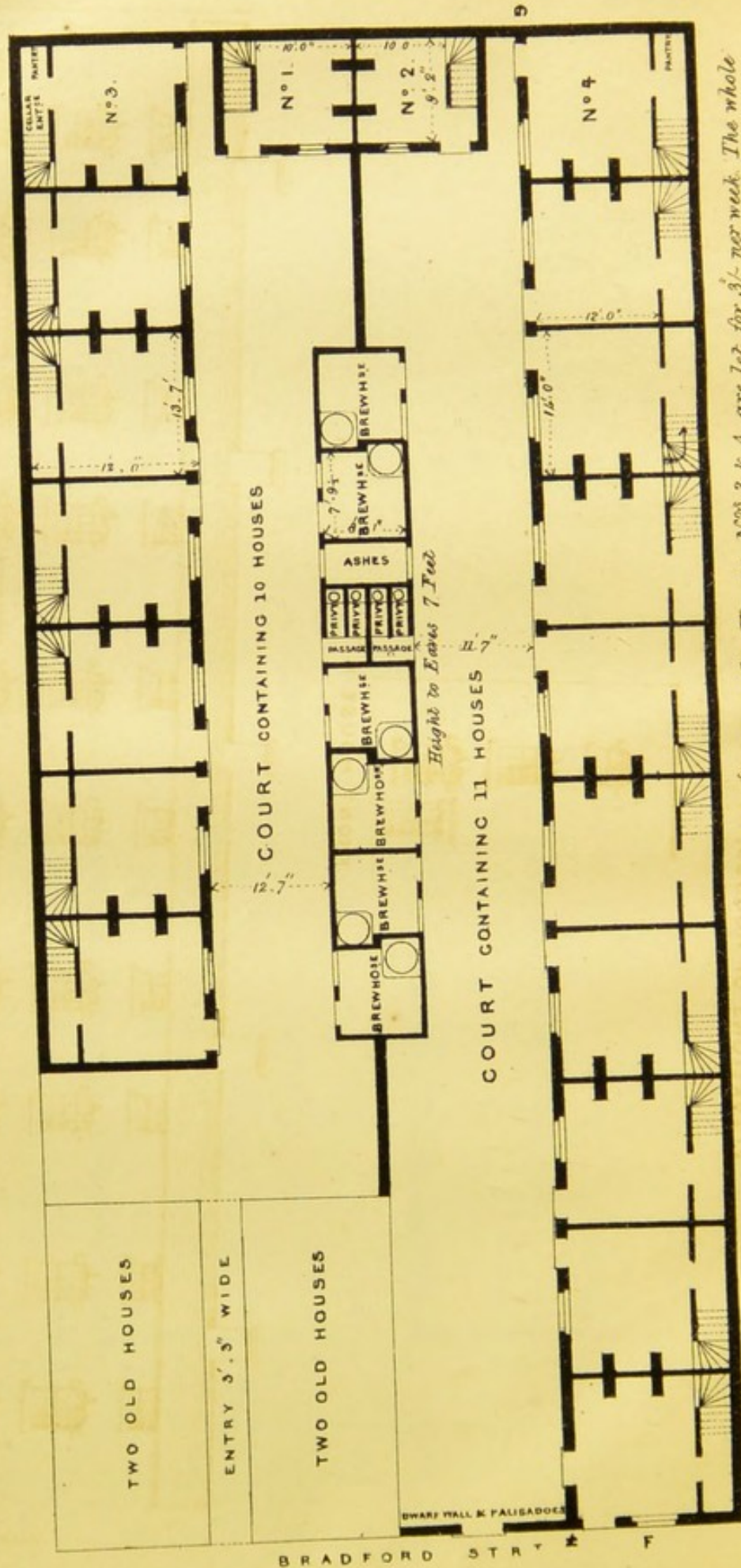
PROJET DE MAISON

DE M. LEBLANC

PAR M. LEBLANC

PROJET DE MAISON DE M. LEBLANC

GROUND PLAN OF TWO NEW COURTS OF HOUSES IN BRADFORD STREET,
BIRMINGHAM.

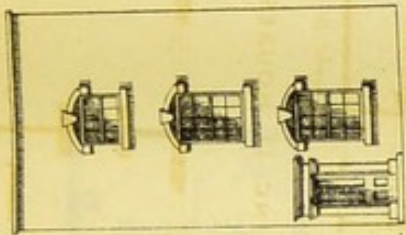


Houses Nos 1 & 2 are two stories, & are without cellars. Rental 2/- per week. Houses Nos 3 & 4, are three stories in height, and have all cellars, are let for 3/6 per week. The whole of the other new houses, which as well as the houses 3 & 4, are three stories in height, and have all cellars, are let for 3/6 per week.

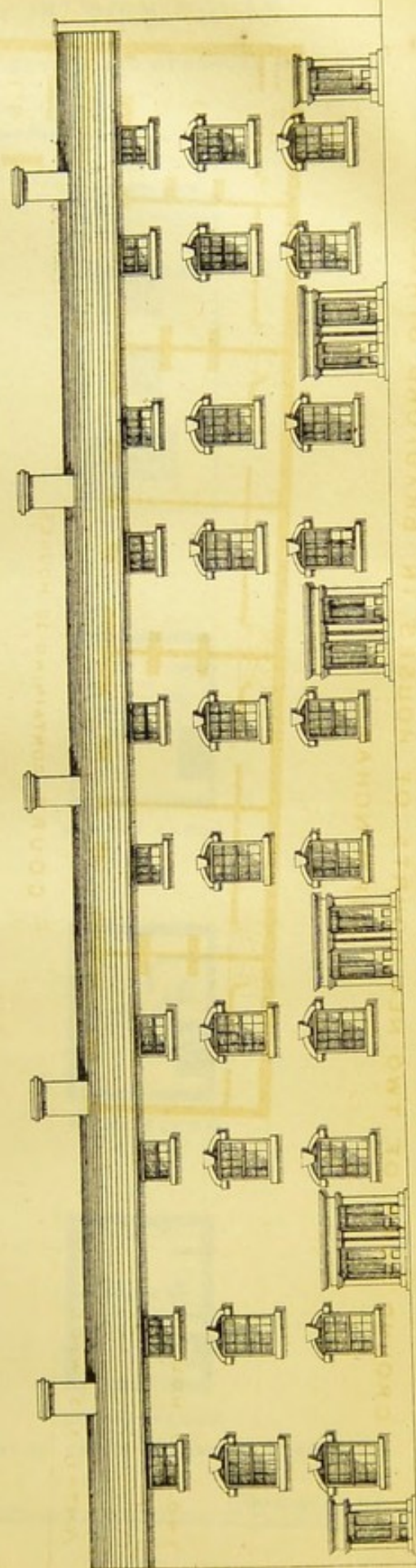
HEIGHTS A 10

E.

ELEVATIONS OF HOUSES, IN BRADFORD STREET BIRMINGHAM.



FRONT HOUSE F.



HOUSES IN COURT, G TO H.

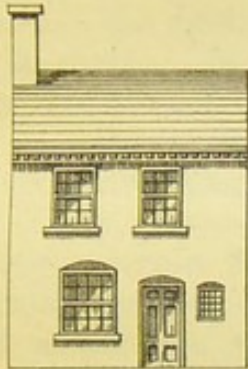
WATER SUPPLY SYSTEM



PLANS OF SINGLE HOUSES IN BIRMINGHAM

ELEVATIONS AND PLANS OF HOUSES IN ANN STREET AND PERSHORE STREET.

*Neither of these Houses have Cellars
Rental of each 2/6 per Week.*



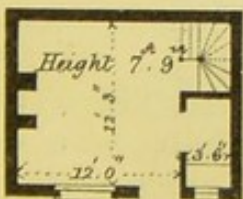
UPPER FLOOR.



SECOND FLOOR



FIRST FLOOR



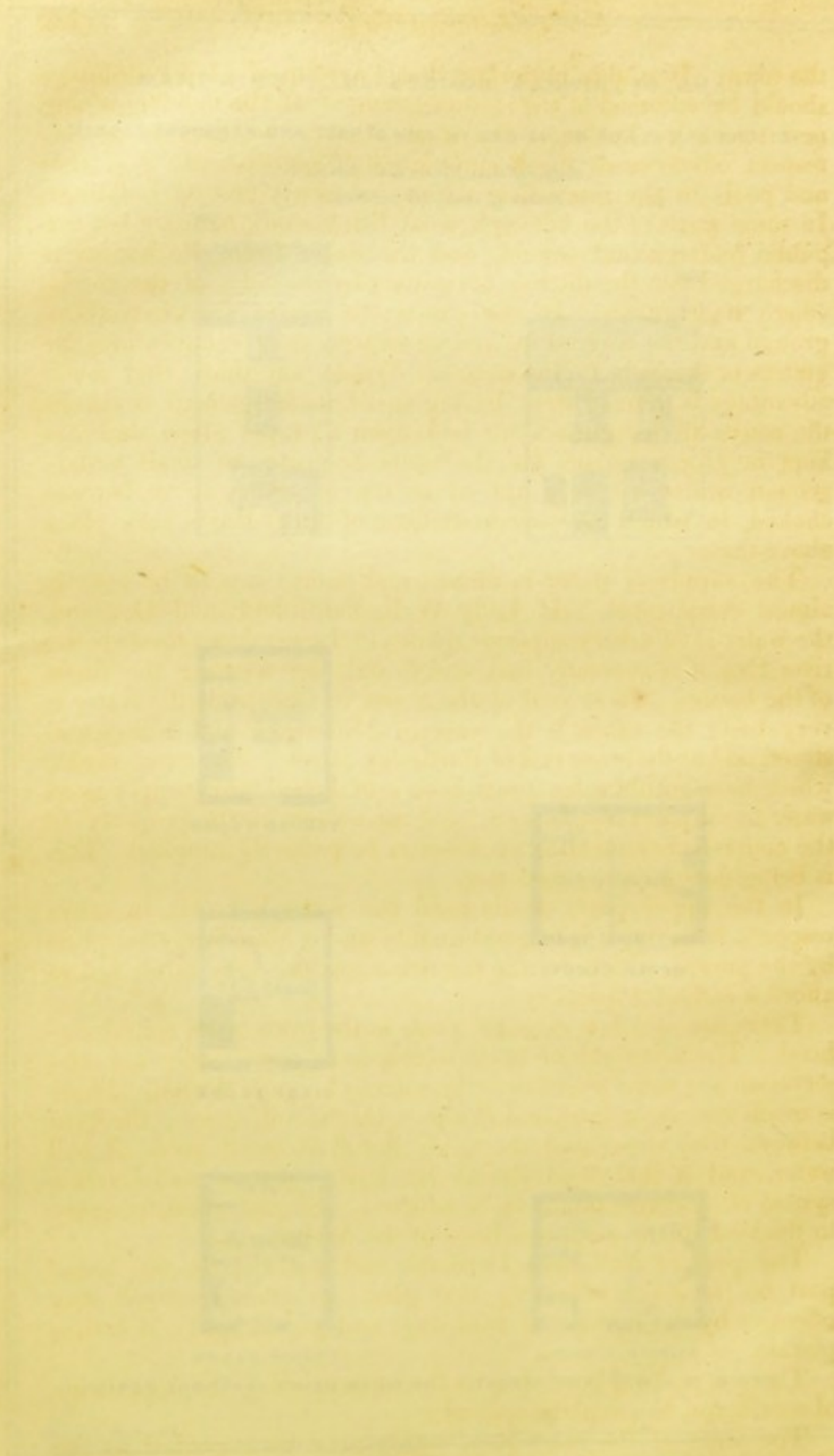
GROUND FLOOR



GROUND FLOOR

HOUSE IN COURT, ANN STREET.

HOUSE IN COURT, PERSHORE STREET.



the town. It is also important that a system of proper drainage should be enforced at the commencement of the building of any new streets or houses. The want of some regulations in this respect often causes the accumulation of putrid water in ditches and pools in the immediate vicinity of newly-erected buildings. In some parts of the borough, as at Edgbaston, there are but few public underground sewers, and the water from the houses is discharged into the ditches or gutters by the sides of the roads, where it stagnates. In the courts the drains are often above ground and not covered in, and discharge their contents into the gutters or kennels in the streets. We do not think that much advantage is derived from having small under-ground drains in the courts if the gutters are laid upon a proper slope and are kept in proper repair, for the weirs or grates of small under-ground drains are very apt to be out of order, or to become choked, in which case accumulations of filthy fluids take place above them.

The supply of water is ample, and pumps are to be seen in almost every court. At Lady Well, Smithfield, and Deritend, the water is of a very superior quality. Lower down towards the river Rea, it is generally bad, and fit only for washing the floors of the houses. In several of the courts in Cheapside the water is very bad; the same is the case in Mill-street and Floodgate-street, and at the lower end of Bordesley-street. The water-works, which have within a few years been established, now supply good water to all parts of the town, and the owners of the property in the courts can cause their premises to be properly supplied. This is being done in some instances.

In the upper parts of the town the water is hard; in other respects, however, it is of good quality and is abundantly supplied by the pumps, which even in the driest seasons very rarely fail to afford a sufficient quantity.

There are very few stagnant pools in the town or its neighbourhood. The principal of these which have come under our observation are some places near the railway luggage station. There is much wet waste land in and about Dartmouth-street; the land between that street and the fields is full of small pools of bad water, and if that land should be built upon, a well-levelled system of drainage ought to be adopted. Similar remarks apply to the land in the neighbourhood of the Asylum.

The pool in Mill-lane, Deritend, and particularly the broad part of the river adjoining this pool, are often rendered very offensive by the number of dead dogs and putrid mud which they contain.

There is no land bordering on the town to which the appellation of marsh can be properly applied.

The state of the river Rea, which may be regarded as the cloaca or main sewer of the town, is very bad. The stream is

sluggish and the quantity of water which it supplies is not sufficient to dilute and wash away the refuse which it receives in its passage through the town. In hot weather it is consequently often very offensive, and in some situations it is at these seasons covered with a thick scum of decomposing matters. This filthy condition of the river near the railway stations is a subject of constant and merited animadversion, and requires especial attention, lest it should become a source of disease when the projected station for the Derby railway shall have brought a denser population into its immediate vicinity.

We have observed nothing with respect to the canals requiring remark; the water is fresh and good.

Excepting in some of the old parts of the town, the streets in Birmingham are generally wide and well ventilated. The latter condition is much promoted by the houses, which are almost all built of red bricks, being low. Very few of the buildings are more than three stories high; those which are higher are situated in the great thoroughfares, and are principally occupied as retail shops. The most important retail shops are situated in New-street, High-street, Bull-street, and the Bull-ring, but there is scarcely a street in the town which does not contain retail shops of various descriptions. The more opulent inhabitants reside in the surrounding country; comparatively few live in the town. The houses of those who do live in the town are principally in New-street, Newhall-street, Great Charles-street, St. Paul's and St. Mary's Squares, the Crescent, Paradise-street, and the neighbourhood of St. Philip's church; but there are few parts of the town which do not contain houses of a better kind than the mass of those with which they are surrounded. These better houses are generally inhabited by master manufacturers, or the superintendents of their concerns, to whom it is convenient and advantageous to live near their works. The warehouses of the merchants and factors principally front the streets, and so do many of the manufactories, but a large majority of the latter, especially of the old ones, are situated in courts.

The courts in Birmingham are extremely numerous; they exist in every part of the town, and a very large portion of the poorer classes of the inhabitants reside in them.* This is particularly the case in the old; but in the new parts of the town an immense number of streets have been formed, which are occupied by the lower classes. The old courts are for the most part narrow, filthy, ill ventilated, and badly drained; but this remark does not apply to the new courts generally. The courts vary in the number of houses which they contain, from four to twenty, and

* Five years ago there were in the parish of Birmingham 2,030 courts, containing 12,254 houses: allowing an average of four inmates to each house, it would appear that 49,016 persons reside in courts in the parish of Birmingham alone, independent of the inhabitants of the numerous courts which exist in that populous portion of the parish of Aston which forms part of the borough.

most of these houses are three stories high, and built, as it is termed, back to back, that is, the backs of these houses adjoin those in other courts or buildings. There is a wash-house, an ash-pit, and a privy at the end, or on one side of the court, and not unfrequently one or more pigsties and heaps of manure. Generally speaking the privies in the old courts are in a most filthy condition. Many which we have inspected were in a state which renders it impossible for us to conceive how they could be used; they were without doors and overflowing with filth. We have also seen the privies of many of the manufactories in an equally disgusting condition, and have observed that those for the men and the women, both in the courts and manufactory yards, were generally situated close to each other, and often so placed that it is impossible to go to them without being observed by and exposed to the remarks of the persons employed in the workshops. There appears in general to be no drainage for the privies by which their more fluid contents might pass away. The privies and ash-pits in the courts, in our opinion, require regular inspection and cleansing. We have found in several situations the former in such a state that the more decent females could not frequent them, but had recourse to utensils in their bed-rooms, which they emptied at night, and we learned that the offensive state of some houses was owing to this practice. The ingress to most of the courts is by a narrow entry from three to four feet in width. This is generally arched and built over, so as to form part of the adjoining house fronting the street. The ventilation of the court is, by this narrow and covered state of the entry, very much impeded, and we conceive it would be of the greatest advantage if the entries to courts were not covered in, and were of sufficient width to admit a common-sized cart, as this large entrance would afford not only a freer ventilation but would also facilitate the removal of the ashes and contents of the privies. A more spacious entrance has been formed for some of the modern courts. It is a common custom throughout the town to empty the contents of the ash-pits and privies in the night into the streets, from which they are carted away early on the following morning. But some filth always remains after this proceeding, and continues, until it has entirely evaporated, to be an annoyance to the neighbourhood. We think it right to notice this practice, because it is evident that it must tend to deteriorate the atmosphere, and because we know that it does not exist in some other towns.

The courts contain very few of that description of dwelling which is called a double house; most of them contain only single houses. The rent varies from 2*s.* to 4*s.* a-week, but the majority of the houses in courts produce from 2*s.* 6*d.* to 3*s.* 6*d.* per week. They are very rarely indeed the property of the occupants, who

are, generally, weekly tenants, and the landlord almost invariably does the repairs and pays the rates, for which he compounds with the overseers. This kind of property, which is for the most part built upon land held under long leases, is generally in the possession of small capitalists, who derive a large interest from it, if care is taken as to the regular and frequent collection of the rents.

It is a very common practice in Birmingham to build the houses which are inhabited by the poorer classes back to back, in the manner which we have described as prevailing generally in the courts. We are aware that this construction does not admit of that thorough ventilation of the houses which would exist if there were an outlet behind; but if the rooms are sufficiently large and lofty, if they have chimneys in them, and if the windows and doors are of good size, and the former capable of being freely opened, which is generally the case, especially in the modern buildings, we are not aware of any particular evils that can arise from this construction. In the houses in the courts, where we have observed imperfect ventilation, we have not thought it referable to this cause, and have regarded it as the consequence rather of the narrowness and confined state of the courts than of this peculiarity in the construction of the houses. Also we beg to observe that upon turning to our remarks upon the localities of disease in this town, it will be found that fevers and those forms of disease which are by many believed to arise from a confined and impure atmosphere, do not prevail more in one situation or one kind of house than in another; and that contagious disorders are quite as frequent in houses of a different construction, in the front houses in the streets and in airy situations, as in the dwellings in the courts which are built as we have described. This mode of erecting houses for the poor is very economical, and if not adopted, the poor inhabitant of a large town, where land is very expensive, could not obtain his house except at a much higher rent than he pays at present, by which his means for providing the other necessaries of life would be diminished. We conceive it infinitely preferable to the habit which prevails in many towns of numerous families being congregated in different rooms of one large habitation; and we cannot but believe that the comparative exemption of the inhabitants of this populous town from contagious fever may be in some measure owing, in addition to other causes, to the circumstance of almost every family having a separate house, although a large portion of these houses are situated in courts, and are built back to back. If these small houses were upon a different construction, if they were removed to the distance of a few yards (which is all that could be expected in a town) from buildings behind them so as to allow of the existence of back doors and windows, we doubt if any advantage to health would be obtained; for these small back

yards or passages would generally be employed for the purpose of keeping pigs, rabbits, and poultry, and made the receptacles of rubbish and filth.

Our inquiries have not enabled us to discover a single example of a cellar being used as a dwelling in Birmingham, but a few cellars, principally in the Bull-ring, are used as workshops and as retail shops. We have requested some vigilant officers of the police to discover if, in any part of the borough, cellars are used as dwellings; and the result of their inquiries has confirmed our own observations on this point.

Lodging-houses for the lowest class of persons abound in Birmingham. They principally exist near the centre of the town; many of them are situated in courts, but great numbers of front houses, in some of the old streets, are entirely occupied in lodging-houses. They are generally in a very filthy condition; and, being the resorts of the most abandoned characters, they are sources of extreme misery and vice. These houses may be divided into three kinds:—mendicants' lodging-houses—lodging-houses where Irish resort—and houses in which prostitutes live, or which they frequent.

The mendicants' lodging-houses are principally situated in Thomas-street, John-street, Lichfield-street, Park-street, Slaney-street, Steel-house-lane, Mill-street, Leese-lane, Moor-street, Edgbaston-street, Dudley-street, and the Inkleys. Mr. Burgess, the Chief Commissioner of Police in this town, has obligingly allowed us access to his Statistical Returns, from which we find that the police are acquainted with 122 houses of this description, situated principally in the streets which we have mentioned. In many of these houses the sleeping-rooms are in a loathsome condition, being crowded with beds, and almost devoid of ventilation. We find it stated in Mr. Burgess's return, that in 47 of these the sexes indiscriminately sleep together. In the day time the doors of these houses are generally thronged with dirty, half-dressed women and children; and, if visited in an evening, the inmates are found to be eating, drinking, and smoking. Such houses are, for the most part, occupied by beggars and trampers, but many of them are the resorts of thieves. Some idea may be formed of the description of persons who frequent some of these abodes, by stating that in two of them, one of which was situated in John-street and the other in Thomas-street, a chain, fastened at one end with a staple and at the other secured by a padlock, was placed on the outside of the door at the foot of the staircase which led to the sleeping apartments. Upon asking the mistress of the house for what purpose that was required? she replied that she employed it to lock in the lodgers until she released them in the morning, as they would otherwise decamp and take away whatever furniture or moveables they could carry with them. Some of these houses are occupied exclusively by foreigners. In a court, in Park-street,

we visited one which was inhabited by Italians, men and women, with their stock of musical instruments, monkeys, and other small animals. We are informed that there is another Italian lodging-house in Lichfield-street, as well as one which is frequented only by the Flemish or German broom-girls.

From Mr. Burgess's return we find that 252 Irish lodging-houses are known to the police. Some of the inhabitants of these houses are beggars and trampers, but the majority of them are resident labourers, employed by the builders and in various occupations. These houses are situated principally in the old parts of the town; they abound in Slaney-street and London Prentice-street. The latter is now almost entirely occupied by the low Irish, and is one of the filthiest streets in the town. During the last summer the small-pox prevailed in this street; and Mr. Gem, the parochial surgeon of the district, informs us that it destroyed 24 of his patients in that street, all of whom were Irish children who had not been vaccinated, although vaccination is performed without any charge, at two public institutions within a quarter of a mile of that situation. We find that the low Irish who reside in this town have a great repugnance to vaccination, and cannot be prevailed upon to allow their children to undergo it. The premises occupied by these persons are, for the most part, in a very neglected condition; and their furniture, bedding, and clothes of a meagre and squalid description.

In the police returns above referred to, we find it stated, that the number of houses in the borough which are inhabited by prostitutes, or to which prostitutes resort, known to the police, is 314, in addition to 187 houses in which prostitutes lodge. These houses are situated in various parts of the town; but there are some streets in which they abound, and are of a very low description. These are Colmore-street; the streets and courts at the back of the theatre; Smithfield-passage; the Inkleys; Lady-well-walk; Dean-street; Barford-street, and Pershore-street. We have reason to believe that prostitution is very common amongst the females employed in the manufactories in this town. We consider this to be principally owing to the want of proper education and domestic care; the habit of constantly passing through the streets to their employments; and, above all, to the indiscriminate mixing of the sexes in the workshops. We do not, however, find from our own observation and the inquiries which we have made, that the diseases incident to this condition are more common in Birmingham than in other large towns.

The description which we have given of the state of the town with regard to these three kinds of lodging-houses will, we think, show that they must in various ways conduce to the injury of the public health. When we add to this statement that we find in Mr. Burgess's Return 81 houses in the borough noted as used for the reception of stolen goods; 228 houses described as the resorts

of thieves, and 12 as the average number of thieves daily resorting to each house, we think we have pointed out sources of disease, of misery and demoralization which demand the interference of all those who are interested in the amelioration of the condition of their fellow-creatures.

The slaughter-houses are situated in various parts of the town, in the vicinity of the butchers' shops. Some well-arranged premises, employed for this purpose by what are called carcass-butchers, have recently been constructed near Smithfield-market. Upon the whole, we do not find that any injury to the public health is derived from the state of the slaughter-houses in the borough; and, probably, the annoyances which arise from premises of this description are less when they are scattered over many situations than when they are concentrated in one or two parts of a town.

There are very few knackers' yards in or near Birmingham. We are acquainted only with one actually in the town. This is situated to the west of Cheapside, near to Beardsworth's Repository, and in the hot weather is extremely offensive. We think this ought to be removed to a distance from the town, as it cannot fail to lessen the purity of the atmosphere in a situation which is now becoming densely populated.

There are also some skimmers' yards at the back of Edgbaston-street, and a cat-gut maker's premises in Pershore-street, which have been represented to us by the police as often extremely offensive; but we do not find that these situations are, more than others, the seat of fevers or contagious disorders.

Large quantities of manure and rubbish are carted from the courts and houses to certain yards or depôts on the sides of the canals, where they remain in heaps until they are removed in boats into the country. These depôts should certainly be placed at some distance from the town. We believe they are under the management of the street commissioners. There is one in the neighbourhood of Shadwell-street, exactly opposite to the back of the General Hospital, and close to a large manufactory: this depôt, in our opinion, should be removed.

To enable us to form an opinion as to the relative frequency and mortality of the most prevailing classes of diseases in Birmingham, we have been anxious to refer only to documents upon the accuracy of which we could with entire confidence rely. With a conviction of the correctness of their statements we have procured reports from Mr. Baynham and Mr. Ryland, both of whom, at the periods to which their reports relate, were surgeons to the Parochial Infirmary, at which an immense number of patients residing in the borough are annually received. We have also had recourse to the reports of the late Mr. Parsons, who was likewise one of the parochial surgeons, and we know the extreme care and accuracy with which Mr. Parsons' reports, published in the Transactions of the Provincial Medical and Surgical Associa-

tion, were compiled. Mr. Baynham's report contains the result of his private, parochial, and dispensary practice for five years, commencing with 1831; Mr. Ryland's report contains the result of his parochial practice for five years, commencing with 1835; the report of Mr. Parsons contains the result of his practice, also for five years, commencing with 1832. The total number of cases included in these reports is 45,951; the number of deaths which occurred is 2,092, the deaths being in the proportion of $4\frac{9}{100}$ per cent. The following table shows the amount of certain forms of disease which occurred in this number of cases, the proportion of each to the whole number of cases, the number of deaths from each mentioned form of disease, and the proportion of these to the whole number of deaths:—

Cases of Fever (including Typhus) . . .	3108	being about 1 in 14 $\frac{1}{2}$	Deaths 163	or about 1 in 12 $\frac{1}{2}$	of the whole number of deaths.
Eruptive Fevers*	2532	" 1 in 18 $\frac{1}{2}$	" 286	" 1 in 7 $\frac{1}{2}$	
Pulmonary diseases†	6642	" 1 in 7	" 308	" 1 in 6 $\frac{1}{2}$	
Cases of Phthisis	578	" 1 in 79 $\frac{1}{2}$	" 370	" 1 in 5 $\frac{3}{8}$	
Cases of disordered stomach and bowels‡	5962	" 1 in 7 $\frac{1}{2}$	" 47	" 1 in 44 $\frac{1}{2}$	"

This table shows that the numbers affected with pulmonary diseases are much greater than those affected with any of the other classes of disease; the whole number, 7,220, being rather less than one-sixth of the whole number of patients; whilst the deaths from this class of disease, 678, form one-third of the whole number of deaths.

It would appear that phthisis occurs more frequently in men than in women, in the proportion of about eight men to seven women. The proportions cannot be precisely stated, but the fact is established, inasmuch as all the reports agree in this particular, both amongst themselves and with the Report of the Registrar-general for the last six months of 1837.

The class of diseases next in frequency is that comprising the disorders of the alimentary canal; but, though the number is great, the mortality is very trifling.

The fever cases form about seven per cent. of the whole of the cases; and the deaths from fever are eight per cent. of the whole number of deaths.

The truly contagious eruptive fevers amount to five per cent. of the whole number of cases, and the mortality from these fevers is more than 14 per cent. of the whole mortality. The deaths from small-pox were 100, scarlet fever 102, and measles 84. The victims of small-pox were, in almost every instance, children under ten years of age. Of 106 deaths from small-pox in the practice of Messrs. Parsons and Ryland, 103 were under ten years of age.

Mr. Baynham has favoured us with the following observations with regard to the cases which he had registered and which formed part of the above table:—

* Variola, varicella, rubeola, and scarlatina.

† Catarrhus, bronchitis (acute and chronic), pneumonia, pleuritis, and hæmoptysis.

‡ Diarrhœa, cholera biliosa, dyspepsia, and gastrodynia.

“ Of 19,969 cases in the years 1831, 32, 33, 34, and 35, 982 proved fatal, being in the ratio of nearly five per cent.

The deaths in that period of time from pulmonary affections were 288

From fevers	53
„ eruptive fevers	95
„ affections of stomach and bowels	23

Of the whole number of cases, pulmonary affections averaged rather more than one-seventh, fevers one-sixteenth, eruptive fevers one-twentieth, affections of the stomach and bowels one-seventh.

“ Consumption of the lungs was met with in 332 patients, of whom 176 were males, and 156 were females.”

We are indebted also to Mr. Baynham for the subjoined table, showing the number of cases of each of the four classes of diseases referred to in the above observations which occurred in each of the five years to which his registers relate; also the relative number of these cases in each of these years, and the number of deaths from these diseases in each year.

—	1831.		1832.		1833.		1834.		1835.	
		Deaths.		Deaths.		Deaths.		Deaths.		Deaths.
Catarrhal cough	217	0	271	0	187	0	166	0	243	0
The same in Chil- dren	72	0	71	0	74	1	69	2	35	1
Bronchitis	45	5	42	4	45	7	32	5	50	9
Chronic Bron- chitis	96	4	126	11	105	7	109	11	95	9
Pneumony	28	13	29	11	35	15	25	8	23	7
Pleura inflamed	10	1	11	2	21	2	14	0	21	2
Hæmoptysis	20	1	20	1	15	0	16	0	6	0
Consumption	58	18	69	29	64	23	66	37	75	42
Total	546	42	639	58	546	55	497	63	548	70
Febris continua	121	2	111	4	59	0	79	0	79	1
— infantum	113	1	83	1	65	4	54	0	57	1
Ephemera	56	0	34	0	30	0	68	0	62	0
Typhus	56	9	29	10	19	6	45	8	37	6
Total	346	12	257	15	173	10	246	8	235	8
Small-pox	153	8	26	8	65	13	48	6	31	8
Chicken-pox	8	0	24	0	18	0	19	0	13	0
Measles	59	6	102	9	41	0	71	2	1	0
Scarlet Fever	59	11	73	7	46	3	42	4	78	10
Total	279	25	225	24	170	16	180	12	123	18
Diarrhœa	187	0	218	0	135	2	197	2	122	2
— infantum	69	3	71	1	48	0	74	4	47	1
Bilious Cholera	48	2	35	1	22	0	20	0	9	0
Dyspepsy	205	1	241	1	232	1	202	0	188	0
— in children	31	0	27	1	39	0	27	0	33	1
Pains in Stomach and Bowels	46	0	67	0	66	0	48	0	56	0
Total	586	6	659	4	542	3	568	6	455	4

It is impossible to contemplate the preceding statements without remarking the small number of cases of fever which they contain, and the comparative mildness of this form of disease as evinced by the number of deaths which it causes. According to these reports pulmonary diseases are not only more than twice as numerous, but nearly twice as fatal as fevers in Birmingham.* Contagious fever, extending from house to house, and ravaging whole courts and streets, and abiding almost constantly in certain localities, as it is described to do in some other large towns, is a condition so rare that it may be said to be almost unknown to the inhabitants of this borough. We are aware it may be urged that our conclusions on this subject are deduced from an examination of registers which relate only to three out of the six districts into which the parochial attendance upon the poor in the parish of Birmingham is divided, and that an examination of the other districts might have given a different result. We have, however, made inquiries into this point, as well as into the frequency of the

* From the Tables contained in the Second Report of the Registrar-general, it appears that in Birmingham more than nine persons die of pulmonary diseases to one of fever; whilst in London the proportion of registered deaths from pulmonary diseases is only 4, in Liverpool $4\frac{1}{2}$, in Manchester rather more than $3\frac{1}{2}$, and in Leeds nearly 5, to one from fever.

The following Table, which we have compiled from the Second Report of the Registrar-general, shows the total number of deaths registered in the places therein mentioned in the year ending June 30th, 1839—the number of deaths from fever, and the proportion of these to the total number of deaths:—

—	Total number of Deaths.	Deaths from Fever.	Proportion of Deaths from Fever to the total number of Deaths.
London	52,698	4,078	1 in 13 or $7\frac{1}{2}$ per cent.
Liverpool	6,627	504	1 in 13 „ $7\frac{1}{2}$ „
Manchester	6,706	533	1 in $12\frac{1}{2}$ „ 8 „
Leeds	4,289	245	1 in $17\frac{1}{2}$ „ $5\frac{3}{4}$ „
Birmingham	3,359	123	1 in 27 „ $3\frac{3}{4}$ „
All the registrations in the county of Warwick, including the parish of Aston, but not the parish of Birmingham	4,825	295	1 in $16\frac{1}{4}$ „ 6 „

It will be observed, that in this Table the proportion of deaths from fever to the whole number of deaths is more than one half less than in the Table of Messrs. Baynham, Ryland, and Parsons (page 173): this difference may probably be accounted for by the circumstance, that the former contains the deaths of persons of all conditions, whereas the latter relates almost exclusively to parochial patients, amongst whom fever is far more fatal than in those who are better supplied with the comforts and conveniences of life. We may also remark, that a very correct inference cannot be drawn from the report of a single year, because fever is sometimes much less prevalent and much less fatal in some years and in some places in those years than in others.

Throughout our Report, under the term fever are included those forms of disease which have been denominated continued, remittent, low, nervous, or adynamic fever, typhus, synochus and synocha; but not the eruptive fevers commonly so called, nor intermittent fever.

occurrence of fever in that part of the parish of Aston and in Edgbaston which form part of the borough of Birmingham, and we believe that our conclusions are correct as applied to the borough generally. This statement is also corroborated by the following fact. In the Birmingham General Hospital there are wards for the reception of persons suffering from fevers, who are admitted at any hour without any ticket or recommendation, and without any charge; into these wards only 37 cases of continued fever were received from the 1st of August, 1839, to the 31st of July, 1840, and we know that this number very much exceeds the average of fever cases admitted in previous years. Of these 37 cases only two were fatal.

The next question which has occupied our attention is whether fever has any peculiar localities in Birmingham—whether there are any parts of the town in which it constantly or more frequently exists than in others—whether it appears in dwellings of any particular construction more frequently than in others—and whether it affects individuals following certain occupations more than others. Our inquiries convince us that there is no part of the borough in which fever can be said constantly to exist, and we are not able to fix upon any parts of the town in which its appearance most frequently takes place. We find it occurring in the elevated as well as in the lower situations, in the more recently-built as well as in the old parts of the town, in the front houses in streets in open and airy situations, in the narrow and ill-ventilated courts, in the houses which are built back to back, and in the double houses which possess a thorough ventilation. The poor are certainly more frequently the subjects of its attacks than those in a better condition of life, but we are unable to discover that any particular occupations carried on in this town predispose to its accession or promote its fatality. The following tables, which show the number and localities of the cases of fever which occurred in three of the parochial districts in the year 1835, with the remarks appended to them, will, we think, be regarded by those who are personally acquainted with the town as confirming the observations which we have made on this subject.

The patients affected with fever registered by Mr. Parsons in 1835, lived in the under-mentioned streets:—

Hurst Street . . . 14	Skinner Street . . . 5	Marshall Street . . . 2
Inge Street . . . 14	Windmill Street . . . 4	Pershore Street . . . 2
Hill Street . . . 12	Bishopgate Street . . . 3	Tonk Street . . . 2
Suffolk Street, . . . 11	Communication Row . . . 3	Beak Street . . . 2
Essex Street . . . 11	Horse Fair . . . 3	Gas Street . . . 1
Bristol Road . . . 11	Little Bow Street . . . 3	Spring Vale . . . 1
New Inkleys . . . 10	Thorp Street . . . 3	Blucher Street . . . 1
Holloway Head . . . 9	Old Inkleys . . . 2	Gough Street . . . 1
Green's Village . . . 9	Five Dwellings . . . 2	Dean Street . . . 1
Bromsgrove Street . . . 8	Cross Street . . . 2	Lady Well Walk . . . 1
Bow Street . . . 7	Ellis Street . . . 2	Severn Street . . . 1
Vale Street . . . 6	Tennant Street . . . 2	
Smallbrook Street . . . 6	Spring Street . . . 2	
William Street . . . 6	Sun Street . . . 2	
		187

The following statement shows the residences and number of the cases of fever attended by Mr. Ryland, in 1835:—

Lower Tower Street	12	Moland Street	4
Summer Street, and Ward Street	11	Fisher Street	3
Lancaster Street	10	Potter Street	3
Canal Street	10	Lench Street	3
Brewery Street, and } Blews Street	10	Cliveland Street	3
Staniforth Street	9	Aston Street	3
Brickkiln Street	9	Gullet	2
Pritchett Street	9	Bagot Street	2
Aston Street	8	York Street	2
Lower Brearley Street	6	Harding Street	2
Loveday Street, and } Russell Street	6	Legge Street	1
Princep Street	5	Price Street	1
New Town Row	5	Brass Street	1
			140

The following Table also shows the number, kind, and residences of the cases attended by Mr. Baynham in 1835. It relates only to parochial patients:—

	Typhus.	Other Fevers.	Scarlet Fever.	Small-pox.	Total.
Hospital Street	0	10	1	0	11
Summer Lane	4	5	2	0	11
Weaman Street	1	8	3	1	13
Lichfield Street	1	11	2	0	14
Slaney Street	1	17	3	4	25
New George Street	0	10	1	2	13
Henrietta Street	1	3	4	8	16
Old John Street	0	5	0	5	10
John Street, West	0	1	0	0	1
Rope Walk	0	1	0	0	1
Nineveh	3	3	0	0	6
Steelhouse Lane	0	10	4	0	14
London Prentice Street	0	4	0	0	4
Old Thomas Street	2	5	0	4	11
Gullet	1	0	0	0	1
Constitution Hill	0	1	0	0	1
Upper Brearley Street	0	3	2	0	5
Barr Street	0	2	2	0	4
Tookey's Lane	0	2	0	0	2
Great Hampton Row	2	4	2	0	8
Shadwell Street	0	3	0	0	3
Howard Street	0	1	1	0	2
Tower Street	0	1	4	0	5
Snow Hill	1	5	0	0	6
Mott Street	0	3	0	0	3
Newton Street	0	6	0	0	6
New Church Street	8	1	0	0	9
Smith Street	0	1	0	0	1
Great Hampton Street	0	0	4	2	6
New William Street	0	1	2	0	3
Great King Street	0	2	1	0	3
Upper Priory	0	1	0	0	1
Bath Street	0	2	0	0	2
Little Hampton Street	0	0	3	0	3
Total	25	129	44	26	224

Mr. Ryland has communicated to us the following remarks on his Table :—

“I have ascertained the residences of all the parochial patients affected with fever under my care in the year 1835, and the examination, in my opinion, disproves the idea of this disease being engendered or fostered by any particular locality in the district of the town which I attended. The number of fever cases (140) was about an average as compared with other years. The patients lived in 28 different streets; not more than 10 cases occurred in any street but one, Lower Tower street, in which there were 12. In Cliveland street, which has the canal at the back of the houses on one side, and a large and partially open drain on the other side, there were three cases in the year. In Cecil street, which lies on the other side of the same drain, no case occurred. In Harding street, which is undrained, and in which the cellars of the houses frequently contain a great quantity of water, two cases only occurred. No case of fever occurred in New John-street, a part of which is the lowest level in the district, and which receives the termination of a large town sewer. Ten cases of fever occurred in Canal-street, and nine in Brick-kiln-street; each of these streets contains about 30 front houses, and the former five, and the latter seven courts.

“Of 160 deaths from fever, 88 were males, and 72 females; this excess of male over female deaths occurred between the ages of 20 and 60; 25 males and 9 females dying, showing an excess of 16 males, which is exactly the majority of the former sex.

“Of the 160 deaths from fever, 30 occurred in the first quarter of the year, 25 in the second, 39 in the third, and 66 in the fourth quarter.

“In a subsequent year, in which 126 cases of fever are registered for the whole district, 22 of the cases occurred in Brickkiln street, none in Canal street, four in Lower Tower street, and one in Cliveland street. Most of the persons affected in Brickkiln street lived in the courts, particularly No. 6 Court, which is very close, and where the houses are capable of very imperfect ventilation.

“Typhus fever is very rare in Birmingham. During the five years ending with 1839, I saw only 17 cases which I was disposed to designate typhus. Of these, eight were attended by the peculiar rubeolar eruption so peculiar in one form of typhus; they occurred in the summer of 1837, when the same species of typhus was raging in other large towns. Seven of the cases of exanthematous typhus occurred in two contiguous houses in a court in Brickkiln-street; one only of them died. The disease did not affect any of the neighbouring families, nor have I since seen any examples of it in Birmingham, though for the two subsequent years I continued in the office of parochial surgeon.

“660 cases of continued fever or synochus came under my care during the same five years; of which number, 33, or 1 in 20, terminated fatally—a very small proportion, and sufficient to prove that the disease was generally of a mild character. The residences of these fever patients were distributed all over the district under my care, and I am satisfied that locality had nothing to do with the production of the disease, nor strictly, perhaps, with its propagation, except that when fever attacked any of the members of a family residing in small ill-ventilated houses, other dwellers in the same house were frequently affected. This happened, however, quite as much or more in the higher and better drained parts of the town than in the lower levels and damper situations. From

my own experience as parochial surgeon of one district in Birmingham, I should say decidedly that damp, undrained houses, and collections of stagnant water are of themselves quite insufficient to generate fever; but that these circumstances are capable of imparting a typhoid character to fever, bronchitis, measles, and probably to other diseases when they occur in such situations.

“Intermittent fever is, I believe, never produced in Birmingham. The disease is occasionally seen in the person of a tramp, or Irish labourer, who, in passing through the town, becomes so ill as to be incapable of proceeding on his journey.

“Dysentery is not common, and very seldom severe. I have never seen more than two fatal cases of this disease in the town. The average annual number of cases has been 15.

“The number of parochial cases of all kinds of diseases attended by myself during the five years, commencing with 1835, was 9,489.”

Mr. Baynham has also favoured us with the following observations with reference to his Table:—

“Slaney street, which furnishes the largest amount of febrile disorders, is inhabited by the lowest class of Irish. The population of that street is considerably greater than that of Old Thomas street; but in the latter, the number of lodging-houses for itinerant paupers far exceeds the number met with in Slaney street.

“Deducting the cases of small-pox and scarlet fever, it will be seen that in Slaney street the proportion of fevers to other diseases is somewhat large—18; whereas in Thomas-street, which for its extent has a crowded population, and very many lodging-houses of the most filthy description, not more than seven cases of fever (exclusive of small-pox) occurred during the year; two of which were of a typhoid character.

“In London Prentice street, containing many lodging-houses for the low Irish, not more than four cases of fever have been registered.

“It is remarkable, that in Livery street, which has, perhaps, by reason of its great length and numerous courts, a larger population than almost any street of the whole town, not a single case of fever is noticed.

“New Church street furnished the largest amount of typhus; it is, however, to be observed, that six of these cases were met with in one family occupying a front and well-ventilated house.

“The following streets were exempted from the invasion of fever:—Livery street, Whittal street, Water street, Hockley street, Harford street, and Bath street. This Table is confined to parish practice alone, and does not include the in-patients of the infirmary, or the children of the asylum. The parochial district, which furnishes the materials of this document, is situated between Livery street and Summer lane, both inclusive, and extends, in one direction, to Nineveh, and in the other, to the paper-mill near the asylum.”

Perhaps it may be expected that we should state our opinion as to the causes which render fever comparatively so rare and so mild in Birmingham. On this subject we feel unable to do more than to point to a few circumstances in which Birmingham, perhaps, differs from most of those large towns in which fever constantly prevails, and in which its ravages are so formidable. These are—the elevated situation of the town—its excellent

natural drainage, and its abundant supply of water—the entire absence of cellars used as dwellings—the circumstance of almost every family having a separate house—and lastly, the amount of wages received by the working classes, which may be regarded generally as adequate to procure the necessaries of life. Whatever depresses the vital powers appears to place the human body in a condition which is favourable to the attack of fever, or to render the disease more violent. Filth, an impure atmosphere, and putrid exhalations, by their depressing influence upon the vital energies, may produce these effects, or perhaps originate the disease; but, in our opinion, anxiety of mind, penury, and starvation, and the depression of the bodily and mental powers which attends these conditions, are more frequent causes of fever than all the other sources to which it is attributed.

The comparative exemption of Birmingham from the incursions of contagious disease was remarkably evinced during the prevalence of the Asiatic cholera in this country. In no town in the kingdom, in proportion to the amount of its population, were the ravages of cholera more terrible than at Bilston, which is situated only ten miles from Birmingham. Although the intercourse between the two places was uninterrupted, only 24 cases of cholera occurred in Birmingham during the year; and in the majority of these cases, it could be distinctly traced that the disease was imported, the patients having been affected with the early symptoms of cholera before they arrived in the town.

The ratio of infant mortality in Birmingham is very considerable. It greatly exceeds that of the metropolis and of the agricultural districts, but it is not so high as in some of the large provincial towns. According to the second Report of the Registrar-general, it is proportionally greatest in Manchester, next in Leeds, then in Liverpool, and fourthly, in Birmingham; in each of which places more than one-half of the total number of deaths registered are those of children who had not attained their fifth year; whilst it is remarkable that in the metropolis the number of registered deaths of children under five years of age is only in the proportion of one to nearly two and a-half of the total number of deaths. In the parish of Birmingham, in the year registered from July 1, 1838, to June 30, 1839, the total number of deaths of all ages was 3,305; of which number 1,658 were under five years of age. Of this last number, more than one-half died in their first year. In the counties of Gloucester and Oxford, and parts of the counties of Worcester and Warwick, including Aston, but not the parish of Birmingham, the total number of deaths registered during the same year is 20,309; of which number 7,298 were under five years of age, and 4,380 of the last number had not completed their first year. The want of sufficient and frequent nutriment and proper care, caused by the absence of the mothers who are detained from their children, and are engaged in their employments in the workshops, may perhaps have some

share in causing this high rate of infant mortality in the large manufacturing towns.

We have but few remarks to offer with regard to the accidents which occur to the manufacturing population of this town. They are very severe and numerous, as shown by the registers of the General Hospital. Many are the consequences of the want of proper attention to fencing in the machinery, which appears to be seldom thought of in the manufactories; and many are caused by loose portions of dress being caught by the machinery, so as to drag the unfortunate sufferers under its power. The shawls of the females, or their long hair, and the aprons and loose sleeves of the boys and men, are in this way frequent causes of dreadful mutilations. We think that greater precautions than are at present employed might be adopted by the owners and superintendents of machinery, with respect to the points which we have now mentioned.

One class of accidents is very frequent in Birmingham—severe burns and scalds. So numerous are these cases, particularly the former, that in the General Hospital two rooms are devoted to their reception. We find from the registers of this institution, that in the year ending July 31, 1840, independent of 180 slighter cases received as out-patients, 130 patients were admitted into the house, having been dangerously burnt or scalded. Of this number, 74 were males, and 56 females, and 36 died; 27 were under five; 24 between 5 and 10; 49 between 10 and 20; and 15 between 20 and 30 years of age. Of the whole number, 97 were burns, and 33 were scalds. Of the 36 who died, 27 were under 10 years of age. A great number of these accidents we know to have arisen from the children having been left without proper superintendence; and many are caused by the custom of wearing loose linen pinafores, which are drawn with the current of air into the fire.

There is an occupation in Birmingham which appears to us to be attended with particular danger, and which, we think, should be carried on under some regulations. We allude to the manufacture of what are called percussion-caps, used as a priming for guns. The insides of the little copper caps are smeared over with a varnish, containing a mixture of the chlorate of potass and sulphuret of antimony, or with fulminating mercury. These substances are highly inflammable, and explode on the smallest friction or percussion. We have known terrific accidents produced by the explosion of these materials, which are more powerful than gunpowder, and are sometimes given out in considerable quantities to the workpeople, who are often very ignorant of their dangerous properties, and incautious in their employment.

The condition and habits of the inhabitants as to food, raiment, furniture, fuel, and cooking, and the frequenting of public-houses and gin-shops, are most important considerations in relation to their effects upon the public health of the town.

An inquiry into these points must embrace the condition of the working population in the mass and not individual cases; it must refer to times of ordinary good trade, and to individuals who have nothing in either their mental or physical condition to interfere with their powers of maintaining themselves and families.

The first point to determine is, whether the wages paid for labour in this town are adequate to the support of the individuals engaged in earning those wages. With the view of approaching the solution of this difficult question, we shall insert the following Table, compiled with great care by Mr. Francis Clark, from the report of a provident institution, by the rules of which the members are required to declare their ages, occupations, and weekly wages at the time of their becoming members of the society; a portion of the cases, however, has been obtained by private inquiry. The Table embraces 110 different occupations, in which 623 males and 164 females are employed, of the ages therein stated:—

Males.				Females.			
Age.	Number of Individuals.	Average Amount of Weekly Wages.	Aggregate of Wages.	Age.	Number of Individuals.	Average Amount of Weekly Wages.	Aggregate of Wages.
		£ s. d.	£ s. d.			£. s. d.	£. s. d.
7	5	0 1 0		7	1	0 0 6	
8	13	0 1 7		8	2	0 1 6	
9	19	0 1 11		9	2	0 1 6	
10	52	0 2 6		10	2	0 2 0	
11	56	0 3 0		11	9	0 2 4	
12	60	0 3 6		12	10	0 2 5	
13	73	0 4 0		13	8	0 2 3	
	278	0 3 1	43 2 0		34	0 2 5	4 1 8
14	74	0 4 5		14	14	0 3 10½	
15	56	0 5 2		15		0 4 2	
16	36	0 5 10		16		0 5 2	
17	18	0 6 10		17	12	0 5 10	
18	12	0 6 8		18	8	0 5 11½	
19	7	0 12 4		19	9	0 5 10½	
20	8	0 13 9		20	8	0 6 6	
	211	0 5 10	62 8 0		62	0 5 2	16 1 11
21 to 25	44	1 4 5		21 to 25	27	0 7 4	
26 30	31	1 4 10		26 30	16	0 8 1	
31 40	26	1 4 9		31 40	14	0 8 4	
41 50	27	1 3 6		41 50	9	0 8 8½	
51 60	5	1 1 5		51 60	2	0 7 6	
61 70	1	1 1 2					
	134	1 4 2	162 11 3		68	0 7 10	26 17 4
Total .	623		267 13 11	Total .	164		47 0 11

It may be objected to the fidelity of this Table as a test of the amount of wages, that the circumstance of their depositing a portion of their earnings in this society shows the members of it to be a more provident and better class of workpeople; but it must be stated, on the other hand, that there is a very numerous class of workpeople whose weekly gains are very much greater than the highest amount stated in the Table, but who either spend all they get, or, if more provident, place their money on different and more profitable security.

A number of workmen in the town earn from 30*s.* to 50*s.*, and many young women gain from 10*s.* to 14*s.* per week. There is a large class of workmen who suffer greatly in times of depressed trade, but who thrive exceedingly when trade is good. These are called garret men; they have no shopping, but work in the garrets of their dwelling houses, and have two or three boys under them; they supply the merchants and factors with goods at a lower price than the larger manufacturer.

The table which we have inserted has been verified by extensive private inquiries; and as regards children's labour, by comparison with the parochial register of casual applications for relief, in which the amount of weekly gains of all the members of the family is inserted. An examination of the Table will show that the remuneration paid for labour in this town, taking into the calculation the gains of the different members of a family, is adequate to supply the necessaries of life. The striking peculiarity in the manufactures of this town is their great variety and the division of labour. It rarely happens that all members of the same family work at the same trade; so that if one trade is in a depressed state, another may be in a thriving condition.

The number of applications for parochial relief varies very greatly in different years. During the last seven years it varied from 5818 to 10,222. On examining the parochial register for casual relief, we find that the applications are made from a variety of causes, but chiefly on account of sickness or want of work; and occasionally by men whose trades are worn out, and who are too far advanced in life to learn new ones; also by females whose husbands are imprisoned for bad conduct, and on account of the illness of children; but we do not find any applications caused by the wages being too low to obtain the means of subsistence when employment can be procured at all.

The next subject for inquiry is, whether the wages are carefully and economically expended; and the result of our inquiries on this subject confirms an opinion founded upon long experience of the habits of this class of persons, namely, that in the expenditure of their weekly earnings, improvidence and thoughtless extravagance prevail to a lamentable degree. The observations upon which this opinion is formed are made upon the habits of the people themselves, confirmed by extensive and recent inquiries

among the shopkeepers with whom they deal. Tea, coffee, sugar, butter, cheese, bacon, (of which a great deal is consumed in this town,) and other articles, the working people purchase in small quantities from the hucksters, who charge an enormous profit upon them, being, as they state, compelled to do so to cover the losses which they frequently sustain for bad debts. Huckster dealing is a most extravagant mode of dealing: there were in this town, in 1834, 717 of these shops, and the number has greatly increased since that time. Meat is purchased in the same improvident manner; the working men generally contrive to have a good joint of meat upon the Sunday; the dinner on the other days of the week is made from steaks or chops, which is the most extravagant mode either of purchasing or cooking meat.

The improvidence of this class of persons arises in many instances from the indulgence of vicious propensities. Drunkenness, with all its attendant miseries, prevails to a great extent, though it is by no means to be regarded as a characteristic feature of the mechanic of this town in particular. It most generally prevails among that class of workmen who obtain the highest wages, but who are often found in the most deplorable and abject condition. The improvidence of which we are speaking is to be traced in very many instances to extreme ignorance on the part of the wives of these people. The females are from necessity bred up from their youth in the workshops, as the earnings of the younger members contribute to the support of the family. The minds and morals of the girls become debased, and they marry totally ignorant of all those habits of domestic economy which tend to render a husband's home comfortable and happy; and this is very often the cause of the man being driven to the alehouse to seek that comfort after his day of toil, which he looks for in vain by his own fire-side. The habit of a manufacturing life being once established in a woman, she continues it and leaves her home and children to the care of a neighbour, or of a hired child, sometimes only a few years older than her own children, whose services cost her probably as much as she obtains for her labour. To this neglect on the part of their parents is to be traced the death of many children; they are left in the house with a fire before they old enough to know the danger to which they are exposed, and are often dreadfully burnt.

More comfort and happiness may be frequently observed in families superintended by a careful wife, where the earnings are small, than in others whose wages are very considerable, but where there is improvident management at home. To the habit of married women working in manufactories may also often be traced those jealousies and heart-burnings, those quarrels and that discontent which embitter the home of the poor man.

When trade is good, the working people will always purchase the best joints and most delicate meats; the inferior kinds of joints

are often bought by their employers. In this town opportunities occur for purchasing good wholesome meat at a low price, which cannot be done in some other places. The parts of the beast which are called the breast and the sticking-piece, in Birmingham are sold separately, and are to be purchased at a much lower price than the other joints; but the mechanic of this town will not put up with these inferior parts, and the butcher generally sells this kind of meat to the country people, or to the lowest description of labourers.

Many of the workmen are supplied with their dinner from small cook-shops, cooked meat is sold to them at the rate of 1s. per pound; a workman will pay 3*d.* for a plate of meat and 1*d.* for potatoes or bread, and this constitutes his dinner, and he is well satisfied with it. Many publicans retail cooked meat at the above-mentioned price, and they remark that this quantity of food quite satisfies the mechanic for his dinner, but it would require double the quantity to dine an agricultural labourer. The meat of the working man is more frequently roasted or fried than boiled, although one-half more fuel is expended in roasting a joint than would keep the pot boiling. The inferior joints of meat are sometimes cooked with vegetables, and made into a stew, and sold at the rate of 9*d.* per pound; but this is much less frequently purchased at the cook-shops by the working man, than the roasted meat. Soup is sold at these shops at 1*d.* per pint; a half-pint of soup and a piece of bread often composes the dinner of an elder working man. There are as many as 95 of these cook-shops in this town. The wives and children dine principally on bacon and potatoes. The more careful housewife buys what are called bits of meat at 5*d.* a pound—these she stews with potatoes and onions, and forms a wholesome and nutritious meal for herself and her children.

The workmen in this town drink principally beer and ale, which, generally speaking, is very wholesome and well brewed. They drink large quantities of low-priced beer sold at 2*d.* or 3*d.* per quart. Spirits are not much drunk by the working mechanic. The habit of drinking foreign wines is growing up among the better class of workmen. In 1834, there were in Birmingham 410 ale-houses, 108 spirit-shops, and 574 beer-shops. An account taken in 1839 gives 511 ale-houses, 129 spirit-shops, and 549 beer-houses.

We are convinced that the custom of taking opium or other narcotics as stimulants, or as substitutes for fermented liquors, does not prevail in Birmingham. We have caused inquiries to be made on this subject at almost all the retail druggists' shops in the town, and the answers which we have obtained confirm our own observations on this point. We have not been able to discover 30 instances of customers who regularly purchase large quantities of opium or laudanum from all the druggists to whom our inquiries have extended.

Fuel is purchased by the labouring classes in the same way as their provisions—in small quantities. They buy coals by the hundredweight: a poor family will require two hundredweight per week, which costs them 14*d.*, being at the rate of 12*s.* per ton. The same description of coals may be bought at 10*s.* by the ton.

The working-classes of this town are generally very well clothed; most of them possess two suits of clothes. Nor do we find anything relating to their furniture or bedding which can be regarded as detrimental to health, except that the latter is often very scanty, consisting only of a small quantity of flock or feathers, the place of which would be better and more cheaply supplied by a liberal quantity of oat-chaff or straw.

The want of some place of recreation for the mechanic is an evil which presses very heavily upon these people, and to which many of their bad habits may be traced. There are no public walks in or near this town; no places where the working people can resort for recreation. The consequence is that they frequent the ale-houses and skittle-alleys for amusement. Within the last half century the town was surrounded by land which was divided into gardens, which were rented by the mechanic at one guinea or half a guinea per annum. Here the mechanic was generally seen after his day's labour spending his evening in a healthy and simple occupation, in which he took great delight. This ground is now for the most part built over, and the mechanics of the town are gradually losing this source of useful and healthy recreation.

The preceding statements have induced us to consider in what manner some of the evils to which the labouring mechanic is exposed, and which influence his health and comfort, admit of removal or amendment.

The first and most prominent suggestion which has occurred to us on this subject is the better education of the females in the arts of domestic economy. To the extreme ignorance of domestic management on the part of the wives of the mechanics is much of their misery and want of comfort to be traced. Numerous instances have occurred to us of the confirmed drunkard, who attributes his habits of dissipation to a wretched home; and a respectable working man is rarely met with, whose house is not managed by a prudent and industrious wife. We believe, however, that much improvement in this respect is not to be looked for so long as the early years of the females are so generally spent in the workshops.

Another suggestion which has often occurred to us is the establishment in different parts of large manufacturing towns and districts of public kitchens where wholesome cooked meat and vegetables, soup and puddings for children, could be purchased at a low price, and be ready punctually at the dinner hour. It very frequently happens that when the working man returns home to his dinner, he finds it unprepared: his wife has been at her

shop, and she leaves the cooking of her husband's dinner to a neighbour, who forgets it, and the poor man is obliged to swallow hastily his half-cooked meal, and to return to his labour with his stomach loaded with indigestible materials. To this cause we believe is not unfrequently to be attributed much of the dyspepsia from which this class of persons suffer. These public kitchens would be most valuable in times of distress, in consequence of the high price of provisions or depression of trade; the temporary soup-shops that are erected in such times are sources of the greatest comfort to the poor, but such places are always fitted up at a great outlay, and not constructed upon the best and most economical principles.

The establishment of public baths and public walks would, in our opinion, be very conducive to the general health of the labouring classes in this town. The former might readily be effected; but the high value of the land, the great extent of the town, and the necessity which would exist of having them in various situations, in order that they should afford full advantage to the inhabitants, renders the formation of public walks an object of difficult attainment.

The wages of the workman in Birmingham are generally paid to him on Saturday night. In many respects it would be advantageous if they were paid earlier in the week. The greater part of the money which has been received is generally spent late on the Saturday evening, frequently in haste, and without the advantage of daylight, by the man and his wife, who resort to the market or to shops in their neighbourhood. The man often remains at the ale-house, and the night is passed in drinking, in which he is more prone to indulge, as on the following morning he is not required to resume his week-day toil. It would be well if the wages were received on the day before that of the market, as it would afford an opportunity of greater choice of the articles on which they should be expended. The only objection which we have heard to this proceeding is on the part of the masters, who urge that it would have the effect of rendering the day following that on which the wages were paid a day of play, and thus deprive them on that day of the services of their men. They state also in proof of this, that they often have great difficulty in getting their men to work on Mondays, unless by that time they have expended the earnings of the previous week. The plan, however, of paying the workmen on Friday is, we know, adopted in one large manufactory without inconvenience, and we believe that some manufacturers pay their workmen on the morning instead of the evening of Saturday.

It is not the custom of the manufacturers in Birmingham to pay their workmen at public-houses, nor are we acquainted with the existence of what are called Tommy-shops. In the neighbourhood of one large establishment in the vicinity of this town

the men^r have jointly formed a company, and keep a provision-warehouse under the management of an agent, from which the members of the company are able to procure the necessaries of life at little more than the cost price. It appears to us that similar undertakings might perhaps be advantageously adopted in this and other manufacturing towns, if aided by the advice and superintendence of intelligent masters.

The attempt to make an examination of the influence of occupations upon the health of the artisan population of Birmingham is attended with peculiar difficulties, in addition to those usually involved in similar inquiries in other towns. Amongst these may be mentioned the great variety of employments of the working classes in Birmingham, arising from the number of trades and the subdivision of these, in consequence of the various processes through which many articles of manufacture have to pass, for such divisions may be regarded as constituting distinct trades. A difficulty arises also from the number of parties who preside over the manufactories, for in 97 trades not common to all large towns, as brass-founders, japanners, button-makers, &c., there are in Birmingham at least 2100 firms. These and other circumstances render the investigation of this subject intricate and laborious.

The population of the parish of Birmingham, according to the census of 1831, amounted to 110,914,* consisting of 23,934 families, of which number 20,763 families were chiefly employed in trade, manufacture, and handicraft. Although the population of Birmingham is almost entirely thus engaged in manufacture, the rate of mortality for the county of Warwick is shown to be less than that of many exclusively agricultural counties.

To ascertain the influence of the manufacturing occupations of the town upon the health of those engaged in them, we have thought it necessary to examine—

1st. The several processes of manufacture in which the artisan is employed.

2d. The workshops of the persons engaged in manufacture.

3d. The age at which they begin to labour.

4th. The influence of the occupation in promoting the development of any hereditary or peculiar tendency of constitution to disease.

5th. The habits of the artisan in relation to sobriety and cleanliness.

6th. The amount of earnings.

It is also necessary to examine the registers of disease kept at the medical charities and by cautious private individuals.

Having made such inquiries, we deduce the following conclusions:—

* The population of the entire borough, which includes the parish of Birmingham, part of the parish of Aston, and the parish of Edgbaston, is now estimated, according to the calculations of the police, at 220,000.

1st. That only a few of the processes employed in the manufactories exert any specific or ascertained baneful effect upon the animal economy. The manufacture of white-lead, and some of the nearly obsolete modes of gilding, produce injurious effects upon the nerves and digestive organs. Dry grinding in all its departments, especially that denominated pointing, as the pointing of needles, is destructive to health and life by its effects upon the respiratory organs, as the state of the needle manufacturers at Redditch and other places painfully exemplifies. Also the dusty employments of pearl-button making, and of the brass-foundry, appear to produce detrimental effects on the air-passages, and the latter perhaps induces affections of the stomach. The process of lackering metals we believe to be very unhealthy; this proceeding is carried on in hot rooms, the atmosphere of which is extremely impure, generally by young females, great numbers of whom become the victims of consumption. With these exceptions, and the accidents necessarily consequent upon constant work amongst all kinds of machinery, injurious consequences to health are not to be traced to the occupations of the artisan in this town.

2dly. More evil consequences to health, perhaps, arise from the workshops than from the processes carried on in them. These are generally too small, frequently damp and badly glazed, but oftener imperfectly ventilated. The ground-floor or cellar where the operation of stamping is performed is usually confined and damp. Some of the large modern manufactories are peculiarly well suited to the purposes for which they have been erected, but for the most part the shopping is in the unceiled roofs of ill-constructed buildings, and is suffocatingly hot in summer and very cold in winter.

3dly. Except in pin-manufactories and a few others, it is by no means a common occurrence for children under ten years of age to be employed in manufacturing processes in the workshops. When they are made to labour at so early an age, the development of the frame appears to be impeded; such individuals, when arrived at maturity, are generally short in stature, and their muscles unequally evolved.

4thly. In the selection of a trade for the young of both sexes, disregard is too frequently paid to hereditary or peculiar predisposition to disease. Inattention to this circumstance oftentimes casts unmerited disrepute upon comparatively harmless occupations.

Diseases of the skin do not appear to be peculiarly frequent amongst the artisans of this town, nor are we able to trace any injurious effects upon their health to the coal-smoke in which they live, nor to the soot or coal-dust with which the clothes and bodies of many of the working-people, both of this town and the neighbouring mining district of Staffordshire, are almost constantly covered.

5thly. It cannot be doubted that whilst the arts and manufactures of the place prove, in some instances, injurious to health, and in a few possibly destructive to life, these evil consequences, as well as hereditary predisposition to disease, are promoted by intemperance, not that intemperance is an infinitely more frequent cause of disease and death amongst the artisans than all the various employments of all the manufactories combined.

6thly. During periods of stagnation of trade disease is most general, or at least at such times there is a much greater application for medical relief; and it is certain that a sufficient quantity of food of good quality will enable persons to carry on employments with impunity which would prove injurious, and perhaps fatal, to the ill nourished.

The examination of the registers of diseases kept at public charities and by private individuals, upon whose reports reliance can be placed, certainly lead to the conclusion that the employments of the artisans in this town do not produce any specific forms of disease, with the exception of those which we have already noticed.

The absorbent nature of the soil in this locality, and the comparatively recent formation of additional burial places throughout the town, with the exception of the small churchyard attached to St. Martin's church, now seldom used, render the town burial places less objectionable than those of most towns. We believe that the present state and situation of the town cemeteries do not produce any injurious influence upon the health of the inhabitants.

We have not been able to discover that any class of individuals habitually dwell in previously deserted houses, hovels, or out-buildings in the town or neighbourhood.

The boats on the canals occupied as dwellings are numerous and of the ordinary description. The cabin appropriated for sleeping is extremely limited, but we have been unable to trace any disease to this kind of habitation. Old and deserted boats we have never found used as places of residence.

Although instances have occurred of persons being suffocated by sleeping on or near to lime-kilns or brick-kilns in the neighbourhood of the town, to which they had been attracted by the warmth of such situations, we do not find that such places are habitually resorted to for residence or shelter.

(Signed)

J. M. BAYNHAM,
P. BLAKISTON, M.D.
J. R. CORRIE, M.D.
J. HODGSON,
S. PALMER, M.D.
J. RUSSELL,
F. RYLAND,
J. WICKENDEN.

Birmingham, February 8, 1841.

No. 14.

ON THE SANITARY CONDITION OF THE TOWN OF WOLVERHAMPTON.

BY J. DEHANE, ESQ., M.D.

Wolverhampton, January 20th, 1840.

GENTLEMEN,—I have the honour to acknowledge your letter of the 30th ultimo, and, in reply, have to observe that, although the town of Wolverhampton has not, with the exception of the cholera, been subject to epidemical visitations, still, during the twenty years of my residence, fever has been constantly present in a greater or less degree.

By a reference to the record of the public dispensary, as well as those recently kept by the parochial surgeons, which will ultimately furnish data of great importance, it will be found that in those localities where the several objects of drainage, cleanliness, and ventilation, have been the least perfectly attended to, the existence of disease has been the most prevalent.

The town of Wolverhampton is seated on a considerable eminence as respects the immediately surrounding district, and in several parts the foundations of the buildings are in immediate contact with the sandstone of which the elevation is principally composed. It might therefore be presumed that such a site must afford every facility both for drainage and ventilation. These natural advantages, however, have not been by any means rendered available to the purposes of the public health, as it may with great truth be asserted that few, if any, of the larger provincial towns in the United Kingdom have been suffered to continue in so neglected a condition.

The population at the last census amounted to about 27,000, and cannot now be reckoned at less than 30,000 individuals. The habits and the occupations of the bulk of a population of this amount, and more particularly of one congregated in a comparatively small space, must, it is clear, exercise a considerable influence, not only on their own health, but also on that of those with whom they are in contact. The larger portion of the population is employed in the coal and ironstone mines in the neighbourhood, in the iron-works, and in getting up, principally at their own residences, a variety of articles in the iron, brass, and tin trades. Japanning is also carried on to a considerable extent. As regards the health of these individuals, it would appear to depend much more on their habits and the localities they occupy than on any effects of the trades in which they are engaged. Pulmonary affections, though somewhat frequent, may with greater reason be attributed to the elevated and exposed position of the town than to any noxious effects of the occupations pursued. The abundance of fuel, however, operates to mitigate the inclemency of the locality,

and also to prevent sickness. A good fire in a dirty habitation often keeps off diseases, not less by its promoting ventilation, and consequently removing some of the causes of infection, than by preventing the depressing effects of cold and filth. The small-pox is of frequent occurrence among the poorer classes, who, to a great extent, improvidently omit the practice of vaccination.

In reference to the portion of our population engaged in mining, it may not be without use to remark, that a majority of the accidents to which they are liable are too often the result of inattention to their own safety, and a desire to accomplish their work in the shortest time. It becomes, consequently, a subject of consideration how far the legislature may not be justified in calling upon the proprietors to enforce the means of safety. The subject is a difficult one; as the intentions of the legislature no doubt would in some measure be exposed to constant frustration from both the masters and the workmen; the desire to avoid expense on one side, and the wish to exonerate themselves from what might be thought unprofitable labour on the other, would both be brought into action: but besides the direct benefit derivable from some enactment on this subject, a large amount of good would indirectly be attained. Many accidents now occur in which it is impossible to hold parties free from blame, either from the use of defective machinery, or from the carelessness of the individuals employed. No law at present exists through which the culpable parties can be readily reached, except the Coroner's Court, and then only when death ensues. A summary power of adjudication in such cases might, perhaps, serviceably be confided to the magistracy; and thus what is at present deemed only an accidental misfortune by the master, but a careless and wanton disregard to the safety of the workmen by the sufferers and their families, would become considered (as it really is) a serious moral and legal offence.

Wolverhampton, notwithstanding its great increase during the last 50 years, still retains, in the arrangement of its streets and the buildings adjoining to them, all the evils of ancient times. The principal thoroughfares are narrow, and what is worse, it is in their immediate neighbourhood that close courts and alleys abound. The high price of building-land, and a principle of convenience has occasioned almost every portion of the yards belonging to houses in the vicinity of the great thoroughfares to be closely built upon, either to form workshops or small houses, which are generally let at weekly rents, and occupied by workmen. A dense population is consequently congregated in these places, almost excluded from the public view, and a stranger would pass through the town with little or no idea of the immense numbers by which these precincts are inhabited. In the formation of these buildings, as might be expected, everything has been sacrificed to secure a large pecuniary return; they are, in themselves, often of the very

worst construction, and in immediate contact with extensive receptacles of manure and rubbish. A great disregard to decency also exists in connexion with these dwellings; many of them having only one privy allotted for the use of several families—an arrangement obviously tending to unhealthy as well as immoral results. In such dwellings it is evident that nearly all the evils consequent on the poverty of those who occupy them must be experienced in almost full effect. It is so. Dirt and disarrangement mark their interior, and it is only to the free consumption of coal, as before observed, to which their comparative healthiness can be attributed. Damp is expelled, and with it a train of disease. Notwithstanding the abundance of lime in the neighbourhood, the use of this disinfecting agent as a means of purification is almost totally disregarded. The appearance of a population thus domiciled, as may be presumed, strongly indicates a predisposition to disease, which is more particularly exhibited by the children and persons slightly advanced in years. In fact, the extended existence of disease in mild forms cannot be doubted, and its full development is evidently prevented more by the correctives referred to than by attention to cleanliness or comfort. Should any epidemic visitation occur in these places, its victims can scarcely be otherwise than numerous; and it ought to be considered whether some measure of municipal police might not be adopted through the medium of which these nurseries of disease might be cleansed, and the inhabitants of them and persons living in their vicinity relieved from the apprehensions which such localities necessarily create.

Even in the new buildings in the town, which are generally of a humble character, a sufficient regard for the health of the public does not appear to exist, particularly as respects drainage and the facility of removing refuse articles from the houses; and fever, it appears from the statement of the medical gentleman who has attended the principal part of these districts, is constantly present. Although there is a manifest improvement in these parts of the town, compared with those before noticed, it is yet worth consideration whether a series of sanitary regulations, something like the provisions of the Building Act, might not be devised and carried into effect with respect to new streets and buildings. A large amount of evil would, by the adoption of such a measure, be prevented from creeping, as it were, into existence. Had enactments of this kind existed a century ago, and continued in force, we should have been spared much unsightliness, and the influence of disease would have been greatly mitigated. Let any one reflect for an instant on the positive evils now suffered by Wolverhampton from the absence of such a law, and the prospective good it would secure, and scarcely a doubt can arise in his mind of its necessity. Prevention, it is well said, is better than cure.

A scarcity of water is often alleged as an excuse for the existence of many of the impurities in different localities. No scarcity, however, to the extent here implied exists. The public pumps, although not very numerous, are yet sufficient to afford an adequate supply. The real difficulty is the trouble of carrying it to the house for domestic purposes.

The deleterious effects of the various accumulations of miasmatic substances are considerably increased by the practice of keeping pigs, which prevails to a great extent. However desirable it is to diffuse habits of economy among the lower classes, and to teach them to make the most of articles which, from their individual worthlessness or restricted quantity, are frequently thrown away, but which become serviceable, and even important in large aggregations, yet few considerations of economy, and none so far as regards health and cleanliness, appear capable of being adduced to justify the practice among those not possessing such accumulations, and residing in confined places. This practice also exists generally among the innkeepers and butchers. As it occasions the accumulation of heaps of foetid manure and large collections of half decomposed animal and vegetable substances, no sanitary regulation would be effectual which did not peremptorily require their removal.

Having given this general sketch, I can only regret that no statistical accounts exist by which it may be supported. In the absence of such documents I append some facts, from which it will be seen that the preceding remarks, however strong they may be deemed, do not more than adequately describe the evils existing, and, perhaps, only too weakly exhibit the need of some prompt remedy.

I have, &c.,

J. DEHANE, M.D.

To the Poor Law Commissioners.

*Salop-street, Wolverhampton,
January 25, 1840.*

DEAR SIR,—In reply to your request that I would afford you some information for the use of the Poor Law Commissioners respecting the health and condition of the working classes in the immediate vicinity of my own residence,—

I beg to state that the district in question contains a number of courts crowded with small and ill-ventilated tenements, the occupiers of which are chiefly employed in the manufacture of locks, keys, bolts, and hinges. They have in general a pale and unhealthy appearance, and are very subject to disease; fever, indigestion, bowel complaints, and consumption, being prevalent.

The streets in this neighbourhood being on a declivity, a large portion of the town's drainage passes through them on its way to the broad meadows. Between Salop-street and Darlington-street a large sewer passes, forming many open cesspools, where mud and manure are collected and kept for the purpose of sale. The effluvia from these receptacles I consider as being very prejudicial to the public

health. When this town was visited by the cholera, it was very prevalent in this vicinity, and was indeed the only place in which any of the more respectable families were attacked by that disease—the *Black Brook* (as this water-course is commonly called) passing at the back of the houses in Darlington-street where these fatal cases happened. Several families residing in this quarter have also suffered from typhus fever, and during the autumn and winter I have had five patients in one house so affected.

The lower extremity of Salop-street consists of very small, ill-constructed tenements, very filthy, and chiefly occupied by the very lowest of the people, together with vagrants, mendicants, and other characters of a similar description. In this locality nearly every house was visited by the cholera. Other diseases are also frequent and fatal in this place, it being not unusual to trace the extension of small-pox from some of the crowded lodging-houses here situated.

Scarlatina, when it appears in this district, is often fatal, from assuming the typhoid character.

I remain, dear Sir, yours respectfully,
EDWARD H. COLEMAN, *Surgeon.*

To Dr. Dehane.

Wolverhampton, January 25, 1840.

SIR,—In accordance with your wish, I herewith transmit the following statement of the number of pauper patients I attended from March, 1837, to the end of March, 1838, with the number of cases of fever. I am only sorry I cannot supply you with a more satisfactory report, for reasons which it is unnecessary to mention.

The district I attended may be considered as the most healthy in the town, yet there are, in one or two situations, certain physical causes of disease which ought to be removed, and which I recommend to your notice. I allude more particularly to a ditch in Graisleys-row, at the lower end of Brick-kiln-street, and also to another ditch in those gardens through which a passage leads from Salop-street into Brick-kiln-street; there is also a small pit in a field adjoining these gardens in which there is at all times filth of a most odious nature. In the situations above mentioned both animal and vegetable substances are constantly undergoing putrefactive decomposition, producing a state of the atmosphere conducive to the propagation of disease.

But there are other causes amongst the poor which operate against a good state of health, and which will continue unless some sanitary measures are adopted for the removal of them. I may give as instances the following; viz.—

1st. The want of proper food, at all times scarce amongst the very poorest classes, but more particularly when there is little or no demand for labour.

2nd. Houses in which the occupants are thickly crowded.

3rd. Courts and alleys in which there are no covered drains, with open gutters, which are generally so ill constructed that the fluid in many places is stagnant.

4th. The practice of keeping pigs in yards contiguous to the dwellings, with vessels containing half putrid food.

5th. The custom of throwing rubbish into heaps, and allowing it to remain intermixed with animal and vegetable matter, &c. &c.

I find, then, upon looking over the parish register of sickness and mortality, that I have entered 289; but, in consequence of some irregularity in not receiving the books in the first quarter, the whole number does not appear. Of these 289, forty were attacked with fever of the continued or typhus character, the remaining cases comprised acute inflammations of the different viscera, with a proportion of chronic complaints.

I am, yours truly,

JOHN TALBOT CARTWRIGHT, *Surgeon.*

To Dr. Dehane.

Horseley-fields, January 24, 1840.

MY DEAR SIR,—Agreeably with your request, I have carefully examined my register of patients for the No. 2 district of the Wolverhampton Union, from Lady-day, 1838, to Lady-day, 1839. I find that during that period I had 134 cases of fever, the greater part being simple and the remainder of a typhoid character, out of which 49 occurred in Carribbee Isle and the adjacent courts. During the Midsummer quarter I find that typhus fever was most prevalent, which I consider to be attributable to the exhalations emanating from the quantity of rubbish and filth deposited in the immediate vicinity of the houses, as also to an open sewer running immediately through its centre. In one house in Carribbee Isle I had no less than eight cases of typhus fever at the same time; indeed, it assumed so threatening a character, that I considered it my duty to inform the guardians, that unless some steps were immediately taken for the removal of the cause we should soon have the whole neighbourhood infected with the disease; the consequence was an application to the Town Commissioners, who ordered the rubbish to be removed and the drain to be cleansed, but nothing was done towards eradicating the evil. Another great cause, in my opinion, of fever assuming so severe a character in this locality is the crowded state in which they live, several families residing in the same house; there is also great want of cleanliness in their persons, together with extreme poverty, not having the necessary articles of subsistence.

There are also several courts in the neighbourhood of Carribbee Isle nearly as bad as it is; viz., Rowlinson's Entry, Back-lane, and the two Castle Places.

My attention was also directed to the following places, as being in connexion with my district, although fever was not prevalent during the time of my being in office; viz., Smithfield, Lichfield-street, Berry-street, Market-street, Wheeler's-fold, and Canal-street.

In Smithfield more particularly a great nuisance exists, arising from its being used as a place for the deposition of manure and sweepings of the streets, which amount to some hundreds of tons, which is allowed to remain till sold; there is frequently an accumulation of water and mud to the extent of an ankle deep.

The pig-market is also in the immediate neighbourhood, together with a number of piggeries; another great evil is its not being underdrained in Walsall-street-road. Much new building has been erected in the vicinity within the last few years, and the locality is chiefly occupied by miners. No attempt has been made to form either pathway or drain, in consequence of which the roadway is always full of mud and stagnant water; there are also several new streets connecting Walsall-

street with Belston-street and Horseley-fields, where no covered drains have been formed; these open drains are frequently in a neglected state from not being cleaned, and fever is continually prevalent in this vicinity. Wheeler's-fold, connecting Lichfield-street and Berry-street, is always in a very offensive condition, owing to the quantity of rubbish collected there, the presence of open privies and large quantities of manure from the Swan hotel, and several private stables; this is also in the heart of the town.

I remain, Sir, yours respectfully,

JAMES GATIS.

To Dr. Dehane.

It having been understood that a statement of the number and condition of the sick poor of Wolverhampton for the current year had already been forwarded to the Commissioners by the medical officers of the union, it has not been deemed necessary to append that document to the present report.

Wolverhampton, January 25, 1840.

SIR,—In answer to your inquiries respecting the amount of disease among the poorer classes of this town (receiving medical relief from the dispensary), I beg to state that during a period of nearly three years, whilst holding the situation of house-surgeon to that institution, I have found that fever has been upon the increase each year (especially in certain parts of the town), which I think is attributable not only to the want of cleanliness in the houses, and of the persons of the inhabitants, but to the great accumulation of filth, and of decomposed vegetable and animal matter, together with the pools of stagnant water which are almost invariably found in the small streets and courts in the below-mentioned localities; namely, Carribbee Islands, the small courts leading out of Stafford-street, Canal-street, Salop-street, also Duke-street, Walsall-street, Oxford-street, and the small streets leading out of Horseley-fields, the Townwell Fold, &c.; nearly the whole of these places for the last five or six months have *never* been free from fever, and out of nearly 30 cases seen by me daily at the patients' own houses, more than one-half have been cases of fever of a low typhoid character, accompanied with catarrh or bronchitis, and which I have not met with in the drier and better ventilated parts of the town. The gross amount of cases that have received relief from the dispensary, from January, 1839, to January, 1840, (resident in the town,) is 1200; the number of fever cases in the above is 320. Most of these cases of fever occurred in Carribbee Islands, in Albion-street, in Walsall-street, and Warwick-street; and I have no hesitation in saying, that in each of these places the causes of fever are to be ascribed to a want of proper cleanliness and ventilation, and to the miasma arising from the filth and water collected round the doors of the houses. Cases of rheumatism are also very frequent in these localities, being a little more than 1 in 12, or 117 in 1,200. Pulmonary diseases also require to be noticed (arising doubtless from the same causes), as I find, upon examining the books, we have had no fewer than 109 in the space of time above mentioned. Trusting that a remedy will soon be found for these evils,

I beg to remain, Sir, yours very respectfully,

ROWLAND WILLIAM MASON,

House Surgeon to the Wolverhampton Dispensary.

To Dr. Dehane.

No. 15.

ON THE SANITARY STATE OF THE TOWN OF STAFFORD.

BY DR. EDWARD KNIGHT.

DURING the year ending September 29th, 1839, there have been in the fever-wards connected with the Stafford County General Infirmary 76 cases of fever, of which number 10 have died, and the remaining 66 were discharged cured.

The far greater part of these cases commenced in the town of Stafford, some being brought to the infirmary in a dying state, which gives a greater rate of mortality.

Although the fever wards are well arranged, and every comfort and attention provided for the patients, there is a general dislike on the part of the poor to be removed to them from their own houses, except in cases of actual necessity.

Owing to this, and the filthy state of those parts of the town occupied exclusively by the lower classes, as the "Broad-eye," "Back-walls," &c., we have generally more or less of infectious diseases during the autumn and winter months in each year, and although such diseases do not extend their ravages to the more respectable inhabitants, the above form but a very small portion of the cases which occur.

These parts of the town are without drainage, the houses, which are private property, are built without any regard to situation or ventilation; and constructed in a manner to ensure the greatest return at the least possible outlay. The accommodation in them does not extend beyond two rooms: these are small, and for the most part the families work in the day-time in the same room in which they sleep, to save fuel.

There is not any provision made for refuse dirt, which, as the least trouble, is thrown down in front of the houses, and there left to putrify. The back entrances to the houses in the principal streets are generally into these, the stabling, cow-houses, &c., belonging to them, forming one side of the street; and the manure, refuse vegetable matter, &c., carried into the street, and placed opposite to the poorer houses; so that they are continually subjected to the malaria arising from that, in addition to their own dirt.

The sedentary occupation of the working-classes (shoemaking being the staple trade of the town), their own want of cleanliness and general intemperance, form also a fruitful source of disease. One half of the week is usually spent in the public-houses, and the other half they work night and day to procure the necessary subsistence for their families. There is great want of improvement

in the moral character of the poor: they can obtain sufficient wages to support their families respectably, but they are improvident, and never make any provision against illness.

A local Act for the improvement of the town empowers the commissioners to remove nuisances, but no notice is ever taken of it.

The situation of Stafford also offers every facility for an efficient drainage; it is nearly surrounded by a large ditch, in which there might be a running stream of water, well calculated to remove all impurities; but it is always choked up, and in a stagnant state: the river "Sow" is also close to the town. There are not any sewers even in the principal streets, the water being carried off by open channels.

In the Lunatic Asylum, which closely adjoins the town and averages 250 patients, great attention is paid to cleanliness, and we never have any infectious diseases.

At the time cholera prevailed in some of the neighbouring districts, the town of Stafford escaped, but no exertions were made to avert it. A board of health might now be established, and, I am decidedly of opinion, would be of the greatest benefit. A frequent use of lime-washing in the houses, together with a proper attention to the removal of refuse, which might be enforced by a power of that description, would tend materially to diminish disease and add much to the moral comforts of the poor.

I find it difficult to obtain such an account from the general practitioners as would enable me to give an exact return of the number of cases that have occurred; nor do the infirmary books state the occupation of the patients, nor the situation of their residences. I have therefore confined my observations to the general state of the town, without filling up the "form" sent.

EDWARD KNIGHT, M.D.

No. 16.

REPORT ON THE HABITATIONS OF THE LOWER ORDERS IN
SALOP, CHESHIRE, AND NORTH WALES.

BY WILLIAM DAY, ESQ.

Assistant Poor Law Commissioner.

Woodside, January 15, 1840.

GENTLEMEN,—Upon the receipt of your communication of the 8th November last, I circulated questions to the different unions within my district, on the points therein alluded to. I transmit to you with these remarks the different answers I have received. The following table will present a synopsis of the more material parts of them:—

Name of Union.	General description of Cottages. Lowest description of Cottages.				Average description of Cottages.				Best description of Cottage.				
	No. of dwelling rooms.*	Cost of Erection.	Rent.	Whether many such in the Union.	No. of dwelling rooms.*	Cost of Erection.	Rent.	No. of dwelling rooms.*	Cost of Erection.	Rent.	No. of dwelling rooms.*	Cost of Erection.	Rent.
COUNTY OF SALOP:—													
Atcham	2	6 <i>l.</i> to 50 <i>l.</i>	1 <i>l.</i>	About 12.	2	25 <i>l.</i>	3 <i>l.</i>	3	50 <i>l.</i>	4 <i>l.</i>	3	50 <i>l.</i>	4 <i>l.</i>
Bridgnorth	1 & 2	6 <i>l.</i>	2 <i>l.</i>	No.	3	10 <i>l.</i> to 15 <i>l.</i>	3 <i>l.</i>	3	25 <i>l.</i>	4 <i>l.</i> 10 <i>s.</i>	3	25 <i>l.</i>	4 <i>l.</i> 10 <i>s.</i>
Church Stretton	1 & 2	Not stated.	2 <i>l.</i>	About 40.	2	Not stated.	3 <i>l.</i> 10 <i>s.</i>	3	40 <i>l.</i>	4 <i>l.</i> to 5 <i>l.</i>	3	40 <i>l.</i>	4 <i>l.</i> to 5 <i>l.</i>
Clun	2	30 <i>l.</i>	2 <i>l.</i> 10 <i>s.</i>	Yes.	2	40 <i>l.</i>	3 <i>l.</i> 10 <i>s.</i>	3	50 <i>l.</i> to 70 <i>l.</i>	5 <i>l.</i>	3	50 <i>l.</i> to 70 <i>l.</i>	5 <i>l.</i>
Drayton	2	10 <i>l.</i> to 20 <i>l.</i>	1 <i>l.</i> to 1 <i>l.</i> 10 <i>s.</i>	No.	3	20 <i>l.</i> to 30 <i>l.</i>	2 <i>l.</i> to 3 <i>l.</i>	3	40 <i>l.</i> to 50 <i>l.</i>	3 <i>l.</i> to 5 <i>l.</i>	3	40 <i>l.</i> to 50 <i>l.</i>	3 <i>l.</i> to 5 <i>l.</i>
Ellesmere	2	20 <i>l.</i> to 40 <i>l.</i>	1 <i>l.</i> to 3 <i>l.</i>	Yes.	3	40 <i>l.</i> to 60 <i>l.</i>	3 <i>l.</i> to 5 <i>l.</i>	3 & 4	60 <i>l.</i> to 80 <i>l.</i>	4 <i>l.</i> to 6 <i>l.</i>	3 & 4	60 <i>l.</i> to 80 <i>l.</i>	4 <i>l.</i> to 6 <i>l.</i>
Madeley	1	..	15 <i>s.</i> to 30 <i>s.</i>	Yes.	2	2 <i>l.</i> 12 <i>s.</i> to 4 <i>l.</i>	..	2	..	5 <i>l.</i> to 7 <i>l.</i>	2	..	5 <i>l.</i> to 7 <i>l.</i>
Newport	2	20 <i>l.</i> to 25 <i>l.</i>	2 <i>l.</i> 10 <i>s.</i>	Yes.	3	35 <i>l.</i> to 45 <i>l.</i>	3 <i>l.</i> to 4 <i>l.</i>	4	60 <i>l.</i> to 80 <i>l.</i>	4 <i>l.</i> 10 <i>s.</i> to 5 <i>l.</i>	4	60 <i>l.</i> to 80 <i>l.</i>	4 <i>l.</i> 10 <i>s.</i> to 5 <i>l.</i>
Shiffnall	2	20 <i>l.</i> to 40 <i>l.</i>	3 <i>l.</i> to 4 <i>l.</i>	No.	3	60 <i>l.</i>	4 <i>l.</i> to 5 <i>l.</i>	3	70 <i>l.</i> to 80 <i>l.</i>	5 <i>l.</i> 5 <i>s.</i>	3	70 <i>l.</i> to 80 <i>l.</i>	5 <i>l.</i> 5 <i>s.</i>
Wellington	2 &	10 <i>l.</i> to 20 <i>l.</i>	1 <i>l.</i> 5 <i>s.</i> to 2 <i>l.</i>	No.	3	30 <i>l.</i> to 60 <i>l.</i>	3 <i>l.</i> to 4 <i>l.</i> 10 <i>s.</i>	4	50 <i>l.</i> to 80 <i>l.</i>	4 <i>l.</i> to 5 <i>l.</i>	4	50 <i>l.</i> to 80 <i>l.</i>	4 <i>l.</i> to 5 <i>l.</i>
Wem	1 & 2	20 <i>l.</i>	2 <i>l.</i> to 2 <i>l.</i> 10 <i>s.</i>	Yes.	3	30 <i>l.</i>	3 <i>l.</i> 10 <i>s.</i>	3	50 <i>l.</i>	5 <i>l.</i>	3	50 <i>l.</i>	5 <i>l.</i>
COUNTY OF CHESTER:—													
Great Boughton	2	20 <i>l.</i> to 30 <i>l.</i>	1 <i>l.</i> to 2 <i>l.</i>	Yes.	2	30 <i>l.</i> to 50 <i>l.</i>	2 <i>l.</i> to 4 <i>l.</i>	4	50 <i>l.</i> to 70 <i>l.</i>	4 <i>l.</i> to 6 <i>l.</i>	4	50 <i>l.</i> to 70 <i>l.</i>	4 <i>l.</i> to 6 <i>l.</i>
Wirral	2	20 <i>l.</i>	2 <i>l.</i>	..	3	40 <i>l.</i>	4 <i>l.</i>	4	50 <i>l.</i>	5 <i>l.</i>	4	50 <i>l.</i>	5 <i>l.</i>

* Dwelling-rooms include both day and sleeping-rooms.

Name of Unions.	Lowest description of Cottage.			Whether many such in the Union.	Average description of Cottage.			Best description of Cottage.		
	No. of dwelling rooms.*	Cost of Erection.	Rent.		No. of dwelling rooms.*	Cost of Erection.	Rent.	No. of dwelling rooms.*	Cost of Erection.	Rent.
NORTH WALES:—										
Anglesey	1	9 <i>l.</i> to 15 <i>l.</i>	..	Yes.	15 <i>l.</i>	2 <i>l.</i>	2 & 3	25 <i>l.</i>	3 <i>l.</i>	
Bala	2	5 <i>l.</i> to 8 <i>l.</i>	15 <i>s.</i> to 30 <i>s.</i>	Yes.	30 <i>l.</i>	3 <i>l.</i>	4	40 <i>l.</i>	4 <i>l.</i>	
Bangor	1	..	1 <i>l.</i> 10 <i>s.</i> to 2 <i>l.</i>	No.	30 <i>l.</i> to 50 <i>l.</i>	3 <i>l.</i> to 4 <i>l.</i>		50 <i>l.</i> to 60 <i>l.</i>	3 <i>l.</i> to 4 <i>l.</i> 10 <i>s.</i>	
Carnarvon	1	12 <i>l.</i> to 25 <i>l.</i>	35 <i>s.</i> to 50 <i>s.</i>	Yes.	15 <i>l.</i> to 25 <i>l.</i>	40 <i>s.</i> to 50 <i>s.</i>	2	30 <i>l.</i>	2 <i>l.</i> 10 <i>s.</i> to 4 <i>l.</i>	
Conway	1	15 <i>l.</i> to 20 <i>l.</i>	1 <i>l.</i>	Yes— $\frac{1}{4}$ of the whole.	20 <i>l.</i> to 25 <i>l.</i>	2 <i>l.</i>	2	25 <i>l.</i> to 30 <i>l.</i>	3 <i>l.</i> to 4 <i>l.</i>	
Corwen	1	25 <i>l.</i> to 30 <i>l.</i>	1 <i>l.</i>	Yes.	25 <i>l.</i> to 30 <i>l.</i>	25 <i>s.</i>	3	..	2 <i>l.</i>	
Dolgelly	2	20 <i>l.</i>	1 <i>l.</i> 10 <i>s.</i>	Yes.	25 <i>l.</i>	2 <i>l.</i>	2	30 <i>l.</i>	2 <i>l.</i> 15 <i>s.</i>	
Festiniog	1	10 <i>l.</i> to 15 <i>l.</i>	15 <i>s.</i> to 20 <i>s.</i>	..	20 <i>l.</i>	25 <i>s.</i> to 42 <i>s.</i>	3	24 <i>l.</i> to 40 <i>l.</i>	2 <i>l.</i> to 3 <i>l.</i>	
Holywell	1	15 <i>l.</i> to 20 <i>l.</i>	15 <i>s.</i> to 40 <i>s.</i>	Yes.	25 <i>l.</i> to 30 <i>l.</i>	2 <i>l.</i> to 3 <i>l.</i>	3	40 <i>l.</i> to 50 <i>l.</i>	4 <i>l.</i> to 5 <i>l.</i>	
Llanfyllin	1	5 <i>l.</i> to 10 <i>l.</i>	1 <i>l.</i>	No.	10 <i>l.</i> to 20 <i>l.</i>	2 <i>l.</i>	3 & 4	20 <i>l.</i> to 40 <i>l.</i>	3 <i>l.</i>	
Llanrwst	1	12 <i>l.</i> to 15 <i>l.</i>	20 <i>s.</i> to 25 <i>s.</i>	Yes.	18 <i>l.</i> to 25 <i>l.</i>	2 <i>l.</i> to 55 <i>s.</i>	3	30 <i>l.</i> to 35 <i>l.</i>	3 <i>l.</i> to 3 <i>l.</i> 10 <i>s.</i>	
Machynlleth	1	..	15 <i>s.</i> to 20 <i>s.</i>	No.	30 <i>l.</i>	20 <i>s.</i> to 30 <i>s.</i>	3	60 <i>l.</i>	3 <i>l.</i> to 3 <i>l.</i> 10 <i>s.</i>	
Newtown	2	..	2 <i>l.</i>	..	..	..	4	70 <i>l.</i>	5 <i>l.</i>
Pwllheli	1	5 <i>l.</i> to 9 <i>l.</i>	14 <i>s.</i> to 20 <i>s.</i>	About 185.	16 <i>l.</i> to 20 <i>l.</i>	30 <i>s.</i> to 40 <i>s.</i>	2 & 3	16 <i>l.</i> to 25 <i>l.</i>	2 <i>l.</i> to 2 <i>l.</i> 10 <i>s.</i>	
Ruthin	1	18 <i>l.</i>	25 <i>s.</i>	No.	32 <i>l.</i>	..	2	40 <i>l.</i>	..	
St. Asaph	1	10 <i>l.</i> to 20 <i>l.</i>	25 <i>s.</i> to 30 <i>s.</i>	No.	20 <i>l.</i> to 30 <i>l.</i>	30 <i>s.</i> to 50 <i>s.</i>	2	30 <i>l.</i> to 50 <i>l.</i>	50 <i>s.</i> to 70 <i>s.</i>	
Wrexham	1	12 <i>l.</i> to 20 <i>l.</i>	18 <i>s.</i> to 50 <i>s.</i>	..	24 <i>l.</i> to 40 <i>l.</i>	50 <i>s.</i> to 70 <i>s.</i>	3	40 <i>l.</i> to 60 <i>l.</i>	4 <i>l.</i> to 5 <i>l.</i>	

* Dwelling-rooms include both day and sleeping-rooms.

It appears, then, upon a review of this table, that within these unions are comprised no inconsiderable number of dwellings in which the whole accommodation consists of a single room; that the average description, at least in North Wales, affords but one sleeping-room for the whole family, in which it is stated in the Returns themselves, generally from four to five individuals are sleeping, and sometimes eight to ten.

Notwithstanding this crowded and deplorable state of these habitations, contagious diseases do not appear to have generally prevailed, and in three instances only, viz., in the Wrexham, Bala, and Festiniog unions, are they at all attributed to this origin. For the distinction thus indicated between these and their neighbouring unions I am aware of no reason, and I feel more inclined to believe that the real cause is rather to be found in the habits of the inmates than in the construction of the dwellings.

I have not introduced into the above table any statement of the cost of repairs; but upon that point desire to refer you to the answers themselves. The question must so entirely vary with the condition of the cottage, and the period which has elapsed since its erection, with the size and habits of the family of the occupier, and with the character of the landlord, that I am satisfied that no general statement can be made out with confidence. If this be true in an instance where there is no reason for concealment, still more does the difficulty prevail as to that part of your inquiry which relates to the proportion which the rent bears to the average income of the labourer.

The income of the labourer is a point upon which I believe most inaccurate opinions are entertained; the nominal day wages of the country are assumed as the basis of the calculation, and a round sum added thereto for the several harvests of the year. I suspect this to be a very loose way of estimating the labourers' means, and I believe that the incomes of that class exhibit an astonishing variety that baffles any general deduction. Having previous to this inquiry felt the importance of obtaining, if possible, some data, small as they might be, that at any rate might be relied on, I directed returns to be prepared for me of the amount paid for twelve months to my own labourers, all of whom would be nominally in the receipt of the same wages, and, consistently with their skill, enjoying the same general means of acquiring them. The following analysis, however, will show the discrepancy of the receipts.

[NOTE.—The following table exhibits only the amount paid to the *regular* labourers on ten farms, exclusive of the amount (equal to two-fifths of the whole of the labour employed) earned by casual labourers during the different harvests and other busy periods of the year from which no data can be derived.]

It appears from this table that if the gross payment were equally divided among the 28 labourers therein enumerated, it would give an average of 12*s.* 3*d.* per week to each. But confining the investigation to the 20 married labourers, we find that their average earnings amount to 14*s.* 7*d.* per week, showing an excess of 32 per cent. beyond the ordinary rate of day wages, viz. 11*s.* per week.

But however useful such a deduction may be as affording data for the calculation of the gross amount divided among any given class, still it affords no practical information as to the individual means in any given case, nor even, in fact, as to the majority of the cases of which the class is composed. This will immediately appear from the following analysis of the above 20 cases:—

Earnings.		No. of Cases.	Earnings.		No. of Cases.
<i>s.</i>	<i>s.</i>		<i>s.</i>	<i>s.</i>	
10 and under	11 per week.	1	16 and under	17 per week.	1
11	12	3	17	18	1
12	13	3	18	19	0
13	14	3	19	20	1
14	15	4	20	21	1
15	16	1	21	22	1

Here then we see that while only four have really obtained the exact average rate of receipts, ten of these labourers have failed in so doing, and six have considerably exceeded it. Any argument, therefore, founded on the *average* means of these 20 labourers, as the data of their ability to pay a greater or lesser amount of rent would, in four-fifths of the cases, be practically false.

Before dismissing this part of the subject, I will mention a circumstance not to be lost sight of, that in the seven counties within my district, those habitations which are the most destitute of accommodation, and which abound most in filth and impurities, are decidedly to be found in the occupation of those classes who obtain by far the highest wages. The hovels of the colliers and the miners are of the lowest description, though their wages average from 15*s.* to 30*s.*, and even upwards, per week.

With reference to any legislative enactment in the nature of a Building Act, I can form no opinion without having before me the specific measures that might be proposed to be introduced. In towns such a measure might be useful and justifiable, as far as preventing those nuisances which, when generated, would, even at present, form the subject of a penal proceeding, but in the rural districts it is difficult to see how it could be made operative. It is true, it might be enacted that every room should have the ventilation of a chimney, but unless in actual use it would invariably be stuffed with straw. Windows might be required to be made

of a given size, but there would be no security that they would therefore be opened.

The table already given shows that many cottages contain only a single bed-room, and hardly any more than two. Cottages, however, have been erected with a third sleeping-room, and indeed I have done it myself, but without producing the result intended. The third, and even the second, are made the means of increasing the income of the occupier, by underletting them, rather than of promoting the decency which was the object. The animal wants are far more importunate than the proprieties of life, and I believe there is small chance of refining a pauper population by Act of Parliament. A cottage which is adapted only for a small family will be occupied by a larger one if it can be obtained at a lower rent, and the labourer who builds his house for himself will necessarily erect but a hovel, unless he be prohibited from building altogether.

I am, Gentlemen,

Your obedient servant,

WILLIAM DAY,

Assistant Poor Law Commissioner.

The Poor Law Commissioners.

No. 17.

ON THE STATE OF THE LABOURING CLASSES IN THE MANUFACTURING DISTRICTS OF LANCASHIRE, CHESHIRE, DERBYSHIRE, AND STAFFORDSHIRE.

BY CHARLES MOTT, ESQ.,

Assistant Poor Law Commissioner.

GENTLEMEN,—The inquiry which her Majesty has been pleased to direct to be made, as to the extent to which the causes of contagious diseases prevail in the various parts of England, and the several points to which I am required by the circular from your Board, dated 8th November, 1839, to direct my attention, involve questions of such magnitude and importance, more especially as regards this extraordinary district, that I despair of being able, from the nature of my other engagements, to supply all those minute points of information so essential to a right understanding of the condition of the working classes of England; I am compelled to offer my observations to the Board in an irregular and unconnected form, and my Report will necessarily be as concise as the nature of the communications which I have to make will allow.

The circumstances promoting the prevalence of contagious and

infectious diseases in large towns in the district assigned to me will be reported to your Board by several eminent and experienced medical gentlemen, who have most kindly volunteered their valuable assistance in furtherance of the important objects of the inquiry.

I have, nevertheless, thought it my duty to submit extracts from the reports of several union officers, all tending to establish the necessity for some immediate remedial measures.

There are many points of inquiry, intimately combined with the social and domestic condition of the labouring classes, into which I have been led whilst procuring information upon the subject of their dwellings.

It might be considered out of place to offer any observations upon them in this report; but the growing importance of all matters connected with the social and physical condition of the manufacturing population renders it desirable that a minute inquiry should be made into the general habits of the working classes, in order, if possible, to institute some means whereby to check that reckless waste so common amongst them in all their domestic arrangements.

Mr. Bland, medical officer of the Macclesfield union, gives the following statement of the dwellings of the poor in the township of Macclesfield:—

“ In a part of the town, called the Orchard Watercoates, there are thirty-four houses without back doors, or other complete means of ventilation; the houses are chiefly small, damp, and dark; they are rendered worse with respect to dampness, perhaps, than they would be, from the habit of the people closing their windows to keep them warm; to these houses there are three privies uncovered. Here little pools of water, with all kinds of offal, dead animal and vegetable matter, are heaped together, a most foul and putrid mass, disgusting to the sight, and offensive to the smell; and thus contagion spreads periodically itself in the neighbourhood, and produces different types of fever and disorders of the stomach and bowels. The people inhabiting these abodes are pale and unhealthy, and in one house in particular are pale, bloated, and rickety.

“ In King-street there are fifty houses without back doors. Fever of the most severe and fatal kind is often to be met with in this neighbourhood; the inhabitants of these houses are far the worst part of the lowest English and Irish paupers. In themselves they are improvident; the houses indifferently furnished; a frying-pan, stool, and box for a table I have seen the only pieces of furniture; the bed on the floor; their clothes are dirty and ragged, and their stockings full of holes, and often without shoes, so that in wet and severe weather malignant fever and inflammation are prevalent. I have attended a family of six in one room, and four in a bed, in this street. The cellars of one or two houses on the right I have seen receptacles of dung and other refuse matter, upon the removal of which the stench was so bad as to cause much illness in the neighbourhood.

“ In the Danes there are thirty-four houses without back doors, a

great number being double houses. The soil here is of a clayey nature ; and there being no drains, the surface gutters are constantly filled with putrifying matter. The privies are quite open ; and an inhabitant observed to me lately that, since her residence in this neighbourhood, death had visited every house round about.

“ On Bank Top and vicinity there are one hundred houses without back doors. It is fortunate that the situation here is elevated and exposed to the full play of the north-east winds from the Derbyshire hills ; but even with such advantages disease is very prevalent in this district. The houses are of the second and lowest class of cottage property.

“ The same remarks apply to the parts called Step Hill, Gutters, Bunker’s Hill, and neighbourhood. On the east side of the old church there are from thirty to forty houses without back doors. The privies all about this neighbourhood are a most disgusting sight, added to the collection of the refuse water from the houses above, produce a most offensive odour.

“ There are forty on the common at the Smelt House without back yards, and numbers at a place called Soho : they are of the description of cottage dwellings, and surrounded by great accumulations of filth and collections of stagnant water, winter and summer. They who breathe the largest dose of the exhalations of such poisoned matter, it will be seen, are the people who inhabit these wretched abodes, and whose strength of constitution and weakened state render them incapable of resisting such exposure.

“ I am now attending several fever cases in the above-named places, brought on evidently from the improvidence of the parties themselves. Their houses scarcely contain a particle of furniture ; a few broken cups, jugs, and saucers appear on the shelves in the house-place, straw in the room above for the bed, and the coverlid a straw mattress. Besides being exposed to the noxious agents in these localities, there is the present unhealthy state of the atmosphere, arising from the open winter, producing, as it does, measles, scarlet fever, small-pox, and a typhoid fever among children of a very bad kind. Such cases, and they are really very numerous among the lowest class of English and Irish poor, form a very heavy tax upon the town, for with their broken-down constitutions, the effects of intemperance, and the pernicious influence of animal and vegetable poisons they are constantly and unconsciously subject to, produces, as it enters the blood by the lungs, various diseases in their feeble constitutions, which are no sooner relieved than they appear again as formidable as ever.”

Mr. Weston, clerk to the Cheadle union, states that—

“ A great number of the cottages of the lowest class are ill built, small, and miserably defective in those arrangements that are so essential to ventilation and cleanliness ; generally small puddles are found close to the buildings, into which dung and decayed vegetables are thrown ; these frequently prove a source of miasmatic effluvia.

“ Few of these cottages have more than two rooms, an under and an upper one ; the man, wife, sons, and daughters sleeping in the same apartment, a practice I have no doubt productive of great moral evil. In some of the parishes the house, or, more properly speaking, the hovel,

often contains but one room, the dimensions varying from six to ten feet square; the interior of these wretched holes is most miserable, the families are huddled together, seldom a casement in the window, the door is generally closed, and when opened a noisome stench meets the visitant."

Mr. Thomas Rowley, relieving officer of Leek union, informs me that—

"The cause of the extension of fever may readily be traced to the want of cleanliness and ventilation; houses in this neighbourhood often consist of only one room, without windows, in which the inmates, varying from three to thirteen in number, live and lodge. They are often made of mud; sometimes there are two apartments, the least of which is occupied by a horse, ass, cow, or pig. The odour arising is often so great as to make it dangerous to enter their dwellings. Privies are never seen; dung and all kinds of filth are scattered about near their dwellings."

Mr. George Wheelhouse, relieving officer, Eskington district, Chesterfield union—

"Wherever contagious fever occurs, it invariably begins in situations where want of ventilation and inattention to general cleanliness are most remarkable."

Mr. George Livesay, relieving officer, Northwich union—

"The cottages built now have seldom gardens attached to them. I consider the comforts of the poor would be greatly increased if they had plots of ground in connexion with their cottages.

"Naked walls compel the occupants of premises, when out of work, to go for relief; whereas in places where they have plots of ground, they generally provide for winter by growing potatoes, keeping a pig, &c.

"Sickness has prevailed, and, I believe, commenced in the lowest description of property, and among those of slovenly and disorderly habits."

Mr. Daniel Charlton, relieving officer, Stockport union—

"The small-pox has been prevalent in the township of Hyde and Werneth; it is supposed to have been introduced into the township of Werneth by vagrants in the lodging-houses there. The typhus fever has been prevalent in the lowest class of houses, in Hyde principally, where the drainage is indifferent, and where inattention to cleanliness on the part of the occupants is apparent."

Mr. John Wright, relieving officer, Tamworth union—

"Some of the houses in the back streets and courts of Tamworth, particularly those comprised in Class No. 1, are in a wretched state with respect to the common conveniences of life, being adjacent to stagnant ditches and pools of water, and having only one privy, common to many houses, and hemmed in with piggeries, &c., most of these houses having no back doors, the consequence of which is, that fevers and other disorders, generated by filth and malaria, are very prevalent, particularly in humid weather."

Mr. Elias Barlow, relieving officer, Wolstanton and Burslem union—

“The townships of Knutton and Chesterton have been visited with fever for several months; and it still continues its raging influence, particularly in Knutton, the reason of which appears to me to be want of drainage, owing to the houses having been built upon low marshy ground; and also want of ventilation, owing to the houses being too small, and having no back doors. It first made its appearance in the lowest class of houses, but has since extended to others.”

Dr. Howard states—

“I have recently had three cases of fever in one house, in a small confined court in Back Factory street. The house is inhabited by seven persons, and consists but of two small rooms, about ten feet square, in one of which all these individuals sleep upon the floor, for they have no bedsteads and very little bed-covering.

“The passage to this court is almost impassable from filth, and directly opposite the house in question is placed an open cesspool, which is the only receptacle for all the refuse and excrementitious matter from the whole court, and many of the neighbouring houses.”

The following statement was made to me by *Mr. Watkinson*, the intelligent relieving officer of Chorlton-upon-Medlock union—

“In a cellar in Reform street, Jenkinson street, a family, consisting of a man, his wife, and two children, income 10s. per week, out of which they pay 1s. 9d. rent. A very damp cellar, in which there is a privy over the food cupboard, the filth from which up to a late period had completely soaked through, causing a constant unpleasant smell, and, as the wife states, no doubt caused the death of one of her children. Cellar in Market street, Charles street, occupied by a man and his wife, with another man and his wife and one child, as lodgers. These five persons eat, drink, and sleep in one room $3\frac{1}{2}$ yards by four, in front of which, within three-quarters of a yard of the door, is a stagnant pool or hole, capable of holding about two buckets of water gathered by rain, and when full must be laded out, otherwise the dwellings would be flooded; in summer this hole creates a loathsome smell.

“Cellars are very damp and unwholesome for dwellings, each row having at one end a privy soaking through to the cellars underneath it. In cellars there are generally persons and families in a state revolting to humanity.

“The greatest privation the inhabitants of cellars experience is want of fire; they deem it essential to have a fire by night as well as by day; and when this cannot be obtained, the damp air is overpowering to the constitution, and this, added to the scantiness of bed-covering, brings on a variety of diseases.

“There are also some small dwelling-houses nearly as damp as cellars, and, to keep them inhabited, landlords suffer a portion of the rent to fall into arrear, and when a tenant complains or expresses a wish to leave, they are threatened with an execution.

“A case of this sort was a heavy tax to the township to which the family belonged: sickness was constantly there. I required the family to move; at the same time directed the tenant to promise the landlord to pay off the arrears at a few pence per week; the landlord refused to

accede to this offer. I then gave peremptory orders for removal, at the same time giving notice to the landlord that, in case of his levying an execution, I should replevy, as there would be no difficulty in proving that the house was not tenatable. After this, another of my paupers, a widow, took the same house, and in a few days was attacked with fever and rheumatism. I requested her to quit, and she did so. The landlord was very wroth and took preliminary steps to bring an action against me, but he thought it more prudent to retrace them.

“ I was sent for to visit a case in Silver street, Hulme; the woman was found so severely diseased that, to effect a removal to the hospital, I was compelled to hire a coach; on looking round, I found there was only one bed, and was then informed that the diseased woman had for many weeks laid in the same bed with the man and his wife, the occupants of the cellar.

“ In another cellar, a few weeks since I found a woman, who had sent to me to afford relief, and who had been delivered of a child in the same bed occupied by a man and his wife, in which she had several weeks been accommodated.

“ In a lodging-house, consisting of one sitting-room and one bed-room, in the bed-room there were three beds, in one of which were an aged man, his son, and a lodger; in another was the aged man’s wife and two daughters, one fifteen and the other twenty; in the third was a family of lodgers, consisting of a man, his wife, and child.

“ Several cases have come under my notice where husband and wife and a whole family lay in one room; great boys and girls resting upon one (so called) bed. On bringing such cases before the Board of Guardians of the Chorlton union, I have always received instructions to remedy them. I have not been called upon to furnish means for interment of any child belonging to the union, as having died of scarlet fever or measles, although these disorders have prevailed extensively for the last two months; although, as registrar of our district, I have registered as many as 17 in one week from these causes, and am registering at least 10 deaths weekly as an average at this period. Having registered the births of many of these children, I can speak to their having been inmates of dirty, stinking dwellings, and of their parents being of filthy appearance and loathsome smell. In many cases I have been compelled to retire to the door to perform my duties, in order to avoid the most offensive stench. Many of these were in houses not subject to the same want of drainage and ventilation as the cellars, but where cleanliness only is wanted to make them healthy. I have not registered of late one child said to have died of fever or measles having parents of the middle or higher classes of society.”

Of the existence of this state of society I could only give one continued chain of proofs, the recital of which would be painful and disgusting in the extreme.

COMPARATIVE ECONOMY.

It is unquestionably true that the deplorable state of destitution and wretchedness, the existence of which is too notorious to be desired, might in most cases have been averted by common prudence and economy. In the manufacturing towns, the aggregate

income of a family is comparatively large, but the practice of allowing children and youths to receive and appropriate their own wages renders, from so many heads of profuse expenditure, the separate incomes quite inadequate, which, under combined and economical management, would be more than sufficient to supply the wants of a large family.

The ruinous state of ignorance in all matters of domestic economy under which they live entails upon them habitual destitution in their household managements.

The disgusting habits of self-indulgence, in both males and females, at the beer and spirit-shops, with their want of economy in expending their weekly income, keeps them in a continued state of destitution and filth, and explains the reason why some families of the labouring classes support themselves in cleanliness and comparative comfort with limited means, whilst others, with the largest amount of income, are always to be found in a state of want and wretchedness. The following cases will serve as examples:—

Contrast in the Economy of Families.

1.

Cellar in Wellington-court, Chorlton-upon-Medlock; a man, his wife, and seven children; income per week 1*l.* 11*s.*; rent 1*s.* 6*d.* per week; three beds for seven, in a dark, unventilated back room, bed-covering of the meanest and scantiest kind—the man and wife occupying the front room as a sleeping-room for themselves, in which the whole family take their food and spend their leisure time; here the family is in a filthy destitute state, with an income averaging 3*s.* 5¼*d.* each per week, four being children under 11 years of age.

2.

Cellar in York-street, Chorlton-upon-Medlock; a man a hand-loom weaver, his wife and family (one daughter married, with her husband forms part of the family). comprising altogether seven persons; income 2*l.* 7*s.* or 6*s.* 8½*d.* per head, rent 2*s.* Here, with the largest amount of income, the family occupy two filthy, damp, unwholesome cellars, one of which is a back place without pavement or flooring of any kind, occupied by the loom of the family and used as a sleeping-room for the married couple and single daughter.

3.

John Salt, of Carr Bank (labourer), wages 12*s.* per week; a wife, and one child aged 15; he is a drunken, disorderly fellow, and very much in debt.

1.

In a dwelling-house in Chorlton union, containing one sitting-room and two bed-rooms. A man, his wife, and three children; rent 2*s.* 6*d.* per week; income per week 12*s.* 6*d.*, being an average of 2*s.* 6*d.* per week for each person. Here, with a sickly man, the house presented an appearance of comfort in every part, as also the bedding was in good order.

2.

In a dwelling-house, Stove-street, one sitting-room, one kitchen, and two bed-rooms, rent 4*s.* per week. A poor widow, with a daughter also a widow, with ten children, making together 13 in family; income 1*l.* 6*s.* per week, averaging 2*s.* per head per week; here there is every appearance of cleanliness and comfort.

3.

George Hall, of Carr Bank (labourer), wages 10*s.* per week; has reared ten children; he is in comfortable circumstances.

4.

William Haynes of Oakamoore (wire-drawer), wages 17. per week; he has a wife and five children; he is in debt, and his family is shamefully neglected.

5.

George Locket, of Kingsley (boatman), wages 18s. per week, with a wife and seven children; his family are in a miserable condition.

6.

John Banks, of Cheadle (collier), wages 18s. per week, wife and three children; his house is in a filthy state, and the furniture not worth 10s.

7.

William Weaver, of Kingsley (boatman), wages 18s. per week, wife and three children; he is a drunken, disorderly fellow, and his family entirely destitute.

8.

Richard Barlow, of Cheadle (labourer) wages 12s. per week; wife and five children, in miserable circumstances, not a bed to lie on.

9.

Thomas Bartlem, of Tean (labourer), wages 14s. per week, his wife earns 7s. per week, five children; he is very much in debt, home neglected.

10.

Thomas Johnson, of Tean (blacksmith), wages 18s. per week, his wife earns 7s. per week, three children; he is very much in debt, and his family grossly neglected.

4.

John Hammonds, of Woodhead (collier), wages 18s. per week; has six children to support; he is a steady man, and saving money.

5.

George Mosley, of Kingsley (collier), wages 18s. per week; he has a wife and seven children; he is saving money.

6.

William Faulkner, of Tean (tape-weaver), wages 18s. per week; supports his wife and seven children, without assistance.

7.

Charles Rushton, of Lightwood-fields, wages 14s. per week; he supports his wife and five children in credit.

8.

William Sargeant, of Lightwood-fields (labourer), wages 13s. per week; he has a wife and six children, whom he supports comfortably.

9.

William Box, of Tean (tape-weaver), wages 18s. or 20s. per week; supports his wife in bad health, and five children.

10.

Ralph Faulkner, of Tean (tape weaver), wages 18s. or 20s. per week; supports a wife and five children, three of them are deaf and dumb.

There are circumstances attending the local position of Manchester which might be urged in palliation of some of the habits of the working classes.

There are no public walks or places of recreation by which the thousands of labourers or families can relieve the tedium of their monotonous employment. Pent up in a close, dusty atmosphere from half-past five or six o'clock in the morning till seven or eight o'clock at night, from week to week, without change, without intermission, it is not to be wondered at that they fly to the spirit and beer-shops and the dancing-house on the Saturday nights to seek those, to them, pleasures and comforts which their own destitute and comfortless homes deny.

Manchester is singularly destitute of those resources which conduce at once to health and recreation. With a teeming popula-

tion, literally overflowing her boundaries, she has no public walks or resorts, either for the youthful or the adult portion of the community to snatch an hour's enjoyment.

The prospect of obtaining any wide area to be appropriated as a public walk or otherwise for the use of the labouring classes becomes more remote each year, as the value of the land within and in the neighbourhood of the town increases.*

The town council of Liverpool has in the most praiseworthy manner instituted an inquiry into the condition of the poor of that town. It is proposed to erect baths for the accommodation of the poor, and to establish public walks and places of recreation for the public, at an expense of 100,000*l.*; should this be accomplished, it will indeed be creditable to the liberality and attention of the legislature of that important town.

The princely gift of Mr. Strutt to the town of Derby for the recreation of the inhabitants of that important and increasing town is beyond all praise.

DWELLINGS.

An immense number of the small houses occupied by the poorer classes in the suburbs of Manchester are of the most unsubstantial character; they are built by the members of building clubs, and other individuals, and new cottages are erected with a rapidity that astonishes persons who are unacquainted with their flimsy structure. They have certainly avoided the objectionable mode of forming underground dwellings, but have run into the opposite extreme, having neither cellar nor foundation.

The walls are only half brick thick, or what the bricklayers call "brick noggin," and the whole of the materials are slight and unfit for the purpose.

I have been told of a man who had built a row of these houses; and on visiting them one morning after a storm, found the whole of them levelled with the ground; and in another part of Manchester, a place with houses even of a better order has obtained the appellation of "*Pickpocket Row*," from the known insecure nature of the buildings.

I recollect a bricklayer near London complaining loudly of having to risk his credit by building a house with 9-inch walls, and declared it would be like "*Jack Straw's house*," neither "*wind tight nor water tight*!" his astonishment would have been great, had he been told that *thousands of houses* occupied by the labouring classes are erected with walls of 4½ inch thickness.

The building land is not let, as in the south, on lease, but on a perpetual ground-rent, or chief-rent as it is called here, at per square yard, and not, as in London, at per foot frontage.

The chief rents differ materially according to the situation, but

* History of Manchester.

are in all cases high; and thus arises the inducement to pack the houses so close.

They are built back to back, without ventilation or drainage; and, like a honeycomb, every particle of space is occupied. Double rows of these houses form courts, with perhaps a pump at one end and a privy at the other, common to the occupants of about twenty houses.

I have not been able to obtain any correct return of the number of houses built by the various building-clubs or societies.

A gentleman conversant with these subjects informed me that there had probably been, from the commencement, 150 of these building societies. Taking each club at 100 shares of 100*l.* each, there must have been raised in this manner for building cottages 1,500,000*l.*; and calculating each house to cost 60*l.*, which is a high average, there has been not less than 25,000 houses erected by building societies in Manchester and the adjacent townships.

These building clubs have doubtless induced many to adopt frugal habits, in order to become owners of cottages; but I am afraid it will be found that the promoters of them are not free from selfish and interested motives.

The members engage to pay by subscription or instalment 10*s.* per month.

Thus every second month, in a club of 100 shares, they have 100*l.* available for building; and this is disposed of in the following manner:—

A day is fixed when the amount is to be tendered for, and those who will make the greatest sacrifice, or allow the largest discount, may obtain the amount.

If a member have fixed upon a spot and is desirous of building a cottage, he is perhaps induced to offer 10*l.* for the immediate payment of the 100*l.*; another may probably offer 15*l.* or 20*l.*, that is to say, they are willing to receive 80*l.*, 85*l.*, or 90*l.* present payment for their 100*l.* share in the society.

Their monthly instalments, to complete their engagements to the club, are secured by a mortgage upon the houses, the money being only advanced as the building progresses. In this manner a member is enabled to get a house built in his own name by the time he has paid 20*s.* to the society.

The first applicants for the money are those who have the strongest inducements to procure the advance and offer the largest discounts. The heavy discounts allowed for the advances, and the forfeitures by non-performance of the conditions, enable those members who can wait, and are interested in establishing these societies, to get abundantly paid for their outlay and exertions.

The following statement, published by the "Manchester Statistical Society on the Condition of the Working Classes," prepared by a committee from information obtained by personal visits

from house to house, by four intelligent agents, at considerable cost to the society during the years 1834, 1835, and 1836, will serve to explain, to a certain extent, the nature of the dwellings of the manufacturing population in Manchester:—

Rents of the Dwellings examined.

	Number of Dwellings.		
	Manchester.	Salford.	Total of Manchester and Salford.
Paying a weekly rent of 1s. and under	184	12	196
Ditto exceeding $1\ 0$, not exceeding $1\ 6$	2935	950	3885
Do. do. $1\ 6$ do. $2\ 0$	3585	1200	4785
Do. do. $2\ 0$ do. $2\ 6$	4913	1711	6624
Do. do. $2\ 6$ do. $3\ 0$	4939	2068	7007
Do. do. $3\ 0$ do. $3\ 6$	3121	1298	4419
Do. do. $3\ 6$ do. $4\ 0$	3031	949	3980
Do. do. $4\ 0$ do. $4\ 6$	1614	465	2079
Do. do. $4\ 6$ do. $5\ 0$	1226	428	1654
Do. do. $5\ 0$ do. $5\ 6$	582	141	723
Do. do. $5\ 6$ do. $6\ 0$	393	85	478
Do. do. $6\ 0$ do. $6\ 6$	346	46	392
Do. do. $6\ 6$ do. $7\ 0$	87	30	117
Do. do. $7\ 0$ do. $7\ 6$	101	5	106
Do. do. $7\ 6$ do. $8\ 0$	161	31	192
Do. do. $8\ 0$ do. $8\ 6$	46	4	50
Do. do. $8\ 6$ do. $9\ 0$	18	1	19
Do. do. $9\ 0$. . .	97	15	112
Rents not ascertained . . .	807	99	906
	28,186	9538	37,724

28,186 dwellings in Manchester at an average weekly rent of 2s. 11 $\frac{1}{4}$ d.
9,538 dwellings in Salford, average weekly rent 2s. 10d.

37,724 dwellings in Manchester and Salford, weekly rent 2s. 11d.

By this statement it appears that of the number of dwellings visited, amounting to 37,724, the average weekly rental of 8,866 of these dwellings averaged only 1s. 6d. per week.

No just estimate, however, can thus be formed of the actual rentals paid by the poorer classes in large towns for their miserable dwellings, nor of the state of degradation to which thousands of them are reduced.

The occupants of the night asylums are chiefly tramps and beggars, the customary tenants of the lowest lodging-houses, who find a mug of coffee, with half a pound of bread, a warm room, and a blanket, far preferable to the filthy crowded lodging-houses, with four or five inmates in a miserable bed, at 3d. each.

Mr. Walker, the proprietor of an extensive silk-mill at Patri-

croft, near Manchester, describes the crowded state of an Irishman's house near his mill some time back. The man was employed by Mr. Walker as watchman, and lived in a cottage of three small rooms, near the premises, without back door or windows. Mr. Walker had engaged some fresh hands from a distance, and was desirous of procuring lodgings for them near their work; he asked the Irishman if he could accommodate them in his house; Paddy regretted that he had not room, and added, "*Faith, I turned out thirty of them to the mills this morning;*" so that at 9d. per week each, he would receive at the rate of near 40*l.* per annum, as rent for the house for which he probably paid 2*s.* 6*d.* per week.

One shilling may be considered as the minimum weekly rent at which the owners or landlords will let their cellars or rooms, or take the trouble to collect; but on inquiry I have found that a second or intermediate class of landlords are interested, and that these shilling rentals are again sub-let and divided by the tenants to a still more needy class; and the rooms are not considered fully occupied while there is space for others to "pig," or stow themselves on the floor; and the accommodation is sought by men and women of the lowest grade, without reference to sex or decency.

On asking the relieving officer of the Chorlton-upon-Medlock union if he knew that such a practice prevailed, he replied, "Oh yes, it is very common; I know a woman who has taken a small cellar at 1*s.* per week, and she is desirous of having one or two lodgers to assist her in paying the rent."

In short, all my experience would confirm the opinion entertained by Mr. Walker, the late stipendiary magistrate of Lambeth-street, that "if facilities were offered, there is no conceivable degradation to which portions of the human species might not be reduced; if you will give the accommodation, you will get the occupants. If you will have marshes and stagnant waters, you will there have suitable animals; and the only way of getting rid of them is by draining the marshes."

An exposition of this deplorable state of society would perhaps imply censure on those to whom the police or municipal arrangements are entrusted; but no blame can fairly be attributed to the local authorities.

In no place in England can more anxiety be shown to remedy the evils which I have described, or more humane and philanthropic desires evinced to improve the condition of the poor, than those which exist on the part of the wealthier classes in Manchester; and the following statement, made up to the end of October in the past year, of the improvements within the last eight or nine years, since the obtainment of the Manchester Police Act in 1830, will prove that the Commissioners have not been

inattentive to their duties, as far as their functions enable them to act:—

Number of streets paved and sewered		181.
	Miles.	Yards.
Length of streets paved and sewered	16	540
Length of main sewers formed	15	678
Length of cross sewers formed	5	1223
Surface of streets paved, 289,971 square yards.		

The town of Manchester exhibits evident marks of improvement by these gratifying exertions of the local authorities; but the evils in several localities, I am afraid, are too deep rooted, and are of that extent and magnitude, that they will require more extensive powers than those possessed by the Police Commissioners, under the Manchester Improvement Act, passed in the years 1830 and 1832, to eradicate them.

The preceding statement of cottage tenements and dwellings is confined to Manchester and Salford; but, in order to obtain more extended information on this interesting and important subject, I prepared a form and sent it to each union, under the regulations of your Board in the district then assigned to me, of which the following is a copy:—(See p. 231.)

I required the relieving officers to make the returns for their separate district; and I annex the returns so made to this report. Some of the relieving officers evinced considerable skill, and acted with great promptitude, whilst others were negligent and, in short, required assistance. I believe, on the whole, the returns are tolerably correct. Before, however, truly accurate information can be obtained upon this, or any other subject, through the relieving officers of this district, (many of whose salaries do not exceed 60% or 70% a-year,) a better informed class, and better paid officers, will be required, than many of those now employed.

The annexed table (see p. 232), made up from these returns, will convey to your Board the best data I can procure on this subject.

The 24 unions included in this table comprised, according to the census of 1831, a population of 663,890; and by the returns, it appears that the

1st or lowest class Cottages amount in number to	37,119
2d ditto	46,050
3d ditto	26,322
	<hr/>
	109,491

Allowing $4\frac{1}{2}$ persons to each house or cottage, it would give for the

1st class	167,035
2d ditto	207,225
3d ditto	118,449
	<hr/>
Making a total of	492,709 persons,

TABLE showing the cost of Erection, Weekly Rents, Interest on the Capital invested, and the numbers of Tenements and Cottages occupied by the Poor and Labourers; taken from Returns made by the Relieving Officers of their respective Districts, in 24 Unions in the Counties of Cheshire, Stafford, Derby, and Lancaster.

	No. 1. Lowest Class of Cottages, average 1s. 3d. per Week, or £3. 5s. per Year, allow- ing for Repairs, &c.			No. 2. Second Class of Cottages, average 2s. 3d. per Week, or £5. 15s. per Year, allow- ing for Repairs, &c.			No. 3. Third Class of Cottages, average 3s. 6d. per Week, or £9. 2s. per Year, allowing for Repairs, &c.			Population.
	Number of Tenements or Cottages.	Average cost of erecting each Cottage.	Interest on the Outlay or Capital invested.	Number of Tenements or Cottages.	Average cost of erecting each Cottage.	Interest on the Outlay or Capital invested.	Number of Tenements or Cottages.	Average cost of erecting each Cottage.	Interest on the Outlay or Capital invested.	
		£.	Per Cent.		£.	Per Cent.		£.	Per Cent.	
Congleton	1,168	47	7	2,035	66	8 $\frac{1}{2}$	395	94	9 $\frac{1}{2}$	26,377
Macclesfield	2,481	38	8 $\frac{1}{2}$	3,864	60	9 $\frac{1}{2}$	2,557	84	10 $\frac{1}{2}$	50,639
Stockport	3,457	28	11 $\frac{1}{2}$	5,032	53	10 $\frac{1}{2}$	6,436	98	9 $\frac{1}{2}$	68,906
Altrincham	1,200	49	6 $\frac{1}{2}$	1,352	79	7 $\frac{1}{2}$	540	101	9	30,139
Northwich	1,615	52	6 $\frac{1}{2}$	2,121	75	7 $\frac{1}{2}$	212	89	10 $\frac{1}{2}$	26,906
Nantwich	1,994	47	7	1,158	74	7 $\frac{1}{2}$	471	108	8 $\frac{1}{2}$	30,992
Lichfield	1,281	34	9 $\frac{1}{2}$	1,227	68	8 $\frac{1}{2}$	320	148	6 $\frac{1}{2}$	22,749
Newcastle	1,502	57	5 $\frac{1}{2}$	1,135	78	7 $\frac{1}{2}$	251	136	6 $\frac{1}{2}$	16,476
Stoke-upon-Trent	2,181	45	7 $\frac{1}{2}$	5,610	60	9 $\frac{1}{2}$	946	90	10 $\frac{1}{2}$	37,220
Woolstanton and Burslem	2,292	50	7 $\frac{1}{2}$	2,993	90	6 $\frac{1}{2}$	295	150	6 $\frac{1}{2}$	23,567
Tamworth	1,278	47	7	376	69	8 $\frac{1}{2}$	134	117	7 $\frac{1}{2}$	12,175
Cheadle	1,438	40	8 $\frac{1}{2}$	805	67	8 $\frac{1}{2}$	169	101	9	14,473
Uttoxeter	672	29	11 $\frac{1}{2}$	471	40	14 $\frac{1}{2}$	125	115	7 $\frac{1}{2}$	12,837
Burton-upon-Trent	2,100	40	8 $\frac{1}{2}$	1,270	90	6 $\frac{1}{2}$	104	86	10 $\frac{1}{2}$	24,667
Leek	1,281	47	7	650	63	9 $\frac{1}{2}$	95	123	7 $\frac{1}{2}$	18,387
Chapel-en-le-Frith	713	60	5 $\frac{1}{2}$	215	79	7 $\frac{1}{2}$	627	140	6 $\frac{1}{2}$	10,448
Hayfield	270	50	6 $\frac{1}{2}$	534	80	7 $\frac{1}{2}$	1,050	90	10 $\frac{1}{2}$	9,493
Glossop	142	60	5 $\frac{1}{2}$	559	80	7 $\frac{1}{2}$	74	146	6 $\frac{1}{2}$	9,631
Bakewell	2,519	58	5 $\frac{1}{2}$	424	87	6 $\frac{1}{2}$	128	105	8 $\frac{1}{2}$	25,879
Chesterfield	1,969	45	7 $\frac{1}{2}$	2,618	70	8 $\frac{1}{2}$	661	107	8 $\frac{1}{2}$	34,246
Belper	3,324	40	8 $\frac{1}{2}$	2,542	67	8 $\frac{1}{2}$	1,026	155	5 $\frac{1}{2}$	33,388
Derby	1,035	45	7 $\frac{1}{2}$	2,855	75	7 $\frac{1}{2}$	5,445	75	12 $\frac{1}{2}$	25,484
Salford	680	53	6 $\frac{1}{2}$	3,741	46	12 $\frac{1}{2}$	4,261	83	10 $\frac{1}{2}$	52,366
Chorlton-upon-Medlock	527	44	7 $\frac{1}{2}$	2,463	54	10 $\frac{1}{2}$	26,322	92	9 $\frac{1}{2}$	46,465
	37,119	40*	8	46,050	65	8 $\frac{1}{2}$	26,322	92	9 $\frac{1}{2}$	663,890

* General Average.

or nearly three-fourths of the population living in houses at weekly rents from one shilling to four shillings each.

Of the first or lowest class, averaging 1*s.* 3*d.* per week rent, the occupants are of the poorest description of persons, paying frequently one-fourth of their income for rent; by which the landlords or owners realize about eight per cent. net on the outlay; whilst the dwellings are without ovens or boilers, and are often filthy, damp, and unfit for habitation; generally deficient of privies, or drainage; or, in manufacturing towns, one privy to 10 or 15 houses.

The second class of dwellings are occupied by a better class of labourers, paying about one-sixth of their incomes for rent; producing, perhaps, 8½ per cent. to the owners as interest on their capital; and although many of them are very defective, as regards drainage and privies, they are still much better provided than the class before described; and many of them have ovens or boilers.

Of the *third* or *best* class, the occupants being generally more skilled and a better paid class of workmen, whose rent amounts to about one-eighth of their income, producing 9¾ per cent. on the outlay to the owners; and here we find far superior accommodation and comparatively comfortable dwellings, well drained, and provided with privies; frequently gardens, and in most of them ovens or boilers.

These results confirm the lamentable fact, that the lower the poor are reduced in the social scale, the more are they subject to imposition and extortion.

The cottages erected by the manufacturers, and other respectable owners of cottage property, are very superior in every respect to those built or purchased by avaricious speculators, whose sole object is gain, and who enforce the payment of their rents with rigid severity. They are moreover commodious, clean, white-washed, and in many cases have the advantage of school-houses.

I confess that I entered on this inquiry with a strong impression that the owners of cottage dwellings realized a much larger percentage on the cost of the buildings than what the returns prove to be the fact.

One advantage the manufacturers or employers of labourers certainly possess,—they are enabled to secure their rents, by deducting the weekly amount from the wages of their tenants; but the dwellings of this description possess so many advantages of cleanliness and comfort, and the tenants exhibit such an improved condition, both moral and physical, as compared with the occupants of the inferior cottages, that the change would be well purchased at a much greater cost.

I had noticed an appearance of neatness and comfort about the cottages in the Glossop union, the townships of which, I believe, belong entirely to His Grace the Duke of Norfolk; and on ex-

pressing to T. Ellison, Esq., the Duke's agent, my wish to obtain some information as to the cost and other particulars, he promptly and kindly furnished me with a most satisfactory account in a letter, of which the following is a copy :—

The Hall, Glossop,
December 16, 1839.

MY DEAR SIR,

“ I shall be happy in affording you the information which I can command in reply to your various inquiries respecting the cottages or dwelling-houses of the operative classes in this locality, viz., ‘ the Glossop Union.’

The state of the Dwellings.—“ The state of the dwellings inhabited by the labouring classes are, generally speaking, of a substantial and superior character; built of stone, of which the district furnishes an abundant supply, of an excellent quality, and roofed with stone slating, of a strong and durable kind, and floored on the basement with stone flagging. The size of these dwellings will, generally, in external dimensions, be about 30 feet long, by 15 feet wide; the thickness of the walls about 20 inches, and the height of the rooms about 7 feet 9 inches. A dwelling of this description furnishes the inmates with the accommodation, upon the ground-floor, of a good front-room, in which the family live, and at the rear of which is a back-kitchen, or rather scullery, and also a pantry or cellar, used for both purposes, and generally forming a sub-story to the limited extent of it. The back-kitchen communicates by a door with the yard, which contains the necessary conveniences of privy, pigsty, and coal-house.

Size of the Building Plots.—“ The plot of ground, including the site of the dwelling, and the garden and yard for one cottage, will, upon an average, be about 150 square yards, taken upon a lease for 99 years, at an annual ground rent not exceeding, generally, and sometimes being under, one penny per square yard.

Cost of Building, Rent, and cost of Repairing.—“ The dwellings now described form the usual habitations of the working classes; and the average cost of them may be fairly estimated at 90*l.* each. This outlay will return 7*l.* per annum, as the gross rental, the net amount being (after deducting ground rent, parochial rates, and taxes, and allowing 7½ per cent. for repairs) 5*l.* 15*s.* per annum, or 6¼ per cent. upon the outlay.

Cellars and Drainage.—“ The ground rents upon which the cottage property is generally let within the Glossop union being moderate in its amount, there is little or no inducement for the construction of cellars, to let off as inhabited dwellings; and the consequence is, that no such nuisances exist in the cottage-houses of the district. From this circumstance arises a much greater facility of drainage, afforded by the superficial character of the drains required, and this added to the ready fall obtained from the undulating surface of the country, affords a ready, cheap, and ample drainage for the rapid transit of the impure and filthy waters into the mountain torrents, which rapidly flow through the valley.

Ventilation.—“ This most important desideratum is secured by attending to the construction of the dwelling-houses of the working-classes in a more isolated form than they are generally found in manufacturing districts. The houses are generally built upon detached plots of ground,

varying in extent from what is necessary for from 1, 2, 3, or 4, to as many as 8 or 10 houses, which form a distinct property; the buildings of which do not abut upon any adjoining ones, but admit of an intermediate vacant space for ventilation and separate access.

Masters' and Workmen's Dwellings.—"The cottages which have been the subject of the previous explanation are those constructed by the working-classes, out of the surplus produce of their labour; and constitute within the Glossop union a large proportion of the whole of the dwellings of the district. The cottages constructed by the master manufacturers for their workmen are of a similar character, but, generally speaking, arranged in large numbers, but nevertheless provided with the advantages of a good ventilation, drainage, and spacious roadways. These habitations are let, generally, for about 7*l.* per annum, the rent being paid weekly, and the parochial rates generally paid by the landlords.

How far the character of the Dwellings affects the habits of the Inmates, whether owners or occupiers.—"In the cottages built by the masters, every convenience of fixtures is provided by them, and the tenants have only their moveable furniture to provide. Their tenancies are, of course, of a precarious character, and subject to the abrupt termination of a week's notice to quit; consequently the persons occupying these buildings are not in the same independent condition as those who dwell in their own houses. Under the influence exercised by their employers, their habits of cleanliness, order and good conduct may be considered to a certain extent the result of regulations beneficially imposed upon them by their masters. I shall, therefore, refer to that portion of the labouring classes who occupy their own houses. Amongst them there is a decided improvement in their habits, feeling, and conduct. Their acquisition of the means to build their own houses proves their industry—their obtaining a permanent stake in the soil naturally creates in them a feeling in favour of the protection of, and not the destruction of, property; and in consequence their conduct is marked by an abstinence from those proceedings of riot, insubordination, and violence, which have so recently outraged the peace and threatened the life and property of the manufacturing districts. There is also this essential difference between the labouring man who is owner of his own habitation and the workman who is the casual occupier. Under the depression of trade, which often produces almost instantaneous destitution, the occupying workman becomes the immediate applicant for parochial relief, and indifferent as to the resumption of his labour and the exercise of his industry in maintaining himself and family, if he can obtain maintenance at the workhouse. On the other hand, the property of the operative owner of his house furnishes an indemnity of a substantial character against his chargeability upon the poor's rates; and one which stimulates the active exercise of his industry.

Rural or Agricultural Cottages.—"The locality forming the Glossop union having been in a state of transition from a rural to a manufacturing district, advancing within the last 40 years from a population of about 4000 to 14,000 inhabitants, does not present to observation any great proportion of the ancient dwellings of the district. A considerable number in a state of decay have been removed, to furnish sites for modern buildings, but those in existence are, generally speaking, though tolerably comfortable, yet incommodious, and low; and in some situations badly drained and ventilated. They are mostly kept in repair by

the occupiers, being let at rents varying from 1*l.* 10*s.* to 4*l.* 10*s.* per annum, according to their conveniences, &c.

Mode of originally providing and afterwards maintaining sufficient drainage and ventilation.—“The modern dwelling-houses and cottages are built upon leases for terms of 99 years. The land is laid out in regular form, under the personal superintendence of the agent or surveyor of the owner of the soil, with a provision for the requisite streets, avenues, passages, drains, sewers, and other conveniences.

“These are provided not only for the present, but for the prospective wants of the district, to secure the essential object of ventilation, drainage, spacious roads, and consequent salubrity, when it becomes more densely populated. These objects are obtained in the first instance, generally at the mutual expense of landlord and tenant, according to such arrangements as may be agreed upon between the parties under the circumstances of the case. The upholding and maintaining of the requisite roads, drains, and sewers, devolves upon the tenants, under the direction of the landlord, or his agent; who have power and authority to make an assessment upon the tenants for the purpose of providing the means of maintaining and repairing the roads, drains, and sewers, upon their respective premises, or appurtenant thereto, and also to provide such additional drainage from time to time as may become necessary.

Influx of Strangers.—“A portion of the population of this district consists of Irish and other strangers, who have formed at times their location here to meet the demands for labour. Amongst these persons generally, but particularly amongst the Irish, there has been a visible improvement in their habits and conditions. This I attribute, amongst other causes, to the necessity of their becoming the occupants of good and decent dwellings, if they settle in the neighbourhood, and to the impossibility of their huddling together in miserable habitations, as you generally find them in manufacturing towns. Their habits become more in keeping with those of their English neighbours, and cleanliness, peace and sobriety become gradually acquired by them, under the regulations of their employers, and their intercourse with orderly and industrious fellow-workmen. I am not aware that I have anything more to add to the preceding observations.

“The question of health is one, of course, which will be best answered by the medical faculty. As a general observation from a resident in the country for the last 30 years, I should pronounce it particularly salubrious.

I am, my dear sir,

Very respectfully and faithfully yours,

(Signed) THOMAS ELLISON.”

CHARLES MOTT, Esq.,

*Assistant Poor Law Commissioner,
Manchester.*

As a contrast to the cost and creditable state of the dwellings as described by Mr. Ellison, I may name as a fact related to me by one of the guardians of the Cheadle union, that on Biddulph Moor there is a sort of colony of non-descript residents, as remarkable for their singular traditions as for their demoralized and

filthy habits; many of them are freeholders, and from having portions of land attached to their huts, have votes for the county.

One of this class, meeting a person who was in the habit of erecting their dwellings, accosted him with—"Jack, what woul' build us 'house for?" "Fifty shillings," replied the man; "but if 'twants a good 'un, I'll have five pounds."

SUPPLY OF WATER.

Manchester is not deficient in the supply of water. The present Manchester and Salford Water Works Company was established in 1802. The works were first at Beswick, about a mile from Manchester, and were then supplied by an engine from the river Medlock.

The rapid increase of factories and other buildings suggested to the proprietors the necessity of procuring a supply at a greater distance from Manchester, and above ten or twelve years since the works were removed to the townships of Gorton, about four miles from Manchester, where the company possess about 88 acres of land, of which 60 acres are occupied as two large reservoirs. The supply to the town is daily. The reservoirs are capable of distributing two millions of gallons per day, but at present the quantity consumed daily is about 1,400,000 gallons. The company has facilities of obtaining a supply of pure water to any amount in the neighbourhood of Gorton.

The townships included in the limits of the Manchester and Salford Water Works Company comprise, according to the best estimate which I have been able to obtain, at least 75,000 dwellings, besides at least 10,000 factories and warehouses. The total number of assessments to the water-works does not exceed 28,000, and hence it follows that 50,000 houses in Manchester and the townships included in the limits of the company have no supply of water from the company.

The water supplied by the company has been analyzed by Dr. Dalton and other experienced chemists, and proved to be of very pure quality; it is extensively used by brewers, fancy silk-dyers, and others requiring pure water, and its anticorrosive qualities have recommended it to the Liverpool and Manchester Railway Company, where it is used for the steam-boilers in preference to the water easily obtained at their station in the Liverpool-road.

The capital of the company is too limited to enable the directors to keep pace with the demand for pipes occasioned by the extension of the township by buildings, &c.

The proprietors are applying for power to raise an additional capital to extend their main and collateral branch pipes, and every well-wisher to the health and comfort of the inhabitants must desire that they may succeed in their application.

There are numerous pumps and a plentiful supply of water within a few feet of the surface, to say nothing of the various tanks

and cisterns in factories and private dwellings, which in this proverbially rainy district are always abundantly supplied, but from the nature of the atmosphere, the rain-water is frequently like ink.

The Irwell and Medlock rivers run through the town of Manchester, but being receptacles for all kinds of filth and refuse, the water is too impure for general use.

In the suburbs of Manchester the water is generally procured through the medium of rain-water cisterns, or from very shallow wells by pumps; in the better class of houses it is generally filtered, but the poorer classes use it without any preparation.

The custom is for owners of small cottage property to erect a pump for the use of a given number of houses; this pump is frequently rented by one of the tenants, who keeps it locked, and each of the other tenants is taxed a certain sum per month for the use of it. One poor woman told me she paid 1*s.* per month. The water company give a plentiful supply to small houses at 6*s.* per year, or about half what this woman paid for a precarious supply from the subscription-pump.

The Stockport Local Act empowers the commissioners of that town to compel cottage owners to provide a good supply of water to their tenants.

The reports from the clerks of the unions relative to the supply of water to the poor are more satisfactory than I had expected.

The particulars of the supply of water to the towns are given in the letters which I have forwarded from the clerks of the unions.

In offering a few suggestions on the necessary remedial measures, I will venture to submit the following extract from a Report of the Select Committee of the House of Commons on inquiry into drunkenness, 1834.

“The right to exercise legislative interference for the correction of any evil which affects the public weal cannot be questioned without dissolving society into its primitive elements, and going back, from the combined and co-operative state of civilization, with all its wholesome and lawfully-imposed restraints, to the isolated and lawless condition of savage and solitary nature.

“The power to apply correction by legislative means cannot be doubted, without supposing the sober, the intelligent, the just, and the moral portion of the community unable to control the excesses of the ignorant and disorderly, which would be to declare our incapacity to maintain the first principles of government by ensuring the public safety.

“That the sound policy of applying legislative power to direct, restrain, or punish, as the cases may require, the vicious and contaminating propensities of the evil-disposed cannot be disputed, without invalidating the right of government to protect the innocent from the violence of the guilty, which would in effect declare all government to be useless, and all lawful authority to be without any intelligible object or end; an admission that would undermine the very first principles of society.”

The astounding facts which the present inquiry will bring to light, the danger by which society is threatened by the continuance of such a state of wretchedness and depravity, will incur a weight of moral responsibility that must force itself upon the attention of the legislature.

It would betray a degree of absolute weakness to expect that any permanent good would result from such mild and palliative measures as have been generally suggested.

All experience proves that local authorities cannot be trusted to enforce such regulations as would be necessary to remove the evils under which the working classes are labouring. The neglect of Commissioners of sewers and their surveyors, the old demoralizing system of Poor Laws, the abuse of charitable trusts, corporation funds, or the management of local taxation of what kind soever, have all failed in their intended benefits, and present one continued history of peculation and jobbing by those who generally interest themselves in these matters, or of supineness and inattention on the part of the more respectable and conscientious inhabitants.

The provisions of the best Acts of the legislature too often become obsolete or inoperative from the interested influence of those to whom the powers are entrusted.

If laws so mild in their nature, and containing powers so absolutely necessary for the cleaning and draining of towns or the removal of nuisances as those generally contained in the various local acts, have failed from the want of attention in the proper authorities in certain localities, can it be expected that the comparatively stringent regulations as it will be necessary to establish to remove the accumulated evils will be enforced by local powers without a controlling authority? I will venture to answer positively—No.

In 1837, an Act was obtained for “Improving and Regulating the Borough of Stockport,” which contains powers so strong, and, as it appears to me, so perfectly adapted to effect the improvement in the draining, cleaning, and building in towns, that I will venture to submit some of the clauses to the notice of your Board.

It invests the controlling power in the council of the mayor, aldermen, and burgesses of the borough, and the sections which I am desirous of bringing under notice are as follows:—

LXIII. Commissioners may cause common sewers, drains, vaults, culverts, and water-courses, to be constructed and made in, along, or across any of the streets, squares, places, highways, lanes, roads, paths or other public passages or entries within the borough; may cause the same to be altered, enlarged, repaired, cleansed or completed; may cause gravel, stones, bricks, &c. to be carried out of, or brought into streets, squares, places, highways, &c. &c.; may cause gutters or openings to be made for the carrying off filth from houses.

Commissioners may cause sewers, drains, vaults, to be made as aforesaid, through any enclosed lands or grounds. If owners of lands through which sewers are made be dissatisfied, they may apply to any justice of

the peace for the borough, not being one of the council, who shall appoint a day for hearing the complaint before him and the other justices of the borough. The justices then and there assembled are to inquire into and assess the recompense money which ought to be paid to the owners for injury or damage sustained.

LXIV. Provides that occupiers of houses are, at their own costs and charges, to form drains from the houses or buildings in their occupation to the common sewer, upon receiving notice from the clerk of the Commissioners. If occupiers neglect or refuse to comply, upon notice given, the Commissioners may cause the same to be forthwith done by any person acting under their authority. The costs and charges attending the same, when ascertained by the justices, are to be recovered from the occupier, and the occupier is to deduct and retain the amount out of his rent.

LXV. Private drains, which may by permission of the Commissioners issue into any of the public sewers, drains, or vaults, &c. are to be cleansed at the charge of the owners or occupiers of the lands or tenements to which such private drains shall belong.

XC. Provides that proprietors and owners of cottages, or tenements occupied by several distinct tenants, and also of tenements rated at less than 10*l.*, shall provide and keep in repair so many necessary houses or privies, with such proper doors or covering to the same, as the Commissioners shall consider necessary for the use of the tenants or occupiers thereof, and screen the same from public view. In default of doing this, upon notice given, every proprietor or owner making default shall pay a sum not exceeding 5*l.*, and 10*s.* for every week during which such house or privy shall not be provided, after expiration of such notice.

XCVIII. Is a clause for the prevention of nuisances. I do not see that it can be abridged. For the commission of any of the offences enumerated in it, the persons offending are to forfeit any sum not exceeding 5*l.*

Clause CI. further relates to nuisances, and authorises officers employed by the Commissioners to take, seize, and carry away all night-soil, carrion, offal, blood, filth or other offensive matter which shall be left in the streets after a certain hour in the morning; to seize and publicly to destroy any unwholesome flesh, meat, fish, or other article of food, and to apprehend the offender. Such offender may be convicted in any sum not exceeding 5*l.*, and in case of non-payment may be committed to the common gaol or house of correction, for any time not exceeding three calendar months.

Clause CV. enacts that penalties imposed by the Act shall extend to all streets, &c. though not highways.

Clause CVIII. empowers Commissioners to cause new pavements to be made in any present or future streets, squares, places, lanes, roads, paths, &c. &c. within the borough of Stockport; and also such streets, squares, &c. &c. which may not be cleansed, completed and put into good order, to be so cleansed, completed, and put into good order. And the expenses attending such new pavements, or such cleansing and putting into good order, are to be paid and reimbursed to the Commissioners by the owners of the houses, buildings, grounds adjoining the said streets, &c.; the proportions which the owners are to pay are to be ascertained by the Commissioners. If owners neglect or refuse to pay, the amount is to be recovered by distress and sale of their goods.

Clause CX. provides that Commissioners may require the occupiers of premises, the owners of which may be liable under the Act to pay any sum of money to the Commissioners, to pay to them all rent which may be due to their landlords, until the whole of the debt and the interest due to the Commissioners is paid off. Commissioners may recover such rents by distress and sale as if they were the landlords of such occupiers. Occupiers refusing to disclose particulars of rents owing and payable are to be fined 20s., and a like sum for each succeeding week's neglect to disclose such particulars, after the first conviction.

Clause CXI. enacts that payments of rent by occupiers to the Commissioners shall be deemed to be valid payments, and discharge of rents to the landlord.

These powers appear sufficient to answer every purpose, but even this excellent Act threatens to be comparatively useless from the causes I have described.

Mr. Coppock, the town-clerk, to whom Stockport is indebted for these valuable clauses, in a letter dated 18th April last, states—

“The difficulty, however, is to get a local board to avail itself of the powers so extensively given. Party and local prejudices always interfere; and this is not done, because it would injure that man's property or interests; and that is not done, because, perhaps, the directing committee has a local interest adverse to the carrying of such particular clause into full effect.

“No good can ever be done when the executive power is controllable by a local authority.”

It would be equally useless to expect that any efforts will be made by the working classes themselves to improve the condition of their dwellings; they are too indolent or thoughtless to attempt any remedies—cleanliness and attention to these matters must be forced upon them.

Mr. Heaton, one of the medical officers of the Leek union, states—

“As regards the removal of all nuisances amongst the poor in this neighbourhood, compulsion is the only remedy; kindness, entreaty, and persuasion are all lost upon them.”

My opinions are confirmed by all persons who have paid any attention to the subject.

Regardless how unpopular the declaration may be, or to what extent popular clamour may condemn the interference with private rights and interests, I fearlessly assert that nothing less than a powerful, and, if you like, an arbitrary control over all matters relating to the sanitary condition of the working classes, their dwellings, &c. &c., can ever remedy the deep-rooted evil under which society now suffers; and unless some prompt and determined steps are taken, the pestilence will spread until it will set even legislative interference at defiance.

“We forbid by law the selling of putrid meat in the market; why do

we not forbid the renting of rooms in which putrid, damp, and noisome vapours are working as sure destruction as the worst food? Did people understand they were as truly poisoned in such dens as by tainted meat and decaying vegetables, would they not appoint commissioners for houses as truly as commissioners for markets? Ought not the renting of untenable rooms and the crowding of such numbers into a single room as must breed disease and may infect a neighbourhood, be as much forbidden as the importation of a pestilence?"*

The astounding extension of the cotton manufactures has brought with it a corresponding enlargement of the population, and so rapid has been its increase that it has preceded all police regulations for the health and accommodation of the productive classes, until it has assumed an attitude which demands the attention of the legislature.

I have the honour to be, Gentlemen,

Your faithful servant,

CHARLES MOTT.

*To the Poor Law Commissioners,
13th February, 1841.*

No. 18.

ON THE SANITARY INQUIRY IN HIS LATE DISTRICT IN
LANCASHIRE, &c.

BY ALFRED POWER, ESQ.,

Assistant Poor Law Commissioner.

Malvern, Worcestershire, Dec. 2, 1840.

GENTLEMEN,—In pursuance of the instructions contained in your circular letter of the 23d November last, I proceed to report upon the inquiries which have been made in my late district as to the prevalence of certain causes of disease referred to in the letter of Her Majesty's Secretary for the Home Department, bearing date 21st August, 1839.

This Report will relate—

I. To the degree in which the diseases themselves referred to in Appendix A., No. 1., Fourth Annual Report, and Appendix C. No. 2. Fifth Annual Report, have prevailed in various localities of the district.

II. To the degree in which the causes specified in those Reports have been found to exist in the same localities.

III. To the suggestions which have been made on the subject of remedial measures.

* Dr. Channing on the Elevation of the Working Classes.

I. AS TO THE DEGREE IN WHICH THE DISEASES REFERRED TO IN APPENDIX A., No. 1, FOURTH ANNUAL REPORT, AND APPENDIX C. No. 2, FIFTH ANNUAL REPORT, HAVE PREVAILED AMONG THE LABOURING CLASSES IN DIFFERENT PARTS OF THE DISTRICT.

The first class of materials available in illustration of this branch of the subject are the forms of statistical return issued by your Board to the medical officers of unions, requiring each officer to report the nosological names, &c., of every case attended by him in his capacity of medical officer during the year ended 29th September, 1840.

The statistical portion of these returns will probably have its greatest value in a general abstract of the whole, showing the degree in which the poorest class of inhabitants in England and Wales, namely, those receiving parochial relief, have been subjected to diseases of every description in the course of the year, under examination. I do not propose to avail myself of those statistics in this report.

The following summary of the cases which have been treated in the Liverpool Fever Hospital, during the years 1834, 5, 6, 7, 8, and 9, has been furnished to me by the master of the Liverpool workhouse, to which institution the hospital is attached.

SUMMARY of the CASES of FEVER admitted into the FEVER HOSPITAL, at LIVERPOOL, from the several Wards of the Borough, during the Years 1834, 1835, 1836, 1837, 1838, and 1839.

Name and No. of Ward.	No. of Cases. 1834.	No. of Cases. 1835.	No. of Cases. 1836.	No. of Cases. 1837.	No. of Cases. 1838.	No. of Cases. 1839.	Total.	Population by Census of 1831.
Everton and Kirkdale } 1	5	4	12	22	3	6	52	7,109
Scotland Road 2	56	84	95	207	94	40	576	20,545
Vauxhall Road 3	290	256	265	576	175	146	1708	20,871
Saint Paul's 4	151	78	104	196	54	59	642	14,891
Exchange . 5	199	224	328	372	131	105	1359	12,605
Castle Street 6	82	105	157	183	42	51	620	8,469
Saint Peter's 7	42	39	76	124	35	31	347	9,256
Pitt Street . 8	73	52	95	148	32	47	447	12,561
Great George's 9	66	64	181	234	34	66	645	15,265
Rodney Street 10	12	23	23	50	14	6	128	9,322
Abercromby 11	8	25	37	27	8	39	144	10,891
Lime Street 12	31	44	59	78	35	34	281	15,863
Saint Ann's 13	56	67	163	18	30	43	477	14,875
West Derby 14	4	3	5	8	5	4	29	5,613
North Toxteth 15	10	20	35	68	18	24	175	} 24,067*
South Toxteth 16	15	9	52	37	23	26	162	
	1,100	1,097	1,687	2,448	733	727	7,792	

By reference to the accompanying map of the Borough of Liverpool it will be seen that the wards in which fever has most prevailed are those in the heart of the town, and contiguous to the

* The supposed amount of the part within the borough.

docks, while the wards adjoining the outskirts have appeared to be comparatively free.

This circumstance is probably owing to a combination of several causes: among the rest, perhaps, to the different character of the population resident in the two descriptions of wards and to the better state of external vegetation in consequence of the freer action of the winds on the outskirts of the town. It is observable, in reference to the latter cause, that the Scotland Road Ward, which is open to the country in the direction of Kirkdale and Bootle, and which has a population of 20,545, including many of the labouring class, does not supply one-third of the number of cases supplied by Vauxhall Road ward (population 20,871), and that it supplies not half so many cases as Exchange Ward (population 12,615), although it has nearly twice the population. Again, the Toxteth Park wards, on the other side of the borough, containing together a population exceeding 20,000, a large proportion of whom are of the lowest class, furnish a very small number of cases in comparison with the adjoining wards of the parish of Liverpool; while the wards of Everton, Kirkdale, and West Derby, containing altogether a population exceeding 10,000, have supplied only 81 cases in the course of the six years.

I have not been informed to what cause or combination of causes the sudden and remarkable decrease of the number of cases admitted into the hospital in the years 1838 and 1839 is to be attributed. I directed the attention of the medical gentlemen connected with the Fever Hospital to this remarkable fluctuation, deeming it probable that it might be connected, in some measure, with the great improvements which have of late years been effected in the drainage and otherwise, in the town of Liverpool, under the provisions of the local acts. Some observations which have been made upon this table by Dr. M'Rorie, and Mr. Nightingale, the senior physician and house surgeon of the Fever Hospital, will be referred to in another part of this report.

The following subdivision of the borough of Liverpool into two nearly equal portions, with the respective population, and number of fever cases annexed, will show how large a proportion of the cases have been supplied by those wards which are contiguous to the docks, and which are inhabited to a great extent, though not exclusively, by the lower class of the working population.—(See table, p. 245.)

Any conclusions, however, derivable from such a comparison as the above, must be qualified by the obvious consideration that it is only the cases of poorer patients which will be found in the books of the hospital, and that if the cases of fever had been equally distributed over the several quarters of the town in proportion to the population, the books of the hospital would still show a greater proportion from the quarters inhabited chiefly by the poorer classes.

Wards.	Popula- tion, 1831.	No. of Fever Cases in 6 Years.	Wards.	Popula- tion, 1831.	No. of Fever Cases in 6 Years.
Vauxhall Road	20,871	1708	Everton and	7,109	52
Exchange Ward	12,605	1359	Kirkdale . }		
St. Paul's . .	14,891	642	Scotland Road	20,545	576
St. George's .	15,265	645	Rodney Street	9,322	128
Castle Street .	8,469	620	Abercromby .	10,891	144
St. Peter's . .	9,256	347	Lime Street .	15,863	281
Pitt Street . .	12,561	447	St. Anne's . .	14,875	477
			West Derby . .	5,613	29
			West, Toxteth	24,067	175
			Park . . . }		
			South, Toxteth			162
			Park . . . }		
Total . . .	93,918	5768		108,285	2024
Per centage of cases on popu- lation. }	. . . 6.1 . . . . .		. . . . . 1.9		

There are dispensaries in many of the large towns of the district, and numerous clubs and societies by which medical assistance is provided for a great mass of the labouring population. The returns, therefore, derived from the medical officers of unions for one year, or even for several years past, would be manifestly but an imperfect means of indicating the proportion in which particular diseases may have prevailed among the labouring classes of any particular locality.

A more comprehensive view is that which is derivable from the new system of registration of deaths, embracing, as it does, every class of the community, but in which those cases only are enumerated which have ended fatally.

It appears important to refer to these registers for the purpose of ascertaining the comparative proportion of deaths which have occurred from the different classes of diseases in those which may be called the Town unions, and those which may be called the Country unions of the district, with a view to consider how far it may be necessary to apply to the latter any or all of the remedial measures which may be recommended for introduction into the towns.

The last report of the Registrar-general contains a classification of the several causes of death for the year 1838, which enables this comparison to be made without difficulty for that year; and for this purpose I adopt in part the statistical form suggested in the minute of your Board of the 13th November last, omitting the classification of the various callings of the individuals whose deaths are registered. I am fully aware of the value of that portion of the inquiry, but it is not in my power to pursue it at this time, as I have assumed the superintendence of another district.

TABLE of Deaths, distinguishing those caused by Fever and other Epidemic Diseases in the Unions and Districts undernamed during the Year 1838.

Name of Union or District.	Population by Census, 1831.	Total No. of Deaths in 1838.	Per Centage of Deaths by all Causes.	Deaths caused by Epidemic Diseases, and per Centage thereof.					Per Centage of Deaths by Epidemic Diseases.
				Deaths by Fever.	Per Centage of Deaths by Fever.	Deaths by Small Pox, Measles, & Hooping Cough.	Per Centage of Deaths by Small Pox, &c.	Total No. of Deaths by Epidemic Diseases.	
Liverpool	165,175	6627	4.012	580	.351	559	.338	1139	.689
West Derby	53,058	1625	3.062	85	.160	113	.213	198	.373
Ormskirk	30,568	616	2.015	36	.117	70	.229	106	.346
Fylde, Garstang and Clitheroe	51,016	1002	1.964	60	.117	46	.090	106	.207
Lancaster	33,415	720	2.154	26	.077	57	.170	83	.248
Ulverstone	22,563	436	1.932	35	.155	40	.177	75	.332
Burnley	48,017	1160	2.415	120	.249	47	.098	167	.348
Todmorden, Haslingden.	58,701	1343	2.287	74	.126	33	.056	107	.182
Blackburn	60,594	1612	2.660	132	.217	64	.105	196	.323
Preston	59,355	1726	2.907	50	.084	148	.249	198	.333
Chorley	33,575	684	2.037	30	.089	12	.035	42	.125
Rochdale	52,387	1477	2.819	68	.129	102	.194	170	.324
Bury	62,599	1901	3.036	109	.174	199	.317	308	.492
Bolton	83,369	2432	2.917	155	.185	162	.194	317	.380
Wigan	58,402	1483	2.539	82	.141	120	.205	202	.347
Leigh, Prescott	59,120	1514	2.560	92	.155	97	.164	189	.319
Warrington	27,757	765	2.756	62	.223	32	.115	94	.338
Huddersfield	88,772	1847	2.080	62	.069	174	.196	236	.265
Halifax	89,739	2098	2.338	99	.110	120	.133	219	.244
Skipton, Sedbergh, Settle	47,322	982	2.075	46	.097	95	.200	141	.297

It is desirable to arrange the foregoing districts in four classes, as follows:—

1. Liverpool, a town of first-rate magnitude, population exceeding 100,000.

2. Districts comprising towns of the second class, as Lancaster, Preston, Bolton, &c., population above 10,000, but not exceeding 50,000.

3. Districts comprising towns of a third class, as Burnley, Colne, &c., population above 5000, but not exceeding 10,000.

4. Districts chiefly agricultural, and comprising only villages or towns, with a population not exceeding 5000, as Clitheroe, Fylde, Garstang, &c.

The result of the comparison will appear in the subjoined Table:—

DISTRICTS.	Popu- lation, 1831.	Deaths by all Causes	Per Cent- age.	Deaths by Epidemic Diseases.					
				Deaths by Fever.	Per Cent- age.	Deaths by Small-pox, &c.	Per Cent- age.	Total.	Per Cent- age.
Liverpool	165,175	6,627	4.012	580	.351	559	.338	1139	.689
Districts including Lan- caster, Preston, Toxteth Park, Wigan, Blackburn, Warrington, Bolton, Ha- lifax, Huddersfield, Bury, Rochdale	669,447	17,686	2.641	930	.138	2221	.331	3151	.470
Districts including Burnley, Colne, Todmorden, Heb- denbridge, Haslingden, Accrington, Chorley, St. Helen's, Leigh, Chow- bent, &c.	199,413	4,701	2.357	316	.158	505	.253	821	.411
Districts comprising the Agricultural Unions of Ormskirk, Fylde, Gars- tang, Clitheroe, Skipton, Settle, &c.	120,898	3,136	2.593	177	.146	428	.354	605	.500

It would appear from this comparison—

1. That in the town of Liverpool the general mortality is in the ratio of about three to two as compared with the three other classes of districts, while the mortality by fever is in the ratio of three to one; the mortality by small-pox, measles, and hooping-cough, taken together, being about the same as in the other classes of districts.

2. The general mortality in the districts comprising towns of the second class, as Lancaster, Preston, &c., is a little greater than in the districts comprising towns of the third class, and those in the

country districts; while the mortality by fevers is somewhat less in the former than in the two latter classes.

3. The districts comprising towns of the third class, as Burnley, Colne, Chorley, &c., show a less ratio of general mortality than the other districts, and also a less ratio of mortality by epidemic generally: but they show at the same time a greater mortality by fevers than the districts comprising towns of the second class, and also than the country districts.

4. The country districts show a general mortality nearly equal to the districts comprising the second class of towns, and a greater mortality by fevers as well as by other classes of epidemics.

The general result, then, of the registers for 1838 is that the country districts and the districts comprising towns of a smaller class have shown a greater ratio of mortality by fever than the districts comprising towns of a larger class, Liverpool only excepted. It is to be observed that the above tables are constructed according to the census of 1831, no allowance being made for the supposed increase between that time and 1838; and as the ratio of increase is greater in the more densely-peopled districts, the result last stated in reference to the country districts and smaller towns is strengthened by this consideration.

Having premised thus much as to the comparative prevalence of fever in the various localities of this district, I pass to the second branch of the inquiry.

II. AS TO THE DEGREE IN WHICH CERTAIN CAUSES OF DISEASE ENUMERATED IN THE APPENDIXES TO THE FOURTH AND FIFTH ANNUAL REPORTS ARE STATED TO EXIST AMONG THE LABOURING CLASSES IN VARIOUS LOCALITIES OF THE DISTRICT.

The information relating to this branch of the inquiry is contained in the observations of the medical officers of unions, and of the several gentlemen who have voluntarily undertaken to make reports on the subject.

It will be useful to separate those statements which relate to town districts from those which relate to villages and other situations in the country, for in this way it will readily be seen what classes of causes more particularly prevail in each kind of locality.

The causes dwelt upon by Dr. M'Rorie, senior physician, and Mr. Nightingale, house surgeon to the Liverpool Fever Hospital, are the following:—

“The inhabiting of dark and damp cellars having no escape for carbonic or azotic gas.

“This remark equally applies to other dwellings up courts and with imperfect ventilation.

“From too great a number of persons living in a confined space.

“ From living near to stagnant water, or to other sources of malaria or miasmata.

“ Want of due attention to bodily cleanliness.

“ Scanty or very poor diet, &c., &c., &c.”

See also the whole of Dr. Duncan's Report on Liverpool.

2. *Observations on Causes of Fevers, &c., in Towns of the Second Class, in point of population and importance, viz., LANCASTER, PRESTON, TOXTETH PARK, WIGAN, BLACKBURN, WARRINGTON, BOLTON, and HALIFAX.*

Town and borough of Lancaster. *Edward de Vitre, Esq., M.D.*

See the whole of Dr. De Vitre's able Report.

It is sufficient here to state that the causes chiefly dwelt upon by him are the following:—

Want of proper stench-traps to the drains and sewers in the main streets of the town.

Want of sufficient drainage and sewerage in the back streets and alleys.

Accumulations of refuse in various quarters.

Stream of water dammed up and rendered noxious by decomposition of animal and vegetable substances.

Want of internal ventilation of the dwellings of the poorer classes.

Want of cleanliness in lodging-houses.

Habits of intemperance.

Poverty, as affecting the quantity and quality of food.

Town and Borough of Preston. *James Harrison, Esq., Surgeon, Medical Secretary to the Board of Health at the period of the cholera.*

See the whole of Mr. Harrison's valuable communication, given in the Appendix to this Report.

The causes chiefly dwelt upon by him are the following:—

Imperfect state of the sewers and drains in some parts of the town.

Uncovered and stagnant state of drains and ditches.

Accumulations of filth and refuse.

Open and stagnant pools of water, with liquid manure draining into them.

Pigsties in small back yards, with the drainage flowing close to the houses.

Situation of slaughter-houses.

Deficiency of privies.

Situation of public burial-grounds.

Crowded state of dwelling-houses.

State of cellars used as dwellings, dark, damp, and ill ventilated.

Filthy state of the common lodging-houses.

Habits of intemperance.

Poverty, as tending to the use of innutritive and insufficient diet, and of scanty clothing.

Difficulty experienced in getting the infected removed to the House of Recovery.

Mr. Harrison has furnished another report as medical officer of the Broughton district of Preston union, which will be found extracted in another place.

Mr. Halden, Medical Officer of the Preston District of Preston Union, observes upon—

Cellar dwellings.
Crowded and filthy state of lodging-houses.
Narrow streets and courts.
Confinement in factories or at the loom.
Deficiency of food and clothing.

Mr. Scott, Medical Officer of Toxteth Park, District of West Derby Union, observes upon—

Damp, small, and crowded cellars.
Crowded and filthy state of other rooms.
Dwellings in back courts.
Want of receptacles for refuse.
Want of bedding, and other discomforts.

Dr. Pearson, Medical Officer of the Wigan District of the Wigan Union—

Filthy condition of the town; some of the streets unpaved and covered with stagnant water, in which animal matter is accumulated and decomposed.

Want of privies.
Filthy habits of Irish inhabitants.
Waste land covered with stagnant water full of putrefying matter.
Confined yards and courts in filthy state, with large dung-heaps.
Drains choked with filth, and in bad repair.
Crowded state of common lodging-houses.
Improper quality of food, and insufficiency both of food and clothing, aggravated by want of work and decline in the rate of wages.

The above report is confirmed by the testimony of *Dr. Stuart*, who also dwells on—

The extreme poverty of the lower orders, aggravated by imprudence and improvidence.

Filthy domestic habits of the Irish, and proneness to congregate in large numbers in dwellings.

Mr. Wilding, Medical Officer of Blackburn District of Blackburn Union—

Intemperate habits of the poor.
Want of cleanliness in person and dwelling; wearing the same clothes; sleeping together when the fever rages in the house or room.
Want of ventilation, washing, &c., and crowded state of rooms.
State of common lodging-house, and of the dwellings of the mere needy Irish.

Mr. Hunt, Medical Officer of Warrington District of Warrington Union—

Drainage of the town considered defective.

Situations cold and damp, or little ventilated.

Congregating together of the poor Irish.

Mr. Heap, Medical Officer of Bolton District of Bolton Union—

Cellars or houses in confined situations.

Vegetable and animal substances in a state of decomposition, and refuse thrown from the houses.

Habits of the lower classes.

Back and front dwellings—cellars ill ventilated and filthy.

Insufficient number of privies and receptacles for filth.

Crowded state of dwellings.

Inferior lodging-houses crowded by mendicants.

Want of cleanliness in person and habitation.

In part of the town occupied by Irish, pigs kept in cellars or close to door of the house.

No hospital for infectious diseases.

Want of common necessaries of life.

Mr. Greenwood, Medical Officer of the Halifax District of the Halifax Union—

Deplorable state of dwellings in certain quarters of the town.

Irish lodging-houses for vagrants and trampers of the lowest description and most abandoned habits.

Want of attention in clearing away offensive matter in sewers, cess-pools, privies, pigsties, &c. surrounding the houses, and sometimes opening close to the doors.

Neglect of the owners of such property.

Instance given of a cottage, the cellar of which is constantly flooded with water, floor of the cottage partially unpaved and constantly damp; the family have suffered much from typhus, and three of them now ill with scarlet fever. The owner refuses to open the drains.

Compulsory draining and purifying of cottages much wanted.

3. *Observations on Causes of Fever in Towns of the Third Class, in point of population and importance, viz. BURNLEY, COLNE, PADHAM, ST. HELEN'S, PRESCOT, CHORLEY, LEIGH, HASLINGDEN, ULVERSTONE, KEIGHLEY, BINGLEY, and ELLAND.*

Mr. Hargreaves, Medical Officer of Burnley District of Burnley Union—

Both in town and country, accumulations of refuse thrown into a channel in front of dwellings.

Not much attention to sufficiency of drains and sewers, and removal of noxious substances.

Too many persons in one apartment.

Privies inconvenient, and too few.

Residences unduly crowded.

Want of proper nourishment and efficient clothing.

Mr. Ayre, Medical Officer of Colne District of Burnley Union—

Animal and vegetable substances in a state of decomposition, in nearly all the back streets of the town, mixed with ashes and night-soil.

No scavengers; filth collected and kept for manure.

Town built on a hill, and nearly all the streets have a slope, but none drained, except by a gutter.

Greater part of the houses of the poor built back to back in rows.

Cellar, in almost all cases, let off to a different family.

No thorough draught or ceiling to the ground-floor apartment.

No attention paid to ventilation. Many of the windows not made to open; neither, at the same time, sufficient regard to warmth.

Want of sufficient receptacles for filth; eight or ten only to forty or fifty cottages. Nearly all open, and most out of repair.

Lodging-houses much crowded.

Want of cleanliness both in persons and dwellings of poorer classes.

Pigs, donkeys, and fowls commonly kept in the same room with the family, and, in innumerable instances, close to the doors and windows.

Want of proper nourishment and clothing.

Cesspool for refuse from slaughter-houses in thickly populated parts, into which animals, and sometimes children, fall.

Mr. Holt, Medical Officer of Padiham District of Burnley Union—

All the back streets deficient in cleanliness.

Quantities of stagnant water, full of all sorts of putrefying matter.

No drains nor proper receptacles for refuse provided.

Houses badly ventilated.

Tenements filthy, and a few unduly crowded; sometimes six persons in one bed.

Lodging-houses formerly much crowded, but not so bad since the introduction of rural police.

Piggeries not uncommonly close to the door.

In some few instances, disease imputable to want of food and clothing, but majority of cases to the causes above specified.

Mr. Blundell, Medical Officer of St. Helen's District of Prescot Union—

Instance given of typhus in a close yard, where filth of every description allowed to accumulate, together with bad drainage. In this situation fever generally prevails.

Case of synochus. The house small and dirty, all the inmates attacked. Fever of a severe and fatal character has prevailed in this district for two years without intermission. It is at all times particularly damp in consequence of water which is raised from coal-mines in the vicinity, not being able to get away.

Mr. Atty, Medical Officer of Prescot District of Prescot Union—

Fever prevails more or less throughout the year, principally owing to the low Irish who inhabit the most confined and damp situations, and are filthy in the extreme; in many instances, having pigs in their houses, and in one or two instances, where fever of a virulent description prevailed, using the back room as a dunghill.

Lodging-houses crowded to excess during harvest—10 or 12 in one small room with neither fire-place nor window that can be opened.

Filthy habits and bad drainage.

No fever ward attached to the town.

Mr. Bamford, Medical Officer of Chorley District of Chorley Union—

Refuse matter thrown in front of the houses and kept for manure for the farmers.

Sewers not in a good state, their contents being impeded by an obstruction at their common opening.

Cottages too frequently without windows that may be opened.

Not proper receptacles for filth.

Cottages frequently unduly crowded, and many in a filthy state.

In some instances disease has arisen from insufficiency of nutritious food, but rarely where proper attention paid to objects above mentioned.

Mr. Anderton, Medical Officer of Leigh Union—

Case of typhus mitior. An aggravated case in a neighbourhood notorious for filth and dirt.

Wide and open sewers, on the level, with no means for their contents to escape.

Street ill-paved; large holes and excavations in which animal and vegetable refuse, mixed with the washings of the street, are allowed to remain and decompose.

Habitations generally low, ill ventilated, and confined.

Rooms small and dirty—white-washing neglected; constructed so as not to admit of ventilation.

Rooms unduly crowded, five, six, and seven individuals in one bed.

Dwellings double, that is, back to back.

Privies in front and close to the doors, with reservoir open and uncovered.

Bad food and clothing, the former frequently unsound.

Mr. Stansfield, Medical Officer of Haslingden District of Haslingden Union—

A bad fever broke out about two years since, arising from accumulation of filth and refuse matter from the houses, the situation being low and no sufficient sewers, aided by habitual want of cleanliness in the inhabitants and their residence in houses not large enough for their families.

Cottages constructed without means of ventilation, built in rows back to back.

Stench and effluvia from persons of those daily occupied in mills and manufactories.

Windows constructed without slides, so that no air can be obtained without taking out a pane or two of glass.

Mr. Postlethwaite, Medical Officer of Ulverstone District of Ulverstone Union—

Several instances given of fever occurring in situations where the drainage is bad, animal matter accumulated and putrescent, or dwelling badly ventilated and confined, and inmates indolent.

Formerly ague in Ulverstone, but after the drainage of marsh-land in the neighbourhood ague has disappeared.

In the same manner, if local nuisances could be removed and lime-

washing, &c. be enforced, fever would be abated in the same manner as the ague.

No house of recovery.

Termination of the fever much dependent on the character of the dwelling.

Mr. Milligan, Medical Officer of Keighley District of Keighley Union—

In some parts of the town fever seldom or never absent.

This happens where the streets are unpaved and no sewers, where privies are in close apposition to dwellings, and night-vessels and vegetable refuse emptied into the streets for want of other convenience, the effluvia forming a constant source of irritation and disease.

In country districts in the neighbourhood, land superirrigated to a great extent, and hence arises miasm, productive of fever.

Habits of intemperance, distress, and poverty, through depression of trade.

Mr. Hartley, Medical Officer of Bingley District of Keighley Union—

Those principally affected by fever who are of—

Slovenly, indolent habits; residing with large families in small dwellings; ill ventilated, and not supplied with the usual drains or receptacles of refuse, causing large accumulations of filth, decayed vegetable matter, and stagnant fluid.

Use of unsound corn.

Situation of the town low, bounded on one side by the river, on the other by the canal.

Mr. Brook, Medical Officer of Elland and Greetland District of Halifax Union—

Case at Greetland of a family afflicted by typhus. Private road in front of the dwelling a receptacle of filth and refuse from neighbouring dwelling, and no drains to carry off the accumulation.

Similar case at Elland in a family of clean habits, produced entirely by the poison arising from various sorts of filth surrounding the dwelling.

Dirty state of the back of New-street the cause of fever, which is almost always prevailing there.

4. *Observations on Causes of Fever, &c., in Villages and other Country Situations comprised in the following Unions, viz., LANCASTER, PRESTON, WEST DERBY, WIGAN, BLACKBURN, BOLTON, WARRINGTON, BURNLEY, CHORLEY, HASLINGDEN, ULVERSTONE, ORMSKIRK, HALIFAX, SKIPTON, SETTLE, and KENDAL.*

Lancaster union, country districts.

See the latter part of Dr. *De Vitre's* report; tract of land toward the sea, flat, swampy, and only partially drained.

People occupied in fishing on the coast much exposed to fever.

Refuse fish allowed to accumulate and decompose near their dwellings.

Cottages badly lighted and ventilated, and frequently damp.

Cottages densely crowded.

Construction worse than in the towns.

Thriftless and improvident habits of fishermen, with some exceptions.

Mr. Corles, Medical Officer of Longton District of Preston Union—

Case of ague. Patient in a cottage with stagnant ditch behind it, and predisposed by insufficient supply of nourishing food.

Disorder of general health. Cottage unflagged and damp, and ill-ventilated; stagnant ditch with dung-hill before the door. Inside of the house clean and orderly.

Ague formerly prevalent, but owing to better system of drainage now extremely rare.

Five cases of fever from cold and wet operating on constitutions predisposed by irregular and insufficient diet.

Mr. Spenser, Medical Officer of Walton District of Preston Union—

Cellars with clay floors, very damp.

Bedding scarce. In many cases, man, wife, and three, four, or five small children on one small chaff-bed.

Fever prevails above other diseases, particularly among the hand-loom weavers, through unwholesome food and want of good and sufficient clothing, added to the damp and unhealthy places in which they weave, which are cellars with ground-floors.

Mr. Harrison, Medical Officer of the Broughton District of Preston Union—

Great part of the district consists of low, flat land, insufficiently drained, with wide stagnant ditches, into which the manure drains from the land and manure-heaps, and sometimes from open hog-holes.

Four cases of typhus now existing among a colony of Irish, whose dwellings are surrounded with water impregnated with animal and vegetable refuse.

Cottages built of mud, with ceilings so low that it is frequently impossible to stand upright.

Doors very small; windows seldom a foot square.

Floors generally covered with clay, sometimes with no covering whatever.

Sleeping-rooms confined, with too many beds crowded into them; sometimes no window, in other cases very small, and without casement or means of ventilation.

Poor employed on the land or at the loom at low wages, consequently subject to great depression of spirits, and fed on innutritious and insufficient food.

Mr. Stanning, Medical Officer of Walton District of West Derby Union—

Situation of this district high and dry, and seldom infected by malaria.

Great source of disease is the badly-ventilated and crowded state of the sleeping-rooms, and want of bedding and bed-clothes.

Mr. Fisher, Medical Officer of No. 5 District of Wigan Union—

General typhus nearly always exists among the poor weavers and

nailors, whose diet is very poor and scanty; and the more malignant cases among those who pay little attention to cleanliness and ventilation, and whose houses are often situated in very low, damp, or flat situations, so that they were nearly surrounded by filth and moisture.

Mr. Mather, Medical Officer of Ashton District of Wigan Union—

Want of sufficient food and raiment.

Malaria from cesspools situated two or three yards from the doors of cottages.

Cottages damp, filthy, and ill ventilated.

Sleeping-rooms unduly crowded, seven or eight sleeping in one room.

Sleeping in the same bed with the diseased.

Mr. Pennington, Medical Officer of Upholland District of Wigan Union—

Locality itself favourable to contagious disease.

Houses situated in dales interspersed with hills, where water and mud are emitting constant effluvia from insufficient drainage and occasional inundations.

Houses badly constructed, most of them only one story.

Accumulations of refuse close to the doors.

In winter, great distress among the nailmakers, weavers, and stone-masons, and fever prevails to a prodigious extent.

Scarcity of food; little, bad, and irregularly taken; also thin and bad clothing.

Disregard of cleanliness, ventilation, and white-washing.

Mr. Shaw, Medical Officer of Hindley District of Wigan Union—

Fever in Ince; some of the cases of a most malignant form; most of them in Broom-street, Ince, a very uncleanly place, with pools of stagnant water, decayed animal and vegetable matter, and many other nuisances of a like description, lying in heaps from one end of the street to the other.

Mr. Morris, Medical Officer of West Houghton District of Bolton Union—

Fever more or less prevalent at intervals in every township of the district.

Accumulations of animal and vegetable matter close to the dwellings, which remains decomposing until there is a sufficient bulk to be removed for manure.

Cottages generally crowded.

Gross want of cleanliness in some of them.

Want of common necessaries of life.

Dr. Anderton, Medical Officer of Hulton District of Bolton Union—

Fever prevalent in most parts of the district, recurring occasionally.

External state of the dwellings good. Fevers appear more frequent where families live in cellars and houses where they sleep and live in the same apartment.

In some places filth accumulates near the cottage doors.

Contagion the chief cause.

Mr. Robinson, Medical Officer of Lever District of Bolton Union—

Undrained and dirty situations.

In several hamlets in the district there are accumulations of refuse near the houses, without drains.

Houses in the country better ventilated and more roomy than in the town, where they are built back to back.

Dirty, ill-fed, ill-clad persons more susceptible than the cleanly.

Mr. Barron, Medical Officer of Newton District of Warrington Union—

Typhus frightfully prevalent in township of Haydock.

In one row of cottages, consisting of nine or ten, more sickness than in all the rest of the township, consisting of 2,000 inhabitants.

This spot, unwholesome by reason of cesspools, privies, and other accumulations of animal and vegetable matter by which the inhabitants were surrounded, but during the last few weeks much improvement has been made.

Mr. Wood, Medical Officer of the Marsden and Barrowfield District of Burnley Union—

Habits of extreme filthiness and extreme intemperance.

Uncovered drains.

Putrefying animal and vegetable refuse thrown out in front of the houses.

Exposed privies and privy soil.

Neglect of lime-washing.

Numerous and large families crowded together in small cottages.

Great poverty, partly owing to the lowness of wages for cotton-weaving, but in many instances to be entirely attributed to intemperance.

Mr. Hartley, Medical Officer of Rossendale District of Haslingden Union—

Personal uncleanness.

Crowded state of sleeping-rooms.

Windows opening not more than one foot square.

Some parts of the district in a most filthy state, a disgrace to the persons owning the property.

Rawton-stall-fold and Back-lane most conspicuous, without soughs, drains, or sewers; impassable in wet weather; accumulation of dirt until sufficient to remove for manure.

Fever prevailing in consequence every year.

Messrs. Redhead and Cartwright, Medical Officers of the Cartmel District of Ulverstone Union—

Village of Lindale much exposed to fever, being walled in on three sides by high and mountainous elevations, preventing access to currents of air, and on the fourth bounded by upwards of eight acres of marsh land.

Population filthy, and living in tenements ill provided with privies and proper receptacles for filth, with piggeries and manure-heaps immediately under their windows.

Many of the bed-rooms of the poor have no aperture at all for the admission of fresh air, except the door, and the majority merely an opening of a few inches.

Out of 400 inhabitants of the village, 300, in times of sickness, are dependent on the parish, two-thirds of which are cases of contagious fever.

The marsh-land above mentioned was rescued from the sea by an embankment, twenty years ago, the outlet to which is not sufficient.

N.B.—Some of the oldest inhabitants inform us that, previous to the embankment, no contagious fever was known at Lindale.

Mr. Blundell, Medical Officer of North Meols District of Ormskirk Union—

In a part of the parish called the Banks fever prevalent in intervals.

Animal and vegetable filth accumulating before the doors of the cottages; draining not attended to, and stagnant pools formed round the dwellings.

The country flat; most of the surrounding land undrained; water issuing from bog-land very unwholesome in summer.

Cottages unduly crowded; two or three families in a house.

Want of food and clothing the cause of disease in some cases.

Mr. Wilson, Medical Officer of Burton District of Kendal Union—

Out of eighty-two patients, twenty-four cases of typhus fever, occurring chiefly at Holme Mill.

Situation bad. Two mill-dams not cleansed out for some time, with vegetable decomposition continually going on.

Dwellings ill ventilated and dirty.

Want of receptacles for refuse.

More elevated parts of the same district quite free from infectious disease.

Observations of a similar tendency, and exhibiting some or other of the causes already described, have been received from the medical officers of other country districts, namely,—

Mr. Burns, of Hawkshead, in Ulverstone Union; Mr. Robertson, of Earl Sowerby and Norland District, in Halifax Union; Mr. Marchant, of the Warley District, and Mr. Holmes, of the Hipperholme and Brighouse District, of the Halifax Union; Mr. Bentham, of the Bradley District of Skipton Union; Mr. Robinson, of Settle and Armcliffe District of Settle Union; Mr. Burrow, of Long Preston District of the same Union; Mr. Smith, of the Ambleside District, and Mr. Messenger, of the Browness District, of the Kendal Union.

The general results of the observations extracted, as above, from the returns of medical officers and other reports, may be stated as follows:—

1. In Liverpool, where the mortality by fever is greater in the proportion of three to one than in any other parts of the district, and nearly equal to that of the metropolis, similar causes appear to exist to those enumerated in the Metropolitan Reports. It is probable that one of the

causes which mainly distinguish towns of this magnitude from those of the second class, in regard to the rate of mortality by fever, is the comparative want of external ventilation in the innermost parts of the town, those parts not allowing a sufficiently free access to the winds which prevail at certain periods for the effectual dispersion of malaria. The remarkable difference which the returns of the Liverpool Fever Hospital exhibit, between the external and internal wards of the borough, tends to confirm this supposition.

2. In the second class of towns, which range from 10,000 to 50,000 in population, such as Lancaster, Preston, Wigan, &c., the same classes of causes tending to the propagation of fevers are stated to exist as those described in the Metropolitan Reports. This state of things must be considered, however, to exist only in a partial degree in the second-rate towns of Lancashire and Yorkshire, in many of which the main streets are well drained and cleansed, while in some of them there are local Acts for paving, cleansing, and draining; although in very few cases, which will be particularly mentioned hereafter, do those Acts contain sufficient powers for the proper execution of these purposes. In some of the towns of this class, as Rochdale, Bury, and Wigan, no local Acts exist for the purposes above mentioned; and in Wigan the description given of accumulated filth and want of drainage in some parts of the town are far worse than in any other of the towns of this class. From Bury and Rochdale we have no reports; but I am led to believe that in some parts of those towns the sewerage and drainage is extremely defective.

3. In towns of the third class, as Burnley, Colne, St. Helen's, &c., where the amount of population ranges from 5,000 to 10,000, and in the districts comprising which the rate of mortality by fever is greater, according to the registers of 1838, than in the districts comprising towns of the second class, as Lancaster, Preston, &c., the reports of the medical officers describe the existence of nearly all the causes enumerated in the metropolitan reports. The reports of the town and union of Leigh, and that of Colne, are particularly worthy of attention. From these descriptions, from personal observation, and from the ratio of mortality by fever, shown by the registers of 1838, there is reason to suppose that the towns of this class are at least equally in want of legislative interference as the larger towns of the second class, more especially as the former are at present wholly without the advantages, imperfect as they are, obtained in some of the second-rate towns, by means of local Acts. In addition to the third-rate towns already named in this report, there are in Lancashire, and in the manufacturing parts of the West Riding of Yorkshire, a great number of villages already populous and fast increasing in population, in which the want of proper paving, drainage, and sewerage is very strongly set forth in the reports of the medical officers. For examples of this latter class of places, refer to the reports from Padiham, in Burnley union; from Hindley and Ince, in Wigan union; from Elland and Greetland, in Halifax; and from the Rossendale district of Haslingden union.

4. In the country districts, several of the causes enumerated in the metropolitan reports are stated to prevail, more particularly the following:—want of external as well as internal cleanliness of the dwellings; want of internal ventilation, the windows being too small, or without

openings, and no thorough draught; accumulations of refuse; imperfections of drainage; the crowded state of the rooms; habits of intemperance; the progress of contagion for want of removal to hospitals; undrained lands.

It is manifest that upon some, if not all of these causes, legislation might operate with effect, and the high rate of mortality by fever, prevailing in the country districts, as compared with all but the largest class of towns, as Liverpool, &c., recommends them strongly to the consideration of Parliament.

There are certain causes referred to in some of the medical reports from this district, as tending to promote fever among the labouring classes, which have not been mentioned in the metropolitan reports, and which have probably been omitted there as unconnected with the subject-matter of inquiry, namely, the want of sufficient and wholesome food, and of proper and sufficient clothing; the latter being dwelt upon more especially in connexion with the sudden changes of temperature to which the climate is exposed.

It is to be presumed that an insufficient supply of the common necessaries of life, wherever it might exist, would predispose the system generally to disease; and, so far as appears from those reports, especially to diseases of a febrile character.

There exists, without doubt, amongst a portion of the labouring classes of this district, particularly the Irish (great numbers of whom are located in nearly all the towns), a great degree of indigence, aggravated occasionally by the reverses of trade, but still existing independently of any such circumstance, through the habits of the sufferers themselves, their improvidence, their intemperance, and the low estimate they have of the advantages of wholesome food, proper clothing, clean and commodious lodgings, and the other ordinary comforts of civilized life.

A liberal supply of the public charity would tend, in the long run, to encourage the indigence arising from such causes; and it is probable that the only legislative measures which can be brought to bear with effect upon the general condition of these persons are such as may raise them in the scale of social beings, promote a due estimate of the ordinary comforts of life, and thus impart the stimulus, now wanting, both to exertion and to the provident and economical use of the earnings derivable from their labour.

Some of the medical gentlemen who have dwelt most upon the topic have given remarkable testimony on this subject.

Mr. Scott, of West Derby, after a description of the miserable condition of the fever patients attended by him, which has already been extracted, observes—

“I have met with many similar cases of misery; yet, amidst the greatest destitution and want of domestic comfort, I have never heard, during the course of twelve years’ practice, a complaint of inconvenient accommodation.”

Mr. Harrison, of Preston, states—

“Much might be done to better the condition of the labouring population, by the efforts of societies having a tendency to encourage economical habits, and the exercise of a prudent foresight that anticipates and provides for evil days. A great proportion of the poverty existing in manufacturing districts arises from improvidence. Many of our now indigent poor, or their parents, have been in circumstances that admitted of considerable savings. I have known many families whose income has exceeded 100*l.* a-year, who, in times of sickness, have been in great distress, and even some who have been obliged to have recourse to the parish for assistance. And I am acquainted with several families now, of the best-paid class of workpeople, whose total weekly earnings will average 2*l.*, and in some cases 3*l.* a-week, who, should sickness overtake the head of the family, and some of the principal workers among the children, would be thrown upon the parish. I have been convinced, from extensive observation, that the masters of these people have it in their power to improve the condition and happiness of their workpeople, beyond what can be effected by any other agency.”

It will be observed, at the same time, that the evil of poverty or indigence is seldom otherwise described in these reports than as predisposing to the reception, and tending to the spread of fever, and that it is not usually placed on the same footing with other more active and exciting causes.

Although not exactly within the scope of this inquiry, which relates solely to the labouring classes, it may be right to mention here, that since my attention was directed to this subject, a great number of instances have been mentioned to me, of fever breaking out in the families of wealthy and opulent persons, which have been distinctly traced to the existence of effluvia, arising from imperfect drainage, under or near their dwellings, and which can have had no connexion with the want of sufficient and wholesome food, or of the other necessaries of life.

Some of the returns forwarded by the medical officers of unions in this district exhibit large tracts of country as free, or comparatively free, from contagious disease, and from those local causes which appear to have been most active in promoting disease elsewhere; and such districts are sometimes exhibited as presenting no necessity for the introduction of sanitary measures.

These have appeared to me a most important class of statements, as showing, in many instances, the favourable state of circumstances usually accompanying freedom from disease. It is instructive, also, to compare the number and character of this class of communications with those which have been already given of an opposite tendency.

Many of these statements relate to districts comprised in unions, from other parts of which the medical officers have represented the existence of the most malignant causes of disease, and the necessity of introducing efficient sanitary measures.

Examples of such a diversity of circumstances are found in the different rural districts of the Ulverstone, Kendal, Blackburn, Preston, Prescott, and Halifax unions.

Observations showing the comparative freedom of certain districts from contagious disease, and from those causes of disease which are removable by sanitary measures, have been received from—

Mr. Eccles, of the Alston district of Preston union; Mr. Bury, of the Little Bolton district of Bolton union (for further explanation of which, see Mr. Ashworth's statements, given below); from Mr. Pickop, of Mellor district of Blackburn union; from Mr. Pickop, of Witton district of Blackburn union; from Mr. Hunt, of Croft and Rixton district of Warrington union; from Messrs. Parkinson, of the Habergham Eaves district of Burnley union; from Mr. Ashworth, of New Church district, and from Mr. Horsman, of Accrington district of Haslingden union; from Mr. Pearson, of the Woolton district of Prescott union; from Mr. Dickinson, of the Colton district of Ulverstone union; from Mr. Burns, of the Hawkshead district of Ulverstone union; from Mr. M'Lachlan, of the Shelf and Queen's Head district of Halifax union; from Mr. Lowery, of the Kirby Lonsdale district, and Mr. Armitstead, of the Millthorpe district of Kendal union; from Mr. Greenwood, of the No. 3 district of Kendal union; from Mr. Bryden, of the Muncaster district, and Mr. Fish, of the Millom district of Bootle union; and from Mr. Hodgson, of the Clapham district of the Settle union.

In a few of the reports last referred to, the necessity for sanitary measures is questioned in localities where fever is admitted to prevail; while, in the greater part of them, the absence of those causes to which sanitary measures would apply is described as leading to a comparative freedom from febrile disorders; and it is frequently observed that, under such circumstances, the poorest classes are no more liable to be attacked than the most opulent.

On comparing the testimony of those medical gentlemen who urge the adoption of sanitary measures, with the testimony of those who dispute the necessity for such proceedings, there is certainly a great preponderance in favour of legislative interference in every description of locality comprised in this district, in the country districts as well as in the larger and smaller class of towns.

Although the inquiry has not been extended in specific terms to the consideration of remedies, it appears important to set forth the suggestions which have been made by those medical gentlemen who have reported their opinions on this part of the subject.

I now pass, therefore, to the third branch of this report; namely, the consideration of those—

III. SUGGESTIONS WHICH HAVE BEEN MADE ON THE SUBJECT OF REMEDIAL MEASURES.

Many suggestions of remedial measures are contained in the reports of the medical gentlemen above referred to; but, as most of those measures have already been submitted to the consideration of the legislature, it will be sufficient to give a brief summary of the suggestions contained in the medical reports.

Most of the remedial measures suggested appear to be as applicable to villages and country situations as to towns; such are the following:

And first, in reference to the construction of future dwelling-houses.

The provision of proper drainage;

The provision of sufficient means for internal ventilation, by regulating the size of the windows and their openings, and possibly by insisting on a thorough draught; the system of building houses back to back being wholly prohibited for the future;

The provision of sufficient privies, and other receptacles, in proper situations;

The regulation of apartments to be built hereafter for dwellings below the level of the adjoining ways;

And, in reference to dwellings already built, as well as those to be built hereafter, the following:

Drainage, where necessary, at the expense of the owners;

Periodical lime-washing, at the expense either of owners or occupiers;

Removal of filth and refuse at proper periods;

Filling up of stagnant pools and ditches in the immediate neighbourhood of dwellings;

Proper surveillance and inspection for effecting the above purposes;

The provision of fever hospitals; say one in connexion with every union workhouse.

All these measures appear to be called for, and applicable in certain parts of the rural districts, as well as in certain parts of the towns, and to be equally attainable without limitation of the rights of private property beyond what may be fairly claimed for the health and security of the public. It would appear, indeed, from a careful examination of the causes alleged to exist in town and country districts, that the want of external ventilation, the position of public burying-grounds, of slaughter-houses, and other noxious establishments, existing on a large scale, are the only evils peculiar to the towns, although many of the other causes, without doubt, exist in an aggravated degree in the denser and worse inhabited portion of the towns.

The evils of intemperance, want of personal cleanliness, and the too great crowding in lodging-rooms (which are much dwelt upon,

both in the town and country reports), are of a class to which sanitary measures will scarcely be considered to apply. The effect of the last of these evils, in promoting and spreading fever, has been strongly set forth in the medical reports; and some of them have gone so far as to recommend legislative interference in regard to the number of persons to be accommodated in dwellings or rooms of a certain size. It is probable that, although not a proper subject for legislative interference, the effect of this cause of fever has not been overrated in the reports; and there exists, perhaps, on this account, the more occasion for caution in limiting the rights of private property, and in regulating the construction of future dwellings, lest, by too rigid a course, capital may be driven from the building of the lower class of houses and cottages, and the crowding of the poor in cellars and other apartments thereby proportionably increased.

I have now carefully gone through those reports which have been received from the medical officers in my late district, and have set forth the effect of them to the best of my ability. I regret to say that many valuable communications which were promised, and have been expected, have not, up to this time, been received.

I have already made some observations on the imperfect powers of the local Acts now existing in some of the large towns of Lancashire, as regards the provision of effectual sanitary precautions.

It will be right to state here, that great exertions have been made during the last few years, under the Liverpool Sewerage Act, with corresponding advantage and benefit to the town. Whether the great reduction of fever cases treated annually in the hospital has been owing, in any degree, to the proceedings taken under the authority of that Act, I have not been able satisfactorily to ascertain.

In the second-rate towns of Lancashire, comprised within my district, I have met with one instance of a local Act giving efficient powers to the trustees appointed under it, to conduct the paving, drainage and sewerage *both of present and future* streets, and to regulate the proceedings of the owners of building property in such a manner as to secure considerable advantages to the public, and to the inhabitants of the town. The instance I refer to is the Police Act for the township of Little Bolton, which forms part of the borough of Bolton, obtained in the 11th Geo. IV.

Having heard from several quarters of the salutary operation of this local Act, I took an opportunity of examining one of the trustees, Mr. Edmund Ashworth, a gentleman of great judgment and experience, and largely interested in the township, on the subject of the Act, to the execution of which he appears to have devoted great attention from the first period of its enactment.

Mr. Ashworth's evidence, which will be given hereafter, induces me to give, in the first place, the following abstract of certain sections of this Act:—

Abstract of certain Sections of Little Bolton Police Act.

Sections 56 and 57 provide for scavenging, under the direction of the trustees.

58 imposes a penalty of 40s. on persons casting any dust, dirt, dung, offal, rubbish, or other filth, into any street, or casting any of the above matters, or any animal, or carcase, or noxious ingredients, or any *other* substance, into any common sewer, drain, sink, public or private well, pump, canal, pond, pool or reservoir for water.

62 empowers trustees to cause *present and future* streets, &c. to be *paved*, made, repaired, amended, raised, lowered, widened or altered; also drains, sinks, gutters, and water-courses to be made for conveying water off from said streets, &c.; no other person to alter, &c. without consent of trustees.

65 enables trustees to cause all *present and future* streets, &c. to be *newly* paved, flagged, soughed, cleansed, &c., and put into good condition and order, to the extent of twice the extent of adjoining buildings, with such sewers, soughs, gutters, sinks, drains, or water-courses, on such levels, and with such declivities and falls, as to such trustees shall seem meet and necessary, and to charge the expense of such new pavements, &c. on the owners or occupiers, with power of distress on occupiers, who are to deduct the same from their rent.

67. Amount charged limited to one year's rent.

66. Notice to be previously given to owners or occupiers, requiring them to pave, &c.

74 empowers trustees to make such and so many common sewers, drains, vaults, culverts, and water-courses, public wells or pumps, in, along, or across any of the streets, squares, highways, lands, roads, paths, or other passages and places, or to cause those *now existing* to be altered, enlarged, repaired, *cleansed*, or completed; also to cause gutters or openings to be made in any of said streets, &c., for the carrying off and conveying the filth, foul and other waters into the said sewers, &c.; to carry said sewers, &c., through any enclosed land or ground, *excepting* courts, yards, gardens, or orchards, avenues or approaches to dwelling-houses. Owners may appeal to juries for compensation at Salford sessions.

75. Private drains may be turned into the common sewers by consent of trustees, at the expense of the parties, not otherwise.

76. If owners of certain streets agree to require trustees, they must make common sewers and drains, or allow said owners to do it at their own expense.

77. All private drains emptying into common sewers must be made, repaired, and cleansed, under inspection of trustees, at the cost of the owners or occupiers.

78. Gutters to be turned, tunnelled, or covered over, at discretion of trustees.

91. Trustees may direct the construction of chimneys.

70. Width of footways regulated in proportion to width of streets; 4 feet to 6—8 yards; 5 feet to 8—10 yards; 6 feet to 10—12 yards; and 7 feet to 12 yards and upwards.

92 gives power for removal of slaughter-houses or other nuisances; appeal to the quarter sessions; penalty for continuing nuisance, 5s. per day.

98, among other things, imposes penalties on any one who shall kill, slaughter, singe, scald, dress any beast, swine, ox, cow, calf, sheep, in any street or shop adjoining to, and exposed to such street, or permit any offal, blood, filth, or other offensive matter to run from any slaughter-house, shambles, butcher's shop, swine-sty, or dunghill, into any such street, or burn any rags or bones, or other offensive substance for making manure, ivory or other black, ammoniac, or for other purposes, within 200 yards of any dwelling-house or place, deposit or keep any night-soil, or the emptyings, cleanings, or filth, taken from any privy, drain, or cess-pool, or the refuse, offal, garbage, filth, or sweepings of any slaughter-house, soap lees, ammoniacal liquor, or other noisome or offensive matter, in or upon any open or enclosed ground within the said distance, viz., 200 yards of any dwelling-house.

99. Persons carrying away night-soil, carrion, offal, blood, filth, or other offensive matter, to do so between 12 and 7 A. M., and not to leave it any where exposed in any situation in the said streets, so as to annoy the inhabitants of Little Bolton.

The following is the evidence of Mr. Ashworth on the subject of the working of this Act in Little Bolton:—

“ I have acted as trustee of the Little Bolton Police Act since the passing of the Act, to within the last two or three years, and have also been surveyor, both before and since, for twenty years in the whole.

“ Before the passing of the Act, the town was in a bad state. Many streets had been laid out by the owners and not completed, with only a few occasional buildings erected, and no pavement in many cases, some in part only paved; the consequence was, there were small pools of stagnant water here and there, and no drainage at all. Some of these pools were very offensive, stagnant and green, with dogs, cats, and other dead animals cast into them. At that time the owners could not be compelled to do any thing, and the neighbourhood was unhealthy. There was expense incurred in obtaining the Act from 1,200*l.* to 1,400*l.*, being much opposed. The assistant overseer of that time, Moscrop, used to say, after the Act had been in operation a few years, that it had already paid for itself, in its benefits to the township.

“ The 65th and 67th section have been enforced against the owners and occupiers to a great extent; *both as regards streets laid out before the Act, and those laid out since.*

“ We require a main sewer down the whole length of the street of 18 inches wide, 2 feet deep, with stone bottom and side, and flagged at top, from 7 to 9 feet below the surface. We put side-soughs to carry off water, communicating by cast-iron gratings with the sewer every 20 yards. As they build, they put an opening from *each* house into the main sewer to take water, slops, &c., and to drain the cellars into the main sewer.

“ We require also the erection of what we consider a sufficient number of privies—one to so many dwellings. In some cases, where sufficient privies had not been previously provided, the owners were obliged to convert some of the buildings into privies. All buildings are now laid out subject to these requirements.

“ We are enabled to prevent various nuisances; we have had frequent occasions to summon people for throwing slops and filth upon the foot-

way before the house; and by this means the owners have been compelled to provide proper communications with the sewer. The powers of the Act are so stringent, that it rarely requires more than a verbal notice from the surveyor to compel obedience to our wishes.

“ A committee of five sits once a-fortnight, and receives complaints from any of the inhabitants, and gives directions to the surveyor to proceed. The surveyor is a paid officer under the Act, at a salary of 60*l.* or 70*l.* a-year.

“ The township is greatly improved by the operation of the Act—it is scarcely like the same. The improvements have been made at the expense of the owners, with a few exceptions, which have been obliged to be done by the trustees, particularly in the old streets.

“ The rates have been usually about 1*s.* 6*d.* in the pound on two-thirds of the assessment; these expenses have been incurred upon the old part of the town. All new streets are now provided with pavement, flagging, footpaths, and all with main sewers as well as private drains, by the owners of the adjoining land.

“ When a street is taken into the town, it comes under the rates—all repairs are then paid from that fund.

“ The Act has been a very good thing for the town, and has given general satisfaction. The owners have been disposed to complain at first, but afterwards have been satisfied.

“ As to the cellars, our Act does not apply to that—it does not compel the owners to render them dry. A provision is wanted to compel owners to do this, which might be done at moderate expense.

“ My brother is in favour of a provision forbidding cellars to be used as dwellings at all. I think that would be too severe upon owners of dwelling-houses already erected with such cellars. An Act providing for this with regard to future buildings might not be so unjust, but still would be complained of by owners. There are many of them not fit to live in. The mischief proceeds from damp floor and damp walls. There might be regulations to prevent both, as well as to ensure ventilation.

“ There are some cases where the lower rooms can hardly be called cellars, being in great part above the surface of the adjoining street; it would perhaps be the best way to say that any room let for a dwelling should consist of a certain number of feet at least above the surface: suppose it was eight feet high—that it should be four feet above the surface at least. In regard to future buildings, this could not well be objected to; and in regard to the present cellar dwellings, the owners ought to be compelled to make and keep them dry. This would be best done by subjecting owners to fine where the dwellings were found in a bad state.

“ In some parts of Bolton at this time, the families are removing from their houses, and crowding together several families into one house, using one fire, and living at the expense of one rent. This is the pressure of the times. The greatest part of the mills are working short time.

“ The owners would not be injured by regulations affecting future buildings. The more comfortable a dwelling was made, the more rent it would command.

“ The working people would be also benefited.”

I believe that the local Acts in operation at Manchester, at Salford, and the important township of Chorlton-upon-Medlock, contain provisions similar or analogous to those of the Little Bolton Police Act, and I have heard that the operation of those Acts has been extremely beneficial.

It cannot therefore be doubted that the operation of similar provisions in other of the towns in Lancashire and the adjoining manufacturing districts, would be of the greatest advantage to the already large and still fast-increasing population of those towns.

It will be perceived, however, that the best of the local Acts at present in operation by no means embrace the provisions necessary to counteract all the various causes tending to the propagation of fevers, which might be counteracted by legislative enactment.

How far it may be possible to devise any general measure applicable to the removal or diminution of any or all the evils in question, without invading or limiting the rights of private property beyond what may be reasonably insisted upon for the protection of the public, it is for the wisdom of Parliament to determine.

Without dwelling further upon that part of the subject, it is sufficient to state, in conclusion of this Report, that most of the causes of fever enumerated in the Metropolitan Reports appear to prevail more or less in every description of locality in this district, so far as can be judged from those Medical Reports which have been received.

I have the honour to be, Gentlemen,

Your very obedient Servant,

A. POWER, *Assistant Poor-Law Commissioner.*

Malvern, 9th February, 1841.

No. 19.

ON THE SANITARY STATE OF LIVERPOOL.

BY DR. W. H. DUNCAN.

Liverpool, August 31, 1840.

GENTLEMEN,—In reporting to you my opinion of the causes which favour the prevalence of contagious diseases in Liverpool, it would be almost sufficient to refer to the excellent report of Drs. Arnott and Kay on the sanitary state of the labouring classes in the metropolis, the causes pointed out by those gentlemen being, with one or two exceptions, in equally active operation in this town. But as Liverpool presents, in some important respects, peculiar features, it will be proper to enter somewhat into detail.

The population of Liverpool, at present, may be stated at about 250,000, and of this number the *working classes* may comprise about 175,000.

These last, during illness, are dependent for medical relief chiefly on the two dispensaries, (branches of *one* institution,) which receives a subscription of 500 guineas a-year from the parish, and the officers of which act in the capacity of parochial medical officers. The sick wards of the workhouse and the different hospitals also receive annually a number of pauper patients, but the great majority of these have previously been entered on the books of the dispensaries.

But there are also in Liverpool a number of clubs or benefit societies, to each of which there is usually a surgeon attached, and the members of which (who are principally mechanics or labourers in the receipt of good wages) are not received as patients by the dispensaries. The largest of these clubs consists of 8000 members, and it is probable that in the aggregate they amount to more than 20,000.

During the last five years, (1835 to 1839, inclusive,) there have been treated by the two dispensaries alone upwards of 25,000 cases of *fever*, giving an annual average of more than 5000 cases.

During the same period the club surgeons have probably treated on the average annually . . . 1500 ,,

To these are to be added the cases treated by private practitioners, including those sent to the fever ward otherwise than through the medium of the dispensary officers or club surgeons, say . . . 500 ,,

Making together . . . 7000* ,,

And giving an average of 1 in 25 of the working population annually affected with fever, a higher ratio, I believe, than is afforded by any other town in England. The proportion which the cases of fever bear to the whole number of medical cases is about 1 in $5\frac{1}{2}$.

There can be little doubt that the causes of the unusual prevalence of this disease in Liverpool are to be found principally in the condition of the dwellings of the labouring classes, who are almost exclusively its victims; but partly also in certain circumstances connected with the habits of the poor.

With regard to their *dwellings*, I would point out as the principal circumstances affecting the health of the poor:—

1. Imperfect ventilation.
2. Want of places of deposit for vegetable and animal refuse.
3. Imperfect drainage and sewerage.
4. Imperfect system of scavenging and cleansing.

* During one year (1837) more than 7000 cases of fever were treated by the two dispensaries alone.

The circumstances derived from their *habits* most prejudicial to their health, I conceive to be :

1. Their tendency to congregate in too large numbers under the same roof, &c.
2. Want of cleanliness.
3. Indisposition to be removed to the hospital when ill of fever.

DWELLINGS.

I. As regards the nature of their dwellings, the working population of Liverpool may be divided into three great classes, viz. :

1. Those inhabiting courts, or back houses.
2. Those inhabiting cellars.
3. Those inhabiting houses or rooms in the front of the street.

1. *Courts.* These consist of two opposite rows of houses, each row containing from two to six or eight, and being separated from the opposite row by an intervening space of from 6 to 15 feet in width.* The houses are three stories high, containing three rooms of about $10\frac{1}{2}$ feet square each, and being built back to back with the houses of the adjoining court, all the windows look out upon the area in front, from which the door enters. The courts communicate with the street by a narrow entrance or archway, very commonly built up overhead, and sometimes so low as to require a person entering from the street to stoop in order to gain admission; at the further end of the court is a wall or the back of an adjoining building, so placed as to convert the court into a *cul-de-sac*.

It is unnecessary to point out the effect of such an arrangement in preventing the circulation of air through the court, and in interfering with the proper ventilation of the houses.

Of the 175,000 individuals of the working classes, I estimate that nearly one-half inhabit courts.†

2. *Cellars.*—The cellars are dwellings under ground, in many cases having no windows, and no communication with the external air excepting by the door, the top of which is sometimes not higher than the level of the street. When the door of such a cellar is closed, therefore, light and air are both excluded. The access to the door is by a narrow flight of steps descending from the street; the roof is often so low as not to admit of a person of moderate height standing upright; and there is frequently no floor of any kind except the bare earth. Generally, however, it is flagged, and in a very few cases, boarded. There is usually only one apartment (10 or 12 feet square) but in some cases there is a *back* cellar, used as a sleeping room, having no direct com-

* The average distance between the rows is perhaps about 9 feet; and the average number of houses in a court, from 6 to 8.

† I have thought it unnecessary to give the data on which these estimates are founded.

munication with the external atmosphere, and receiving its light and air exclusively from the front apartment.

It will be easily imagined that the cellars are dark, damp, ill ventilated, and dirty.

There are upwards of 8,000 inhabited cellars in Liverpool, and I estimate their occupants at from 35,000 to 40,000.

In a report lately made by the surveyors appointed by the Town Council to examine the condition of the court and cellar residences within the borough, it is stated that of 2,398 *courts* examined, 1,705 were closed at one end so as to prevent thorough ventilation. Of 6,571 *cellars*, whose condition is reported on, 2,988 are stated to be either wet or damp, and nearly one-third of the whole number are from 5 to 6 feet below the level of the street.

It will be understood that there are many cellars as well as courts, especially among those of a more recent date, of a better class than those which I have described above.

3. The remainder of the working classes inhabit *houses or rooms in the front of the street*. These dwellings of course vary much in their character. Small houses are occasionally occupied by a single family, but most generally the rooms are sublet, each apartment being occupied by one or more families. Most of the lodging-houses also are in front.

The average width of the streets is about 25 feet, being often much narrower, and seldom exceeding 30 feet. The houses have no thorough draught.

In this general description of the dwellings of the poor, I have directed attention chiefly to the first of the accessory causes of fever above noticed, viz. *imperfect ventilation*. The influence of this cause is shown, I think, in the case of the cellars, whose ventilation is more imperfect than that of the courts and houses, at the same time that they afford a much larger proportion of fever cases. Of the 5,000 cases annually treated by the dispensaries, nearly 1,500 occur in cellars, being 35 per cent. more than the cellar population ought to yield, as compared with the total working population.

II. *Want of places of deposit for vegetable and animal refuse*.—I shall say nothing on the disputed question as to the power of putrefying organic matter to *generate* fever. It is enough to know that no one disputes its power to favour the extension of contagious disease. That at least is a doctrine which no one can doubt who knows anything of the physical condition and medical history of the poor of Liverpool. The filth which abounds in and around their dwellings is no doubt in part the consequence of their own habits, but there can be as little doubt that those habits are fostered and encouraged, if not engendered, by the absence of facilities which it is the duty of others to afford them. Without receptacles for their refuse matter, (dirt, ashes, organic remains, &c.,) it

is impossible, however great may be their abhorrence of filth, to keep their houses or streets even tolerably clean. I have often been surprised and pleased to see what effect a little encouragement has in stimulating the exertions of the poor to maintain neatness and cleanliness around them. Many of the courts, in place of being flagged, are paved with small stones, which easily loosen and break up, giving rise to the formation of holes here and there, which give ready lodgement to water and filth. From the difficulty of keeping such courts clean, the inhabitants usually give up the attempt in despair, and are content to breathe the polluted atmosphere. But I have frequently observed that when such a court has been flagged and plentifully supplied with water, the inhabitants have appeared to feel a pride in keeping it in proper order. In the same way those streets are always the most filthy which are the most neglected by the commissioners of paving.

At the further end of each court there are in general two privies, with an ash-pit between them which serves as a receptacle for the refuse of all the houses in the court; it is in consequence very speedily filled, and as it is no one's business to see it emptied, it not unfrequently continues full to overflowing for weeks together, or until the nightmen, who pursue the occupation of collecting manure, happen to visit the court in their rounds. In the mean time the ashes, &c. are deposited in the corners or other vacant spaces in the court, and the ash-pits being themselves uncovered, the atmosphere becomes impregnated with all sorts of nauseous effluvia. None of the cellars have any place of deposit for refuse attached to them, and the great majority of the front houses inhabited by the poor may be said to be in the same predicament. In an investigation lately made by the Watch and Scavenging Committee, it was ascertained that in the district bounded by Scotland-road on the one side, and Vauxhall-road on the other, and comprising perhaps about 2,500 front houses of all descriptions, there were not less than 922 front houses and 1,843 cellars without the accommodation in question, viz. without either yard, privy, or ash-pit. There was thus considerably more than one-third of the whole number of front houses (putting the cellars out of the question) without any place of deposit for filth and refuse; and if we confine the calculation to the dwellings of the *working classes*, it would appear that a very large majority of the inhabitants have no means of getting rid of their filth but by throwing it out into the street, or carrying it into some of the adjoining courts and depositing it in the ash-pits there. Sometimes the latter alternative is adopted, (and the court privies are frequently made use of by the inhabitants of the streets,) an annoyance of which the court inhabitants complain; but in nine cases out of ten, refuse matter of every kind is thrown into the open street. The scavengers do not *profess* to visit these streets oftener than once a-week, and the interval is frequently much longer, so that the atmosphere is

being constantly contaminated by the emanations from this extensive surface of putrefying and offensive matter. I have frequently visited a street a few hours after the scavengers had made their weekly clearance, and its appearance would have naturally led to the belief that *days* in place of *hours* had elapsed since the operation.*

The state of many of the entries and passages in the most densely peopled streets it is impossible to describe. It is sufficient to say that they require the most careful management of both eye and nose on the part of the unpractised visitor.

It is difficult to give distinct examples of the morbid effects of each separate cause, the influence of so many different agents being mixed up together, and rendering it impossible to assign to each its relative value. It is notorious, however, that a very dirty street is always an unhealthy one, although an unhealthy street may not always be a very dirty one; and I may mention one case in which the want of proper receptacles for filth seemed to favour the extension of contagion. In a cellar in Preston-street, where nearly 30 individuals slept every night, (it was a double cellar,) a kind of well had been dug in the floor for receiving the offal and filth of the household. This hole, situated in the front cellar or sitting apartment, not only filled that with its effluvia, but these were carried by the draught from the door directly into the back cellar, where most of the inmates slept, and which had no communication with the external air. Fever of a malignant type broke out among these unfortunate beings, and in the course of a week or two carried off seven or eight of their number.

III. *Imperfect drainage and sewerage.*—The state of the drainage and sewerage it is important to notice in connexion with the prevalence of fever. The sewerage of Liverpool was so very imperfect, that about ten years ago a local Act was procured, appointing commissioners with power to levy a rate on the parish for the construction of sewers. Under this Act, which expires next year, about 100,000*l.* have been expended in the formation of sewers along the main streets, but many of these are still unsewered, and with regard to the streets inhabited by the working classes, I believe that the great majority are without sewers, and that where they do exist they are of a very imperfect kind. Unless where the ground has a natural inclination, therefore, the surface water and fluid refuse of every kind stagnate in the street, and add, especially in hot weather, their pestilential influence to that of the more solid filth already mentioned. With regard to the courts, I doubt whether there is a single court in Liverpool which

* I ought to mention that the Watch Committee are about to try the experiment in a small district of the town, of sending round carts, with a bell, every morning, for the purpose of removing anything that the inhabitants may choose to bring out, but I very much fear, that unless means are taken to *enforce* the bringing out of the refuse, &c., or at all events to prevent its deposition in the street, the measure will fail of the effect intended.

communicates with the street by an under-ground drain ; the only means afforded for carrying off the fluid dirt being a narrow, open, shallow gutter, which sometimes exists, but even this is very generally choked up with stagnant filth.

There can be no doubt that the emanations from this pestilential surface, in connexion with other causes, are a frequent source of fever among the inhabitants of these undrained localities. I may mention two instances in corroboration of this assertion. In consequence of finding that not less than 63 cases of fever had occurred in one year in Union-court, Banastre-street, (containing 12 houses,) I visited the court in order to ascertain, if possible, their origin. I found the whole court inundated with fluid filth which had oozed through the walls from two adjoining ash-pits or cesspools, and which had no means of escape in consequence of the court being below the level of the street, and having no drain. The court was owned by two different landlords, one of whom had offered to construct a drain provided the other would join him in the expense ; but this offer having been refused, the court had remained for two or three years in the state in which I saw it ; and I was informed by one of the inhabitants that fever was constantly occurring there. The house nearest the ash-pit had been untenanted for nearly three years in consequence of the filthy matter oozing up through the floor ; and the occupiers of the adjoining houses were unable to take their meals without previously closing the doors and windows. Another court in North-street, consisting of only four small houses, I found in a somewhat similar condition, the air being contaminated by the emanations from two filthy ruinous privies, a large open ash-pit, and a stratum of semi-fluid abomination covering the whole surface of the court. An intelligent Irishman who lived there told me that it was in vain to attempt to keep the court clean unless the landlord would repair the privies, put a cover on the ash-pit, and make a drain ; but all this he had refused to do. The stench at night he said was enough to “ rise the roof off his skull as he lay in bed,” and the court was never free from disease : 17 cases of fever had occurred there in the previous year. He thought, since their landlord would do nothing for them, the parish ought to put the court into a habitable state ; and he had no doubt they (the parish) would be repaid by the saving which would arise from the diminution of fever alone.

From the absence of drains and sewers, there are of course few cellars entirely free from damp ; many of those in low situations are literally inundated after a fall of rain. To remedy the evil, the inhabitants frequently make little holes or wells at the foot of the cellar steps or in the floor itself ; and notwithstanding these contrivances, it has been necessary in some cases to take the door off its hinges, and lay it on the floor supported by bricks, in order to protect the inhabitants from the wet. Nor is this the full

extent of the evil; the fluid matter of the court privies sometimes oozes through into the adjoining cellars, rendering them uninhabitable by any one whose olfactories retain the slightest sensibility. In one cellar in Lace-street, I was told that the filthy water thus collected measured not less than two feet in depth; and in another cellar, a well, four feet deep, into which this stinking fluid was allowed to drain, was discovered below the bed where the family slept!

IV. *Imperfect scavenging and cleansing.*—I have already mentioned that the scavengers do not visit the bye-streets oftener than once a-week at the most; and that they take no cognizance whatever of the courts. A deficient or irregular supply of water has been in some instances alleged as a reason for the dirty state of the courts; but, as a general rule, I believe the supply is tolerably good: should the landlord be in arrear for water-rent, however, the punishment falls upon the inhabitants, whose supplies are liable to be stopped in consequence. When the pipes go out of order, the courts are sometimes without water for weeks together.

Such are the principal circumstances connected with the dwellings of the poorer classes, tending to promote the spread of fever. The causes which remain to be noticed are partly at least dependent on their

HABITS.

I. The first to be mentioned, viz., their tendency to congregate together in numbers disproportioned to the space they occupy, must be considered in many cases, perhaps, as the inevitable result of poverty, but may be partly also ascribed to their gregarious habits, particularly in the case of the lower Irish, and to their ignorance of its baneful consequences. From many calculations which I have made I have found that, *cæteris paribus*, the prevalence of fever in any street, court, or house, is generally proportioned to the density of the population. Thus in Lace-street, one of the most densely-peopled streets in Liverpool, containing 1285 inhabitants, in a space which gives only four square yards to each inhabitant, there occurred on an average of the last five years 160 cases of fever annually; in other words, 1 in 8 of the population was yearly affected with fever; while in Addison-street (in the same neighbourhood), with a population of 1191, in a space giving $8\frac{1}{2}$ square yards to each, there occurred only 72 cases; in other words, 1 in $16\frac{1}{2}$ of the inhabitants was yearly affected with fever. In Addison-street the density of population being less than half that of Lace-street, the prevalence of fever was also less than half. These, with some analogous results, are shown in the following table:—

Streets.	Square Yards to each Inhabitant.	Proportion of Fever to Inhabitants annually (average of 5 years).	Remarks.
Lace-street .	4	1 in 8	*In one year (1837) more than one-fifth of the inhabitants of Oriel-street were attacked with fever, 335 cases having occurred among 1585 inhabitants.
Oriel-street .	6	*1 in $9\frac{1}{2}$	
North-street .	7	1 in $5\frac{3}{4}$	
Crosbie-street	7	1 in 12	
Johnson-street	$7\frac{1}{4}$	1 in $11\frac{1}{4}$	
Banastre-street	8	1 in $12\frac{1}{4}$	
Addison-street	$8\frac{1}{2}$	1 in $16\frac{1}{2}$	
Primrose-hill	$14\frac{2}{3}$	1 in $26\frac{1}{2}$	

It will be observed that the only material deviation in the above table, from the rule laid down, is in the case of North-street, where the proportion of fever is higher than the rule would indicate. That street is almost exclusively inhabited by the lowest class of Irish; it contains a number of lodging-houses, and the courts are in a most abominably filthy state, and altogether of the very worst description.

The same principle holds good with regard to the *courts*, as shown by the following table. It will be seen that in Coop-court, North-street, with only one square yard to each inhabitant, 1 in $2\frac{1}{2}$ of the inhabitants were yearly attacked with fever; while in Barker-court, in the same street, having $4\frac{1}{3}$ square yards to each inhabitant, the cases of fever were only 1 in 10. In Fir-court, Crosbie-street, having 118 inhabitants in eight small houses, or $1\frac{1}{2}$ square yards to each, 1 in $2\frac{1}{4}$ were annually attacked; while the inhabitants of Elm-court, with $4\frac{1}{4}$ square yards to each, were attacked only in the proportion of 1 in 9.

Courts.	Square Yards to each Inhabitant.	Proportion of Fever to Inhabitants.
North-street:—		
Coop-court	1	1 in $2\frac{1}{2}$
Spencer-court	2	1 in $3\frac{1}{2}$
Newton-court	2	1 in 4
Barker-court	$4\frac{1}{3}$	1 in 10
Fleming-court	6	none.
Crosbie-street:—		
Fir-court	$1\frac{1}{2}$	1 in $2\frac{1}{4}$
Oak-court	$1\frac{1}{2}$	1 in $3\frac{3}{4}$
Pine-court	2	1 in $4\frac{2}{3}$
King-court	$2\frac{1}{2}$	1 in 8
Lime-court	$2\frac{2}{3}$	1 in 10
Ash-court	$3\frac{1}{6}$	1 in 13
Elm-court	$4\frac{1}{4}$	1 in 9
Lace-street:—		
Rycroft-court	$1\frac{3}{4}$	1 in $5\frac{1}{2}$
Cumming-court	$2\frac{1}{4}$	1 in $7\frac{3}{4}$
Friends-court	$4\frac{3}{4}$	1 in 8

I do not know the dimensions of the remaining courts in Lace-street with sufficient accuracy to include them in the list. The higher ratio of fever in Friends-court may possibly be explained by the fact, that three of the four houses of which it consists are public brothels of the lowest kind, and filled with prostitutes.

In the case of individual *houses* I believe the rule will still apply, although I am unable to give statistical data on the subject; but it is notorious that many of the lodging-houses, in which 30 or 40 individuals, or more, are accommodated nightly, are seldom entirely free from fever. I have already mentioned the cellar in Preston-street, where, out of nearly 30 persons who slept there, six or eight were carried off by a fever which broke out among them. In three adjoining lodging-houses in Banastre-street, 40 cases of fever occurred in 12 months; and in another small house in the same street, occupied by 17 individuals, 13 were attacked with fever within three months. In a lodging-house in Shaw Hill-street, 23 cases occurred in six months; but the cellar of that house was used as a receptacle for manure, and sent up into the rooms above a stench which it was almost impossible to bear. It is not an uncommon practice with the keepers of lodging-cellars to cover the floor with straw, and allow as many human beings as can manage to pack themselves together to take up their quarters for the night, at the charge of a penny each; and I was told of a lodging-house keeper in Johnston-street who was said to receive 16s. a-night from his lodgers, paying an average charge of about threepence each. The dwellings of the lower Irish (not what are called "lodgings") are often crowded in a nearly equal degree. I have known four families reside in a cellar not more than 9 or 10 feet square.

II. The second circumstance to be noticed with regard to the habits of the working-classes, is their *want of cleanliness*. I have already stated that they are not responsible for *all* the filth amidst which they live; but when it is considered that there are not less than 50,000 of the lower Irish resident in Liverpool, it will be understood that some portion of it, at least, must be the result of their own indifference. Even when a plentiful supply of water is at hand, the inhabitants of the filthy courts inhabited by the Irish too often neglect to avail themselves of its services; and when the removal of a nuisance is in their power, they seem to think it hardly worth the trouble which it would occasion them. The cellar in Preston-street, where a well was made in the middle of the floor to receive the refuse and dirt of its 30 inmates, is a case in point; and I was told of a cellar in New Bird-street, where a hole had been made in the back wall which separated the cellar from the ash-pit of an adjoining court, in order that the offal, &c., might be at once thrown into the ash-pit, and the inmates be saved the trouble of carrying it round by the entry into the court. The saving of trouble more than counterbalanced in their estimation,

the disadvantage of living in a room having an open communication with a cesspool!

In many cases the cellars beneath the houses are used as places of deposit for manure collected out of the streets. I have mentioned an instance of this kind beneath a house in Shaw Hill-street which was seldom free from fever. In Oriel-street there is a court (John-court), containing 10 houses, nearly all of whose cellars are used for the purpose alluded to, and in that court 33 cases of fever were treated by the dispensary in 12 months; and in an *inhabited* cellar in Johnston-street I was assured by the agent of the Statistical Society that not less than three cartloads of dung, mixed with the offal of slaughter-houses, &c., had been collected from the street; and that although the people overhead complained of the nuisance, the family in the cellar lived and slept contentedly cheek-by-jowl with the putrefying mass.

The custom prevalent among the Irish of keeping pigs in the cellars and even garrets which they inhabit, ought to be noticed in connexion with the present subject. On one occasion I had to grope my way (at noon-day) into a house in a court in Thomas-street; and on a candle being lighted, I discovered my patient lying on a heap of straw in one corner, while in the opposite corner of the room a donkey was comfortably established, and immediately under the window was the dunghill which the donkey was employed to assist in gathering from the street.

The general fact of the unhealthiness of dirty streets has been already noticed; and I may here add that the three streets which appear by the list in a former page to have yielded the largest proportion of fever cases (*viz.*, Lace-street, North-street, and Oriel-street), are three of the most notoriously dirty streets in Liverpool, being very ill supplied with ash-pits, &c., and chiefly inhabited by the lowest class of Irish. Of 58 front houses in Lace-street, 51 have no yard, privy, nor ash-pit; of 50 in Oriel-street, 41 are similarly situated; and of 29 in North-street, only 6 are supplied with any convenience of the kind. Addison-street, which yields a much smaller ratio of fever, is better provided with conveniences, there being 28 privies, &c., among 79 front houses.

III. The disinclination (especially among the Irish) to be removed to the hospital on the first appearance of fever in their dwellings, is a circumstance which favours very much the extension of the disease. In illustration of this many instances could be given, if necessary.

Such are the principal circumstances which, in my opinion, favour the prevalence of fever in Liverpool. The remedies, so far as they admit of remedy, are obvious, *viz.*, power lodged in some public authority to regulate the building of courts or houses intended for the habitation of the working-classes; to prevent cellars being inhabited, if possible,* or at least to provide for their

* In the Corporation leases, a clause prohibiting the habitation of cellars has been inserted for the last 30 years, but it unfortunately has never been enforced.

proper ventilation; to provide a sufficient number of ash-pits, or places of deposit for dirt and refuse; to oblige every court and house to communicate by means of an underground drain with the main sewer, and to cause the formation of these last, where deficient. Such powers as these might be embodied in a general Building Act. But there ought further to be authority to inspect and regulate lodging-houses, to prevent more than a certain number of individuals sleeping in a room or house of given dimensions, to secure periodical white-washing, &c., and to remove immediately to the hospital any inmate who may be affected with fever. This last suggestion may be looked upon as too arbitrary for English notions; but it is one which the security of the poor themselves, more than of any other class of the community, seem to require. No one should be allowed to keep pigs or donkeys, or manure, &c., in any building occupied as a dwelling-house; and it is even doubtful whether pigs, at least, should be allowed to be kept in courts. Lastly, supposing a sufficient supply of ash-pits to be provided, any one depositing filth in the street should be punishable by fine.

In large towns it would be desirable to appoint a Board of Health, or salaried "Inspector of Public Health," or both, whose duty it should be to point out nuisances or infringements of the sanitary regulations, and to exercise a general supervision of matters affecting the health of the community. If it were thought objectionable to intrust more extensive powers to such a Board or officer, the *executive* department might be left to the municipal authorities.

Were these suggestions carried into effect, I do not doubt that the prevalence of fever might be very much diminished in Liverpool. But it is to be remembered that many of the evils which I have pointed out are, perhaps, the inevitable results of poverty; and I believe that fever, to a certain extent, is an inseparable accompaniment of extreme poverty affecting large masses of the community. Among the causes of fever in Liverpool I might have enumerated the large proportion of poor Irish among the working population. It is they who inhabit the filthiest and worst-ventilated courts and cellars, who congregate the most numerous in dirty lodging-houses, who are the least cleanly in their habits, and the most apathetic about everything that befalls them. It is among the Irish* that fever especially commits its ravages; and it is they who object the most strongly to be removed to the hospital from their miserable abodes. Nor does the evil stop with themselves. By their example and intercourse with

* During nine months of 1838, the officers of the North Dispensary visited (exclusive of surgical cases) 2428 English patients, of whom 637 were ill of fever, and 1826 Irish, of whom 601 were ill of fever.

The fever cases among the English patients were thus little more than 26 per cent., and among the Irish nearly 3 per cent. of the whole number of patients.

others they are rapidly lowering the standard of comfort among their English neighbours, communicating their own vicious and apathetic habits, and fast extinguishing all sense of moral dignity, independence, and self-respect. No one interested in the welfare of his poorer brethren can contemplate the prospect without a feeling of melancholy foreboding; and I am persuaded that so long as the native inhabitants are exposed to the inroads of numerous hordes of uneducated Irish, spreading physical and moral contamination around them, it will be in vain to expect that any sanitary code can cause fever to disappear from Liverpool.

No. 20.

ON THE PREVALENCE OF DISEASES ARISING FROM CONTAGION,
MALARIA, AND CERTAIN OTHER PHYSICAL CAUSES AMONGST
THE LABOURING CLASSES IN MANCHESTER.

BY RICHARD BARON HOWARD, M.D.,

Physician to the Ardwick and Ancoats Dispensary.

Manchester, April, 1840.

GENTLEMEN,—It was not without considerable hesitation and diffidence on my part, that I acceded to your request, to furnish a report of the extent to which the causes of contagious diseases prevail amongst the labouring classes in Manchester.

Fully sensible of the importance which may be attached to such a report, from this populous and, in many respects, extraordinary district, and of the attention it might attract, I felt conscious that in undertaking the task, I was engaging in an onerous duty, and incurring no small degree of responsibility. I was quite aware, also, that I should have to encounter great difficulties in my inquiries, from the imperfect state of the records in many of the public medical institutions:—imperfect at least insofar as affording no facilities for obtaining the statistical information which was desirable for preparing such a report as you required. As I had anticipated, I soon found that to collect useful statistical data from these documents, required more labour than I have been able to bestow on the subject, and also more time than has been allowed me for the preparation of my report. It would certainly have been much more satisfactory to you, as well as to myself, if I had always been able to verify the statements I have made, from facts derived from the registers of the public institutions; and it is to me a matter of much regret that, from the causes just alluded to, I have frequently been prevented from doing so. I may however state, that the opinions and views I have advanced are the result of above 10 years' constant medical attendance on the poor in Manchester, and that a connexion with the Royal Infirmary and Poor House, during the greater part of

that period has afforded me extensive opportunities of becoming acquainted with the diseases and the general condition of the labouring classes.

According to the census of 1831, the population of Manchester (including Salford and the immediate suburbs) was 232,578, and may at present probably amount to 260,000. That of the whole parish was then 270,961, and cannot now be estimated at less than 300,000. In the following report, the term Manchester will be used generally, and must be understood to comprehend Salford and the adjoining suburbs.

The patients admitted during the last year at the various medical charities in Manchester amount to 40,858; and if to this number be added the sick under the care of the surgeon to the Manchester Poor House, and those attended in Salford and Chorlton-upon-Medlock, by the medical officers of these unions, we find that the enormous number of 42,964 persons (nearly one-sixth of the whole population) are dependent on public charity for medical advice:—a melancholy proof of the indigence and unhealthy condition of the working-classes in this district.

Owing to the defective registration of the diseases, it is impossible to ascertain with precision the amount of fever occurring amongst these persons; but from the most correct calculations I have been able to make, it is probable the number of cases of idiopathic contagious fever would not exceed 2432; including, of course, those treated at the House of Recovery. This, however, is a larger proportion than has been usual in former years; for fever has certainly prevailed much more extensively during the last two years and a half than for many years preceding. As a proof of this, it may be mentioned that the average number of patients admitted into the House of Recovery during the last three years is 1071, whilst that for the 10 years previous is only 511. In order to account for the apparently small ratio which I have allotted to fever, out of the 42,964 persons treated at the various medical institutions, it is necessary to state that in this number are comprehended the patients admitted at the Lying-in, Lock, and Eye Hospitals, where, of course, cases of fever occur only casually:—that no less than 6495 were cases of accident, and that all the fever patients occurring to the surgeon to the Manchester Poor House, and a large proportion of those occurring at the Royal Infirmary, are sent to the House of Recovery.

This amount of fever among our pauper population, though very considerable, cannot be deemed large for a town which might certainly be supposed in many respects peculiarly fitted to promote the diffusion of contagious diseases; and which, in many localities, seems to possess all the requisites for the generation and extension of infection. Indeed, when we consider the greatness and density of the population—constantly suffering from numerous causes of physical depression, with the indigence, improvidence, irregular

and dissipated habits, and the entire absence of cleanliness in no small portion of it, this considerable share of exemption from fever which we enjoy, compared with some other large towns similarly circumstanced, is somewhat remarkable; and certainly not what might *à priori* have been anticipated. In this respect Manchester would bear a favourable comparison with London, Edinburgh, Glasgow, and Liverpool.

The cause of this moderate proportion of fever, where so many fruitful sources of it exist, is, I believe, mainly ascribable to the munificence with which the medical charities are supported by the opulent classes, and to the great facilities thereby afforded to the indigent poor for speedily obtaining medical aid. The careful attention with which the parochial authorities have always watched over the poor during epidemics of fever, and the prompt steps they have usually taken for the removal of infected persons, have also contributed most materially to check the spread of contagious diseases, and to preserve the health of the town.

According to the Registrar-general's First Annual Report, there were 274 deaths from fever in Manchester, Salford, and some of the adjoining townships (comprising, in 1831, a population of 236,935), during the half-year ending 31st December, 1837, which at the same ratio would give 548 for the whole year. If we suppose that one death takes place in every 12 persons attacked with fever (probably about the average), the *total* number of cases which occurred in this district, during that period, would be 6576. No inference, however, can be drawn as to the general prevalence of diseases in any locality, from a report for so short a period; particularly those of the epidemic class, which are subject to such sudden and remarkable variations.

The House of Recovery, which is the only public institution in Manchester where cases of fever are admitted, has generally been found sufficient hitherto to receive all the applicants; for, until the severe epidemic of 1837, it has very rarely occurred that persons have been refused admission from want of room. This establishment may be made to accommodate 100 patients upon an emergency; but it has been the usual practice not to receive more than about 84, in order to avoid the risk of injurious consequences from over-crowding. It is, therefore, very evident that, from our now greatly increased and still increasing population, this accommodation is insufficient, and that the time has now arrived when further accommodation ought to be provided. Even an inconsiderable increase in the prevalence of fever would immediately fill the present House of Recovery: and from the increasing size of the town already mentioned; from the constant immigration of Irish labourers, many of whom arrive here already affected; from the dreadful extent to which distress and destitution do now exist, and have for a long time existed, amongst a large proportion of our working-classes; and the low ebb to which the resources of

others are reduced, it is much to be feared, unless some improvement speedily takes place in the condition of the poor, that a permanent augmentation of fever may be anticipated.

Though it would certainly be out of place to enter into any lengthened discussion here respecting the nature and laws of contagion and malaria, yet there are some points which it is so extremely important to bear constantly in mind in reasoning on the generation and diffusion of fevers by these causes, that it will facilitate our inquiries, and prevent repetition in future parts of this report, if I premise a few brief remarks on these subjects before proceeding further.

I. With regard to *contagion*, the following principles seem to be established:—

1. There are certain morbid states of the system in which noxious emanations arise from the body of the individual affected, which are capable of exciting a similar disease in other persons. To the poison so generated, the term contagion or infection is applied: and diseases possessing the property of propagating themselves in this way, are called contagious or infectious; terms usually considered synonymous in popular language, and which I shall employ as such in the following pages.

2. Several of these diseases are supposed never to originate spontaneously, the presence of their specific contagion being considered necessary for their production; of this class are small-pox, scarlatina, measles, &c. On the contrary, some continued fevers, as typhus and synochus, are known occasionally to arise independently of contagion, in individuals exposed to certain other exciting causes; and the disease thus generated may become contagious, and capable of communicating itself to other persons.

3. The contagious matter of fever diffuses itself through the air, and appears to enter the body through the medium of the lungs during respiration.

4. Contagion has also the property of attaching itself to certain substances, chiefly those of a porous texture, as woollen articles, furs, feathers, &c., which may afterwards give out the contagious matter in an active state, and capable of communicating the disease. Substances thus embued with contagion are termed fomites.

5. When the contagious matter arising from a person ill of fever is largely diluted by the free admission of pure air, it becomes innoxious, and the risk of infection is very slight indeed; whereas if the patient be placed in a small confined room, where no attention is paid to ventilation, the atmosphere becomes so strongly impregnated with the poisonous emanations, that the probability of the disease being communicated to the attendants and other inmates amounts almost to a certainty. Dr. Haygarth remarks that the poison of typhus “in a small, close, and dirty room, infects a very great proportion of mankind; not less than 22

out of 23, or a still higher proportion ; but in a large, airy, clean-apartment, even putrid fevers are seldom or never infectious."*

6. A fever of the mildest character often assumes a malignant type if the patient is lodged in a confined apartment, where ventilation and cleanliness are neglected, and where he is constantly respiring air strongly impregnated with the noxious emanations from his own body.

II. It has been long known that, in certain localities, fever having a peculiar type prevails so universally that few who remain any length of time within the district escape the disease. The exciting cause of the endemic fever of these districts has been satisfactorily traced to exhalations from the earth's surface, which occur particularly in low, marshy, and swampy situations, and in consequence they have received the name of *marsh miasmata*, or *malaria*. The latter, being the more comprehensive term, is preferable, as the existence of a marsh is not necessary for its production. The fevers thus generated are distinguished by their occurrence in periodical paroxysms ; and, according to the completeness or incompleteness of the abatement of the symptoms in the interval, are termed intermittent and remittent, in contradistinction to continued fevers. Intermittent and remittent fevers also differ from the latter in not being contagious.

III. Besides the malaria here described, it is believed by many that the exhalations arising from animal and vegetable substances in a state of decomposition,—from excrementitious matters, and from the various accumulations of the filth and refuse of towns,—are also capable of generating fever though of a different type, viz., continued fevers, or those contagious diseases known by the names of typhus and synochus. It is proper, however, to state, that on this point the profession is divided in opinion. That this species of malaria, from its effect in deteriorating the health of those exposed to it, is often a most powerful agent in aiding the increase and diffusion of fever, all medical men readily admit ; and of this fact abundant evidence will be adduced in this report, both from my own observations and the testimony of others ; but that it is adequate singly to generate typhus is denied by many. It would be quite out of place to enter into any discussion of this question here, but I may state that it appears to me, the evidence on which the latter opinion is founded is very strong. Since, however, as has just been stated, it is agreed on all hands that the malaria under consideration is, in some way or other, one of the chief causes of the rapid and extensive *spread* of fever amongst the poor in large towns, the determination of the point does not affect the validity of the conclusion as to the great advantages likely to accrue from the removal of the sources from which civic malaria arises, and is in reality a matter of no practical importance, provided an admission of the affirmative does not lead

* On the Prevention of Infectious Fevers, 1801, page 73.

us to underrate the other universally acknowledged causes of fever. In reference to this subject, Dr. Alison, to whose opinions on all medical questions great weight is deservedly attached, has remarked: "In the Appendix to the Fourth Report of the Poor Law Commissioners, it is stated by Drs. Arnott, Kay, and Southwood Smith, that the malaria arising from putrefying animal and vegetable matters produces typhoid fevers. Although I highly respect all these gentlemen, and approve of the practical inference which they draw from that opinion, so far as it goes, because I have no doubt that vitiated air, like all other causes which weaken the human constitution, favours the diffusion of fever—yet I cannot subscribe to their opinion that this cause is of itself adequate to the production of contagious fever. And if, trusting to that opinion, the public authorities should think it sufficient, in any situation where contagious fever is prevalent, to remove all *dead* animal and vegetable matter, without attempting to improve the condition of the *living* inhabitants, I am confident that their labour will be in vain. The true specific cause of the contagious fever, at least of Edinburgh, certainly does not spring from anything external to the living human body. I have stated much evidence on this point in a paper in the Edinburgh Medical Journal for 1828, and could easily adduce much more. A case in point is given in a letter contained in the Appendix in question, from Mr. Evans, surgeon in the borough. 'I have attended, in nine months, above 500 pauper cases of fever, but cannot trace it to any local cause, for we have, in the parish of St. George, very good drainage, and very little accumulated filth, with the exception of certain courts and lanes, *and there the disease does not exist more severely than over the parish in general.*' Another occurs to me in the letters of Dr. Barry of Cork, published by Drs. Barker and Cheyne. 'More than once, on visiting the neighbourhood of deposits of manure, I have witnessed much misery in the inhabitants, shown by general emaciation, &c., and yet they have been exposed to the continued agency of these exhalations, without showing any symptoms of fever. Sooner or later the disease found entrance, and *then* swept away the inhabitants in great numbers.' He gives instances where fever spread in the upper rooms of houses in such situations, while the lower, 'in the most abominable state of filth,' were free from it; all showing, as our experience in Edinburgh does, that this is a cause of the *extension*, not of the *generation* of fever."*

Dr. Ferrier also, whose experience was very great, hesitates to admit this cause adequate to produce fever, though he insists strongly on its influence in aiding the progress of the disease. "I am persuaded," he says, "that mischief frequently arises from a practice, common in many narrow back streets, of leaving the vaults of the privies open. I have often observed that fevers

* The Management of the Poor in Scotland, Edinburgh, 1840, page 19.

prevail most in houses exposed to the effluvia of dunghills in such situations. During the late epidemic it was observed that fever prevailed most in streets which were not drained, or in which dunghills were suffered to accumulate, or where the blood and garbage from slaughter-houses were allowed to stagnate. I do not mean to assert that such nuisances produce the disease, but they appear to assist its progress, and to operate as remote causes of fever, in whatever manner pathologists may choose to explain their action.*

Much evidence might nevertheless be adduced to show that the exhalations evolved by putrefying animal matter (which constitutes a great portion of the filth of towns) are less injurious to the human constitution than those arising from decaying vegetable substances.

IV. The vitiation of the atmosphere by the emanations arising from the bodies of even perfectly healthy individuals, when great numbers are crowded together in a small confined space, and ventilation is neglected, constitutes another, and I believe a very frequent, source from whence fever originates. The noxious effluvia thus produced have been termed "human miasms" in contradistinction to those arising from causes external to the human body, and to contagious vapours. The efficiency of this cause to generate fever is a fact well established, and many familiar instances of its effects will readily occur to the mind. It may be sufficient to state the well-known circumstance, that when workhouses, barracks, prisons, or transport ships are unusually crowded, fever almost invariably, sooner or later, breaks out, unless more than ordinary care be paid to ventilation.

Abundant evidence of the effects of great density of population in diminishing the duration of life is derived from the Registrar-general's First Annual Report of Deaths. "In the whole of England and Wales, out of 1000 deaths, 145 have been at the age of 70 and upwards; while, in the North Riding and northern part of the West Riding of Yorkshire, and in Durham, except the mining districts, the proportion has been as high as 210. In Northumberland (excluding the mining district), Cumberland, Westmoreland, and the North of Lancashire, the proportion has been 198; in Norfolk and Suffolk, 196; in Devonshire, 192; in Cornwall, 188. In contrast with this evidence of the large proportion of persons who attain to old age in these more thinly peopled portions of the kingdom, we find results extremely different where the population is densely congregated. In the metropolis and its suburbs, the proportion who have died at 70 and upwards has been only 104; and even this proportion is favourable when compared with that of other large towns—the proportion in Birmingham being 81; in Leeds, 79; and in Liverpool and Manchester only about 63."

* *Medical Histories and Reflections. On the Prevention of Fever in Great Towns, 1795, vol. ii page 180.*

In the Appendix to the same Report, Mr. Farr has clearly pointed out the increased rate of mortality in large and crowded towns, compared with rural districts. From his calculations it appears that the deaths in the metropolitan division, with a population of 1,790,451, lodged upon an area of 70 square miles, from 1st July, 1837, to 30th June, 1838, amounted to 53,597; whilst the deaths in Devonshire, Dorsetshire, Wiltshire, Cornwall, and Somersetshire, where nearly the same number of inhabitants (1,723,770) was distributed over an area of 7933 square miles, were only 34,074. It must besides be remembered that these counties include Exeter, Plymouth, Bath, and a great number of other large towns, which renders the result of this calculation less striking. Mr. Farr justly observes that, "*cæteris paribus*, the mortality increases as the density of the population increases, and where the density and the affluence are the same, that the rate of mortality depends upon the efficiency of the ventilation, and of the means which are employed for the removal of impurities."

But though the fatality from every class of diseases is augmented in the concentrated population of large towns, Mr. Farr has shown in his abstract of the causes of death, that the increase is most remarkable in the mortality from epidemic, endemic, and contagious diseases,—the ratio of deaths from these diseases in towns being more than double what it is in rural districts. This augmented ratio of mortality from typhus is very striking; for it appears that, out of 5020 deaths from this disease, 3456 occurred in cities, and only 1564 in counties.

The increased mortality of crowded cities is owing to a variety of causes, the chief of which are the insalubrity of the atmosphere, from its vitiation by respiration, by the exhalations from animal and vegetable putrefaction, and collections of refuse, and by numerous operations constantly going on in large towns; the want of ventilation, draining, and scavenging; the dissipated and irregular habits of the people; their uncertain and precarious employment, and consequently frequent destitution; their confining and sedentary occupations, with their neglect of cleanliness and of exercise in the open air.

Having made these observations respecting the three principal, or, as they have sometimes been termed, the essential or efficient, causes of fever—*contagion*, *malaria*, and *human miasms*—I shall now proceed to inquire to what extent these, and some other causes of fever prevail in Manchester.

1. It appears to be established beyond all question of doubt that the propagation of the idiopathic continued fevers of this country (designated typhus and synochus) is chiefly effected through the agency of the emanations arising from the bodies of those already sick; in other words, they are propagated by *contagion*. There are some, I am aware, who deny this conclusion; but it is certainly in accordance with the united testimony of a

great majority of the most eminent physicians in the kingdom. My own personal observation has fully satisfied me that this is the case with regard to the common fever of this district ; and I believe, I may safely add, that it is the general opinion of the medical gentlemen here who have had opportunities of marking the extension of the disease among the poor. Sporadic cases of fever, which cannot clearly be traced to contagion, do, without doubt, frequently occur to every medical practitioner ; but it is certainly consonant with general experience, that individuals are usually affected in proportion to the closeness and frequency of their intercourse with the sick. I conceive it quite unnecessary to adduce any evidence in support of this opinion here. The extent to which the circumstances favouring the spread of fever by contagion exist in Manchester will be clearly manifested from numerous statements made in various parts of this Report, and need not now be enlarged upon.

It is obvious that the most certain means of preventing the extension of contagious diseases is the separation of the sick from the healthy ; and as this cannot possibly be effected in the small and crowded habitations of the poor, it becomes requisite to provide establishments for this purpose.

The paramount importance of having ample accommodation for the reception of persons ill of infectious fevers cannot be too forcibly impressed upon the minds of those who are intrusted with the management of the poor, for this must assuredly constitute one of the most essential measures in any successful plan for diminishing the prevalence of fever. When once the disease breaks out in the confined and dirty houses of the labouring classes, nothing but the removal of the patient can prevent its rapid extension. Such persons having frequently only a single apartment, and often but one bed for 3 or 4 persons, the healthy are obliged even to sleep with the sick ; and the spreading of the disease under such circumstances amounts almost to a certainty. Whether the subject be viewed with reference to the interest and welfare of the poor themselves, or merely as a matter of economy and prudence, the advantages of separation are equally apparent. By timely removal the chances of recovery are increased, the risk of the disease extending to others is obviated, and the ruinous consequences to the family, which often ensue from the loss of time occasioned by the necessary attendance upon the sick, are avoided. If we take into account also the protracted convalescence which, from various causes, often follows before they are able to resume their work, when patients have remained at home, it is evident the pecuniary saving and consequent reduction of the poor-rates, from all these circumstances, cannot be small. It is important to bear constantly in mind that in a great majority of instances, where the head of a family, amongst the labouring classes, is attacked with fever, he is, *pro tempore* at least, a

pauper, and he and his family have to be supported out of the poor-rates.

The utility of fever-wards in checking the spread of fever is very strikingly illustrated by the beneficial results which followed their establishment in Manchester, and there cannot be a doubt that much of our freedom from the disease is attributable to their successful operation. In consequence of the great and constant prevalence of fever, more especially during the years 1789, 1790, 1791, 1794, and 1795, it was determined at a public meeting of the inhabitants to form a "Board of Health," and establish wards for the reception of persons affected with fever. The institution was opened in May, 1796, under the denomination of the House of Recovery; and the diminution of fever which immediately ensued was very remarkable, as appears from a report of the board of the infirmary, which states that "the number of home-patients weekly admitted is not, upon an average, more than half the number admitted previous to the opening of the House of Recovery; but it appears from an inspection of the physician's books, that the proportion of fever-patients out of the whole number of patients is much smaller than formerly; thus, on comparing the home-patients admitted in January, 1796, with those of the last month, it appears that in January, 1796, the whole number of patients was 296, out of which 226 were cases of fever; but in January, 1797, notwithstanding the severity of the season, the number of home-patients was only 161, out of which 57 were ill of fevers."* Dr. Ferriar also observes, "The most striking proof of the benefit which the public derive from this institution results from observing the diminution in the number of home-patients of the infirmary; the number of home-patients, from June, 1795, to June, 1796, was 2880; from June 1796 (immediately after the opening of the House of Recovery), to June, 1797, the number of home-patients was 1759; that is, the illness of 1121 persons has probably been prevented by this institution in one year; for the home-patients' list has generally increased every year."†

The success which attended the establishment of the House of Recovery (previous to which the ravages committed by fever in Manchester were dreadful) will be further evinced by an examination of the table inserted at page 313, from which it appears that, with the exception of the years of scarcity, 1801, 1802, and 1803, the number of patients admitted in one year never exceeded 375 (notwithstanding the rapid increase of the population), until the commercial depression of 1818. In one year the number of admissions was only 125, a very decisive proof of the usefulness of the institution, for, as has been aptly remarked, "one curious

* Account of the Establishment of Fever Wards in Manchester by Dr. Ferriar, in *Medical Histories*, 1798, vol. iii. page 72

† *Ib.*, page 84.

and perhaps peculiar feature of the House of Recovery is, that its benefits are never more triumphantly exhibited than when its own successful operation has caused it to contain few or no patients, and therefore to become apparently of little or no use.

It would be easy to adduce instances in which, where fever-patients have remained at home, many individuals have been attacked in succession. I recollect attending, in 1837, an Irish family, consisting of 7 persons, every one of whom became affected with fever. They all lived together in a small room at 12 Garden-street, and in consequence of the crowded state of the House of Recovery, could not gain admission. I lately attended 5 individuals ill of fever in one house in Beatson-street, and also a family in Oldham-road, where a man, his wife, and child severally passed through the disease, in consequence of the first objecting to go to the fever-wards.

The following analysis of the cases under my care in the temporary fever-hospital in Balloon-street, during the severe epidemic of 1837-38, shows how generally the disease spreads to several inmates, when it once breaks out in the confined, crowded, and dirty houses of the poor. The hospital was open a little more than 4 months, and altogether 182 patients were admitted. Out of this number no less than 73 were furnished by 20 houses. From one house 7, and from another 6, were admitted; there were 5 houses which furnished 5 patients each; in two instances 4, in five instances 3, and in six instances 2 persons were brought from the same dwelling. In this calculation, I have, in two instances, included 2 persons, who, though not marked in the register as residing in the house in which I have classed them, had nevertheless been passing most of their time there, in attendance upon relatives ill of fever, previous to their removal, and in which duty they evidently caught the disease.

But even this statement does not in every case give the whole number of persons who were attacked in the same house, because, in several instances, some were sent to the House of Recovery. Many of the single cases also were brought from adjoining houses, and clearly owed their origin to contagion in consequence of communication with infected houses.

The risk which those run whose duties lead them to visit the close and filthy rooms of the poor affected with fever is evinced by the melancholy fact that, during the epidemic of 1837-8, a physician and physician's clerk to the Royal Infirmary, and one sidesman, caught fever and died; one of the overseers and an assistant were also attacked, but recovered,—all within the space of three months.

There is not usually in Manchester much reluctance on the part of the poor to be removed to the House of Recovery; instances of refusal are exceptions to the general rule, and seldom

occur, save in the case of children who will not consent to be separated from their mothers.

2. The *malaria* which produces intermittent and remittent fevers requires little notice, as it can scarcely be said to have any existence in Manchester. Dr. Carbutt remarks, "that in the memory of the oldest medical practitioner living, and as far back as tradition can reach, there never was an ague caught in Manchester, nor within a considerable number of miles of it."* Dr. Gaulter also states, "that ague is utterly unknown here, and remittent fevers are exceedingly rare, in comparison with those of a continued or typhoid character."† It is probable, however, that these statements are somewhat too unqualified; for though I have never met with a case myself, Dr. Davenport Hulme, physician to the Royal Infirmary, mentions to me that, within a few years, he has seen one or two cases of ague, which appeared, from all the evidence he could collect, to have originated in Manchester.

3. The effects of *civic malaria*, arising from accumulations of decaying animal and vegetable matters, and various kinds of refuse, so far as they have been observed in Manchester, come next to be considered.

That the filthy and disgraceful state of many of the streets in those densely populated and neglected parts of the town where the indigent poor chiefly reside, cannot fail to exercise a most baneful influence on their health, is an inference which experience has fully proved to be well founded; and no fact is better established than that a large proportion of the cases of fever which occur in Manchester originate in these situations. Of the 182 patients admitted into the temporary Fever Hospital in Balloon-street, 135 at least came from unpaved or otherwise filthy streets, or from confined and dirty courts or alleys. Many of the streets in which cases of fever are common are so deep in mire, or so full of hollows and heaps of refuse, that the vehicle used for conveying the patients to the House of Recovery often cannot be driven along them, and the patients are obliged to be carried to it from considerable distances. Whole streets in these quarters are unpaved, and without drains or main sewers, are worn into deep ruts and holes, in which water constantly stagnates, and are so covered with refuse and excrementitious matter as to be almost impassable from depth of mud, and intolerable from stench. In the narrow lanes, confined courts, and alleys leading from these, similar nuisances exist, if possible to a still greater extent; and, as ventilation is here more obstructed, their effects are still more pernicious. In many of these places are to be seen privies in the most disgusting state of filth, open cesspools, obstructed drains, ditches full of stagnant water, dunghills, pigsties, &c.,

* Clinical Lectures in the Manchester Royal Infirmary. 1834, page 193.

† Origin and Progress of Malignant Cholera in Manchester, 1833, page 106.

from which the most abominable odours are emitted. But dwellings perhaps even still more insalubrious are those cottages situated at the backs of the houses fronting the street, the only entrance to which is through some nameless narrow passage, converted generally, as if by common consent, into a receptacle for ordure and the most offensive kinds of filth and rubbish. The doors of these hovels very commonly open close upon the uncovered cesspool which receives the contents of the privy belonging to the front house, and all the refuse cast out from it, as if it had been designedly contrived to render them as loathsome and unhealthy as possible. Surrounded on all sides by high walls, no current of air can gain access to disperse and dilute the noxious effluvia, or disturb the reeking atmosphere of these areas. Where they happen to be less crowded, and any ground remains unbuilt upon, it is generally undrained, contains pools of stagnant water, and is made a depôt for dung, offal, and all kinds of filth.

If the interior of the dwellings in these localities be examined, they will be found accurately to correspond with the filthy condition of the exterior, and to present all the indications of negligence, slovenliness, and discomfort—of abject poverty and destitution, which the appearance from without would lead us to predict. They are dirty in an extreme degree, damp, shamefully out of repair, and barely furnished. Many, indeed, can scarcely be said to be furnished at all—a table, a chair, or a stool, a few, and very few, articles of culinary apparatus, some shavings, or a little straw in a corner, with a scanty piece or two of filthy bed-covering, constitute the whole furniture of numerous habitations in this town; and numbers may be found where even this meagre catalogue is far from being complete. The wretched condition of many of the cellars will scarcely be credited by those who have not visited them—dark, damp, and filthy, incapable of ventilation, and constantly liable to be flooded—they present a most dismal appearance, and are quite unfit to be inhabited by civilized beings. The walls are scarcely ever white-washed, the windows neither keep out the wind nor rain, and the floors are sometimes not half covered with bricks or flags. I have occasionally visited patients where the bedding or straw on which they lay was placed, without any protection, on a floor not only damp, but literally wet. The wretched occupants of these miserable abodes, as might be expected, are grossly negligent of personal cleanliness; they suffer from scantiness of clothing and bedding, too often from deficiency of food, from want of fuel and other necessaries of life, and have altogether a squalid and unhealthy appearance—the natural consequence of living amidst such fertile sources of disease.

It is in these loathsome and pestiferous localities that disease rages in all its malignancy and power; that contagion, seizing

victim after victim, commits, unchecked, its dreadful havoc ; it is here that those extensive ravages are wrought by which the bills of mortality in large towns are so appallingly increased, and the average duration of life allotted to man is so lamentably curtailed ; it is here that the services of the medical officer of the infirmary and various dispensaries are principally required, and it is amidst such melancholy scenes that he, more than any other class of men, becomes acquainted with the hidden sufferings, miseries, and almost incredible destitution of his fellow-creatures. In his daily visits to these neglected haunts of disease and wretchedness, he seldom encounters an individual but the indigent inhabitants themselves, except perhaps the parish overseer, and haply some minister of religion in the exercise of his sacred office, endeavouring to afford religious comfort to some suffering mortal, whose last moments in this world, hastened by the pestilential atmosphere in which he has lived, and the privations he has endured, are probably drawing to a close.

The state of the houses of the poor, as well as that of the streets and localities in which they are situated, constituted one of the chief objects of inquiry of the "Special Board of Health," formed in Manchester on the visitation of malignant cholera to this country. From the united reports of the various inspectors appointed to the different sections into which the town was divided for the purpose of being inspected, a mass of evidence of the most extraordinary and painful description was elicited. The most important parts of the information thus collected were published by Dr. Kay,* and created a very strong sensation at the time amongst the more wealthy portion of the inhabitants, who were astounded at the facts brought to light.

A few of the results of this inquiry may be stated, to show the deplorable condition at that time (1832) of the streets and tenements inhabited by our pauper population.

Of 687 streets inspected, 248 were reported unpaved, 53 partially paved, 112 ill ventilated, and 352 containing heaps of refuse, stagnant pools, ordure, &c.

The number of houses inspected was 6951, and of these 2565 were reported as requiring whitewashing, 960 requiring repair, 939 in which the soughs wanted repair, 1435 damp, 452 ill ventilated, and 2221 were reported as wanting privies.

The state of some of the streets and courts examined was found by the inspectors abominable beyond description, and exhibited a melancholy picture of the filthy condition and unwholesome atmosphere in which a large portion of our poor are doomed to live. As an example, I will extract the description given of the state of Little Ireland, from the proceedings of the Special Board of Health, which I have been permitted to examine, through the kindness of the boroughreeve, John Brooks, Esq.

* Moral and Physical Condition of the Working Classes in Manchester.

“The undersigned, having been deputed by the Special Board of Health to inquire into the state of Little Ireland, beg to report, that in the main street and courts abutting, the sewers are all in a most wretched state, and quite inadequate to carry off the surface water, not to mention the slops thrown down by the inhabitants in about 200 houses. The privies are in a most disgraceful state, inaccessible from filth, and too few for the accommodation of the number of people, the average number being 2 to 250 people. The upper rooms are, with few exceptions, very dirty, and the cellars much worse, all damp, and some occasionally overflowed. The cellars consist of two rooms on a floor, each 9 to 10 feet square, some inhabited by 10 persons, others by more; in many, the people have no beds, and keep each other warm by close stowage on shavings, straw, &c.: a change of linen or clothes is an exception to the common practice. Many of the back rooms, where they sleep, have no other means of ventilation than from the front rooms.

“Some of the cellars on the lower ground were once filled up as uninhabitable, but one is now occupied by a weaver, and he has stopped up the drain with clay to prevent the water flowing from it into his cellar, and mops up the water every morning.”* In addition to the circumstances here mentioned, the unhealthiness of this spot is further increased by its low and damp situation in a deep hollow, bounded on one side by a filthy and stinking brook, which readily overflows after rain; on another, by a very steep embankment; and on another, by a high wall, which separates it from the gas-works; and surrounded, moreover, by numerous high factories.

The above description represents as faithfully the present state of this place as it did its condition eight years ago. On the open space in the centre, which was formerly uncovered, numerous pigsties are now erected, which add, if possible, to its insalubrity. All the streets on the west side of the square are blocked up at one end by a high wall, so that each forms a *cul-de-sac*, a mode of construction which precludes the possibility of effectual ventilation. Close to this wall, at the upper end of these streets, are placed filthy and dilapidated privies, with large open cesspools, which are frequently full to overflowing. The present condition of those in Bent and James Leigh-streets are disgusting and offensive beyond conception.

Little Ireland, as its name implies, is inhabited almost exclusively by Irish, and these of the most improvident and dissolute habits; regardless alike of order, cleanliness, and comfort, a circumstance which in some degree accounts for its disgraceful and dirty condition, for it is always observable that those quarters where the Irish congregate are the worst in this respect,—little Ireland has long been remarkable as affording numerous cases of

* MS. Proceedings of the Special Board of Health, vol. i. page 52.

fever; and scarlatina and small-pox have frequently committed extensive ravages amongst the children there. When I had charge of the district in which this insalubrious spot is situated, during my connexion with the Royal Infirmary, the great prevalence of fever in it forcibly struck me; and from recent inquiries I find it still maintains this unenviable character. At a lodging-house, No. 15, Foedge-street, 4 cases of fever occurred from the 24th December, 1839, to 1st February, 1840; and several persons were also affected in the same house in April and May, 1838. At No. 1, Anvil-street, 4 cases occurred between 30th November and 9th December, 1839. Both these streets are situated very low, are unpaved, and covered thickly with mud and refuse. Directly opposite to the house in Anvil-street is a piggery, the drainage from which renders the locality extremely filthy. Foedge-street is nearer the brook, and is frequently flooded several feet deep.

Great efforts were made by the Special Board of Health, with the co-operation of the parochial and municipal authorities, to remedy or mitigate the evils and nuisances represented to them; but owing to deficiency of funds, to defects in the various enactments for the management of the town, and the absence of any clauses for rendering the paving, draining, and cleansing of streets compulsory, no very great permanent advantages resulted from their exertions. Since the time these reports were made, however (now more than 8 years), much has been done towards improving the state of the streets. Great numbers have been thoroughly paved and soughed, and the charge of keeping them clean and in repair having devolved upon the town, they are now regularly scavenged.

This improvement has been effected through the agency of the recent Police Act, which came into operation 9 years ago, and which gives to the Commissioners of Police additional powers for enforcing the proper completion of streets. In the old Act there was no power vested in the Commissioners to compel owners to pave and sewer streets, though when they agreed to do so, and executed the work to the satisfaction of the authorities, the Commissioners had power to declare such streets public highways, and they were thenceforth repaired and scavenged at the expense of the public. The Act of 1830 authorizes the Commissioners to give notice to the owners and occupiers of property to pave and sewer streets, and if this notice be not complied with within six months, the Commissioners are then empowered to execute the work themselves, and charge the cost to the owners, in proportion to the lengths of their respective frontages into the street.

For this information I am indebted to Mr. Wroe, comptroller, and through his kindness I am enabled to furnish the following statement of what has been effected in the improvement of the streets under the present Act:—

Number of streets paved and sewered . . .	146	
	Miles.	Yards.
Length of streets paved and sewered . . .	13	1,402
Length of main sewers formed . . .	13	160
Length of cross sewers formed . . .	5	103
Surface of streets paved . . .	251,791 square yards.	

The benefits which this Act has conferred upon the town will at once be evident from this statement; and though, from inability to obtain the requisite information, I have not been able to compare the number of fever cases occurring latterly in these streets with the former numbers, it is most probable they have considerably diminished, and there can be no doubt that the general health of the inhabitants has been greatly improved by the change.

It were much to be wished that the remarks made relative to the improvements of the streets could be extended to the houses of the poor, but in this respect no amendment has taken place; and owing to the apathy or avarice of owners of cottage property, great obstacles stand in the way of effecting any. They are now as filthy and deficient in necessary conveniences,—as dilapidated, damp, and ill ventilated as they were in 1831, when the Special Board of Health made its inquiries.

And notwithstanding all that has been done in the improvement of the streets, the number requiring paving and soughing, and into which the scavenger never enters, is still very great; for as those more central have been completed, others have been laid out in the outskirts equally without pavements and drains, and into which all the refuse, slops, and filth from the houses are unceremoniously thrown, and left there to decay and exhale their noxious vapours; so that these streets bid fair in a short time to rival their former prototypes in the interior of the town.

It is greatly to be lamented that the same crowding and ill planning of houses, which is seen in the older parts of the town, and which has been productive of such bad effects on the health of the inhabitants, should still continue to be frequently imitated in the cottages erected for the poor. The practice of building houses at the backs of those fronting the street, with only an extremely narrow passage intervening, and the doors of the former opening directly opposite the privies and uncovered cesspools of the latter, is still shamefully common. In one respect there is certainly an amendment; the houses are not now generally more than two stories high, and cellars are not so general as formerly. The proportion of fever cases occurring in cellars has always been very large, and the practice of letting them as habitations for the poor ought to be discountenanced as much as possible. Their construction renders it quite impossible to make them salubrious; few of them can be made dry, or be properly ventilated.

In some of the new streets the backs of the cottages are built

in close contact with each other, each having but two rooms, one on the ground-floor and one above; so that, in fact, the front and back of these houses constitute a separate tenement. The great disadvantage of this plan is the paucity of privies and the absence of any receptacle for refuse or provision for carrying off the slops. There is not usually more than one privy to 20 or 30 houses, and this being generally placed in one of the narrow covered passages (intersecting the line of buildings at intervals), from its open and filthy state, renders these passages extremely offensive and insalubrious.

A very observant and experienced physician, in a sketch of the Medical Topography of Manchester, published in 1830, in allusion to this subject, has remarked, "The number of private, unpaved, and consequently filthy streets, is lamentably great in Manchester; the picture drawn by Sir W. Scott of the village of Tully-Veolan may, in part, be taken as a faithful representation of their condition; the only scavengers that enter them are dogs and swine, allowed to roam at large, and they are useful in their way, by consuming some of the offal which is indiscriminately cast in heaps before the doors. It is much to be regretted that the surveyors of the highways, or some other body of gentlemen specially appointed, were not, 40 years ago, invested with authority to regulate the laying out of building-land within the precincts of the town, and power to enforce the observance of certain conditions on the part of the owners and lessees of such property. If the growth of Manchester had proceeded under such auspices, and if every street and court, as soon as completed, had been taken charge of by the public functionaries, there would be no occasion now to reprobate the offensive and disgraceful exhibitions of accumulated filth which present themselves in every quarter. . . . There cannot be a rational doubt that much disease has arisen from the state of things here complained of, and it is hoped that the Bill brought into Parliament during the present Session will be found an effectual remedy for the evil."* The hope here expressed has been but partially realized, and it is unfortunate that a clause for regulating the laying out of building-land and enforcing the construction of adequate drains was not inserted in the Act, in accordance with the foregoing suggestion.

Besides the increase of fever attributable to the malaria arising from the want of drainage and collections of refuse in the neighbourhood of the dwellings of the poor, it is the indirect cause of many other diseases, probably to a much greater amount. By impairing the physical condition and lowering the standard of health of the inhabitants, it promotes the development of scrofula, consumption, stomach affections, &c., and renders those exposed to it peculiarly liable to suffer from all prevailing epidemics.

In addition to these *physical* evils, the unpaved and filthy state

* Dr. Lyon, in North of England Med. and Surg. Journal, No. 1, page 17.

of the streets has also a most baneful *moral* effect upon the residents, who, from long familiarity with all kinds of loathsome sights and stench without, acquire an indifference to cleanliness and neatness in the interior of their houses,—an indifference which soon extends to their personal habits. Such feelings are much to be regretted; they have a very injurious and demoralizing tendency by engendering a want of self-respect and a disregard for decency of appearance, and form a serious impediment to domestic comfort and to improvement in the social condition of the poor.

If some of the more dense and crowded parts of the town were intersected by a few wide streets, and an open space or two made so as to give more air and afford the means of better ventilation, there cannot be a doubt that the health of the inhabitants would be greatly benefited; and as the adjoining property would be much increased in value, it is probable these improvements might be effected at a very moderate expense. The greatest advantages, for instance, would result from some such improvement in that densely crowded part of the Collegiate Church district, bounded by Shude-hill, Hanover-street, Long Millgate, Todd-street and Withy-grove. The space enclosed within these boundaries contains some of the most insalubrious streets in the town, and notorious as furnishing numerous cases of fever; of which Garden-street, Back Garden-street, Back Hanover-street, and Wells-street, with Huntsman's-court, are the worst; the last, chiefly inhabited by the lowest prostitutes, is one of the most filthy and disgusting places which can be imagined.

It appears to me unnecessary to lengthen this report by specifying the particular localities in which nuisances, productive of malaria, tending injuriously to affect the health of the inhabitants, and to promote the prevalence of contagious diseases, exist; but it may be well to mention a few of the streets which, either from being unpaved, or without drains, or containing collections of refuse, &c., or being over-crowded and ill ventilated, have been remarked to be particularly unhealthy.

In *Ancoats district*, the lower end of Pott-street, Back Pott-street, Pott-street court, Fairbottom's-court, some parts of Carruthers-street, Back Portugal-street, the top of Primrose-street, Leigh-street east, and Lloyd-street, are the worst which occur to me. In all these places disgraceful accumulations of filth and other nuisances exist; and in all of them I have lately attended patients ill of fever, in the capacity of physician to the Ardwick and Ancoats Dispensary. I have recently had three cases of fever in one house, in a small confined court in Back Factory-street. The house is inhabited by seven persons, and consists of but two small rooms, about 9 feet square, in one of which all these individuals sleep upon the floor, for they have no bedstead, and very little bed-covering. The passage to this court is almost impassable from filth, and directly opposite to the house in question is placed

an uncovered cesspool, which is the only receptacle for all the refuse and excrementitious matter from the whole court, and many of the neighbouring houses. Three cases also occurred in Chapel-court between the 2nd and 12th October last; and several in Stopford's-court, a very filthy place. Five cases originated at 13, Lomax-street, between the 7th November and 7th December, 1839,—a street abominably offensive from collections of refuse. Mather-street, Cross Mather-street, and Forty-Row are also similarly circumstanced, and furnish many fever patients. I ought, however, to state that the dispensary patients affected with fever which have come under my care, have been by no means confined to these filthy localities,—many cases having occurred in streets which were well paved, drained, and tolerably clean, and where the disease could not be attributed to any evident external cause.

The streets in *Angel Meadow district* have been greatly improved of late, but there are many still in an extremely wet, filthy, and disgraceful state. As examples, Crown-lane, Nelson-street, and some of the adjoining courts, Back Ashley-lane, Charlotte-street, Parker-street, Irish-row, and Water-street may be mentioned; in all of which fever is frequently occurring. Hargreave's-street, situated opposite some dye-works on the river Irk, has long been in a most abominable condition from accumulated filth; it is at present nearly knee-deep in mire and refuse. During the epidemic of 1837-38, fever prevailed here and in the street behind to an alarming extent. In some of the houses all the inmates were attacked in succession; the disease was of a severe type, and several cases proved fatal. In one instance I found a woman ill of fever, whose husband, just dead of the disease, was lying in the same bed by her side. A dirty and crowded pile of dilapidated old buildings, called Gibraltar, is peculiarly notorious as a fertile source of fever; and several cases have lately occurred at No. 9. In many of the streets leading out of Angel and Blakeley-streets, and in some of the cellars in St. George's-road, fever almost constantly exists.

In a filthy place called Connaught-court, New Mount-street, at one end of which is a privy in a most disgusting and dilapidated condition, with a large uncovered cesspool, fever has often been very prevalent; and there are several other dirty courts in the vicinity where it frequently abounds. Back Simpson-street, paved and drained, but narrow, confined, and filthy from ordure and mud; Nicholas-street, at one end of which is a large collection of dirt, manure, &c., being the accumulation from a pigsty, and the drainage from a neighbouring filthy street; and Old Mount-street, containing some very damp cellars much below the surface, are all sites from which fever is seldom absent. At a crowded lodging-house in Clockface-entry, a most foul spot, three fever cases occurred between the 7th June and 17th July, 1839.

These two districts are very densely populated, principally by hand-loom weavers and the workpeople employed in the factories,

a large proportion of whom are Irish, living for the most part in a state of extreme indigence, and without the least attention to cleanliness. Altogether they comprehend by far the worst quarters of the town both as regards the wet and filthy state of the streets, the dirty, damp, and dilapidated condition of the houses, and the improvidence, poverty, and destitution of the inhabitants; and, as might be anticipated, they furnish the great bulk of our fever patients.

Some of the worst localities in the *Collegiate Church district* have already been mentioned; to which may be added several of the courts leading out of Long Millgate. There are also some filthy and crowded lodging-houses in Garden-street, particularly Nos. 16 and 18, likewise a close ill-ventilated cellar at No. 30 in the same street, and a similar one in Red-fern-court, where fever often prevails. The unhealthiness of this district arises more from overcrowding and want of ventilation than from moisture or accumulated filth in the streets, most of which are paved and drained.

The state of the streets in *Bank Top district* is not generally so bad as in many other parts of the town where the poor reside, though some spots might be pointed out as particularly unhealthy; of which Little Ireland, already mentioned, is the chief. Back Hunt-street, also in this district, is a long narrow court, the only entrance to which is at one end down a flight of steps. The other end being closed by a high wall, and the houses being lofty, ventilation is impossible. Half way down the steps are placed some open and filthy privies, at present intolerably offensive. The cellars on one side of the street are the most dismal and wretched habitations which can be conceived. They consist of two apartments, the interior of which, having no aperture to admit either light or air except the door leading into the front room, is nearly quite dark. Many of them are at present empty, being, it would seem, so extremely comfortless and forbidding in appearance that tenants, little fastidious as they generally are to matters of this kind, cannot be procured. It will not excite surprise that fever has at various times been very prevalent in this place, though it does not appear to have been particularly so lately.

Deansgate district usually furnishes a considerable number of fever patients. It is probable, however, the disease is here attributable more to overcrowding and want of ventilation, aided by the destitution, and the dissolute and filthy habits of the people, than to accumulations of refuse in the streets, most of which are paved, drained, and regularly scavenged.

There are several unhealthy situations in *Salford*, where fever is generally more or less prevalent. These are chiefly those parts which are low and damp, or bordering upon the river, where it is liable to overflow its banks. As examples, some places may be mentioned in the vicinity of Oldfield-road, Hope-street, and the streets branching from it, Canal-street, Barrow-street, Wickham-

street, and Regent-street, most of them unpaved, unsoughed, and filthy, and the inhabitants generally very poor. In that portion of the town included between New Bailey-street and Blackfriars-bridge, which is confined, densely populated, and in many parts very dirty, fever is also frequent. Several streets situated on some low ground behind the Adelphi, and others leading from Broughton-road and Greengate towards the river, furnish many fever patients. "But the spot of all others the least friendly to health and comfort is the Old Cloth Hall, situated nearly opposite the confluence of the Irk and the Irwell, but inaccessible to the purifying breeze which might be expected in such a situation. The approach to this place is by an archway from Greengate, and the visitor finds himself involved in a labyrinth of low dwellings, consisting partly of the old building formerly used as a cloth-hall, divided into two stories by an open gallery in front, from which the upper rooms are entered, and every room being a separate tenement;—partly of a range of cottages recently built across the area, with other cottages outside of these, so as to leave a very narrow space between the several rows. A few years ago, one-third of the patients, removed by a physician of the infirmary from Salford to the fever hospital, were taken from this nursery of disease."* Yet it is very remarkable that not one home-patient affected with fever was admitted at the Salford Dispensary from this insalubrious place from June, 1838, to June, 1839:—strong presumptive evidence that something in addition to an unhealthy site is necessary for the *generation* of typhoid fevers.

For much information relative to some of the localities in which fever has recently prevailed, I am indebted to Messrs. Harrison and Furnival, physician's clerks at the Manchester Royal Infirmary, and Mr. Southam, late house apothecary at the Salford Dispensary.

Of the 1042 patients admitted into the House of Recovery from the 31st May, 1838, to the 31st May, 1839, 276 came from Ancoats district, 320 from Angel Meadow district, 104 from the Collegiate Church district, 141 from Bank Top district, 134 from Deansgate district, and 67 from Salford. It is evident, however, that no inference can be drawn as to the comparative prevalence of fever in these districts, from these numbers, unless the indigent population of each was known.

With a view of ascertaining, as far as is practicable, the relative prevalence of fever to other diseases in different parts of the town, I made a calculation of the proportion of the former occurring amongst the home-patients attended by the physicians of the Royal Infirmary and the dispensaries during the past year, in each of their respective districts; and the following statement exhibits the result. The six first comprise the several infirmary districts into which the town is divided, for the purpose of being more con-

* North of England Medical and Surgical Journal, No. 1, page 19.

veniently visited, and the state of the streets, each of which has been briefly noticed:—

In Ancoats district there was	14·38	per cent. of fever.
In Angel Meadow	21·58	„
In the Collegiate Church	25·58	„
In Bank Top	15·84	„
In Deansgate	13·81	„
In Salford	12·56	„
At the Chorlton-on-Medlock } Dispensary there was . . }	22·43	„
At the Ardwick and Ancoats } do. }	16·15	„
At the Salford do. }	17·95	„

Owing to the imperfect registration of the diseases at most of these institutions, the accuracy of the above calculations cannot be implicitly relied upon, but they will nevertheless serve to give some idea of the relative prevalence of fever in particular localities. In many instances it is certain that cases of slight febrile excitement, which has passed off in a day or two, have been denominated fever, though they cannot properly be placed in the class of diseases which are the subject of this report. This has probably been the case at the Chorlton-upon-Medlock Dispensary, where, according to the register, the ratio of fever appears to be higher than in most parts of Manchester;—a circumstance which is extremely doubtful, and probably the reverse of truth, for the streets in this district are generally better paved and soughed, and more free from accumulations of filth than those in other parts of the suburbs, and the labouring classes are not commonly so extremely indigent or destitute. Frequently no entry at all is made of the disease, so that some cases of fever may not be included; but as this omission in the register is generally owing to some obscurity in the complaint, it seldom occurs amongst the fever cases, as there is not likely to be any difficulty in detecting them;—besides, as the patients affected with contagious fever occurring at the infirmary are usually sent to the House of Recovery, and marked as so disposed of in the book, this circumstance serves as an additional check to the error in question.

In order to account for the discrepancy in the proportion of fever occurring amongst the home-patients in Salford, attended from the infirmary and those attended from the Salford Dispensary, it is necessary to state that the number of patients from this district, which is now admitted under the infirmary, is too small to form any calculations upon, and that the acute cases, such as fevers, are chiefly attended by the Dispensary physicians.

Without placing too much reliance on the accuracy of the above calculations, as to the proportion of fever to other diseases in par-

ticular localities, I think it fully establishes the opinion subsequently stated, that human miasms constitute a fertile source of fever, and that the disease is usually most prevalent in the more confined, close, and ill-ventilated parts of the town, and in overcrowded lodging-houses. The Collegiate Church district is certainly the worst in this respect, and there the ratio of fever appears much higher than anywhere else.

Notwithstanding the generally admitted fact that fever is most prevalent in localities where refuse is allowed to accumulate and decay, and notwithstanding all the evidence which has been adduced here in support of that opinion, the existence of some other cause seems necessary for the generation of the disease. It would not be difficult to point out places in a most abominably filthy state, which have remained free from fever for a long period; yet no sooner has one case occurred, than the disease has spread with the greatest rapidity. In the course of my necessary inquiries for the preparation of this report, I have met with many more filthy situations, in which the occurrence of fever is extremely rare:—a fact, of which I have satisfied myself, both from the records of the medical institutions and from the evidence of the residents.

My own impression is that the overcrowding and neglect of ventilation, the dissipated habits, and above all, the poverty and destitution which prevail amongst the inhabitants of the low and filthy quarters of large towns, are more powerful causes of fever than the malaria to which those people are exposed, for we find that persons who are well fed and abundantly supplied with the necessaries of life, bear with impunity exposure to the most offensive effluvia arising from putrefying animal matters; or at least that in them it does not produce fever. Mr. Herbert Mayo, after noticing the detrimental effects of exhalations from living persons, observes, “the decomposition of animal substance (*not of a morbid origin*) does not appear equally prejudicial to health. The medical student who is diligent in his attendance in hospitals is often compelled to desist by ill health, which had not happened to him when prosecuting anatomy. M. de Noe mentions in his ‘*Mémoires relatifs à l’Expédition Anglaise de l’Inde en Egypte,*’ how little injurious to health the mass of putrefaction attending the oyster-fishery in a hot climate is found to be:—‘Although millions of oysters are putrefying under a burning sun, in the very midst of a dense and promiscuous mass of human beings, filling the atmosphere with a most intolerable stench, sickness is hardly known.’ In like manner, in the process of grinding bones in this country for manure, a smell the most dreadfully offensive attends the operation, yet the men who are constantly inhaling this odour, are exceedingly healthy. Butchers, tripe-men, tanners, candle-makers, are all exposed more or less to the effluvium from animal matter in various degrees of decomposition, and yet are far from being unhealthy; or rather, the degree of unwholesomeness in

these cases bears no proportion to the offensiveness of the effluvia ; and although all accumulations of animal matter should be viewed with suspicion, and removed or obviated, it is singular in how small a degree, unless combined with the produce of living exhalation, or of vegetable matter, they ordinarily prove deleterious.”*

4. The pernicious effects resulting from human miasms, or the vitiation of the atmosphere by the congregation of many persons in a confined space, are lamentably illustrated in the common *lodging-houses* of the poor ; the crowded, dirty, and ill-ventilated state of which is, I conceive, without doubt, one of the most prolific sources of fever in Manchester. To those who have not visited them, no description can convey anything like an accurate idea of the abominable state of these dens of filth, disease, and wretchedness.

This is not an evil of recent date. So long ago as the year 1792 these establishments received the especial notice of Dr. Ferriar, who pointed them out as one of the chief sources of fever in Manchester at that time. “The mean lodging-houses in the outskirts of the town are the principal nurseries of febrile contagion. Some of these are old houses, composed of very small rooms, into each of which three, four, or more people are crowded, to eat and sleep, and frequently to work. They commonly bear marks of a long accumulation of filth, and some of them have scarcely been free from infection for many years past. As soon as one poor creature dies, or is driven out of his cell, he is replaced by another, generally from the country, who soon feels in his turn the consequences of breathing infected air.”† So convinced was this philanthropic physician of the extensive evils produced by these houses, that he proposed having them licensed, as the only remedy. “If lodging-houses were licensed, and brought under the notice of the civil magistrate, many of the causes of fever might be prevented. They might be visited by proper officers, frequently, and regular reports of the names, occupations, conduct, &c. of the lodgers, as well as of the state of the houses with regard to infection, might be laid before the magistrates of the district. It would not be difficult to discover at what point the want of cleanliness becomes dangerous, and as far as scouring and white-washing can remedy that defect, the hazard might be prevented.”‡

In the preface to the Annual Report of the Board of Health for the year 1802, written by Dr. Holme, the necessity of legislative interference is also alluded to:—“The want of proper regulations in common lodging-houses is an evil on which we have often had occasion to animadvert, and for which we are persuaded no adequate remedy can be obtained without Parliamentary interposition.”

* *The Philosophy of Living.* London, 1838, 2nd edition, page 213.

† *Medical Histories.* London, 1792, vol. i., page 136.

‡ *Medical Histories.* London, 1792, vol. i., page 141.

The state of the common lodging-houses to which the poor resort is still the same as it was when the above remarks of Drs. Ferriar and Holme were made; and if they are not now worse, it is only because they were then as bad as it was possible for them to be. Though the magnitude of the evils arising from them has on various occasions attracted attention, no effective measures have yet been taken permanently to remedy them.

From the inquiry entered into by the "Special Board of Health" already alluded to, it appears that, in 1832, the number of these houses amounted to 267.* As had been anticipated from the reports then made of their state, the havoc caused by cholera in these places was terrible. A most violent and extraordinary outbreak of the disease took place in a lodging-house, No. 12, Blakeley-street, well known to the medical officers of the Royal Infirmary as a prolific source of fever. Out of 18 persons at that time staying in the house, 10 were attacked and 8 died.†

The great prevalence of fever in these houses during the severe epidemic of 1837-38 attracted the especial notice of the Board of the House of Recovery, who passed and transmitted the following resolution on the subject to the churchwardens on the 3rd of January, 1838:—"It appearing that a great number of cases of fever originates in the common lodging-houses of the poor of the town, this Board begs to suggest to the churchwardens and sidesmen the desirableness of appointing proper persons to inspect the same, in order to prevent, as far as possible, by cleanliness and ventilation, the increase and spread of this malady." In consequence of this suggestion the parochial authorities did immediately cause some of the most filthy of these establishments to be cleansed and white-washed; but it is evident that temporary exertions of this kind, however praiseworthy, are quite inadequate to effect much permanent improvement.

In some of these houses as many as 6 or 8 beds are contained in a single room; in others, where the rooms are smaller, the number is necessarily less; but it seems to be the invariable practice of these "keepers of fever beds," as the proprietors were styled by Dr. Ferriar, to cram as many beds into each room as it can possibly be made to hold; and they are often placed so close to each other that there is scarcely room to pass between them. The scene which these places present at night is one of the most lamentable description; the crowded state of the beds, filled promiscuously with men, women, and children; the floor covered over with the filthy and ragged clothing they have just put off, and with their various bundles and packages, containing all the property they possess, mark the depraved and blunted state of their feelings, and the moral and social disorder which exists. The suffocating stench and heat of the atmosphere are almost

* MS. Proceedings of the Special Board of Health, vol. i. page 114.

† Dr. Gaultier on Cholera in Manchester, page 39.

intolerable to a person coming from the open air, and plainly indicate its insalubrity. Even if the place be inspected during the day, the state of things is not much better. Several persons will very commonly be found in bed; one is probably sick, a second is perhaps sleeping away the effects of the previous night's debauch, whilst another is possibly dozing away his time because he has no employment, or is taking his rest now because he obtains his living by some night-work. In consequence of this occupation of the room during the day, the windows are kept constantly closed, ventilation is entirely neglected, and the vitiated atmosphere is ever ready to communicate its poisonous influence to the first fresh comer, whom habit has not yet rendered insensible to its effects, an exemption which seems to be in some degree acquired by habitual exposure, and which accounts for the immunity frequently enjoyed by the keepers themselves of these houses, whilst their lodgers are attacked in succession. This circumstance, which was particularly noticed by Dr. Ferriar, I have often observed. Where cellars are occupied as lodging-houses, the back room is generally used as the sleeping apartment; and as this has often no window, and can, therefore, only receive air and light through the door opening into the front room, the utter impossibility of ventilation renders the ravages of infectious fevers particularly destructive, when they once find entrance.

The beds and bedding, being seldom washed or changed, are generally in the most filthy condition, and consisting usually of those porous materials to which contagious vapours are especially liable to attach themselves, the danger of sleeping in them may be well conceived. Even if a bed has been occupied by a fever patient who has died, or been removed, it is often immediately used by fresh lodgers, without having undergone any purification.

From this description, which applies to a large proportion of the common lodging-houses, and in which there is no exaggeration, it is evident that it would scarcely be possible to contrive places more likely to be effectual in promoting the spread of infectious diseases. They are, in fact, complete hot-beds of contagion, ever generating and nurturing the seeds of fever, and disseminating it amongst the unfortunate beings who chance to take up their abode therein;—receptacles in which contagion almost constantly exists, and where its pestilential properties are never weakened by its natural antidotes, cleanliness and ventilation. When infection has once been introduced into these abodes, it will be readily conceived that they retain the power of communicating the disease for a great length of time.

It would be easy to point out particular lodging-houses in which cases of fever have been more or less frequently occurring for many years. There are several in Angel-street, Blakeley-street, Hanover-street, and Garden-street, particularly notorious on this account. A crowded one in Mason-street, No. 31, has latterly furnished

many fever patients. Several cases have recently occurred at 24, Mitchell-street, a house consisting of but four small rooms (besides a scullery and a little room above, corresponding), and in which 21 persons were residing previous to the breaking out of the fever. Of these 21 persons, 7 have had the disease within two months, and 2, both adults, have died. At a crowded lodging-house, No. 2, Larkin's-court, Lees-street, 5 cases occurred between the 26th March, and 12th June, 1839. There is a very dirty one in Ludgate-street, No. 11; 1 at 36, Miller-street; and another at 52, Angel-street, in the cellar, where many persons have recently become affected with fever: 2 or 3 in Garden-street have already been mentioned.

The inmates of these establishments are constantly changing; and, carrying the contagion either in their persons or their clothes, they readily infect individuals with whom they come in contact, in their migrations through the town; and in this way fever is often widely and rapidly disseminated.

The disgraceful state of these lodging-houses has been dwelt upon at some length, because I consider their evils of a most serious and extensive nature, and I feel quite satisfied they are the most malignant and active foci of infectious fevers in Manchester. Indeed it is my decided opinion that the vitiation of the atmosphere by the living is much more injurious to the constitution than its impregnation with the effluvia from dead organic matter; and certainly all I have observed in Manchester induces me to consider the "human miasms" generated in overcrowded and ill-ventilated rooms as a far more frequent and efficient cause of fever than the malaria arising from collections of refuse and want of drainage. I have been led to this conclusion from having remarked that fever has generally prevailed more extensively in those houses where the greatest numbers were crowded together, and where ventilation was most deficient, although the streets in which they are situated may be well-paved, drained, and tolerably free from filth, than in those where there was less crowding, notwithstanding their locations in the midst of nuisances giving rise to malaria. This inference is also supported by the fact of the higher relative proportion of fever to other diseases which has been shown to exist in the Collegiate Church district, where the number of crowded lodging-houses and confined courts, the closely compacted state of the buildings, the narrowness of the streets, and consequent density of the population and absence of ventilation, are most remarkable.

Again, fever is usually most prevalent in winter, when putrefaction goes on more slowly than during the hotter months of summer, and when malarious exhalations are least copious. Many circumstances conspire to develop and augment the virulence of human miasms, and in other ways increase the prevalence of the disease at this season; the more crowded state of the houses during

the day, owing to the inclemency of the weather, the more imperfect ventilation, every crevice by which a little air could enter, being stopped to keep out the cold; the greater scarcity of employment; the higher price of provisions, the more severe suffering from want of clothing and fuel; and, in short, the greater poverty and destitution, which generally exist during the winter.

It scarcely comes within the scope of this report to dwell on the other evils, besides that of diffusing contagious diseases, which arise from the present deplorable condition of the establishments under consideration, but they will readily suggest themselves to every one on a moment's reflection. They serve as open receptacles for crime, vice, and profligacy, and as nurseries in which the young and yet uninitiated become familiar with every species of immorality. They are the haunts of the most depraved and abandoned characters as well as the most miserable and suffering objects of the town, and constitute one of the most influential causes of the physical and moral degradation of our labouring population. Dr. Kay has described the state of these pauper lodging-houses so graphically, that I cannot refrain from quoting his words, corroborative as they are of my own views: "The establishments thus designated are," he says, "fertile sources of disease and demoralization. They are frequently able to accommodate from 20 to 30, or more lodgers, among whom are the most abandoned characters, who, reckless of the morrow, resort thither for the shelter of the night—men who find safety in a constant change of abode, or are too uncertain in their pursuits to remain beneath the same roof for a longer period. Here, without distinction of age or sex, careless of all decency, they are crowded in small and wretched apartments; the same bed receiving a succession of tenants, until too offensive even for their unfastidious senses. . . . The temporary tenants of these disgusting abodes, too frequently debased by vice, haunted by want, and every other consequence of crime, are peculiarly disposed to the reception of contagion. Their asylums are frequently recesses where it lurks, and they are active agents in its diffusion. They ought to be as much the objects of a careful vigilance from those who are the guardians of the health, as from those who protect the property of the public."*

The necessity of some means being adopted for the inspection and better regulation of these houses is so evident and so pressing that it seems quite superfluous to insist longer upon it; and it is hoped the subject will receive the early and serious attention of the Legislature.

In speaking of the injurious consequences arising from the congregation of large numbers, I have made no allusion to the factories of the town; because, from the strict attention which is *now* generally paid to cleanliness and ventilation on the part of

* Moral and Physical Condition of the Working Classes in Manchester, 1832, 2nd edition, page 33.

the owners, I believe they are perfectly free from all causes likely to produce fever. And herein is an instructive and forcible illustration of the good effects of cleanliness and ventilation in causing the diminution of fever, for formerly, when these were little regarded, fevers often originated in the factories, and extended rapidly among the people employed in them, as appears from the writings of Drs. Percival and Ferriar, as well as from the early proceedings of the Board of Health in Manchester. The superiority of the atmosphere in the generality of the present factories over that of the wretchedly damp and foul dwellings in which many of the work people live, in point of salubrity, cannot be doubted. On this subject Dr. Gaulter has made some striking remarks, in noticing the large share of exemption from cholera enjoyed by persons employed in manufactures, when that disease visited this town. He states that out of the 200 first cases which occurred, only 23 worked in factories, and of these 12 were out of work, or accidentally remaining at home at the time.*

In looking over the proceedings of the Board of Health, I find constant notices of the prevalence of fever being attributed to the dirty and undrained state of the streets, and the filthy and crowded condition of the common lodging-houses. One or two of these observations have already been mentioned, and, in order to give confirmation to the preceding statements, I will extract a few more, from the prefaces to the Annual Reports, drawn up by the physicians to the House of Recovery. In that for the year 1818, written by Dr. Lyon, it is remarked, "But it must not be concealed that pecuniary contributions alone are insufficient for the attainment of the great object in view—the prevention of infectious fever in this town and neighbourhood. So long as the narrow streets, lanes, and courts continue to exhibit a noxious accumulation of filth and rubbish,—so long as any large number of the poor continue to be so regardless of cleanliness and comfort as they at present appear to be,—and particularly whilst the *lodging-houses*, resorted to by the vagrant poor, are suffered to remain in the ill-regulated, crowded, and dirty state which has been observed to characterize too many of them during the past year, there will never fail to be an alarming number of applicants for admission within the walls of this House. It may be worthy of serious consideration, what benefits might result from a system which should place lodging-houses of the above description under the superintendence of the police. As an instance of the tendency of these disorders to propagate themselves, we may state that 18 people, dwelling in a house situated in Little John-street, Turner-street, were, within a period of 30 days, attacked in succession with fever; and 3 of them fell victims to it." In the preface for the year 1828, composed by Dr. Charles Henry, it is stated, "The judicious observations of the resident clerk, Mr. Wallis, have

* Origin and Progress of Cholera in Manchester, page 120.

established one fact, which cannot be too strongly impressed on the public mind. A very large majority of our patients are received from those unpaved streets, in which animal and refuse matters are allowed to accumulate, evolving, during decomposition, the most pernicious effluvia. It is earnestly to be hoped that some plan may be adopted of subjecting such streets to the usual police regulations." In the report for 1830, the diminution of the number of patients and absence of any epidemic fever is noticed. "Whether our comparative immunity from such a scourge may be imputed to the course of the seasons, to a more efficient system of police, or to an increase of comfort, and more animating prospects among the labouring classes, it is not easy to say. That the relative condition of these classes has, with a few exceptions, been improving lately, is tolerably clear; and it is hardly necessary to point out the importance of dry and airy dwellings, along with abundance of wholesome food and freedom from anxiety about the future, as preservatives against the inroads of fever." In the preface for 1831, the writer, Dr. Carbutt, in noticing the existence of fever of a peculiar type termed "gastro-enteritis," attended with ulceration of the mucous membrane of the alimentary canal, alludes to the disgraceful state of the streets and dwellings of the poor. "This affection seems to have its origin, partly in some peculiar and unknown state of the atmosphere, quite independent of heat or cold, moisture or dryness,—partly in poverty of diet, in habits of intemperance, in the alternation of exciting and depressing passions, in the want of personal cleanliness, and in the impure air generated in the filthy back streets, lanes, alleys, and courts of the town, and in the miserable, dark, and ill-ventilated hovels of the poorer classes, more especially those of the Irish labourers, in which 6, 8, 10, 12, and even 14 persons, are sometimes found occupying, nightly as well as daily, the same room. It is a melancholy, but certain fact, that 6 or even 8 patients will occasionally follow in succession from the same wretched cellar or house, before the attention of the inmates or of the owner is roused to make the necessary exertions for extirpating the disease by ventilation, white-washing, and other means of cleanliness."

5. Besides the causes of fever which have hitherto been under consideration, there are several others whose power to generate the disease cannot be doubted; and as some of these are in active and extensive operation in Manchester, it is necessary they should be noticed, to render this inquiry complete. The chief of the causes here alluded to are, all the depressing passions of the mind, imperfect nutrition, exposure to cold and moisture, arising from deficiency of clothing and fuel, or from the damp and dilapidated state of dwellings, the state of exhaustion and fatigue arising from too long continued toil, without adequate repose, neglect of personal cleanliness, and the languor and exhaustion consequent on intoxication.

Few of these causes acting singly appear adequate to generate fever, but when several operate in conjunction, they become a most powerful agent in the production of the disease; and under such circumstances its appearance may be pretty certainly predicted. The more usual mode, however, in which they act in promoting the diffusion of fever is by increasing the susceptibility of the body to the reception of contagion or malaria, and they are in consequence commonly termed *predisposing causes*. And as under this head must be included all those circumstances which have the effect of weakening the constitution and lowering the vital powers, it obviously comprehends a great variety of injurious agents to which the indigent poor, in large towns, are constantly exposed.

Disease has ever been remarked to go hand in hand with poverty and want, and to be proportionate to their extent. It is a matter of universal observation also that fever always prevails extensively during periods of unusual scarcity or distress, and that the most destitute are its earliest and most frequent victims. The reason of this is self-evident, for at such times the poor necessarily suffer from the combined operation of all those causes here enumerated as most powerful in lowering the standard of health, and reducing the vital energies; and under such aggravated circumstances they change their position as mere *predisposing*, and become most energetic *exciting causes* of fever.

It would, indeed, be taking a very contracted view of the subject to ascribe the prevalence of fever on these occasions to any one cause, when so many are in active operation. The poor are then undergoing increased suffering equally from anxiety and despondency as to the future, from deficiency of food and clothing, want of fuel, shelter, &c., a union of circumstances which is sure eventually to give rise to the disease.

The depressing passions act by exhausting the nervous system through the medium of the mind, and perhaps these are not the least efficacious in the production of fever. Indeed if I were inclined to attribute more power to one class of the causes now under consideration than another, I should probably select that depressing feeling of despair, despondency, and mental agony, which must ever attend a consciousness of helpless poverty and destitution. On this subject I have elsewhere remarked, "It is well known that mental despondency is one of the most powerful causes in predisposing the system to receive the morbid influence of malaria or other sources of infection, and to suffer from all kinds of injurious exposure; whilst mental excitement and hilarity of spirit have enabled men to resist disease under exposures, hardship, and want of the most aggravated description."*

That the epidemic prevalence of fever is influenced by certain states of the atmosphere and the seasons, in respect to temperature, moisture, &c., and perhaps by other causes not cognizable to us,

* The Morbid effects of Deficiency of Food, 1839, page 46.

through which the virulence of its contagion, or the susceptibility of the human constitution to its reception, is increased, cannot be doubted; but when it prevails epidemically in any district to an unusual extent, and for a protracted period, its continuance may generally be traced to other evident causes. And of all these known causes, the effect of none is more clearly ascertained than that of poverty and destitution. Much evidence on this subject has been collected by Dr. Alison, and he has distinctly pointed out the close connexion which has always existed between periods of scarcity and distress, and the severe epidemics of fever which have occurred during a long period in Great Britain and Ireland. "These repeated and severe visitations of fever demand especial consideration on this account, that they are not merely the *occasion* of much and widely-spread suffering and destitution, but they 'argue a foregone conclusion;' they are, as I shall endeavour to show, in a great measure the result and the *indication and test*, of much previous misery and destitution, and I believe never occur, in peaceful times and in wealthy communities, where the condition of the lower orders is so generally comfortable, as it certainly is in some parts of Europe, and as every man of benevolent and Christian feeling must wish and hope it may be made in all What we are sure of is, that it (destitution) is a cause of the *rapid diffusion* of contagious fever, and one of such peculiar power and efficacy, that its existence may always be presumed when we see fever prevailing in a large community to an unusual extent."*

Dr. Cowan, in making some observations on a table which he had drawn up of the deaths from *fever* in Glasgow, in the years 1836 and 1837, also alludes to the effect of poverty in increasing that disease. "It (the table) shows the slow progress of an epidemic disease when trade is prosperous, compared with what occurs in seasons of distress. Up to November, 1836, the period at which the commercial embarrassments were felt, the mortality from fever had not been rapidly increasing. In November it was just about double what it had been in January preceding, the number of deaths being 45 in January and 89 in November. The moment, however, the effects of the stagnation in trade extended to the working-classes, the mortality increased with fearful rapidity, aided, no doubt, by the season of the year, the high price of grain, and the scarcity or high price of fuel. The deaths from fever in the four months preceding 1st December, 1836, were 316; for the four months following, 696. The table also marks the period at which the epidemic reached its maximum amount of mortality, viz., in the second quarter of 1837, and in the month of May in that quarter, being the month succeeding that in which the strike of the cotton-spinners took place, by which 8000 individuals were thrown out of employment."†

* Management of the Poor in Scotland, page 18.

† Vital Statistics of Glasgow, 1838, page 39.

Alluding to the influence of imperfect nutrition in promoting the spread of fever, I have observed, in the publication already quoted, "In persons labouring under an impaired state of health from deficiency of food, there is a remarkable susceptibility to the effects of contagion, unwholesome conditions of the atmosphere, vicissitudes of the weather, and, in short, to all the exciting causes of disease; and it is this class which always suffers most severely during the prevalence of endemic, epidemic, or contagious disorders."*

The testimony of the most eminent practical physicians of Ireland fully proves the awful prevalence of fever in that country to be owing to the distressed state of the poor.

The records of the House of Recovery point out very clearly this relation between periods of distress and the epidemics of fever which have prevailed in Manchester, as will appear from the following statement of the number of patients admitted in each year since the establishment of the institution in 1796:—

Year ending May 31st.	Admitted.	Year ending May 31st.	Admitted.	Year ending May 31st.	Admitted.	Year ending May 31st.	Admitted.
1797	371	1808	188	1819	572	1830	315
1798	332	1809	258	1820	424	1831	472
1799	375	1810	262	1821	339	1832	774
1800	353	1811	167	1822	279	1833	287
1801	739	1812	136	1823	303	1834	404
1802	1,031	1813	125	1824	354	1835	402
1803	571	1814	222	1825	667	1836	592
1804	256	1815	372	1826	659	1837	799
1805	184	1816	174	1827	610	1838	1,372
1806	262	1817	160	1828	747	1839	1,042
1807	307	1818	446	1829	507		

On inspecting this table, it will be observed that the first great increase of patients occurs in 1801, 1802, and 1803: the average number admitted in these three years amounted to $780\frac{1}{3}$, whilst that for the four previous years was only $357\frac{3}{4}$, and for the 14 succeeding years only $219\frac{1}{2}$. This extraordinary increase immediately followed the remarkably bad harvests of 1799 and 1800; that of 1799 being one of the worst ever known, and in that of 1800 there was one-fourth less than an average crop. The consequent scarcity and high price of provisions produced the most dreadful distress amongst the poor, and to this circumstance the increase was undoubtedly attributable. This cause is frequently noticed in the Proceedings of the Board of Health at the time, and in the preface to the Annual Report for the year 1801. The following paragraph, in allusion to the great prevalence of fever, occurs:—"Last season, deficiency of the necessaries of life, with its attendants, weakness of body and depression of mind, contributed to the diffusion and to the virulence of the disease,

* Morbid Effects of Deficiency of Food, page 38.

there having been an increase above the former years of nearly 3000 patients."

The next increase of any importance followed the remarkably wet seasons, the deficient harvests, and the injured state of the grain in 1816 and 1817, and took place in 1818, 1819, and 1820,—a period in which, along with much political discontent, there was very great distress amongst the labouring classes. The year 1819 is notorious as that in which the great Radical meeting, commonly called "Peterloo," was held, the immediate result of which was necessarily much misery. A very considerable increase again occurred in 1825, and continued till 1829. The year 1825 will long be remembered as that of the "Panic," when so many great failures took place; and the long commercial depression which followed necessarily caused much distress amongst the poor, to which this increase may be fairly attributed. "The years 1825-6 were unhappily remarkable for more severe distress than any which had occurred since, or probably during the war. . . . The number of bankruptcies throughout the country was enormous, and the stagnation of trade everywhere such as to occasion the most poignant suffering to the working-classes—sufferings the more severe, because the previous great activity in business had given them no warning to lay up provisions for an evil day. A meeting was held in Manchester for the purpose of obtaining a subscription to relieve the distressed operatives; soup-shops were opened, and 14,000 persons were weekly assisted with soup, meal, peas, &c. . . . In the township of Manchester the rate for the relief of the poor, which in 1824 was only 2s. in the pound, was in 1826 and 1827, 5s. . . . The year 1829 is, unfortunately, remarkable only for the distress endured by the working-classes, and the disquietudes of which that distress was, as usual, the cause."*

In 1831 and 1832 trade was in a very depressed state in Manchester; the labouring classes generally suffered severe privations, and the number of fever-patients was again augmented.

The present commercial embarrassments commenced in 1836, when another remarkable increase of fever began, and has continued ever since. In the autumn of 1837 and winter of 1838, the distress which prevailed amongst the poor from want of employment, and the high price of provisions, was dreadful, and the amount of fever in the town was greater than it had been for many years. The number of patients admitted into the House of Recovery in that year exceeds that of any former year since its establishment by 341; but the amount stated in the table fails to give an accurate representation of the severity and extent of the epidemic, because great numbers were necessarily refused admission from want of room; and in addition to this, 182 patients were treated in the temporary hospital in Balloon-street, opened

* Wheeler's History of Manchester, 1836.

by the churchwardens in consequence of the inadequate accommodation of the House of Recovery.

On inquiring into the circumstances of the patients treated in the Balloon-street Hospital, I was much struck with the numbers who had suffered from want of food, clothing, and shelter, previous to their admission. Many had been long out of work, others followed no regular employment, and their means of support had been precarious and uncertain in the extreme; and some had passed several nights in privies or entries, from inability to procure lodgings. A few had found a temporary shelter in that excellent institution, the Night Asylum for the Destitute, established early in the year 1838, and which has indubitably been the means of saving many lives.

Some idea may be formed of the condition of the labouring classes from the expenditure of the poor-rates; for the amount of relief granted (where the poor laws are judiciously managed, as is universally allowed to be the case in Manchester) will be proportionate to the distress which exists.

The increased expenditure which took place in the suffering years of 1826 and 1827, has already been noticed; and in 1828 and 1829 it continued higher than usual,—all years in which fever prevailed extensively, as will be seen on referring to the table inserted at page 313.

In the year 1832, remarkable for the great prevalence of fever, the expenditure on account of the poor was again much augmented; and since the commencement of the last epidemic in the autumn of 1837 it has continued high; though, from an important change adopted in the system of granting relief to the Irish poor, a considerable reduction might have been anticipated, had no increased pressure arisen from the continuance of extensive distress.

Some of the above remarks will be confirmed by the following statement of the expenses of the township of Manchester for the last 10 years:—

TABLE exhibiting the Expenditure on Account of the Poor; the Sums paid for Constables' Accounts, and County and Hundred Rates, and the Gross Amount paid out of the Poor Rates in each Year since 1829.

Year ending 25th March.	Expenditure on Account of the Poor.			Amount of Constables' Accounts, and County and Hundred Rates.			Gross Amount paid out of the Poor Rates.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
1830	48,977	10	11	8,939	19	2	57,917	10	1
1831	41,787	5	11	11,839	2	8	53,626	8	7
1832	47,191	7	9	9,708	3	11	56,899	11	8
1833	53,799	13	7	9,493	11	9	63,293	5	4
1834	33,634	4	6	9,835	5	5	43,469	9	11
1835	27,645	9	6½	9,393	15	10	37,039	5	4½
1836	25,762	19	2	9,663	0	8	35,425	19	10
1837	24,692	10	0½	7,757	7	9	32,449	17	9½
1838	31,349	10	1	9,732	0	11	41,081	11	0
1839	29,280	3	11	12,180	4	10	41,460	8	9

With regard to the relation between the amount of the poor-rates and the prevalence of fever, it has not escaped me that the increased expenditure may be considered in some degree rather as the consequence of the destitution produced by the ravages of fever than as an evidence of the previous existence of distress; and there cannot be a doubt that the latter has a full share in causing the increase.

Enough has, however, I think, been said to prove the frequent dependence of fever on the distressed and destitute condition of the poor; and I should be concealing a conclusion to which all my observations and all my experience have led me, and of the truth of which I am firmly convinced, if I did not distinctly avow my belief, that whatever the essential cause or causes of contagious fever may be, poverty and want are the most influential causes of its prevalence and extension amongst the labouring classes in Manchester. This avowal, be it observed, does not in any degree affect the question as to what may be the causes of this destitution; whether it is owing to the frequent want of employment, the disproportion between the rate of wages and the price of provisions and the necessaries of life, or to habits of reckless improvidence and dissipation, and want of economy and good management on the part of the poor themselves. I am extremely anxious to express my opinion on this point in the most decided and explicit manner, because I am satisfied that, as long as the poor are in a state of great destitution, and are not provided with adequate nourishment, clothing, and shelter, no sanitary regulations, with regard to the cleansing, draining, and ventilation of the streets, and the removal of the sources of malaria, will effectually check the spread of fever. Until the labouring classes are supplied with the common necessaries of life, and relieved from the state of extreme wretchedness and destitution in which great numbers habitually exist, fever and disease generally will continue to prevail extensively amongst them; and it must be equally the duty of a government to endeavour to devise means for insuring them these necessaries, whether their inability to procure them arises from causes which they themselves might be taught, by ordinary prudence and forethought, to avoid, or from circumstances which they cannot control. If the poverty of these classes is found to be owing to their own improvidence or ignorance, a remedy for the evil must be sought in a system of moral, religious, and general instruction, in which the advantages, and, in fact, the necessity of providing for their physical wants, as the only means of preserving their health, would be forcibly and impressively inculcated. But, I repeat, it is merely the *consequences* of the extreme indigence and destitution of the working-classes which I am at present endeavouring to show; an investigation of its *causes* constitutes quite a separate subject of inquiry, into which it is not my intention to enter.

The extent to which *intemperance* prevails amongst the labouring classes in Manchester, and its close bearing upon the subject of this report, render some notice of it necessary. That the languor and exhaustion immediately consequent on intoxication are a frequent cause of fever, by increasing, in an eminent degree, the susceptibility of the body to contagion, it would be easy to adduce abundant evidence; but the most extensively injurious effects of this vice proceed indirectly from the destitution to which it gives rise. From indulgence in this habit, many who regularly receive high wages are constantly in a state of the utmost indigence—often bordering on positive starvation; they make not the smallest provision for the future; and if any accidental circumstance occurs to deprive them (even temporarily) of employment, they are left completely without the means of subsistence. And it must be kept in mind that such individuals are less capable of enduring privations than those who have led a more regular life, and very speedily begin to suffer under the combined operation of want and the sudden withdrawal of their accustomed stimulus.

The moral and physical degradation which result from the prevalence of intemperance in large towns is an evil which has been long known and deeply deplored; but unless we take into account all the poverty, destitution, and consequent inability to procure food, clothing, and the other necessaries of life, which this failing entails upon the working-classes, we shall form a very inadequate idea of the appalling amount of disease, misery, and crime which are its consequences.

Although the preceding remarks have been made especially with reference to common continued fever, the same external physical causes which have been shown to promote its spread, promote equally also the extension of those febrile disorders arising from a specific contagion—small-pox, scarlatina, measles, &c. During epidemics, these diseases are always found to rage most extensively and destructively in the close and filthy localities of the poor, precisely as fever is observed to do. This simple fact is a clear illustration that there is no inconsistency in attributing the rapid and extensive spread of typhoid fever to these external causes, without the necessity of admitting them adequate *per se* to generate the disease; just as we do in the case of those disorders for the origin of which the operation of a specific contagion is avowedly essential.

Small-pox has not prevailed so extensively in Manchester within the last two or three years as it has in some other towns, and the number of cases has not been considerable. The mortality from it has been almost exclusively confined to young children who have not been vaccinated. When it has occurred after vaccination, the disease has *usually* been extremely mild, and I have seen nothing within the range of my observations to invalidate in any *practical* degree the immortal discovery of Jenner.

The indifference to vaccination which exists among the labouring classes is greatly to be lamented, and there is reason to fear it as an increasing evil. This indifference is most frequently observed in the case of Irish families, or those leading a vagrant life, and residing in common lodging-houses.

The number of children vaccinated at the various medical charities in Manchester during the last five years is only 4324, whilst that for the five previous years was 4868; a diminution of 544 has therefore taken place, which is very considerable when the increased population during that period is calculated, and shows a growing inattention to this important duty on the part of the poor.

With a view of ascertaining the extent to which vaccination is neglected by the poor, I put a series of queries on the subject to all the mothers of families indiscriminately, who happened to present themselves at the Ardwick and Ancoats Dispensary during several weeks, and the following is the result of my inquiries. My examination extended to 250 families, and comprised 1341 children. Of this number 412 had never been vaccinated, and of these unvaccinated children 192 had suffered attacks of small-pox, of which a great many died; whilst out of the whole number (929) of those who had undergone the protective influence of vaccination, only 26 had been attacked with that disease, and in these, with the exception of about 4 cases, the malady was extremely mild and modified in character. In this calculation, children under three months old were excluded, earlier than which age vaccination is not generally performed. To account for the large average number of children to each family, it is necessary to state that I included those who were dead as well as the living, provided they had lived three months. This was requisite to accomplish the object of the inquiry, inasmuch as many of the children had fallen victims to small-pox, in consequence of not having been vaccinated.

The effects of the lamentable neglect of vaccination hereby shown to exist will only be manifested gradually, and are not yet fully developed; but if the same negligence be allowed to continue, the ravages which small-pox must in a few years produce cannot fail to be dreadful, and from the greater proportion of adults who will then be unprotected by vaccination, the consequences will be infinitely more serious. At present the mortality is almost entirely confined to children, but it will gradually extend to those of maturer years; and we shall then witness the more melancholy spectacle of the heads of families falling victims to the disease, and leaving their orphan offspring (bereft of parental care and protection) exposed to all the hardships and temptations of the world, results which will not only entail a heavy burden upon the poor-rates, but, what is of still more serious import, will prove most disastrous to the moral as well as the physical welfare of the community.

This omission of vaccination is owing, in some instances, to a positive prejudice against the practice, or to a doubt of its efficacy as a protection against small-pox; but it is more generally attributable to indifference, procrastination, or thoughtless negligence. Though vaccination is performed gratuitously every week, and without the necessity of any recommendation, at the Royal Infirmary, Lying-in Hospital, and the various dispensaries, the poor will not be at the trouble of taking their children to get the operation done.

I have now made all the observations which appear to me requisite to enable you to form a just idea of the causes which are mainly instrumental in giving rise to, and promoting, the spread of infectious fevers amongst the labouring classes in Manchester.

Some of these causes are so complicated in their nature; are so interwoven with the perhaps unavoidably unpropitious position of the lower orders in densely populated manufacturing districts, constantly liable to fluctuations of commercial prosperity and depression; or are so much the effect of long established habits and customs, that their removal seems almost hopeless, or at least can only be accomplished by slow degrees. Others originate in the improvidence, dissipation, and irregularities of the people themselves; in their want of forethought and economy; in their total ignorance of good management in domestic matters, and in their neglect of various matters of hygiene, and can only be effectually remedied by education, with religious and moral instruction. There are others again (and these a very numerous class) which is quite within the power of a government, by means of a judicious code of sanitary laws, to mitigate, if not entirely to remove.

There are few objects which have greater claims on the attention of those to whom the enactments for the management of the poor are intrusted, than the means of lessening the prevalence of fever. When we reflect on the amount of misery which this disease inflicts upon the labouring classes themselves; the state of utter destitution and helpless poverty into which whole families are plunged by its ravages, and the heavy burden it entails upon the community at large, from the increase in the poor-rates thereby occasioned, the importance of the subject can scarcely be overrated. There are circumstances which render the effects of fever peculiarly disastrous to the welfare of the poor. It is ascertained that idiopathic contagious fever is much less frequent in children previous to the age of ten years than in older persons; and consequently it is most prevalent during that period of life when individuals have begun to obtain their own livelihood, and ceased to be dependent upon others for maintenance. Statistical documents have also proved that the mortality from fever increases with age, and consequently the deaths are most numerous amongst the heads of families, and those on whom the survivors have hitherto depended for support. This fact is forcibly stated by

Dr. Alison: "It is further to be remembered that the effect of the mortality of fever on the happiness of the community cannot be estimated merely from knowing its amount; for (unlike some other epidemic diseases) it always falls most heavily on the most valuable lives, particularly among the poor. An observation made by one of the Irish physicians, who reported to government on the great epidemic of 1817, is perfectly applicable to all that we have seen of the disease since that time in Edinburgh. "*The heads of families, almost without exception, became the victims, while the rest escaped. The widows and orphans, who are so numerous in every quarter, can bear a sad testimony to the truth of this well-known observation.*" "A fever which consigns thousands to the grave," says Dr. Hardy, "consigns tens of thousands to a worse fate—to hopeless poverty; for fever spares the children, and cuts off the parents, leaving the wretched offspring to fill the future ranks of prostitution, mendicancy, and crime." "The mortality of fever," says Dr. Barker, "is most frequently where it is most injurious, viz., in men advanced in life, the heads and supports of families. The increase of poverty and mendicity, and the agonizing mental distress to which it must give rise, are consequences which must occur to every reflecting mind." There is no exaggeration in the simple and impressive statement of Dr. Cowan, that "the prevalence of fever presents obstacles to the promotion of social improvement among the lower classes, and is productive of an amount of human misery, credible only to those who have witnessed it."*

In drawing up my report, I have dwelt more especially on those external physical causes of fever which appeared most capable of being remedied by legislative measures, and respecting which I apprehend it was your chief object to obtain information. At the same time I have been anxious not to overlook or underrate the influence of other causes, lest such a partial view should lead to erroneous impressions as to the success likely to attend the removal of the former class of causes in diminishing fever.

It must, however, be evident to you that it is a matter of extreme difficulty, and requires the exercise of great discrimination, to estimate justly the relative efficacy of the various causes which have been under consideration, in the production of fever, from the circumstance of our seldom having an opportunity of observing their action singly. Thus, for instance, those close, crowded, undrained, and foul localities, where malaria is chiefly generated, are likewise just the situations which possess all the requisites for augmenting the activity and diffusion of contagion, when it has been once introduced; and moreover, it is in these neglected and filthy quarters of the town where the most destitute portion of the poor resides—those who are the most frequent sufferers from deficiency of food, clothing, fuel, and other necessities of life; for individuals whose higher wages and regular

* Management of the Poor in Scotland, page 16.

employment, or whose greater providence and more economical management enable them to pay a higher rent, shun these parts, and live in better houses and better streets. Here then we have three or four of the principal causes of fever in active co-operation; and in judging of their individual power, medical men will be liable to attach importance to each, in accordance with their pre-conceived opinions on the subject.

The most feasible and practicable means of diminishing the prevalence of fever appears to be the adoption of certain sanitary regulations by which many of its evident causes might be obviated. Of such a system of medical police, the following would constitute the most important measures:—

1. The establishment of certain police regulations by which the efficient paving, and sewerage, and the regular cleansing of the streets would be secured, and the collections of refuse of all kinds in the neighbourhood of dwelling-houses strictly prohibited.

2. The passing of a Building Act, by which the laying out of all building land in large towns should be subject to certain restrictions, whereby the crowding and erecting houses on plans injurious to health would be prohibited. Such an Act is essential to guard against the evils now complained of in this respect being perpetuated, and should confer power to prevent the formation of streets of less than a specified width,—the building houses on undrained and unlevelled land, or without privies and covered drains to carry off the water and refuse—the occupation of cellars as dwellings, and the construction of courts or alleys with only one outlet. It would indeed be a great advantage if the latter could be entirely abolished.

3. The improvement of some of the more crowded and dense parts of the town by making a few wide streets and spacious openings, and by throwing open the confined courts and lanes, so as to permit more effectual ventilation.

4. The placing the common lodging-houses of the poor under the jurisdiction and surveillance of the municipal authorities, in order that they may be regularly inspected, with a view of preventing injurious crowding, and enforcing the observance of cleanliness and ventilation.

5. An effective establishment of fever wards, to which all persons labouring under infectious diseases should be removed as speedily as possible.

It might be hazardous to risk an opinion as to the extent to which the prevalence of fever and all its attendant evils might be lessened by the adoption of these measures, but that it would be very considerable no one can doubt. It would, however, be taking a very narrow view of the subject to estimate their advantages merely by the diminution of fever which might be thereby effected: for the amount of other diseases, of destitution and crime which would be prevented; the reduction which would

take place in the poor-rates, and the improvement in the physical condition of the inhabitants which would ensue, cannot be esteemed matters of slight importance in promoting the general happiness and prosperity of the kingdom.

I have the honour to be, Gentlemen,

Your obedient servant,

RICHARD BARON HOWARD.

No. 21.

AN IMPROVED DESCRIPTION OF COTTAGE TENEMENTS FOR THE
LABOURING CLASSES.

BY EDMUND ASHWORTH, Esq.

Respected Friend,

EDWIN CHADWICK,

Egerton, 12 Mo. 30, 1839.

I HAVE to acknowledge the receipt of copies of the Instructions issued by the Poor Law Commissioners "for promoting an inquiry into the residences of the labouring classes."

This is a subject which has interested us (my family) for many years, and I rejoice to see that public attention is likely to be drawn to it, believing, that if it leads to increased provision for the domestic comfort of the labouring population, it is calculated to elevate and improve their condition above most others.

I fully concur in the sentiment contained in the instructions issued by the Commissioners, "that the state of the dwellings occupied by the labouring classes exercised an important influence upon the health and indirectly upon the moral state of themselves and families." In any remarks I may make, our particular circumstances must be borne in mind; situated in a country district, surrounded by a population mainly dependent upon us for employment, and therefore in some degree under our control, we have had from necessity to provide dwellings for a considerable portion of them, and therefore had the opportunity of marking their improvement and the causes which have conduced to it.

On the occasion of building cottages we have of late years consulted the opinions and wants of those who were likely to occupy them; and consequently the various points enumerated in your inquiry as "to comfort and accommodation, cost, and rent paid, as well as the moral effects arising from improved domestic habits," have each been brought under our notice and consideration.

It must be confessed that the manufacturing population generally have a much less knowledge of domestic comforts and happiness than might be expected from the amount of income which most of them enjoy.

Many causes have operated to produce this lamentable state of things.

On the early introduction of the cotton manufacture, the parties who entered into it were often men of limited capital, and anxious to invest the whole of it in mills and machinery, and therefore too much absorbed with the doubtful success of their own affairs to look after the necessities of their workpeople.

Families were attracted from all parts for the benefit of employment, and obliged as a temporary resort to crowd together into such dwellings as the neighbourhood afforded: often two families into one house; others into cellars or very small dwellings: eventually, as the works became established, either the proprietor or some neighbour would probably see it advantageous to build a few cottages: these were often of the worst description: in such case the prevailing consideration was not how to promote the health and comfort of the occupants, but how many cottages would be built upon the smallest space of ground and at the least possible cost. We find many built back to back—a most objectionable form, as precluding the possibility of any outlet behind.

People brought together as these were for a living had no alternative but to occupy such dwellings. Whatever the weekly income, the wife could never make such a house comfortable; she had only one room in which to do all her work: it may be readily supposed the husband would not always find the comfort he wished in such a home. The public-house would then be his only resort. But here the evil does not end; the children brought up in such dwellings knew no better accommodation than such afforded, nor had they any opportunities of seeing better domestic management. Few of the parents in these parts have ever lived as domestic servants, so that it becomes no matter of surprise that the major part should have so little knowledge of improving their social condition even when the pecuniary means are within their reach. It must be allowed that the introduction of manufactures is not justly chargeable with producing the whole of this evil. About this time the old Poor Law was exercising a very pernicious influence upon the labouring classes, by means of inducing both the landowners and farmers to discourage cottage property for fear the inmates should gain parish settlements.

Cottages were forbidden to be built; some pulled down when empty, and others fell to decay for want of repair; poor people were banished as much as possible from the agricultural districts on account of the burden of parish settlements: even in this county I saw the ruins of two cottages which I was informed were the two last cottages in the parish.

Under such depressing causes it is not to be wondered at that we frequently received families into our employ who did not know how to conduct (with propriety) a decent cottage in such

a manner as to conduce either to the health or comfort of the inmates.

About twelve years ago we had occasion to introduce a considerable number of families into some new houses ; in the course of a few months a most malignant fever broke out amongst them, and went from house to house, till we became seriously alarmed for the safety of the whole establishment. We instituted an inquiry into the state of the houses where the fever first appeared, and found that from the low habits of the occupants, and their ignorance of the proper decencies of life, the cottages were in so filthy a state that it was apparent we should not long be free from a recurrence of the same evil unless we took some active means to effect a change in the habits of these people.

Although we felt very unwilling to do anything which appeared to interfere with the domestic management of our workpeople, still the urgency of the case at the time seemed to warrant such a step. We therefore ordered an examination of every cottage in our possession, both as regarded cleanliness and ventilation, as well as bedding and furniture.

The striking difference exhibited in the state of these cottages, the neatness and cleanness of some, the gross neglect of others, appearing to have no relation to the amount of income, convinced us that an occasional repetition of these visits would be essential in order to effect any permanent improvement amongst them.

These periodical visits have now been continued through a series of years ; and as no invidious distinction or selection was ever made, do not appear to have been viewed in the light of an intrusion ; a week or two of notice being mostly given, a laudable degree of emulation has been excited as to whose house, bedding and furniture should be found in the best order ; my brother or myself have occasionally joined in these visits. By these means we were made acquainted with the wants and necessities of the various families in our employ. Having had such opportunity of observing the great inconvenience arising from small dwellings where the families were large, both as regards bed-rooms and living-rooms, few cottages having more than two bed-rooms ; and where there were children or young persons of both sexes, the indelicacy of this arrangement was apparent : we therefore concluded to build larger cottages, and make them with three bed-rooms in each. These houses were sought after with the greatest avidity, and families allowed to remove to them as an especial favour ; the increase of rent of 1*s.* to 1*s.* 6*d.* per week was a small consideration in regard to the additional comfort afforded to a family where the income was from 24*s.* to 50*s.* or 60*s.* per week, as is frequently the case with families employed in manufactories.

We have therefore continued to enlarge the size of our cottages till we have almost every rent-charge from 3*l.* to 13*l.* a-year.

Plans and estimates of four different sizes I send herewith. The one most approved for general use appears to me to be the one marked on the plan No. 2, capable of being built for 103*l.* 2*s.* 9*d.*; it contains a living-room of 15 feet by 13 feet, and back kitchen of 15 feet by 9 feet, with oven, boiler, and grate, as fixtures, and three bed-rooms over, with a back-yard 24 feet by 13 feet.

From my own observation, I am fully confirmed in the opinion that comfortable dwellings exercise a powerful influence in producing and confirming habits of sobriety and virtue. The husband has more inducement to stay at home; the wife has less temptation to become idle and negligent; and the children brought up in such houses are more likely to rise than descend in the scale of society. Many are the cases I have witnessed of an improved moral and religious feeling apparently consequent upon an improved physical condition. When once a steady family get into a larger house they soon begin to require more furniture; this, where their means will afford, is often of a better quality: from that time they rise in the scale of respectability. They dress better on the Sabbath, they associate with others of an improved class; they often see it important to attach themselves to some body of religious professors, and, in fact, are raised to a station in society to which a few years before they were strangers. I am happy to say that during the last ten years a visible improvement has taken place in the building of cottages attached to large manufacturing establishments in this country. We instituted the practice of a periodical inspection of our cottages in consequence of fever. Fevers frequently prevail to a frightful extent in districts where, if there had been a timely assistance from the parish authorities on the representation of the relieving officer or surgeon of the district, much suffering would have been spared.

It is very important that the domestic comforts of the labouring classes should be more attended to; and the cheapening of building materials would greatly contribute towards this. The duties on bricks and timber operate very prejudicially in this respect.

Cottage property is always regarded as a disadvantageous investment on account of the uncertainty of collecting the rents, as well as the more rapid dilapidation; they are therefore charged a higher rate of interest upon the outlay for rent than most other property.

It is not the duty of 5*s.* 10*d.* per thousand alone which is added to the cost of making bricks; but the vexatious regulations attendant upon the Excise create a sort of monopoly which limits competition, and enhances the value; bricks are sold in the neighbourhood of Bolton at about 25*s.* per thousand, which, if there were no duty, I think would be sold at half the price.

The whole amount of duty collected from bricks in 1835,

when there was more building going forward than on an average of years, was 479,925*l.* I have not any returns of a later period.

Another and a serious obstacle to the extension of cottage building by the labouring classes, as well as the purchase of them out of their savings, is the cost of legal conveyance, which frequently amounts to one or two years' rent. This is often the hindering cause to many a working man's investment, even where the property is freehold or leasehold; but where copyholds prevail, the hardship becomes a very considerable evil; the transfer expenses of property in case of death often fall heavy and unexpectedly upon the owners of small copyholds.

If the Bill for the Enfranchisement of Copyholds, which was lost in the House of Lords last year, had passed, it would have been a great boon in cases where cottages are built upon copyhold: many are now abandoned rather than pay the fees of court.

I shall greatly rejoice to see anything done to improve the condition of the labouring classes, either mentally or bodily.

The man who has a well-furnished house, is a more trustworthy servant than one who lives in a cellar or single room with almost no furniture; but the workman who lives in his own house is better than either.

I remain thine respectfully,
EDMUND ASHWORTH.

SPECIFICATION of the Works in four descriptions of Cottages erected at Egerton for Messrs. Henry and Edmund Ashworth.

Masonry.—The front and back walls and the chimney shafts are set in regular courses, well hammer-dressed. The inside walls, gables, and chimney flues are of parpoints six inches thick. The door-jamb, tops and thresholds, and the window-sills and tops, also the labels over the front doors and windows, are all hewn and tooled; there is square cornice at the back, and moulded cornice at front; both are well hewn, tooled, guttered, and the joints corked water-tight. The yard walls are of random stone, eighteen inches thick, finished with semicircular coping stones on the top. The privies are of parpoints, and the ash-pits are made off from the yards with flags set on edge. The ground floors are laid with good self-faced flags, and there are flags at the front and back doors, averaging about three yards to each house, and a hearth to each bed-room chimney-piece. The foot-path, five feet wide at front, is paved with river stones, and side stones set at the edge. There is a cellar to each of the houses No. 1 and 2 under the stairs; it goes down about four steps, and holes are formed under the ground-floor for keeping provisions in, and there is a slop-stone in each kitchen.

Slating.—The roofs are covered with Welsh slate and stone ridging.

Plastering.—All the walls are plastered two coats; and the ceilings and stoothing lathed and plastered two coats, and the slates well pointed.

Fire-fixtures.—The living-rooms have each a boiler, oven, and fire-grates, and the parlours and all other places where fire-places are shown, are fitted up with sham stove-grates.

Carpentry, Joinery, and Glazing.—The timber is American pine throughout, (except the roofs and windows of No. 1 and 2, which are of Baltic deal.) The floors have beams and joints, and are covered with inch boards. The stairs are as per plan, made of inch boards, and are two feet six inches wide. The partition at the side of the stairs is of three-quarter inch boards, and the partitions which divide the bed-rooms are of stoothing. There are ceiling joists fixed over all the bedrooms. The roofs have two ribs on each side, and spars fixed fifteen inches betwixt their centres. The outside doors, both front and back, are framed batten doors, hung to stone jambs, with bands and gudgeons, and have a Lancashire handle set on each; the front doors have each a plate lock, and back doors a flat iron bolt. The inside doors, the privy doors, and yard doors, are all batten doors with four cross bars to each. They are all hung to wood casings, (except the back yard doors, which are hung to stone,) and have each a Lancashire latch set on. The front windows, and the back bed-room windows of No. 1, are all frames and sheets single hung, and the remainder of the back windows are fast sheets with a casement in each; they are all primed and glazed with good white glass. There is about twenty feet of shelving fixed in each house, and there is skirting fixed in both rooms on the ground-story, and surbase or chair-rail round each living room, and casings and single moulds round doors and windows on ground-story. There is a wood drop-spout to each house.

ESTIMATES.

	No. 1.	No. 2.	No. 3.	No. 4.
Masonry, &c.	£52 17 0	£48 11 2	£37 8 0	£33 10 0
Slating, &c.	8 6 0	7 10 0	6 6 9	5 12 0
Plastering, &c.	8 17 6	7 12 0	6 2 6	5 10 0
Fire-fixtures, &c.	5 4 10	4 19 3	2 18 9	2 18 9
Joinery, Glazing.	37 7 8	34 10 4	27 2 6	24 0 0
	<u>£113 13 0</u>	<u>£103 2 9</u>	<u>£79 18 6</u>	<u>£71 10 9</u>

No. 22.

SANITARY CONDITION OF THE TOWN OF LANCASTER.

BY DR. EDWARD DE VITRE'.

Lancaster, April 20, 1840.

GENTLEMEN,—In reply to a communication made to me, through your Assistant Poor Law Commissioner, Mr. Power, requesting my opinion regarding some of the physical causes of sickness and mortality to which the poor in this neighbourhood are particularly exposed, and which are capable of being removed by proper sanitary police regulations, I have great pleasure in rendering my feeble aid in furtherance of your benevolent purpose, and beg to submit for your consideration the following statement:—

Having acted as physician to the Lancaster Dispensary and Fever Hospital for nearly eight years, and having during the whole of that time been in daily communication with some portion or other of the poorer classes, I have had almost constantly to lament the difficult and untoward circumstances they have had to contend with, over many of which they had no control, and in the absence of such regulations as you now contemplate, little or no assistance could be afforded. For the sake of brevity I shall proceed to state under distinct heads such of the physical causes of sickness and mortality as have more particularly engaged my attention.

1. *Malaria*.—In placing malaria first on the list, I am not going to stop to make the inquiry whether or not contagious fever is capable of being generated by malaria alone, it is sufficient for my purpose to know that the Profession are united in opinion that vitiated and tainted air is highly favourable to the diffusion of fever. Nor am I anxious to have it believed that Lancaster is peculiarly liable to such an influence, far from it, as I strongly suspect there are not many towns in the kingdom freer from such a vitiated state of the atmosphere. When, however, I know that it does exist, and that it is capable by proper regulations of almost being entirely removed, it is clearly my duty, on such an inquiry as the present, not to shrink from so stating the fact as that the remedy may be more effectually applied.

The principal streets in Lancaster are, I believe, all well sewered and drained, but notwithstanding this, in consequence of a want of stench-traps at the surface mouths of the drains, the most foetid effluvia escapes after a continued drought, or on the recurrence of rain. The cesspools belonging to the castle or county gaol, along with all other filth generated there, are emptied into the common sewerage of the streets, which makes it still more advisable to have all such sewers provided with stench-traps. The nuisance from this source I am assured on good authority is frequently intolerable, and might be obviated altogether, either by constructing a proper cesspool or a covered drain for the exclusive use of the castle.

The average number of inmates in the gaol is from 470 to 500.

The back streets and alleys have not been so well attended to, and are chiefly dependent on surface drainage for any cleaning they may obtain; add to this the collection of stagnant water, filth, and garbage of all descriptions, and we have at once a fruitful source of malaria, more especially in hot weather. The streets of the town have been for a few years back most shamefully neglected, which is the more unpardonable as we have an ample police rate, and there is scarcely a street in the town that does not present a good fall; instead therefore of walking ankle-deep in mud and water, with very little exertion Lancaster might be rendered, as it has been, celebrated for its cleanliness: under such a system there

is little encouragement held out to the poor for any exertion on their part. In many of the narrow and close streets are to be found dunghills and privies most inconveniently placed, and on the outskirts of the town small patches of waste land contiguous to human dwellings are used as the depositories of manure, which constantly emit a most offensive odour. A large dog-kennel in the immediate neighbourhood of the town forms a nuisance of the worst description, and the decomposed animal matter scents the surrounding district the year round. In the lower part of the town flows a stream of water taken from the river, into which many drains empty themselves, and which, if kept properly open, more especially as it would then be subjected to the daily influence of the tide, might prove of great value to the town; but a dam was thrown across its mouth a few years ago for the purpose of turning some machinery, and it is in consequence rendered comparatively useless, and has become a receptacle for much vegetable and animal matter, which is constantly undergoing decomposition. It is in this part of the town that fever has been most prevalent, and it is proverbially attributed to the stream in question. I would strongly urge the necessity of erecting a general slaughtering-house, and thus for ever remove a nuisance apparent to every one where no such accommodation exists.

2. *Want of Ventilation and Cleanliness.*—The want of proper ventilation almost throughout the whole of the houses occupied by the poor, is an evil which has engaged much of my attention, and which I have been unceasing in my endeavours to remedy. In the great majority of instances, the defect undoubtedly arises from the careless way in which the houses of the poor are constructed, and from an overweening anxiety on the part of the proprietors of such property to economize both space and expense. In the best of such dwellings it is seldom that more than one pane of glass in a small sash-window is made to open, and in houses of a still worse class sometimes not that; even in alleys and courts, of themselves badly ventilated, old buildings, rendered useless for their original purpose, are frequently converted into dwellings, and then we find them with a damp sunken area, or on a ground-floor, without cellarage, with low roofs or ceilings, and with little or no attention paid to proper ventilation. The ground-floors of a very large proportion of cottage property in Lancaster are placed several feet below the surface of the ground, many of them very damp, and of course increasing the difficulty of thorough ventilation: notwithstanding all these disadvantages the poor are much to blame in this matter, and it is almost a hopeless task endeavouring to convince them of the utility of what really appears to be beyond their comprehension, as they nearly unanimously object to the admission of fresh air into a sick-room, and if convinced at all, it is always against their own *judgment*, and hence in ninety cases out of a hundred the poor sufferer is limited to a

mouthful of fresh air *per diem*, and that during the professional visit. With regard to cleanliness, it affords me great pleasure to testify favourably of the poor in Lancaster: there are of course many exceptions to this testimony, chiefly among the lodging-houses, where may be found a total disregard both to personal and general cleanliness. It has occurred to me that lodging-houses in towns at least might be put under some police regulations, without difficulty, and with great advantage and safety to the public. It would be well if the poor generally could be induced to whitewash the interior of their dwellings several times a-year, and this might at all events be readily effected where parties are deriving parochial aid, as an order to that effect might be issued by each Board of Guardians to their relieving officer, and a similar regulation could easily be enforced by all private charitable societies.

3. *Intemperance*.—Of the baneful effects of intemperance on the human constitution, both in a moral and physical point of view, it is quite unnecessary for me to enlarge in this place. It is sufficient to know that the evil exists and exists too to a frightful extent, to induce any one having an interest in the welfare of his fellow-creatures to use his most strenuous exertions in suggesting any plan calculated to change the habits of the intemperate. The extended system of moral and religious instruction throughout the land is, I am convinced, steadily promoting this object, but it will require no inconsiderable time before the full benefits of such a system can either be expected or realized. I am by no means disposed to undervalue the good effects of Temperance Societies, as it has frequently come within my own knowledge that the most abandoned drunkard has been effectually reclaimed through their instrumentality, and restored to a position in society his former habits totally excluded him from. How then are we to check intemperance, when all the present preventive means, including the summary punishment for detected drunkenness, fail? It is to be apprehended that an affirmative answer cannot be supplied, whilst a simple negative reply can never, in a great Christian country like this, be quietly submitted to; pains and penalties, though good as a means, have been found ineffectual in checking vice, and they ever will be so where punishment is dealt out by one hand, and the means of transgression afforded by the other. Yet such is the case with our present Beer Bill, a bill which the vulgar have themselves designated "*The Tom and Jerry Bill*," as implying everything that is vicious and profligate. The law says you are not to get drunk, but the same law licenses houses at the corner of every street for the sale of intoxicating liquors,—not as houses of general refreshment for travellers, or for the transaction of necessary business, but avowedly as an accommodation to the poorer classes of society to procure cheap ale, and which they are at liberty to drink *ad libitum* on the premises. Without going more into detail about

the demoralizing effects of these beer-shops, I verily believe that they have gone far to neutralize all the means adopted for the promotion of temperance for the last century; that they have carried ruin, disease and misery into the bosom of many a cotter's family, previously happy and prosperous (more especially in country districts where an ordinary inn was not required), and that human ingenuity could not have devised a happier mode of creating vice, crime, and poverty. Here then we have a monstrous evil striking at the very root of our social system, by debasing the moral character of man, pressing hard, through its consequences, upon the honesty and industry of the country, and yet suffered, nay, encouraged, to continue its ruinous course. It is the upas-tree of England, and till uprooted and eradicated, vice, crime, and poverty will continue to increase, and all our attempts to promote temperance will be rendered comparatively futile and nugatory. The above remarks are equally applicable to retail gin-shops, which are now very common in provincial towns.

4. *Neglect of Vaccination.*—Throughout the kingdom medical men complain of the great difficulty they have to encounter in inducing the poorer classes to have their children vaccinated, even free from any expense. The experience of many years has decided that vaccination is the very best preventive means known as a protection against the poison of small-pox. I am aware that you have already turned your attention to this subject, and that orders have been issued in many unions under your charge, to the medical officers, to vaccinate all the children in their respective districts, and I would respectfully urge the necessity of following up and enforcing such regulations. It would be well if all public dispensaries and other charities would adopt some peremptory rule to the same effect. It is unnecessary to say more on this topic, as it is not improbable that even these remarks may be anticipated by a legislative enactment.

5. *Poverty.*—The title of this section of my letter may at first strike you as supererogatory, but as I could not select a better term for the division, and as poverty does not imply destitution (which the Poor Laws of England under all circumstances relieve), and more especially as I consider it one of the most fruitful sources of disease, I think it advisable, in an inquiry like the present, not to omit anything having such a tendency, which is capable of being obviated, even however remotely, either by a sanitary police regulation, or by the due exercise of moral influence. When I say that I consider poverty as a fruitful source of disease, I do not mean to assert that even *extreme poverty* is adequate to the production of fever; yet I am nevertheless of opinion that it is one of the most predisposing causes, and that it cannot exist long without contagious fever making its appearance, more particularly in densely crowded situations. Poverty not only

indicates an inability to procure proper food in quantity and quality, but it also indicates a like inability to procure all other necessaries of life ; and it is universally admitted, that where circumstances combine to enervate the human constitution, contagious diseases extend with a frightful rapidity. I do not wish, however, any remarks I have made in this letter to be considered as having reference to fever alone, but as applying with almost equal force to the production of diseased action generally.

Under the head of intemperance is already detailed one of the greatest sources of poverty ; and, like all other vices, originating with the head of the family, its impoverishing effects are felt by each member of the household, thus visiting the sins of the guilty upon the innocent. Having, however, already dismissed this part of my subject, I shall not enlarge upon it here.

Another grand source of poverty may be found to arise from the combinations amongst workmen, refusing to work for a less amount of wages than they themselves choose to dictate, and from the arbitrary and frequently illegal influence they often exercise over fellow-labourers who are less exacting. It is no uncommon thing at the present day to find numerous families thus suddenly reduced from comparative comfort and plenty to absolute want, whilst abundance of work might be had at a remunerating price, which they will neither execute themselves nor permit others to do. It is not for me to suggest any remedy for an evil of this character ; but surely if the arm of the law is already insufficient to exercise a proper influence in such cases, no time ought to be lost in remedying the defect.

An excellent example is shown in this neighbourhood by the wealthy manufacturers and tradesmen, almost universally paying their men's weekly wages on a Friday evening (or, what is still better, early on Saturday morning), instead of Saturday, thus putting it into the power of all to spend their money to the best advantage at Saturday's market, and obviating the great temptation that formerly existed, of spending their earnings, or a large proportion of them, in the public-houses and beer-shops after the termination of the week's labour. It may be said that such parties are as likely to dissipate on a Friday as on a Saturday evening. The propensity, I grant, may be the same, but there is no intervening day of rest to shake off the effects of intemperance and indulgence ; and as workmen must resume their labours on the Saturday, hence it is that such a regulation exercises not only a salutary, but a provident influence. The same considerate conduct induces many of the masters to encourage their workmen and servants to make a point of placing a small amount of their earnings periodically in the savings banks—an example worthy of all praise. I wish I could persuade the labouring poor to place more money in the savings banks and less in clubs and friendly societies, they would soon experience the beneficial effects of such a system ;

they would find that in a very few years they would be entitled to a larger amount from the bank than from the club, and that in cases of sickness, or great distress, they could draw on the principal as their own individual property, which they can never do from a club. They would find that in a time of hardship they are not compelled to continue their payment to the bank, but that they might resume it, or discontinue it, according to the pressure of the times, or their own circumstances, without incurring any loss; they would find that such a system is unattended with expense, that there is no club-room to provide, no officers to maintain, and no inducements to dissipation; they would find in their old age a fund to soothe their declining years, and, it may be, a surplus to divide among their children. Moral and religious instruction is extensively afforded to large classes of the workmen and their families by voluntary teachers; a system that meets with much encouragement from the master manufacturers. Such instruction is undoubtedly the best ground-work for leading rational beings to reflect, and thus, not only to encourage habits of industry and frugality, but, by teaching them the principles of Christianity, they have the best preparation for their duties here, and for their eternal good hereafter.

In conclusion, I would beg to offer a few remarks about the neighbourhood of Lancaster. The country around is open and hilly, and in general under good cultivation, with the exception of a considerable tract of land towards the sea, which is flat and swampy, and only partially drained. Indeed, the best cultivated land in this district, from its extreme level, only permits of drainage into large open ditches, which are constantly more or less filled with water, and in hot and drougthy weather are sometimes very offensive. Intermittent fever occasionally makes its appearance in this district, and fevers of a typhoid type are not unfrequent. The villages on the sea-coast, at no great distance from this land, are frequently the seat of contagious fever; and perhaps a little investigation will suffice to account for the rapidity with which it is often diffused. The male inhabitants of these villages are almost all exclusively engaged in fishing for herrings, flat-fish, shrimps, cockles, and muscles. The nature of their occupation implies great exposure both by day and night; and whilst they are so engaged, their families at home are picking and sorting the produce of each previous catch, and are hence much exposed to damp. The refuse fish, instead of being carefully destroyed, or conveyed away, are commonly thrown down, at or near the cottage-door, there to accumulate and *decompose* along with other garbage, until wanted as manure for the land. It is almost unnecessary to say that the stench arising from this source alone is, in many seasons of the year, perfectly insufferable. With an occupation such as this, cleanliness, either in person or in their domestic arrangements, is scarcely to be expected, and if expected,

certainly does not prevail. Their cottages are in general badly lighted and ventilated, frequently damp and densely crowded. The construction of such property is, upon the whole, infinitely worse than in towns. It is not unusual to find a large family crowded into a hovel with only a small kitchen below, and a garret divided into two sleeping apartments above. Notwithstanding a very large sum of money is yearly obtained by these fishermen, yet such are their thriftless and improvident habits, that they are almost all in a state of great poverty. There are honourable exceptions to this sweeping censure; and here and there a neat cottage, with smiling contentment, is observable; and I would gladly hope that, by the laudable exertions at present making by the clergy and other benevolent persons in their neighbourhood, that these villages will shortly present a better aspect.

I am, Gentlemen,
Faithfully and respectfully yours,
EDWARD DE VITRE'.

No. 23.

ON THE STATE AND CONDITION OF THE TOWN OF LEEDS IN
THE WEST RIDING OF THE COUNTY OF YORK.

By ROBERT BAKER, Esq.

THE town of Leeds, in the West Riding of the County of York, is situated on the River Aire, which runs through it, and which is navigable only hitherto. It forms by far the most important of the 11 townships of which the borough is composed, having, by the census of 1841, a population of 87,613 persons out of a parochial and total population of 150,587. The acres of the parish or borough are stated to be 21,450, but the total acreage of the township is only 2,672 A. 2 R.

By the Municipal Act of Will. IV., the borough of Leeds was divided into 12 wards, of which eight are in the township of Leeds, viz., the North, North-east, East, South, Kirkgate, Mill-hill, West, and North-west.

It is proposed to consider these wards in this Report: the inquiries instituted only having reference to the town, and not to the borough.

The following Table exhibits the present builded and blank areas of these wards, *i. e.*, the surface which is covered with buildings, including the streets, and that which still remains, either building-land, or land allotted to agriculture, gardening, or other purposes; to which is added, the number of houses of various values, and the population of them, taken on a calculation of four and a half to a house, which was the ratio in the census

of 1831, of the statistical census of 1838 and 1839, and is nearly the same in the census just completed.

It is necessary, however, to observe, that the measurements here given are the present result of an entire admeasurement ordered to be made by the Town Council of Leeds of the whole borough, with a view to an improved valuation; while the number of houses at different values, is that obtained by the statistical survey of the town in 1838 and 1839, between when and now the whole population of the township has increased from 82,120 to 87,613. But for all practical purposes it is the same, for the increase has no doubt been distributed in similar proportions as heretofore. The object of this argument is to show the proportion of the working-classes, *i. e.*, persons who live in houses under 10*l.* annual rent, to the middle and upper classes, and their number, upon given areas, with a view to exhibit congregation, amongst the other elements which affect longevity:—

Wards.	Land.			Buildings.			Total.			Population of the Ward.	Dwellings under 10 <i>l.</i> Annual Rent.	Population of the Working Classes at 4 <i>l.</i> to a House.
	A.	R.	P.	A.	R.	P.	A.	R.	P.			
North . .	28	1	0	63	3	0	92	0	0	12,506	2,100	9,450
North-East	466	0	0	75	3	0	541	3	0	16,269	3,422	15,399
East . .	546	3	0	111	0	0	657	3	0	14,271	2,947	13,261
South . .	66	1	0	57	1	0	123	2	0	5,630	943	4,243
Kirkgate .	4	0	0	27	2	0	31	2	0	3,158	348	1,233
Mill-hill .	26	1	0	101	2	0	127	3	0	5,167	274	1,566
West . .	384	0	0	176	0	0	560	0	0	15,483	2,104	9,468
North-West	456	0	0	82	1	0	538	1	0	9,656	1,465	6,592
8	1,977	2	0	695	0	0	2,672	2	0	82,120	13,603	61,212

By this Table it is seen, that upon the 92 acres of the North ward are located nearly as many persons as upon the 541 acres of the North-east, the 657 acres of the East, and the 560 acres of the West. The importance of this will be manifest when we come to consider the districts of the registrars.

The town itself stands on sloping ground, the highest part of which is on Woodhouse Moor, to the west, and which is about 232 feet above the level of the River Aire below the Hunslet Weir.

The Hunslet Weir is here mentioned, because it is only below this, a distance down the river of about two miles, that an effectual drainage can be obtained.

Within it are going on daily the processes of flax-spinning and weaving by hand; the manufacture of woollen cloths, and of some worsted goods; of various kinds of machinery, of tobacco, and pipes, dye-works, ware and saw-mills, and other processes of industry.

The higher parts of the town are ordinarily clean for so large a manufacturing location; but the lower parts, which lie contiguous to the river and the Becks or rivulets are dirty, confined, ill

ventilated, and in many instances self-sufficient to shorten life, and especially infant life, when exposed to their influence.

The comparatively little sewerage of the town is emptied into the river and the Timble Bridge beck, a rivulet which runs from north-west to south-east, joining the river in the East ward. The river and this beck are so much the receptacles of all kinds of refuse, that long before either of them reach the town, their waters are perfectly discoloured. With the river it is not so much the case, but with the Timble Bridge beck, running through the most important ward of the town in point of population, the refuse left upon its sides, on its waters being drawn off for particular purposes, is so exhalant and noisome as to be offensive in the first degree. Some idea may be formed of the use of its waters by engines and dye-houses, that serious contentions have occasionally arisen between parties appropriating them for condensing purposes, on account of their heat.

The lower parts of the town are furthermore disgusting, particularly on account of a general want of paving and draining, for the irregularity of their buildings, for the violation of the common decencies of life in the abundance of refuse and excrementitious matter lying about in various directions, and what is indeed a matter of universal complaint in every part of Leeds, for the pavement, where there is any, being set in ashes, and occasionally covered with the same, by which, in dry weather, a black and irritating dust prevails, not only in the streets but the houses; and in dirty weather, a spunging puddle, most foul and most offensive.

The town of Leeds contains 586 streets, varying from 8 to 23 or 24 yards wide, three or four squares, and a great many courts and *culs-de-sac*. Over 86 of the streets only have the local authorities any control; for there seems to be no power under any existing Act of Parliament whereby newly opened streets may be added to those over which the public have an acknowledged legal right, without their being first thoroughly paved, and by common consent of all the proprietors, given up for public use.

By the census of 1841 the total number of inhabited houses has been found to be 17,737, of uninhabited houses, 1,249, and of those building 220. For the most part they are put together without regard to architectural order or regularity. The levels of various parts of the town above the Hunslet Weir range from 232 feet, as before mentioned, to as low as 27 feet 9 inches; and whilst it is perfectly true, therefore, that a great part of the town might be effectually drained very considerably nearer the town than the Hunslet Weir, yet there are great portions of it adjacent to the river, and in the neighbourhood of the brooks, in such low situations, that either a distant fall will be required to obtain drainage, or frequent regurgitations from back-water will be inevitable.

The river Aire, which courses about a mile and a half through the town, is liable suddenly to overflow from violent or continued rains, or from the sudden thawing of heavy falls of snow. The lower parts, and dwellings, both in its vicinity and in that of the becks, are not unfrequently therefore inundated; and as the depth of the cellars is below the means of drainage, the water has to be pumped out by hand-pumps on to the surface of the streets. In those parts of the town, and particularly where the humbler classes reside, during these inundations, and where there are small sewers, the water rises through them into the cellars, creating miasmatic exhalations, and leaving offensive refuse, exceedingly prejudicial to the health as well as to the comfort of the inhabitants. It was stated on the authority of one of the registrars, that, during a season remarkable for an unprecedented continuation of hot weather, in one of these localities, the deaths were as three to two, while in other parts of the town, at the same period, they were as two to three. The condition of the Tumble Bridge beck is doubtless much worse for drainage purposes than formerly, for the bottom has been raised by continual deposits, until the oldest water-wheel upon it has had to be removed as useless and inoperative; and stepping-stones, once the means of passage over it, are at this moment said to be buried under the accumulation of years, as much as one or two feet in depth. It is quite clear, therefore, that that which was once the main receptacle for the drainage of an entire district, is, in its present state, no longer capable of fulfilling that purpose; and that though a considerable amount of drainage might still be effected by it, yet, unless emptied of its superfluous matter, it cannot now be made available for the wants of the entire population in its course.

In an inundation about the period of 1838 or 1839, which happened in the night, this beck overflowed its boundaries so greatly, and regurgitated so powerfully into petty drains communicating with houses 100 yards distant from its line, that many of the inhabitants were floated in their beds, and fever to a large amount occurred from the damp and exhalations which it occasioned. Of the 586 streets of Leeds, 68 only are paved by the town, *i. e.*, by the local authorities; the remainder are either paved by owners, or are partly paved, or are totally unpaved, with the surfaces broken in every direction, and ashes and filth of every description accumulated upon many of them. In the manufacturing towns of England, most of which have enlarged with great rapidity, the additions have been made without regard to either the personal comfort of the inhabitants or the necessities which congregation requires. To build the largest number of cottages on the smallest allowable space seems to have been the original view of the speculators, and the having the houses up and tenanted the *ne plus ultra* of their desires. Thus neighbourhoods have arisen in which there is neither water nor out-

offices, nor any conveniences for the absolute domestic wants of the occupiers. But more than this, the land has been disposed of in so many small lots to petty proprietors, who have subsequently built at pleasure, both as to outward form and inward ideas, that the streets present architecture of *various orders*, causeways, dangerous on account of steps, cellar windows without protection, here and there posts and rails, and everywhere clothes-lines intersecting them, by which repeated accidents have been occasioned. During the collection of the statistical information by the Town Council, many cases of broken legs by these unprotected cellars, and of horsemen dismounted by neglected clothes-lines hanging across the streets, were recorded.

It might be imagined that at least the streets over which the town surveyors have a legal right to exercise control, would be sewered: but this is not the case; of the 68 streets which they superintend, 19 are not sewered at all, and 10 are only partly so; nay, it is only within the three or four years past that a sewer has been completed through the main street for two of the most populous wards of the town, embracing together a population of 30,540 persons, by which to carry off the surface and drainage-water of an elevation of 150 feet, where, indeed, there could be no excuse for want of sufficient fall. I have seen, in the neighbourhood to which I now refer, an attempt made to drain the cottage houses into a small drain passing under the causeway, and which afterwards had to be continued, through a small sewer, and through private property, by a circuitous route, in order to reach its natural outlet, and the water from the surveyor's drain regurgitate into the cutting from the dwellings. It only needs to be pointed out that the sewer which has subsequently been made, and is most effective, is an evidence of the previous practicability of a work so essential to the welfare of the people; but, I may add, that many of the inhabitants of the districts a little further distant from the town, where fever is always rife, are yet obliged to use cesspools, which are constructed under their very doors, for the want of the continuation of this desirable measure.

Along the line of these two wards, and down the street which divides them, and where this sewer has been recently made, numbers of streets have been formed and houses erected, without pavement, and hence without surface-drainage, without sewers, or if under-drainage can be called sewers, then with such as, becoming choked in a few months, are even worse than if they were altogether without. The surface of these streets is considerably elevated by accumulated ashes and filth, untouched by any scavenger; they form nuclei of disease exhaled from a thousand sources. Here and there stagnant water, and channels so offensive that they have been declared to be unbearable, lie under the doorways of the uncomplaining poor; and privies so laden with ashes and excrementitious matter, as to be unuseable, prevail,

till the streets themselves become offensive from deposits of this description : in short there is generally pervading these localities a want of the common conveniences of life.

The courts and *culs-de-sac* exist everywhere. The building of houses back to back occasions this in a great measure. It is in fact part of the economy of buildings that are to pay a good percentage. In one *cul-de-sac*, in the town of Leeds, there are 34 houses, and in ordinary times, there dwell in these houses 340 persons, or ten to every house ; but as these houses are many of them receiving-houses for itinerant labourers during the periods of hay-time and harvest, and the fairs, at least twice that number are then here congregated. The name of this place is the Boot and Shoe-yard, in Kirkgate, a location, from whence the Commissioners removed, in the days of the cholera, 75 cartloads of manure, which had been untouched for years, and where there now exists a surface of human excrement, of very considerable extent, to which these impure and unventilated dwellings are additionally exposed. This property is said to pay the best annual interest of any cottage property in the borough.

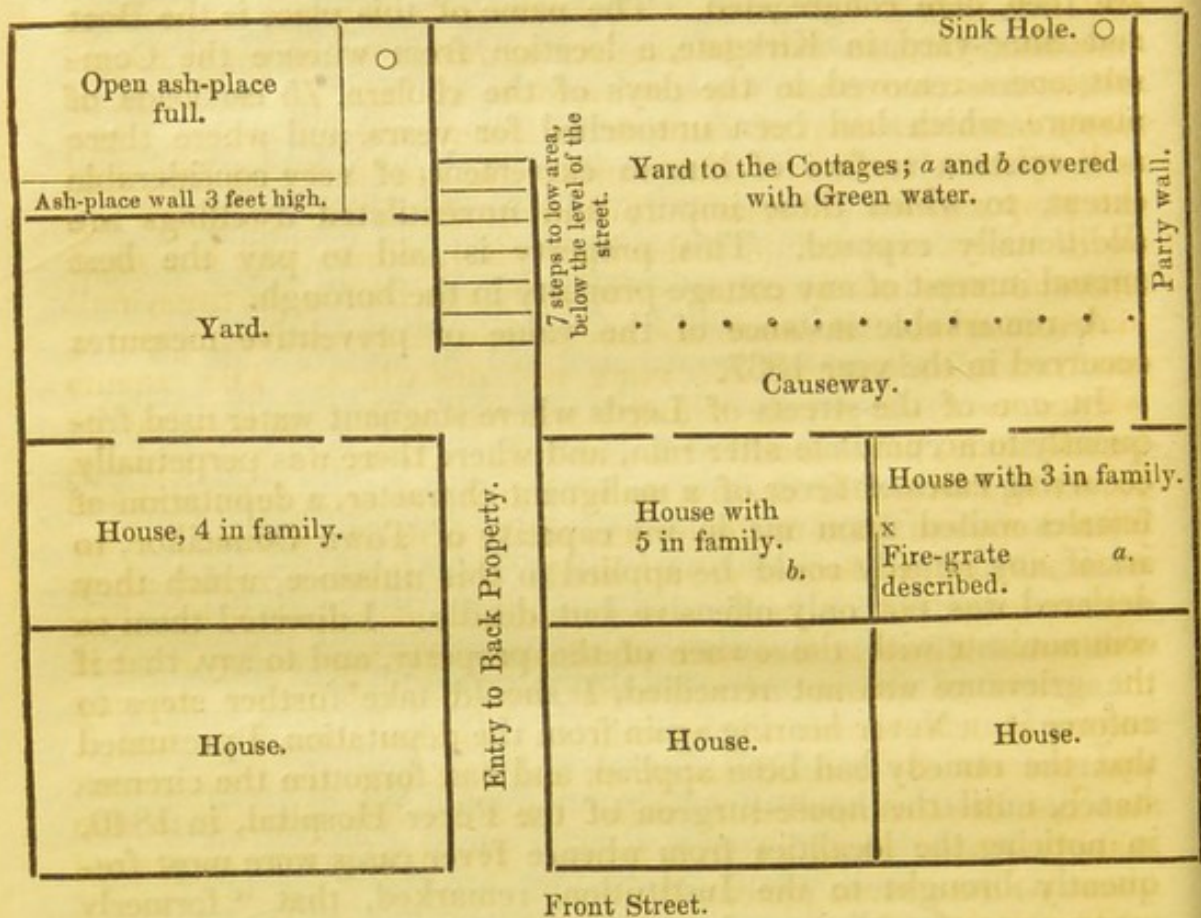
A remarkable instance of the value of preventive measures occurred in the year 1837.

In one of the streets of Leeds where stagnant water used frequently to accumulate after rain, and where there was perpetually occurring cases of fever of a malignant character, a deputation of females waited upon me in my capacity of Town Councillor, to ask if any remedy could be applied to this nuisance, which they declared was not only offensive but deadly. I directed them to communicate with the owner of the property, and to say, that if the grievance was not remedied, I should take further steps to enforce it. Never hearing again from the deputation, I presumed that the remedy had been applied, and had forgotten the circumstance, until the house-surgeon of the Fever Hospital, in 1840, in noticing the localities from whence fever cases were most frequently brought to the Institution, remarked, that "formerly many cases of malignant fever were brought in from — street, but for two or three years there had been none, or not more than one or two." This fact alone is sufficient to point out the value of effective drainage. In the Leylands, a large and increasing neighbourhood is located along the sides of the Timble Bridge beck. This district is situated so low, that the sewer, which is but very small, is said to be always half full of water, which cannot get away, because the owners of the soil between the beck and the street will not allow lateral drains to be made through their property, which, though they might subject the houses to occasional inundations from back-water, yet for nine-tenths of the year would keep this main sewer perfectly empty and free. Under the circumstances it is necessary to carry this sewer by a long and circuitous route, and by several angles, to a more distant

part of the same beck, perhaps the distance of about 500 or 600 yards into another sewer, into which also branch sewers from higher levels are perpetually pouring their contents.

Drainage.—In many of this courts the want of drainage is severely felt. All the refuse water has to be thrown on to the surface, where it either becomes stagnant, or is absorbed, or is attempted to be removed by sumpholes. A court under these circumstances is shown on the subjoined ground-plan. The facts are related by a cottager occupying the house marked *a*.

Privy here from other property, which drains into the water.



Thomas Rooley is 66 years of age. His wife is also about the same age; worked formerly as a soap-boiler; is now unable to work, and lives on parish allowance, and the earnings of his wife. Has 2*s.* 6*d.* a-week. A son lives with them, who has been a long time out of employment. Has lived in this cottage for more than a twelvemonth; has had very bad health during that period, and his wife also has had rheumatism. The water in front of the house has accumulated from various sources. The yard has never been dry since he came to it. There is a sump-hole, a great depth, in one corner, made by the landlord, to take the water away; but it is full of deposit. The stench is often so bad, and especially after rain, that he and his wife cannot bear it. The fire-place of his house has a small place under it for ashes,

but he has been forced to remove the grate and put down an oven-plate to cover it with, in consequence of the stench coming under the house and making its way up the grate. Last week, in consequence of much rain, he would have been up to the knees in wet but for baling the water out and throwing it over the wall. He worked five hours at it. Last winter, when the thaw was, he had water in the house for some days. The necessary above drains into this water through the partition wall, and adds to its offensiveness. Then there are suds and dirty water also which are forced to be added to it, for there is no drain nor means of throwing them elsewhere. His wife and himself have both had bad health ever since they came, and they are too poor to remove. He has had rheumatism so bad, that he could not go out, and so has been more exposed to it than his wife. It is about 10 inches deep of water in the lowest corner.

Benjamin Hardwick is the owner. He and his father have had the property for 30 years. Formerly the water used to run down its natural fall into the high yard, where there is a small private sewer, but the owner some years ago built a partition-wall across to divide the properties, and so cut off his drainage, and it has been so long that he cannot now disturb it. The tenants wanted to make a hole through the wall with a poker, but he forbade them, being afraid of a law-suit. He made a sumphole, to try if that would drain it away, but it was soon full; and has offered endless times to the owners of the property below to allow it to run off as formerly, and would give them a rental or an acknowledgment, or make a sewer at his own expense, but they will not. These houses have stood empty for four and five years at a time on account of this water, which is a nuisance not only to them but to all the neighbourhood. He has sometimes had it pumped out by a hand-pump, or laded it into the front street, but has been compelled to desist from its offensiveness to the neighbourhood whilst running away. Has had great complaints about it, but cannot remedy it.

This is one of many applications which have been made to me to view property either unpaved or undrained, by reason of obstinate neighbours, in the hope of getting the nuisance removed.

Nuisances.—During the progress of the statistical inquiry, one of the collectors recorded the circumstance of a woman, who, in passing through a dark entry leading from one street to another, fell into the refuse of an undefended privy, and but for the assistance of neighbours would have been suffocated.

Of the many nuisances of such kind which exist the record is indeed disgusting. It is not only in a physical but a moral point of view that they produce their effect upon the people. As slaughtering cattle in the public thoroughfares has a tendency to brutalize the feelings, so the perpetual presentation of these uncleanly *loci* to the eye, dulls the energies of even the most willing

housewives, and weakens in time the most cleanly original determinations.

In instancing the following fact, which happened two years ago, and even in this year has been repeated, there is exhibited an apathy to, or disregard of, consequences so extraordinary, that it calls for public condemnation. The contractor for the street sweepings, who is the treater with the Commissioners of Public Nuisances in Leeds, absolutely rented, and rents, or did rent a very few weeks ago, a plot of vacant land in the centre of the North-east ward, the largest ward in point of population in the township of Leeds; and containing the greatest number of poor, as a depôt for the sweepings from the streets and markets, both vegetable and general, for the purpose of exsiccating and accumulating till they could be sold as manure and carried away. So noisome were these exhalations, that the inhabitants complained of their utter inability to ventilate their sleeping-rooms during the daytime, and of the insufferable stench to which both by night and day they were thus subjected.

A great many of the privies of the cottages are built in small passages, between clumps of houses, which are different properties; others, with the ash entrance open to the public streets; and others at a little distance from, and open to, the front of the houses; whilst some streets are entirely without. The inhabitants, to use the language of an old woman, of whom inquiry was made, say "That they do as they can, and make use of the street itself as the common receptacle." These remarks apply in particular to three streets in Leeds, which contain a population of between 400 and 500 persons, where there is not a useable privy for the whole number.

The cesspools, which exist abundantly, though not so numerous as formerly, are a fruitful source of disease. In some streets they are formed under the flags which cover the front doors. In the clayey soil of the neighbourhood of Leeds they soon become full of putrescent matter. From Woodman-street and Cottage-street, where they are obliged, from want of drainage, to be resorted to, many cases of fever are annually taken to the fever hospital.

There are some slaughter-houses in Leeds in the midst of dense populations. In the Kirkgate and the North wards they prevail, and are very often highly offensive. Bone-mills and candle-makers' shops are also great nuisances. Perhaps, however, the greatest nuisance to which manufacturing towns are exposed, and more especially Leeds, is that of the smoke from the engine-furnaces, the dye-works and the tobacco-pipe furnaces. It is estimated that the engine-furnaces alone consume annually about 200,000 tons of coal. The dye-houses and pig-shops, and other furnaces, where steam-engines are not erected, add materially to this amount. The density of the atmosphere, occasioned by this im-

mense consumption of fuel, added to that used for domestic purposes, may be conceived. The smoke, however, from the low chimneys of the dye-works and tobacco-pipe furnaces is a greater nuisance in particular localities than even that of the engine-chimneys, for the latter do carry the cloud above the heads of the people, but from the former dense volumes are conveyed through the streets by every breath of wind.

It has been suggested, that to the chemical changes of the atmosphere,—and in a great measure attributable to smoke,—arise the amount of small-pox which fell upon the southern migrants who were located in Yorkshire in 1836 and 1837, many of whom were affected by this malady. There is very little doubt, indeed, that this vitiated state of the atmosphere does tend to produce a great effect upon the structure of the lungs. The exact amount of this in Leeds, in proportion to other places, I have no present data to show, but it is in course of collection. I have a table of the deaths of 1,742 married men, of which 708 were from phthisis pulmonalis. This table was made in the general statistical inquiry of 1838 and 1839. Of the 2,279 widows there recorded, 1,742 were able to explain the cause of death in their husbands; and as the inquiry was indiscriminate, the fact is interesting. I have also a table of 427 deaths registered in one of the Leeds districts from January to July, 1841, of which 242 were about 16 years of age, and of which 78 were from phthisis also.

The supply of good water to the inhabitants of Leeds has for a long time been most justly complained of, but the evil is now remedied.

The only sources of supply, till very lately, were the river and pumps in private hands. The offensiveness of the river water was proverbial. It was distributed in pipes after having been forced into reservoirs, open to the atmosphere, where it could be “allowed to settle,” which pipes were often found choked up with offensive matter. The cost of the pump-water was not very considerable generally, though its free use would doubtless be curtailed by the mere labour of fetching it from a distance; yet its sulphureous impregnation was an objection, though the water itself was stated to be very pure. Leeds has now, however, new water-works, which distribute a most abundant supply of pure water all over the town at a reasonable rate, which rate is estimated in fact in proportion to the rent, at about 1*s.* in the pound; so that if a poor cottager paid formerly 1*d.* a-week for water, and had to fetch it from some distance, for 5*s.* or 6*s.* annually he can now have a good supply brought to his door.

Houses.—It has before been shown that Leeds contained in 1839, 18,279 houses, of which 13,603 were under the annual value of 10*l.* The total number under 5*l.* annual value was 5,272. It is in this latter class of houses that the humbler part

of the industrious population resides. Perhaps there is no question of more importance than the size of the houses within the entire range of vital statistics.

The price of the building-land in Leeds varies from 1*s.* a-yard to the highest range of value. Beyond 3*s.* or 4*s.* a-yard, however, it is considered too valuable for cottage purposes. Generally it is freehold, and purchased in small lots, by different proprietors. The streets are usually formed, re-stated out, before the buildings are erected, after which their progress goes on according to the sale of sites. In periods of great prosperity, no property is more valuable than what is called cottage property in towns; for the demand for labour enables the operative to pay a high rent, which, for the most part, is collected weekly or quarterly, according to the character of the tenantry. Thus whole streets of houses have arisen in Leeds, in an inconceivably short space of time, and in many instances evidently for the sole end of speculation, without regard to the absolute wants of the tenants.

In instance of this, it has been shown, that in three of such streets there is now no useable privy, and other records exist of as many as 30 houses having been thus erected with only one privy for the whole. For the most part, all these houses are built back to back, and at the same period of time. The price of land, and the outlay on materials direct this. Two such houses are ordinarily built for a cost of from 65*l.* to 70*l.* each, which with the land, raises the entire cost to about 80*l.* a house. The average repairs may amount from 5*s.* to 10*s.* a-year. When new, these houses will let for 12*l.* a-year, and continue to be so let for a considerable period. A house of this description will contain a cellar, house, and chamber: there are very few of the rent of 5*l.* which contain more accommodation than this.

But it must be manifest that one sleeping-room, though it may be quite sufficient for a young couple, must be very inadequate to a family of five persons, or oftener eight; and it is no sufficient answer—in fact an answer founded in error—that with the increase of a poor man's family his means of affording them accommodation increase; on the contrary, an operative is almost at the head of his wages when he becomes a housekeeper and married; and if his means then are inadequate to pay the rent of a house with two sleeping-rooms, they rarely or ever become so. The wages of children added to the common stock, are more than consumed in food and clothes, during the earlier periods of life and parental control. But with many of the working-classes of manufacturing districts, this control is shaken at 14 years of age, and entirely gone at from 16 to 20, and but a very small portion of the earnings of children are then appropriated to the domestic use of the entire family. In fact, at the period when it is essential that the separation of the sexes should be enforced, there is often the less ability to effect it—and thus, in the houses of the working-

classes, brothers and sisters, and lodgers of both sexes, are found occupying the same sleeping-room with the parents, and consequences do occur which humanity shudders to contemplate. It is but three or four years ago since a father and daughter stood at the bar of the Leeds sessions as criminals, the one in concealing, and the other in being an accessory to concealing, the birth of an illegitimate child, born on the body of the daughter by the father; and now, in November, 1841, one of the registrars of Leeds has recorded the birth of an illegitimate child born on the body of a young girl, only 16 years of age, who lived with her mother, who cohabited with her lodger, the father of this child, of which the girl had been pregnant five months when the mother died.

The ordinary size of such a cottage-chamber is about five yards square, and about four yards high. Their contents vary from 600 to 1000 cubic feet, a part of which space is of course occupied by furniture. There are generally two beds in the same apartment where there are families, or even three, and not unfrequently instruments of labour, as looms, or the apparatus for combing wool, or for some other kind of handicraft. In the worsted districts are not unfrequently found the charcoal furnaces of the wool-combers in their bed-chambers, which are all day burning to enable them to use their combs for their occupation, at once heating and vitiating the atmosphere, and rendering the apartment wholly unfit for sleeping purposes.

Let a poor family, consisting of a man, his wife, and seven children, two or three of whom are adolescent, be imagined occupying one of these chambers, in a *cul-de-sac*, or in an undrained and unpaved street, seven human beings, each requiring 600 cubic feet of breathing room, shut up in a chamber not containing more than 1000 feet for the whole. The offices of nature performed in the same apartment with sustentation, sufficient perhaps to maintain the vital powers, but hardly enough to supply the draught which nature demands to nourish their growth; both parents and children rising in winter and summer at five o'clock in the morning, and labouring in other unhealthy atmospheres with occasional intermissions, from six A.M. till half-past seven P.M., in a temperature, probably, of 70, 80, or 90 degrees, tasting flesh-meat once a-week, and returning to the limited atmosphere of the night, unchanged, because unable to be improved, owing to the defective sanitary regulations, or an entire absence of them;—and the mind that so thinks, draws a picture which the theatre of any large manufacturing town could pourtray in a thousand instances. In the common lodging-houses, this impaction of persons in the same sleeping-apartment is most perfect. There is one common lodging-house in Leeds which contains two bed-rooms, of about 1,200 cubic feet each, separated by a partition of wood, and having one window in each room, looking into a narrow lane, where the pure air of heaven never blows—in each of which rooms, when last

visited, there were six beds, for the purpose of sleeping two and three persons in a bed, from which house many cases of malignant fever have been taken to the House of Recovery. In the summer of 1838, a labourer, a powerful and athletic man, and his wife came in from the country and took lodging in this house. In three days he was taken with typhus fever, and removed to the House of Recovery, where in twenty-four hours more he died. His wife was warned by the house apothecary of the institution of the dangerous character of her lodgings, and recommended to change them; but she refused, and in a few days was herself admitted and shortly died; and two nurses died, and one narrowly escaped, on administering to their necessities. Once more let us recur to the Boot and Shoe-yard, where, in 34 houses, occupied by 43 tenants, there were living, in 1839, 174 males and 166 females in 57 rooms, making an average of six persons to a room; most wretched hovels indeed, almost without furniture and the means of cleanliness, yet paying an annual rental of 214*l.*, and with no rents better paid, or less leakage.

One more instance is recorded of the necessity of attention to the number of sleeping-rooms in cottages. A gentleman appointed to an important commission touching the education of the people, and anxious to acquaint himself with the social condition of the inhabitants of large manufacturing towns, was introduced to me in the spring of 1840, as one likely to further his object by reason of my acquaintance with the various localities likely to interest him. In passing through a public thoroughfare, about 9 o'clock in the evening, our attention was attracted by an open door, from which a good light was shining, and to which we directed our steps for the purpose of examining the apartment, both as to size and to the apparent comfort of the inmates. To our mutual astonishment we were presented with the following *tableau*:—The chamber on the ground-floor, and level with the common causeway of the street, contained two beds; in one, sitting up, undressed, was a youth of about 16 years of age; on the floor, before the fire, was seated the father, preparatory to undressing; whilst the mother, *en chemise*, half naked, in fact, was standing with her back to the fire, with the most perfect *nonchalance*. Much more might be said, and many more instances given, but it is unnecessary,—

Ex uno disce omnes.

The rent of cottages of the labouring classes in Leeds varies from 2*l.* to 10*l.* a-year. Perhaps the great majority are between 4*l.* and 7*l.* Were the houses built upon a much larger scale, therefore, and with a much larger quantity of land appropriated to them, the annual value would be beyond the income of the labourers. The rates and rent of a house of 6*l.* a-year do not absorb much less than a seventh of the wages of the occupier, and perhaps a fifth or sixth upon the average wages of all classes

of artisans, and labourers of all descriptions. Whatever rent might therefore be added, by reason of original cost, would be increased by rates in proportion to the annual value, and great distress and privation would be thereby occasioned. The annual rent of houses with two chambers varies from 6*l.* to 8*l.*; but if to this were added large yards and separate out-offices, or garden ground, or anything tending to enlarge the original cost, the annual draught from the income of a working man would be too heavy for the other requirements of his family.

There are a few clumps of houses in Leeds having gardens before them, but no vegetation thriving in them, and an attempt at any cultivation of the soil only adds to the mischief which the additional rent occasions. One cannot but notice the moral and social as well as physical effect which an attention to the architecture and order of cottage houses and the good arrangement of the streets has upon the health and habits of the people. In every town, no doubt, this contrast can be made; but certainly so in towns built upon undulating land, where drainage can be effected, and where habits of out-door cleanliness can be enforced. In the Bank, in Leeds, a part of the East ward in which there is every variation of size and order of cottage dwellings, there is a large population located under a good landlord, who has erected his houses upon a good plan, with a due regard to the wants and requirements of his tenantry, with a due share of out-offices, and other accommodation; and with streets well paved and sewered; he has very rarely any houses to let. The whole estate bears upon the face of it comfort and enjoyment. Every house is clean and neat, and enanted by a respectable occupier. This landlord can have a selection of tenants, who count it a favour to obtain one of his houses, and his rents are regularly paid almost to a farthing. It is true that he has every advantage of situation and means, and he has availed himself of them, which hundreds of others have not, who are similarly circumstanced. There are no violations of decency to be seen here, and no disturbances nor assemblies of Sabbath-breakers; on the other hand, in the lower parts of the same ward, with effective means of drainage and pavement, are to be found houses occupied by tenants shadowed down through every grade, from the rents obtained on the first estate, to the 1*s.* a-week rent of the dark and dank cellar, inhabited by Irish families, including pigs, with broken panes in every window-frame, and filth and vermin in every nook. Here, with the walls unwhitewashed for years, black with the smoke of foul chimneys, without water, with corded bedstocks for beds, and sacking for bed-clothing, with floors unwashed from year to year, without out-offices, and with incomes of a few shillings a-week, derived from the labour of half-starved children, or the more precarious earnings of casual employment, are to be found within what seem the dregs of society, but are

human beings withal existing, from hour to hour, under every form of privation and distress. The tables exhibited under the article population, show how great this is—while without, there are streets elevated a foot, sometimes two, above the level of the causeway, by the accumulation of years, and stagnant puddles here and there, with their fœtid exhalations, causeways broken and dangerous, ash-places choked up with filth, and excrementitious deposits on all sides, as a consequence undrained, unpaved, unventilated, uncared-for by any authority but the landlord, who weekly collects his miserable rents from his miserable tenants.

Can we wonder that such places are the hot-beds of disease, or that it obtains upon constitutions thus liberally predisposed to receive it, and forms the mortality which Leeds exhibits. Adult life, exposed to such miasmata, gives way. How much more, then, infant life, when ushered into, and attempted to be reared in, such obnoxious atmosphere. On the moral habits similar effects are produced; an inattention on the part of the local authorities to the state of the streets diminishes year by year the respectability of their occupiers. None dwell in such localities but to whom propinquity to employment is absolutely essential. Those who might advocate a better state of things depart; and of those who remain, the one-half, by repeated exhibitions of indecency and vulgarity, and indeed by the mere fact of neighbourship, sink into the moral degradation which is natural to the other, and vicious habits and criminal propensities precede the death which these combinations prepare.

Number of Persons to a House.

The greatest number of persons living in one house is to be found in the lodging-houses for itinerant labourers, where, in some instances, they are as many as five to a bed. Three beds are not at all uncommon in one sleeping room, in the private houses of the cottagers, without always having the decency of a curtain between them, though sometimes this arrangement is made.

In the houses of the Irish poor, of which there are a great many in Leeds, who work in factories, and are engaged in weaving by hand plaids and other stuff goods, there is a general state of desolation and misery. Whether it is the improvidence of the Irish character, or their natural habits are filthy, or both, or whether there exists the real destitution which is apparent in their dwellings, I know not; but in them is more of penury, and starvation, and dirt, than in any other class of people which I have ever seen. The proverbial misery of the poorer Irish people is not overlooked, nor indeed is it apparently without reason; but whether that misery is the result of improvidence or not, is another question altogether; for the average amount of labour which they obtain in Leeds is evidently quite equal to that of the English labourers. They are mainly employed in plaid-weaving and bobbin-winding, and in

some of the mills of the town, of whose population they compose no inconsiderable amount, especially in those departments of mill-labour which are obnoxious to English constitutions, and to some unendurable. To such an extent, indeed, has the employment of the Irish been carried in Leeds, that, in 1835 and 1836, many of the flax-mills would have been obliged to stand for want of hands, but for the influx of Irish labourers which then took place.

The subjoined Table gives the wages of a large number of Irish weavers and their families, in the months of November of ten successive years, and of October in the present year, embracing periods both of great depression and of great prosperity. The men comprise young and old, skilful and unskilful, and quick and slow; all

YEARS.	Men, Women, Boys, and Girls.	Total Earnings for Four Weeks.			Average per Week.	
		£.	s.	d.	s.	d.
Nov. 1831.	104 Men . .	252	7	10	12	1½
	17 Women .	20	14	3	6	1
	14 Children	23	6	9	8	3
Nov. 1832.	114 Men . .	219	16	11	9	9
	7 Women .	74	1	9	5	6
	9 Children	13	4	0	7	4
Nov. 1833.	104 Men . .	218	1	5	10	6
	9 Women .	11	3	0	6	2
	10 Children	14	18	9	7	5
Nov. 1834.	120 Men . .	268	7	6	11	2
	10 Women .	12	5	9	6	1
	9 Children	12	15	6	7	1
Nov. 1835.	126 Men . .	323	10	11	12	10
	24 Women .	40	11	6	8	5½
	12 Children	14	0	10	6	0
Nov. 1836.	144 Men . .	330	0	0	11	6
	12 Women .	15	13	3	6	6
	18 Children	28	12	6	7	11
Nov. 1837.	133 Men . .	323	16	11	12	2
	14 Women .	18	0	0	6	5
	13 Children	20	6	0	7	9
Nov. 1838.	134 Men . .	307	5	0	11	6
	13 Women .	18	8	3	7	1
	12 Children	14	0	10	6	0
Nov. 1839.	145 Men . .	380	6	6	13	1
	29 Women .	41	16	0	7	3
	19 Children	32	12	5	8	6¾
Nov. 1840.	137 Men . .	308	16	5	11	3
	18 Women .	27	16	0	7	9
	10 Children	18	0	5	9	0
Oct. 1841.	150 Men . .	375	12	1	12	6¼
	23 Women .	37	8	5	8	0
	12 Children	21	11	10	9	0

of which qualities are most important in the consideration of this question; and to be accurate on this head, they are divided into three classes; viz., out of 150 men, 45 are taken as earning 18*s.* a week, 60 as earning 13*s.* a week, and 45 as earning 9*s.* a week; and almost invariably the women and children are the wives and children of the men therein specified. The month of November, too, is chosen as the period of the year best likely to give the average earnings.

The average wages which either of these persons earn is quite sufficient, with care, to provide for the wants of their families; and more than this, in some instances, with economy, to lay by something for the decline of life. Let us look for a moment at these earnings of these Irish weavers, which, although the subject might come more properly under the head of labour, has been now introduced under the idea that it is better to keep the destitution and the means of the Irish immigrant under consideration together, lest we should be led away by the former under general sympathy, and underrate the latter when we came to speak of it.

A plaid-weaver, for instance, of industrious habits, will rent a small house, consisting of a kitchen and chamber, at an annual cost of about 4*l.*, or a cellar at 2*l.* 10*s.* In the former case, the kitchen is not only appropriated to culinary purposes, but is the house, the sleeping-room, the hen-house, and the piggery; whilst upstairs are three or four looms, all but touching each other; and, perhaps, in a corner, a bed on the floor for one of the owners of those looms, which are employed as follows: one by the occupier of the house, the others by persons to whom they are either sub-let at a weekly rent, or who are relatives, friends of, or labourers for, the owner, who work either for weekly wages, or for the common maintenance of the family. In a cellar, a single loom for the weaver is all that it will contain.

It appears that in November, 1832, the lowest rate of wages was obtained, and the highest in 1839; and that the average of the 11 years of the men's wages only, has been 11*s.* 8*d.* per week. Taking the number of women and children in each month as showing the families, out of the total number of each month, who were benefited by the additional wages of themselves and children, we have a number, out of the several aggregates, whose weekly wages have been by no means inconsiderable; as, for instance, in the month of November, 1831, 17 families were benefited by the labour of the wives, and 14 by that of the children; the former averaging 18*s.* 2½*d.*, and the latter 1*l.* 0*s.* 4½*d.* per week, leaving, out of the total number of 104 men, the presumed heads of families, though by no means certainly so, 73 only as having but the 12*s.* 1½*d.* per week, as therein stated. But it would be unfair to set down these 73 persons as heads of families only earning 12*s.* 1½*d.* a week, and not to suppose that in most, if not in all the instances, they are assisted by the labour of their children in other trades of industry; not, perhaps to the extent of either 6*s.* 1*d.*, as in the case of these wives, nor yet 8*s.* 3*d.*, as in the case of the children; but on the

average of each family having one child above 13 years of age, earning about 4s. or 4s. 6d.

This presumptive advantage, which is believed to be much within the true state of the case, will give to the lowest year (*i. e.* to 1832) a weekly rate of wages to the men only (*i. e.*, without including the women and children of the Table), of 14s. 3d., while in the highest year, and including the wages of the children, they are seen to be 1l. 1s. 7 $\frac{3}{4}$ d.

The average rate of wages of the labouring classes of England scarcely exceeds this; and it is presumed, therefore, without laying much stress on the voluntary privations to which the Irish labourer will and does subject himself, to economize his earnings, when his labour is migratory and not fixed, that the statement is borne out, that were the habits of the Irish settler made more provident by sanitary regulations—regulations affecting his dwelling, his means of livelihood, and his indifference to personal and local cleanliness, and by the example of his English neighbours—that his character would cease to be what it has long been, *viz.*, an expression of desolation and misery; that he would not be so often found the recipient of parochial and general charity, but might possess the same independence which his English neighbours possess, and that the destitution and mortality of towns might be materially reduced.

I have been in one of these damp cellars, without the slightest drainage, every drop of wet and every morsel of dirt and filth having to be carried up into the street; two corded frames for beds, overlaid with sacks for five persons; scarcely anything in the room else to sit on but a stool, or a few bricks; the floor, in many places, absolutely wet; a pig in the corner also; and in a street where filth of all kinds had accumulated for years. In another house, where no rent has been paid for years by reason of apparent inability to do it, I found a father and mother and their two boys, both under 16 years of age, the parents sleeping on similar corded frames, and the two boys upon straw, on the floor upstairs; never changing their clothes from week's end to week's end, working daily in the dusty department of a flax-mill, and existing upon coffee and bread.

In some parts of the town there are houses and cellar-dwellings under the same roof; *i. e.*, a cellar-dwelling, as it is called, on a level with the causeway of the street, and one or two tiers of galleries to other dwellings above them. These kinds of houses are not at all uncommon in Bradford, and in parallel streets running laterally on sloping ground, so that the street below is higher than the one above. These are then generally houses containing a room and chamber fronting the upper street, and cellars, as before stated, level with the lower street and houses, each containing a room and chamber above them, or two ranges of galleries; each room being, in fact, a dwelling, the same above as below. Where the means of livelihood also occupy the same department, these dwellings are

very much curtailed in size. I was, for instance, in one such not long ago, occupied by a tinner, whose various wares, both old and new, his anvil, his resin-pot, irons, and all, were about him, in such confusion as hardly to leave room to stand in without contact; and where the walls seemed not to have been whitewashed for years; and where a small back room or closet, without either window or ventilation but into the apartment to which I have referred, was the only sleeping-room of himself, and wife, and three children. The true cellar-dwelling, however, is only that which is below the level of the street. Multitudes of Irish families occupy these miserable places, wherein I have heard them occasionally express their anxious desire to change their then condition for that which was theirs in their native land; without, I believe, referring to their *amor patriæ*, but to the contrasted misery of both states. Many such cellars are, however, occupied by widows and aged poor, on account of the cheapness of the rent, and their ability to pay it; and in many instances such occupiers look comfortable enough.

There is, however, another class of cellar-dwellings, which must not be overlooked in the effect which would be produced by a restricted law as to dwellings, viz., the cellars of shopkeepers in public streets, *i. e.*, cellar-dwellings which are in fact shops and places for the sale of goods, having two or three rooms upon the same level, and which pay, in fact, a very high annual rent. In every public street, where frontage is of the first importance, these cellar-dwellings are to be met with, and as much as from 30*l.* to 50*l.* a-year is paid for the use of them. As I have heard no complaints of any diseases peculiar to this class of cellars, probably because they are always open to spacious and well-drained streets; their exemption from restriction, when above a certain rental, might be worth consideration. It seem clear that, whether in cellars or houses aboveground, the rate of mortality in large towns diminishes in proportion to the means of ventilation and drainage. Thus, in Leeds, by drawing a line through the centre of the map from north to south, the deaths in proportion to population on the east side of the map were, in 1839, as 1 to every 24; while on the other hand, in those parts of the town where the streets are spacious and wide, and the drainage sufficient, the deaths were only as 1 to 36; both ratios being exceedingly high, but the difference remarkable. As I propose to return again to this subject under the head of Population, I pass it by for the present, merely now referring to it to notice the present neglect of large means of ventilation in the crowded streets of towns, especially where the labouring classes reside. How few squares we find where the tainted atmosphere of thousands of breathings, and exhalations of a deadly character, may have vent, circulation, and dispersion.

It is not the four and a-half persons to a house which appears to produce so much of mortal mischief, as we find in towns like Leeds; for other towns contain by far more than these upon the average;

as for instance, London, where they are seven and a-quarter, Plymouth nine and three-quarters, Bath seven and a-half, and Newcastle nine, to every house; but, wherever a population is pent up within *small and dirty areas*, we seem to have fatality increased. In illustration of this, let us notice the births and deaths of the registration districts in Leeds in 1839, in proportion to the builded areas, houses, streets, and people.

WARDS.	Builded Areas.		Number of Streets on each Area.				Number of Dwellings.	Popula- tion.	Births & Deaths in each District.		
	Acres.	Roods.	Paved.	Sewered	Bad.	Total.			Births.	Deaths.	
1. {	North	63	3	37	18	43	80	2794	28,775	1269	1219
	N. East	75	3	27	15	66	93				
2. {	East	111	..	35	16	87	122	3461	23,039	858	808
	South	57	1	10	1	13	23				
	Kirkgate	27	2	15	9	3	18				
3. {	Mill-Hill	101	2	35	21	13	48	984	30,306	1077	839
	West	176	0	53	4	72	125				
	N. West	82	1	32	3	45	77				

In this Table, we find in all the districts about the same ratio of persons to a house; even in the wards apart from the districts this is so; and it is important to notice the fact, because numbers only might be supposed to produce the different results which arise in this ward to those of the other two. But it is clearly shown, I think, that fatality exists in ratio of ventilation and drainage, whatever adventitious aids may be given by other causes; for we find, in further investigating the facts here presented to us, that in the three districts enumerated, the deaths have varied not only in proportion to the builded acreage of the districts, but in conformity also with, and in proportion to, the number of streets within the area, and the average number of persons upon the acre and in each street.

Thus, for instance, there are in the district—

Streets, of which are	on an Area of				Houses.	Population.	Births.	Deaths.	
	Good.	Bad.	Acres.	Rds.					
No. 1.	173	64	109	139	2	6607	28,775	1 in 22	1 in 23
No. 2.	163	60	100	195	3	5342	23,039	1 in 28	1 in 30
No. 3.	250	120	130	359	3	6430	30,306	1 in 28	1 in 36

	Population upon the						Births.	Deaths.
	Acres.	Rds.	Streets.	Acre.	Street.			
No. 1. there is an area of	139	2	173	207	166	1 in 22	1 in 23	
No. 2.	195	3	169	118	136	1 in 28	1 in 30	
No. 3.	359	3	250	84	121	1 in 28	1 in 36	

All of which is still more confirmatory of the previous assertion of

fatality being in ratio of ventilation; for, where the streets are spacious and wide, and the drainage and ventilation most perfect, as in districts Nos. 2 and 3, where there are fewer streets in proportion to acres, and in a better condition, there is also a much lower rate of mortality than in No. 1.

We may observe further, also, that in 173 streets, out of which 109 are described as bad, the deaths are one in every 23.

In 163, out of which 100 are described as bad, the deaths are 1 in every 30.

While in 250 streets, out of which 130 are described as bad, the deaths are as 1 in 36.

Building-clubs for the erection of houses are not uncommon, even amongst the working classes. They are managed generally by committees, and monthly savings are contributed by the subscribers. The principal question of the propriety of such societies is, as to the security which the subscribers have that their money is not only safely and well invested, but that the houses are erected with a due regard to safety, as well as comfort and accommodation.

Burial-Grounds.

The crowded state of the burial-grounds within the limits of the population is another source of prejudice to the public health requiring immediate attention. There are burial-grounds in Leeds to all the churches, and to most, if not all, the chapels; and as these are scattered over all the population, their consequences are felt over the whole area. It is unnecessary altogether to refer to the instances recorded of maladies accruing, and deaths even, to persons employed in opening graves which had been newly closed; nor to the effects upon congregations in churches where interments are permitted within their walls; the mere fact of there being burial-grounds within the limits of large populations is sufficient to demand their entire suppression. In Leeds, the principal parochial burial-ground is in Kirkgate, surrounding and immediately opposite the parish church, separated by this street, which is one of the thoroughfares of the town. This burial-ground (speaking of both sides of the street) has been disused for some years, excepting for interments in particular graves, on account of its perfectly engorged state, and the danger of disinterring decomposing bodies. About 11 years ago, another burial-ground, capable of containing 3680 graves, was added to that originally belonging to the parish; which, however, was stated to be also so full in January, 1841, that the bodies, when interred in particular places selected by the friends, were disinterred after the funeral and the retirement of the friends, and re-deposited in some other part of the ground; a practice which came before the magistrates of the town officially, and thus became of public notoriety. These burial-grounds are marked upon the map given with this Report along with another in the north-east ward belonging to the Primitive Methodists,

which is open to public desecration, owing to some dispute between the original owner of the ground and the sect whose place of interment it was. It is true that in Leeds we have a large and excellent cemetery, founded by a company of proprietors a few years ago, and situated out of the town; but it is only used by the Dissenters, no part of it having been consecrated for the use of the Church.

It is impossible to reprobate too strongly the practice of interring the dead among the living, and to expose the health of large masses of the people to the putrescent exhalations of burial-grounds, independent of the disgust which the disengorgement of the grave occasions, and the knowledge that a very few years only will intervene before the remains of friends and relatives will be disturbed and thrown aside to make room for others. In a few years more, when it will be thought that putrefaction has gone through all its stages in the parochial burial-ground of Leeds, it will be once more broken up for fresh interments; and, whether it has been completed or not, the habitations of the living, which everywhere surround this Golgotha, will be exposed to its exhalations.

Population.

By the Census of 1841, the population of Leeds is declared to be 87,613 persons, of which 41,884 are males, and 45,729 are females. The increase during the last ten years appears not to have been so proportionately great as in some other towns, according to the report of the Registrar-general, and according to the Census of the previous decennary periods—

For in 1801	the population was	30,669
„ 1811	„ „	35,951
„ 1821	„ „	48,603
„ 1831	„ „	71,602
„ 1841	„ „	87,613

The total number of houses by the last Census is also given as 18,906; and as in 1838-9 it was ascertained that the number of dwellings under 10% annual rent was 13,603, so it is more than probable, out of the additional number built since then, that cottage-houses have been erected in an equal ratio with former periods. This fact is of importance, because in endeavouring to arrive at the sanitary state of the population of large towns, and especially of those which are manufacturing, it is most desirable to ascertain as nearly as possible how many of the gross population are of the working classes, upon whose health labour, as well as congregation or causes peculiar to localities, may have an especial effect.

The more able part (in a pecuniary point of view) of the operative classes reside in houses which exceed 10% annual rent. Taking, then, this rental as the line of demarcation, and multiplying the number of houses under 10% annual rent by four and a half, which is the result of a division of the gross population by the entire

number of houses, there is given about the number of the labouring classes from among the whole population of Leeds. To the 13,603 houses of 1838-9, let us add the third of the increased difference in the number of houses of those years and 1841, and multiplying them by four and a half, we shall have about the number of the working classes of Leeds at the present time. Thus 470 being that difference, the number of houses under 10% rent at this moment will be about 14,073, and this number, multiplied by four and a half, will give the working classes, in June, 1841, at 63,328, out of the whole population of 87,613.

The next point which it is important to represent is the Wards in which these classes mainly reside, viz. : in the North and North-east Wards, which form one Registration district; in the East and South Wards, which, with the Kirkgate Ward, form another Registration district; and in the West and North-west Wards, which, with the Mill-hill Ward, form the remaining Registration district.

In the above districts, too, are found their proportionate numbers to the middle and upper classes, and also the rate of mortality of the three districts; and I am anxious to lay considerable stress upon these divisions of the people and their results, because I believe it is only by some such arrangement as this that we shall be able to arrive at the true reason of the aggregate mortality of Leeds; which, although condemned as a town in its entire locality at the first glance, may really have only peculiar points of local influence from whence the gross results are derived.

By again referring to the Table in the first page and to the Table in page 14 of this Report, it will be found that—

	The Population of the Working Classes is	Out of a gross Population of	Deaths.
In the North and North-east Wards . .	24,849	28,775	1 in 23
In the East, South, and Kirkgate Wards .	18,747	23,079	1 in 30
In the Mill-hill, West, and North-west Wards }	17,627	30,306	1 in 36

And this would seem to imply, that not only have ventilation and drainage an effect upon mortality, but labour also, notwithstanding the amount of births, whereby the deaths are increased by those of the infantile period.

The population of 87,613 divides itself, by the Census of 1841, into the classification on following page. Of this total number, 644 are Scotch, 4310 are Irish, 275 are foreigners, and 5086 are persons not born in the county.

Of these emigrants, the Scotch appear to be scattered through every branch of occupation, and confined to no one in particular.

Persons having sedentary occupations	1,586
Persons having perambulatory ditto.	967
Professions.	292
Merchants	427
Persons working in mines	130
General out-door labour and handicraft.	3,988
In-door labour and handicraft	13,445
Dyers	665
In trade	2,799
Not in business	1,905
Persons under 15 years old without occupations	31,056
Other persons without occupations	21,990
Persons employed in manufacture	8,363
Total	<u>87,613</u>

The Irish are almost exclusively limited to plaid-weaving, flax-spinning, and bricklayers' labourers. The foreigners are wool-merchants, or agents having commissions in manufacture, with here and there Italian dealers in picture-frames, looking-glasses, small wares, plaster-of-Paris figures; and of those not born in the county, many mix up both in the in and out-door handicraft of the place, but the major part seem to be in domestic service. There is a great difficulty in deciding by any present data how much of effect labour has upon mortality, how much local influence, how much destitution and penury, and how much other causes which do not attract particular attention, because not sufficiently specific, for all these elements are to be found in combination in Leeds; and even though it is correctly ascertained how many of each occupation have arrived at 70 years of age and upwards. It is certain, however, that some occupations seem much more healthy than others, even where both inhabit the same locality.

The following Table gives the total number of trades and occupations in Leeds, in any of which there were persons, with the number of those persons also, in June, 1841, who had arrived at 70 years of age and upwards:—

TRADES.	Number in this Trade or Occupation.	70		75		80		85		90		95		100	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Accountant	32	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Agent	78	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Army	96	1	.	1	.	1	.	1	.	.	.	.	.	.	.
Baker	63	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Basket-maker	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Beer-house keeper	78	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Biscuit-maker	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Blacksmith	187	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Block-maker	18	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Blanket-maker	7	.	.	1	1	.	.	.	.	.	.	.	.	.	.
Bookseller	41	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Broom-maker	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Bricklayer	237	3	.	.	.	1	.	.	.	.	.	.	.	.	.
Brush-maker	117	.	.	.	.	1	1	.	.	.	.	.	.	.	.

TRADES.	Number in this Trade or Occupation.	70		75		80		85		90		95		100	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Milkseller	54	3	1	.	.	.	.	.	.	.	.	.	.	.	.
Miner (lead)	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
No Trade	*21990	14	119	4	45	6	25	.	5	2	1	.	.	.	.
Nurse	46	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Oil-miller	41	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern-dyer	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Pawnbroker	40	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Pauper	†27	.	5	.	2	.	2	.	1	.	.	.	.	.	.
Port-mistress	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Plumber	129	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Publican	231	5	4	1	1	.	.	.	.	.	.	.	.	.	.
Press-letter	6	.	.	2	.	.	.	.	.	.	.	.	.	.	.
Provision-dealer	61	1	.	.	.	1	.	.	.	.	.	.	.	.	.
Pit-maker	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Rag-collector	12	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Sack-maker	9	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Saddler	64	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Roper	39	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Sawyer	107	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Shopman	47	4	8	1	1	.	.	1	1	.	.	.	.	.	.
Shroud-maker	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Shears-grinder	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.
School	191	1	.	.	1	.	.	.	.	.	.	.	.	.	.
Store-agent	8	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Surgeon	97	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Stuff-dyer	18	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Stuff-weaver	847	8	.	4	.	.	.	.	.	.	.	.	.	.	.
Stuff-singer	64	1	.	.	.	3	.	.	.	.	.	.	.	.	.
Stuff-presser	93	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Skinner	22	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Shoemaker	1277	14	1	1	1	2	1	.	.	.	.	.	.	.	.
Stockinger	11	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Stay-maker	76	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Teacher	4	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Tailor	808	10	1	3	.	1	1	.	.	.	.	.	.	.	.
Timber-merchant	12	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Tea-dealer	41	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Upholder	61	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Waterman	30	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Wool-sorter	203	.	.	.	3	.	.	.	.	.	.	.	.	.	.
Woollen-mill	322	3	.	.	.	.	.	.	.	.	.	.	.	.	.
Whitesmith	259	1	.	.	.	1	.	.	.	.	.	.	.	.	.
Wine-merchant	23	.	.	1	.	1	.	.	.	.	.	.	.	.	.
Weighing-machine	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Wool-comber	142	4	1	1	.	2	.	.	.	.	.	.	.	.	.
Warehouseman	491	3	1	.	.	.	.	.	.	.	.	.	.	.	.
Washerwoman	107	.	1	.	2	.	.	.	.	.	.	.	.	.	.
		287	384	78	133	62	97	4	17	3	9	2	.	.	.

Total Persons alive above 70 years of age . . . 1076

* These include persons of all ages above 15 years whose occupations were not named.
 † The only persons who call themselves paupers.

By the above Table it appears that in Leeds—

1 Male in	1 Female in	Reaches the Age of
145·9	119·	70
536·9	343·	75
677·0	471·4	80
10471·	2689·9	85
13961·3	5081·	90
20942·	..	95

and in whatever trades or occupations there are else, in the town there were none in which any had reached that period of life; and that at 100 there are none living out of any class. But as it would be unfair to draw inferences from cases of which there are only very few examples, let us take 1000 persons in each of the following classes, and regard the longevity which they exhibit in their several aggregates, as for instance—

1. Persons in sedentary occupations.
2. Persons in out-door labour and handicraft.
3. Persons in in-door labour and handicraft.
4. Persons in independent circumstances.
5. Persons in trade.
6. Persons employed in woollen manufacture.
7. Persons employed in flax manufacture.

No. 4. consists of 1000	{ persons in independent circumstances }	Of these there are alive at 70 years of age . . .	1 in 30
2. of 1000	{ Persons engaged in out-door labour and handicraft . . . }	Gardeners	1 in 9
		Labourers	1 in 44
		Brick-makers	1 in 58
		Bricklayers	1 in 59
		Excavators	0 in 11
		Charwomen	1 in 44
3. of 1000	{ Persons engaged in in-door labour and handicraft . . . }	Joiners	1 in 75
		Cabinet-makers	1 in 86
		Blacksmiths	1 in 187
		Cap-makers	0 in 62
		Carvers and Gilders	0 in 104
		Saddlers	1 in 31
		Booksellers	1 in 41
		Upholders	1 in 61
		Bakers	1 in 63
5. of 1000	{ Persons engaged in trade }	Linendrapers	1 in 88
		Grocers	1 in 168
		Butcher	1 in 185
		Braziers	0 in 7
		Tinmen	0 in 57
		Chemists	0 in 63
		Tobacconists	0 in 100
6. of 1000	{ Workers in woollen-mills }	Cloth-dressers	1 in 250
		Woollen-weavers	0 in 440
7. of 1000	{ Workers in flax-mills }	Flax-dressers	0 in 302
		Mill-workers	0 in 698
1. of 1000	{ Persons in sedentary occupations }	Clerks	0 in 443
		Dressmakers	0 in 557

It will be seen that the arrangement of these classes as now presented is altered from that in which they were before placed. They now stand not only in their own order of healthiness, but their composite parts are also arranged in a similar manner: and here, as elsewhere, it is observed that persons in independent circumstances are the longest lived; next come out-door, then in-door labourers and handicraft, then trades, then workers in woollen-mills and flax-mills, and lastly persons of sedentary occupations, which seem to be the most fatal occupations of all. By another form of arrangement, taking trades merely, and without referring to particular classifications, we find that the order of healthiness begins with gardeners, and then goes on to saddlers, booksellers, labourers, charwomen, brickmakers, bricklayers, upholders, bakers, joiners, cabinet-makers, linen-drapers, carvers, butchers, blacksmiths, and ends with cloth-dressers; and that the order of unhealthiness begins with flax-mill workers, and then goes on with dress-makers, clerks, woollen-weavers, flax-dressers, carvers and gilders, tobacconists, chemists, cap-makers, turners, excavators, and ends with braziers.

These tables, whilst they show which are the most healthy occupations, show us also the different effects of labour upon longevity, for instance,—

Of persons having sedentary occupations, such as accountants, clerks, milliners, dress-makers, and the like, only 2 out of 1586 are found alive at 70 years of age; and yet these are persons who, for the most part, are not subjected to the local influences which affect the dwellings of the labouring classes.

Of the persons employed in flax-mills not one out of 2079 is found alive at 70; whilst out of 2028 labourers, including 169 agricultural labourers, there are 39 males; and out of 110 gardeners there are 10 males who have reached this period of life, or who have exceeded it.

There requires, however, some explanation on the subject of workers in flax-mills, which diminishes to some extent the apparent value of this contrast. It must be borne in mind that workers in flax-mills, and more particularly in the dusty parts of them, *i. e.*, hackling and dressing, now that machines perform the work which formerly was done by men, migrate very quickly, rarely staying for a continuous period; and they do this, not so much because the occupation disagrees with them, though in some instances no doubt it does, but because they seek and obtain other situations by which they are ultimately to earn their livelihood. Many, if not most, of the female spinners leave the mills at the adult period of life. Nevertheless, out of the 302 flax-dressers, who are a body wholly devoted to the same occupation, there are none to be found living at 70 years of age. But looking at the two classes, *viz.*, “independent persons” and persons who are denominated as having “no trade,” how forcibly is borne out Dr. Southwood Smith’s observation, that “longevity and happiness go hand-in-hand;” for,

out of 1676 of the former, it is seen that not less than 103 males and 340 females, and out of the latter 26 males and 195 females, have not only reached 70, but have some of them gained the quinquennial periods far beyond it. On the term "independent persons," however, it also requires to be said, that it seems to have been assumed by all who had no visible occupation, whether really in what are understood by independent circumstances or not, and the number of females is swollen by the residents in the almshouses. Nevertheless Dr. S. Smith's argument is not at all gainsaid, but strengthened: for the comfortable provision of these charitable institutions are to their inmates the independent circumstances of wealth, and health, and peace; and hence the longevity which is peculiar to both rich and poor, under the mental quietude of being above the world. It appears, then, to be distinctly shown that labour is one of the elements fatal to human life; not labour abstractedly, otherwise the "labourers," and the "gardeners," and others would have shown the same fatality as dress-makers or flax-dressers, nor is the labour which is known at the outset to shorten its term, such as the steel-grinding of Sheffield, here referred to; but labour of ordinary kind, and of every-day occurrence, which, added to local influences, saps the vital powers, and prematurely destroys them.

The accompanying Tables give the deaths which occurred in the various Registration districts of Leeds in 1840; and it will be considered extraordinary that in a locality so limited as within 10 miles round Leeds, the return of deaths should be found to vary so much as from 1 in 29 to 1 in 56. There is a difference in the ratio of deaths in 1840, to 1838, for which I am unable to account unless by the sanitary improvements which may have taken place in the North and North-east Wards, by reason of the statistical inquiry which was made by the Town Council. The total number of deaths in those Wards were given in 1838 as upwards of 1200, which in 1840 scarcely reach 1000, and the Kirkgate district is now shown to be the most fatal, as compared with any of the registration districts in the borough of Leeds. Rather more than one-half of all the deaths recorded have taken place under 5 years old; and it is remarkable that deaths under 5 years increase the mortality of England to a great degree, and that they occur in Lancashire, Yorkshire, and Middlesex mainly. And it is still more remarkable that those infantile deaths are concurrent with the increase of manufactories, and the abstraction of females from their homes and domestic occupations for mill-labour, or for other occupations which take them from home.

The great increase of deaths under 5 years seems to have taken place since 1801, and to have been greatest last year. The greatest number of mills at work was in 1836 and 1837, and their progressive growth has taken place between 1798 and 1840. By a return made to the House of Commons in 1839, by the Inspec-

tors, it was found, that out of 423,735 persons employed in the factories of England, Ireland, Scotland, and Wales, 245,034 were females, and of the whole number also, 23,486 were under 13 years, and 162,396 were under 18 years of age; and when it is considered that these female operatives are taken from home and commence labour at the early age of 9 years, that to the youngest of them this labour requires that absence certainly as long as they remain at the mill, that thus in early life they have no adequate means of acquiring the necessary domestic information to fit them for mothers, and that, later on, their homes and children are both forsaken for the labour in which they have been brought up, there is too much reason to fear that by the employment of so large a number of females in mills, not only is a delicate constitution induced, by which sickly children are born, but that absolute neglect of their offspring takes place after birth. A great many instances of this neglect are within my own knowledge, but I only record two, which are as follows:—In Bradford, a power-loom weaver, a widow of 27 years of age, having two children, both of them under 4 years of age, at this moment places one out to nurse with her father at 2*s.* 6*d.* a-week, and the other with her sister at 1*s.* 6*d.* a-week, whilst she herself pays 3*s.* 6*d.* a-week to a female to wash and scour, and bake, and manage, in fact, all her domestic concerns. Again at Wilsden, I saw the other day a young female, apparently not more than 16 years of age, who, two years ago, bore an illegitimate child, which was put out to nurse forthwith, that she might attend to her power-loom, at which she now remains from 6 in the morning till 8 at night. The amount of this neglect, the medicaments used by nurses, who have not the sympathies of mothers to lull the cries of these infants, the means used to induce the premature births of illegitimate children, the effect of gravitation on the womb by long standing at labour, children of destitute parents, and the birth of children in impure and unwholesome atmospheres, I have no doubt swells this dreadful catalogue of human mortality and helps materially to make the amount of it what it is.

These tables show us a very large amount of diseases of the respiratory organs, as well as of epidemics; the latter prevail also in the ill-drained divisions of the town, while the former extend nearly equally over the whole districts. Whatever cases of cholera occur, they are to be found in the North district, almost without drainage. The number of accidents are large in proportion to the population; and what is extraordinary to observe is, that in the three districts which are wholly free from manufacture, there are found no cases whatever of asthma, nor cases of premature births, as there are in all the other districts in which manufactures obtain.

But how are we to account for the variation which exists in the ratios of longevity in these districts, but by the want of sanitary regulations to control elementary influences, and to regulate those which belong to the arts of life?

WHITKIRK.—Deaths in 1840. Population of the Registration District, which and SWILLINGTON

DISEASES.	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Infl. Lungs	1																																			
Convulsions	2	4	1	1																																
Teething	1																																			
Diarrhœa	1																																			
Consumption																																				
Accident							1																1													
Infl. of Esophagus									1																											
Croup																																				
Mesenteric diseases											1																									
Whooping Cough													1																							
Scarlet Fever																																				
Dropsy													1																							
Influenza																																				
Infl. of Bowels																																				
Visitation of God																																				
Common Fever																																				
Decay																																				
Tumour																																				
Old Age																																				
Palsy																																				
Total	4	6	1	1			1		2	1	1	1											1										1	1		

CHAPELTOWN.—Deaths in 1840. Population of the Registration District, Agricultural and Mercantile (i. e.

DISEASES.	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Consumption	1	1	1	1																																
Convulsions	6	7																																		
Infl. Lungs	2						2																													
Water in the Chest																																				
Infl. of the Brain	1												1	1																						
Teething			2																																	
Dropsy			1																																	
Water in the Head			1																																	
Scarlet Fever					1	1	1	1							1																					
Gangrene																																				
Measles													1																							
Croup																																				
Accident															1																					
Inf. Fever																																				
Ulcer																																				
Peritonitis																																				
Suicide																																				
Complicated Disease																																				
Decay																																				
Erysipelas																																				
Apoplexy																																				
Dis. of Stomach																																				
Old Age																																				
Total	9	10	5		3	3	2	1	1	1	1		3	2	1	1							1										1			

ROTHWELL.—Deaths in 1840. Population of the Registration District
Colliery a

DISEASES.	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		1	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	
Small-pox	3	2	1	1	1																													
Water on the Brain	2	2	2							1																								
Congestion of Lungs																																		
Marasmus	1																																	
Convulsions	5	4																																
Scarlet Fever	1	2	1	1	4	2	1	4		1	1	2	1	2	1					1	1			1										
Erysipelas	1	1								1																								
Infl. Lungs	6		1	3	1					1	1	1																						
Infl. Bowels	1																																	
Measles				1	1	1	1																											
Teething			1																															
Accident			1	1																1			1		1		1				1			
Worms							1						1																					
Phrenitis													1																					
Dis. of Stomach																							1											
Typhus																																		1
Consumption																																		
Spinal																																		
Complicated disease																																		
Stone																																		
Diabetes																																		
Liver Disease																																		
Laryngitis																																		
Dropsy																																		
Natural																																		
Old Age																																		
Total	21	11	7	7	6	4	3	4		2	4	3	2	2	2					1	1	1		2	1	1		1				1	1	

If we look at the great mass of children that die of convulsions, of inflammation of the brain (so stated), of inflammation of the bowels, of dropsy (so stated), of inflammation of the lungs, of hydrocephalus, of hooping-cough, and of measles, we have abundant reason to doubt the domestic care which is bestowed upon those who labour under such ailments; whilst those who die from phthisis, and other affections of the heart, show destitution, and labour, as well as climate, as causes, leaving still a large residue to those obnoxious influences, viz. miasm, and want of ventilation and drainage. Had I time or opportunity, I could show the diseases of which the adult population die, and the ages also at which those deaths take place; but such statistics belong more properly to another subject. A few remarks on some branches of operative industry will come reasonably within the limits of this inquiry:—on the period of life, for instance, at which labour commences; on the nature of the various occupations to which it is exposed; on the state of workshops generally, as to ventilation; and on the condition of the people to maintain the physical exhaustion which labour produces.

Previous to the erection of the large manufactories, labour was considered passive until about 15 years of age; but by the Factories'

nises the period of 21 years, as the adult and responsible epoch of life, the Factory Law stops short of this, and reduces the limit down to 18 years. To this early introduction of children to labour very few parents make any objection—it is to the contrary, indeed; there is an extreme desire manifested among parents that children may be admitted to employment at an earlier period; and the history of factory labour gives numerous instances of persons commencing at five years old, apparently without much prejudice to their physical condition. But we see only one side of the picture in looking at these examples; we see the living, but we know nothing of the dead. There is no record left of them to say how they died. In the collieries, as well as in the woollen and cotton factories, children are employed by their own parents. The greatest number, however, of children employed, are to be found in the various manufactories of woollen, worsted, cotton, silk, and flax, in the United Kingdom. Then again, the great arts of life, such as blacksmiths, bricklayers, cabinet-makers, dyers, joiners, mechanics, masons, plumbers, sawyers, shoemakers, tailors, whitesmiths, &c., embrace a large amount of all populations. In Leeds these alone amount to an aggregate of 5703. In none of these callings, however, does labour commence at a very early period, nor is it subject to much variation of temperature. The effects upon the moral health shorten the period of physical life more than labour; criminal statistics prove this.

It would hardly have been expected that the effect of labour upon health, whether from physical deterioration as the effect of the occupation, or immoral habits as its concomitant, that tailors would have taken the precedence, and yet it seems so, for the most healthy are tailors, then bricklayers, then shoemakers, joiners, cabinet-makers, dyers, sawyers, plumbers, whitesmiths, blacksmiths, mechanics, and, lastly, masons; but beyond these come workers in cloth-mills, and then worsted and flax mills. In all these divisions of labour the ordinary working hours never exceed ten, during the performance of which two hours additional are taken for meals, with the exception of factories in which the hours of labour are twelve, to which are added one hour and a half for meals in the course of the day; and it is singular, that though in apparently the worst form of human labour the longest hours obtain, the weakest powers are applied, and the slightest rest permitted. The hours of factory workers exceed those of all other labourers; more than half the work is performed by female hands, and an eighteenth of it by infants; and in a vast many instances six hours and more are continuously worked without refreshment. These hours too have been occasionally exceeded beyond endurance. There are cases on record of forty hours' consecutive work in factories, without any other intervals than that for meals; and previously to the passing of the Factory Act, the average term of labour was fourteen hours per day, and often through the entire night.

The rooms or workshops in which in-door labourers are employed vary very much both in size, temperature, and the means of ventilation; many of the factories of old were built and furnished without regard to these requirements; but though this condition is very materially improved, the nature of some kinds of employment, requiring high temperature, and the consumption of oxygen by human breathings, and by gas-lights, renders it imperative that the legislature should interfere not only to protect the human machine from competition with the steam-engine, but from the more insidious but not the less deadly effects which impure atmospheres, varying temperatures, and floating particles prejudicial to the delicate texture of the lungs, produce. Take, for instance, the case of a child of nine years old, requiring a large amount of sleep for the support of its physical strength, rising during the winter months at five o'clock in the morning, and going without food to its work in every variation of weather, from an atmosphere highly carbonized by too many breathings, into another, maybe, below zero; and then again into a third, with the thermometer at 72° , then working through a long day of twelve hours, and returning at half-past seven o'clock at night, to the same unventilated bed-room from whence it set out, and we have the daily existence of three-fourths and more of the 23,486 children who are exposed to factory labour. It is an error indeed to suppose that the labour of these children is materially shortened, if at all, because the law limits them to the performance of nine hours' labour per day. In all mills the machinery performs the actual work; the depressing agents upon the physical strength of the operatives are not those which exhaust from the wear and tear of muscular fibre directly, but from loss of nervous energy by perpetual excitement, and from long continuance in ill-ventilated and overcrowded rooms. There is no diminution of the working hours by this supposed diminution of the hours of labour. A child that rises at half-past five o'clock in the morning, and is at work from six till eight or half-past, is allowed one quarter of an hour for breakfast; then works from a quarter past eight till ten, then goes to school till twelve, then is at dinner till one, and playing till half past two, at work again till half-past four, then at tea till a quarter to five, and then at work again till half-past seven, when it returns home and may be supposed to be in bed at eight, has daily fourteen hours and a half of continuous watchfulness, always in the same direction, and without variation. Is it too much to imagine that this kind of labour is prejudicial to its physical condition; but that, in the laborious watchfulness of dress-making, the same unhealthy indications are produced? neither the one occupation nor the other being laborious in itself, but the injury being produced by the confinement of the attention to one object, and the unaltered position which is demanded. Observe the one leaning over the organs of respiration, denying to the frame-work of the chest its due motion, keeping the

lungs, in fact, for the most part more in collapse than in play, and plethorizing all the functions of digestion; and the other affecting all the organs which can suffer by gravitation, by standing through days and years, diverging the bones of the legs, flattening the arch of the foot, enlarging the hemorrhoidal vessels, and subjecting the skin to every variety of temperature. The domestic condition of the people helps, however, no little to produce untoward consequences—dwellings without ventilation—streets without drainage—and these too often predispose the system to receive a variety of evils. This occasional destitution may be imagined from the following statement, which is taken from the documents of a society existing in Leeds, for the purpose of affording relief to persons *labouring under sickness*, in addition to what they receive at the parish board.

In the six months of March, May, August, September, October, and July, 2,664 persons, having a united income of 79*l.* 14*s.* 7*d.* per week, or about 7*d.* per head, and sickness in each house, were relieved by this society.

The Workhouse Board have lately also registered with great care a series of inquiries on the subject of pauperism, which is likely to be of the utmost utility. These returns evince increasing destitution to a great degree, which cannot but be a subject of great anxiety, for it appears by them, that in September, October, and November,

			£.	s.	d.
1839,	1979	cases were relieved with	2986	9	10½
1840,	2268	"	{ 3260	6	5 in money,
			{ 590	5	6 loaves;
1841,	3038	"	{ 3584	10	0 in money,
			{ 964	13	6 loaves;

so that the cases of 1840 advanced in number 289, 1839—and 770 in 1841 over those of 1840. But the most important feature of these returns is, that in 1839 there were in the same months 495 fresh cases, of which 60 had never before been applicants—

In 1840 there were 510 fresh cases } in which {130} had never before applied.
 In 1841 " 638 " } {275}

Amongst the Irish children who are employed in factories and elsewhere, and very frequently in high temperatures, it is easy to trace one of the physical effects which labour produces: why or how I know not, but the under eyelid is found of a rosy blush, which can rarely or ever be mistaken, and the invariable answer to the question "When have you had flesh meat?" is, "We never get it," or "Sometimes once a-week."—"What then do you live upon?" "Coffee and bread—or tea." But there is another effect yet produced by factory labour above all others which demands serious consideration, not only in a sanitary point, but in every relation in which it can be viewed, whether as perverting the order of nature or as being the basis of immoral habits in a double sense,

and thereby pre-inducing the causes of pauperism and disease, viz., the amount of female labour which is employed. In referring to the total amount of persons occupied in factories, it is seen that more than one-half of all the persons so employed are females. There are three or four results in consequence, which are inevitable.

1st. The congregation at all ages and of every grade of character, without the means of classification.

2nd. The early loss of parental control by the pecuniary means which are acquired.

3rd. The employment of female labour whilst males are unemployed.

4th. The utter inability of the wives of the operatives to obtain their requisite domestic acquirements by which the homes of future husbands may be made more attractive than society abroad.

The dread which many parents entertain of public schools, by reason of the consequences of congregation, may be more justly felt concerning the congregation of the mills, where children of every age not only mix with women of every age, but occasionally of every shade of depravity, and with the opposite sex also. In mills where hands are scarce, the moral habits of the applicant are rarely inquired into, nor is the contamination which she may bring with her a subject of consideration. It is not meant by this to be said that nine-tenths of the masters would permit a known bad character to be employed; but there are very few masters, if any, who know all their hands by name, or even by sight, much more how they live, or what they are. By this promiscuous mixing of the sexes, assignations are formed by day, to be kept in the evening when labour is over, and hence it is that hands from a mile or two in the country are preferred in town mills to town hands, not only because their habits are less corrupt, but because the means of forming and keeping assignations are fewer. There are districts in Yorkshire in which there is scarcely ever a marriage without previous pregnancy; but though this is not attributable to labour in mills, for it is common to those districts, and the fact is merely cited to show their standard of morality, yet the congregation of mills is made up of many individuals, of which some such, no doubt, compose a part. And whilst it is so, and without the strictest moral regulations, it is not necessary to do more than to ask the commonest understanding, such is the state of society, what are likely to be the results arising from such a promiscuous admixture of the sexes, in many of whom the principles of religion and morality have never been inculcated, and even if so, on whom, during their hours of work, they cannot be enforced?

This early deprivation of parental control is of great importance, for it is not only in the loss of that wholesome moral restraint which a parent's eye would see necessary, and the heart be solicitous to use, in order to ward off the effects of evil communications, but the still greater loss of all control whatever in a vast number of instances,

both in a pecuniary and moral point of view. Children begin to be workers, for instance, at 9 years of age, and for 4 years are earning 3s. or 4s. a-week. These wages are either paid by them to, or are drawn by, the parents, who reward the children with a penny a-week for their own use. When from 13 to 15 or 16 years of age the wages have been advanced considerably, a still larger weekly allowance is afforded. But when these girls become power-loom weavers, and can earn high wages, then the force of example comes into operation. One companion has a silk dress, another a new bonnet, a third other articles to be coveted and copied. And now a contract is attempted to be entered into with the parents; the girl will retain her own wages, find her own dress, and pay her parents so much a-week for her maintenance. This perhaps is refused, on the ground that with the declining strength of the parents, all the wages of the family ought to compose a common fund for all its wants. On this refusal there is altercation, which too often finally ends in the forced compliance of the parents with the wishes of the child, or in a separation, the girl going into lodgings where she can gratify her wishes; and being ultimately led off to other pursuits, in which the desire for finery in the first instance was the leading principle.

Thus large present pecuniary means in the hands of young people have very frequently led to this miserable result, a result the more terrible because in female life, and the more important because it has so powerful a relation, directly or indirectly, on everything which affects society. It reverses also the order of nature. Female labour is employed to the exclusion of males, because it can be obtained more cheaply, and because it is more controllable, and because their manipulations are lighter and more suitable. In 1836—7 the wages of wives in the worsted districts were often the sole subsistence of the families; the husbands idling their time in wilful dissipation, whilst among the woollen people industrious husbands in many instances were known not only to tend the house and manage its domestic requirements, but even to take infant children to their mothers at work for the breast.

Lastly, and perhaps not the least, comes in the inability to make home desirable, by the entire want of domestic education, which is consequent upon the early and continuous employment of females in factories. The charm which makes home so desirable to every heart, making a man's own fire-side more agreeable than the public-house, and the step by step encroachments of society abroad to be so much dreaded, is unknown; the principles of good management have neither been learned nor cultivated, the bases of all human happiness is unappreciated. To the female has been allotted, in the order of Providence, the domestic duties of human life. It is wholly unnecessary to say in what these consist, and it is equally unnecessary to point out how utterly incapable the female

factory workers of England are of obtaining the requisite knowledge of them. And yet what is there to prevent mills from being blessings to the community, instead of prejudices? Why should not the moral discipline of mills be equal to that of any large establishment in which order and moral conduct are fundamental principles? It requires only to shorten the hours of adult labour, to limit the labour of children to half a-day, and to combine with it a good and sound education—to fill, in fact, the endowed schools which everywhere abound, and which are now empty because their present hours of work are incompatible with the school hours, and the difficulty of recalling the children to work when once they have been permitted to leave the manufactory with scholars, and to make them subservient to their real purposes, viz., the education of the children of the poor. These, with an efficient system of moral government, might make the labour of females unobjectionable. In the young there would be a progressive growth with labour and education in useful combinations, to be improved through its further stages by introductions to the various institutions which abound everywhere for promoting the intellectual condition of the people, to which these early processes would be preparatory; while in more advanced age opportunities would be afforded for obtaining domestic knowledge suited to the capacities and situations of each. It is all-important to every one wishing well to his country to know that those who are to be the mothers of the future physical strength of the country are nearly without the means of estimating their just position, and that the rising race may chance to be without education at all, or with such a one as will only make its strength more dangerous; and that whilst most are careful for the manufacturing interest of England, the moral welfare of the people which it employs is nearly, if not entirely, neglected. There is one other view in which labour generally has not been viewed, and which the Factory Act itself even has overlooked, and that is, that there is no protection to the human constitution from the effects of labour upon it. It is true that before a child can be permitted to work at all it must have attained the age of 9 years, and then its labour is limited to 9 hours a-day; and before a young person can be permitted to work more than 9 hours a-day it must have a medical certificate that it is of the “ordinary strength and appearance of 13 years,” and that then its labour is limited to 12 hours a-day. But there is no authority to watch the effect of labour upon the young constitutions thus submitted freshly to it, nor to advise that the kind of labour is acting prejudicially upon them. The common dictates of humanity would seem to point out the immediate discharge of sickly operatives by the employers, or their abstraction from it by their parents. But for years they may never be seen by the former; and in too many instances the latter either cannot afford to lose their wages or will not listen to the voice of nature. Again, young persons declared

by medical testimony to be physically unfit for 12 hours' labour per day, can have that testimony superseded by a baptismal register which declares them to be 13 years old, though the growth of the body is stunted and the developments manifestly imperfect. The children of the Irish are often objected to this effect also, that with the smallest means of supporting life, by reason of their destitution, theirs is the hardest labour, and in the highest temperature. Such children are everywhere to be found working all day, and sometimes in temperatures of 80° or even 90°, on a dietary of bread and tea or coffee, without butter and sugar, and without flesh-meat for days together, and lying down to rest upon straw or pallets of the humblest kind, with half the covering necessary to the season.

All these causes affect longevity; of the labouring classes more particularly, but of the community in general: and it is lamentable to see the rate of mortality in towns so high, when compared with the rate of mortality of those who live in pure atmospheres, and to know that very much of the ravages which particular diseases make on the human constitution is occasioned by the want of those sanitary regulations which ought to have grown with the growth of all other improvements, and, in fact, to have preceded them. Where labour is also prejudicial, there needs not miasm and want of ventilation to accelerate its consequences; and there is no doubt but that atmospheric influences have a preponderating effect on many occupations; they germinate and ripen the seed which labour has sown. The proof of this, if further proof were wanting, would not be difficult. As one striking illustration of longevity in different atmospheres, the population being employed in the same kind of occupation in every respect, both as to labour, ventilation while at work, and casualties of every kind, a comparison is instituted between the townships of Great Bradford and Horton in Yorkshire, both in the parish of Bradford, and contiguous, differing only in elevation and atmospheric influence. The town of Bradford lies in a hollow formed by the high land of the surrounding country, a part of which forms the township of Horton, and both populations, in about an equal ratio, are employed in worsted-mills, built about the same period of time, in the same kind of architecture, with the same appliances for ventilation and purification in every respect, differing only in comparison as to numbers both of population and mills.

	Population.	Births.	Deaths.	Mills.
Bradford . . .	34,560	1 in 25·8	1 in 37·3	39
Horton . . .	17,618	1 in 28·	1 in 47·	22

The difference between the two localities will at once be seen, and can only be accounted for by the difference in atmospheric influences: the former population being resident in ill-conditioned dwellings, without sufficient ventilation; the latter residing in localities which, though undrained in many instances, are yet open to pure air and breezes, which never reach the town without the most perfect contamination. It is thus that the impure atmospheres of

crowded houses and workshops is most prejudicial to human life. The age at which the bulk of the labouring population die is far below that of persons not subject to the same causes; for instance, while the average age at which the gentry and professions die in the town of Leeds is 44, the average age of the industrial classes in every occupation, as shown by a correct return of the ages at which 400 deaths took place in various Benefit Societies, is not higher than 37. If we look at the diseases of which both classes die, we shall be able to trace the influence of these causes more closely to its results: for instance, in 1840, there died—

	Epidemic Diseases.				Diseases of Brain.				Diseases of the Respiratory Organs.				Diseases of Digestive Organs.			
	Fever.	Small-pox.	Measles.	Influenza.	Hydrocephalus.	Apoplexy.	Paralysis.	Convulsions.	Inflammation.	Inflammation of Lungs.	Asthma.	Consumption.	Bronchitis.	Stomach.	Liver.	Bowels.
1. Persons in Independent circumstances	1	.	.	.	.	.	2	.	1	.	.	1	.	.	2	.
2. Persons engaged in out-door labour and handicraft	12	.	.	.	.	.	.	.	1	4	4	19	4	.	.	2
3. Persons engaged in in-door labour and handicraft	1	.	.	.	.	2	1	.	2	1	.	6	1	.	.	.
4. Persons engaged in trade	3	.	.	.	.	.	.	.	2	.	1	9	.	.	1	.
5. Workers in woollen-mills . . . . .	.	.	.	.	.	4	3	.	1	2	5	29	.	.	.	2
6. Workers in flax-mills	2	.	.	.	.	.	.	.	.	.	.	5	.	.	.	.
7. Persons in sedentary occupation	1	.	.	.	1	.	.	.	.	.	1	5	.	.	.	1
Total	20	.	.	.	1	6	6	.	7	7	11	74	5	.	3	5

We see here how largely diseases of the respiratory organs prevailed, diseases of debility, in fact, which are perhaps as much the result of impure atmospheres, and labour or destitution, as climate. Further, of 20 tailors who died in Leeds last year, 15 died from diseases of the chest, of which 13 were consumption; and of 6 schoolmasters and mistresses, all died from consumption without exception.

Remedial Measures.

The remedial measures essential to improve the health of the inhabitants of large towns are several: as, for instance—

Sewering, draining, and paving to the streets.

Architectural order, size, ventilation, and accommodation to the houses.

A better legal definition of the term “nuisances,” with more extended powers for their removal.

The establishment of public baths and pleasure-grounds for the use of the labouring classes, and enclosures in which to dry newly-washed clothes.

Ample public supplies of pure water.

The prevention of smoke within every practicable limit.

The extension of fever hospitals, and the perfect and uniform record of all that pertains to their inmates, as to sex, diseases, trades, residences, and every other particular which can tend to elicit information on local causes, and this not only with fever hospitals, but all medical charities throughout the kingdom; and finally, the establishment of local Boards of Control, by whom the powers of any sanitary enactments may be enforced, and of which paid medical officers, in ratio of population, and limited both as to amount of remuneration as well as to number of sittings, shall form a part. These may seem formidable recommendations, but I believe they are essential to the advance which our population has made within the last 25 years, and to its requirements.

The first great difficulty requiring to be removed is clearly to show what is a public street; for unless by a specific interpretation, there is now no law extant which clearly defines this term, and without which, therefore, general sanitary enactments would be in a great measure unavailing in such towns as Leeds. It has been before observed that out of the total number of streets in Leeds, viz., 586, only 68 are paved by the town. These 68 streets, then, are the only ones which are under any regulation, whether as to paving, draining, sewerage, or cleansing. These have, in fact, become highways, and are under the control of the surveyors of the highways, who are appointed by the vestry annually. But these surveyors have no power whatever over any streets which have not, as it is said, been taken into the town, *i. e.*, have been paved and sewerage, and had application made for their enrolment amongst the number of highways at the quarter-sessions. It is true that by the General Highway Act of 5 and 6 Will. IV., c. 50, it has been determined, "If a man opens his land so that the public pass over it continually, after a user of a very few years, will acquire a right of way;" and that no "bar has been set up," nor "has any indication been made," to show the right of any landlord to any of the great mass of unpaved streets in Leeds, and that a dedication to the public may be presumed from a "user" of 6, 8, or even 30 years; but unless there is a specific enactment that the owners of property, on first laying it out in public streets and for building purposes, shall first sewer and pave and flag the same under competent authority, and that then such streets shall be taken and deemed to be highways, and be subject to the laws which control highways, it is not likely that much permanent good will ever be effected. The deeds of conveyance in 99 cases out of every 100 of the small plots of town streets require the *purchaser* to pave and sewer and flag forthwith; yet as there is no compelling power, and as there is very seldom unity of purpose, for such a purpose at least, between owners of property, one of whom may be resident and feel the grievance, the other non-resident, and careless because he does not feel it, the powers of such

deeds are a dead letter and unavailing, and nothing but an enactment will accomplish it. In the flagging of causeways, steps should by no means be allowed, nor grates, nor cellar windows, nor other openings be left unprotected. Serious accidents have frequently arisen from these causes, which might have been easily prevented. Paving and draining might be thus effected, but not so always with sewerage, unless very ample powers are given by an Act to enable the surveyors or Board of Control to carry sewers through lands a considerable distance, and below levels which were, but are not now available, owing to accumulations of refuse matter in water-courses which formerly carried off that drainage, which must now be directed into another channel. By referring to the map attached to this Report, the position of the houses on the south side of the river may be noticed, as well as those which lie contiguous to, and in the course of, the brook or rivulet which runs from north-west to east, *i. e.*, from New Town to the river opposite Francis Island. Any drains formed in the streets in either of these neighbourhoods could not be carried low enough to drain the cellars without constant regurgitation from both sources. I am apprehensive, and I am confirmed in this view both by the town surveyor, as also by Mr. Fowler, another general surveyor and civil engineer in Leeds, who has favoured me with the levels of various parts of Leeds above the river, that to effect sufficient drainage in both these localities the sewers must be carried a mile and a half below the weir at Hunslet, and not nearer to the town. The Beck itself ought to be cleaned out and restored to its original level. If it were, in ordinary cases, good drainage might be accomplished in localities which now are rife with fever at all periods; and though the drains might be subject to regurgitation, yet as the river Aire is one of those rivers which rises and falls with equal rapidity, this inconvenience would not be of long standing. It is manifest, however, that a rigid enforcement of a particular kind of sewerage, whether in depth or width, might be impracticable in some localities, and probably something on this head ought to be left to the Board of Control. It ought, however, to be an enactment that every dwelling-house *should* be drained into the common sewer of the street; and perhaps this would be an easy mode of getting rid of cellar-dwellings, which, by being below the level of the sewer, thereby rendering its drainage impracticable, would carry upon the face of it a condemnation as a place of residence, not only tangible but reasonable. The value of drainage is nowhere better evinced than in the case of the Boot and Shoe-yard, where, after a thorough drainage from end to end, the number of cases of typhus fever in 1840 and 1841 were reduced from 46 in the former year to 4 in the latter.

With regard to the ventilation of neighbourhoods, it is essential that property should sometimes be taken down, and large squares made here and there, in the midst of dense populations, as ven-

tilators: for this, provision, in many instances, does exist. In Leeds, for instance, there is an Improvement Act, by the powers of which rates may be levied, and buildings be purchased and taken down for the purpose of public improvement. But without meaning at all to disparage the services of those who for years have been in office under the authority of this Act, so long as the board is a non-medical board, nor has medical advice within its pale, the *necessity* of sanitary improvements will neither be duly considered nor effected.

But power should also be given to the surveyors to drain the surfaces of sites of land in streets and neighbourhoods which remain undrained and are declared unhealthy, and also to direct the fencing off of such sites which are lower than the streets themselves, in such a manner as shall be satisfactory to the surveyors. Great dangers accrue from excavated sites being left unprotected, especially in thick weather and at night. With regard to the former means, I offer the following cases in proof of its necessity:—

December 15, 1840.—Sarah Asgurth, a widow aged 40, residing in Madras-street Bank, in a low, damp, and ill-ventilated cellar, within a few yards of which is a constant stagnant pool of dirty water, says:—“She began to be ill a few days ago when attending her husband, who died of typhus. Recovered in 35 days.

Rosanne Mody, aged 16, *neighbour to S. Asgurth*, and who attended upon her previous to her removal, says—“She got a ‘bad smell,’ and has been ill ever since.” Symptoms the same as in the last case. Recovered in 36 days.

Mary Fothergill, living *next door* to Sarah Asgurth, a married woman aged 22, also taken with typhus in January, 1841. Symptoms were severe at first, but were suspended by removal from the locality; and recovered in 12 days.

Margaret Thompson was taken on the 13th January, 1841, aged 30, with typhus in its severest form. She *resided in the same neighbourhood*. Recovered after 48 days.

Sarah Stevenson *also came from the same locality*, and died in 2 days.

William, the husband of Mary Fothergill, had also typhus on the 26th January, 1831; *resided in the same locality*. Recovered in 26 days. In addition to which, 3 Irish lodgers removed on account of their dread of fever, one of whom took it, and recovered after 27 days. These cases distinctly show the continuance of the cause.

Again, Priscella Nuttall, of Purdy’s-court, York-street, one of the most horrible of streets in the North-east Wards, was seized with typhus on the 20th January, 1841.

G. Nuttall,	from the same locality,	on the 3rd	of February.
Ellen Hartley	ditto	on the 5th	ditto.
M. A. Hartley	ditto	on the 5th	ditto.
Richard Hartley	ditto	on the 13th	ditto.

Four cases also in Vernon-street, close to Purdy-street, also occurred in a similar rotation to the above.

The above are records made by the house-surgeon of the Fever Hospital in Leeds, who adds—"that the Leylands are notoriously bad for want of surface drainage and sewerage; and that about three years ago a healthy man from Keighley came to lodge opposite Imperial-street (a neighbourhood very pregnant with fever), was seized with typhus of an alarming character, and died in a few days; his daughter, a stout healthy young woman, having a very narrow escape." He further adds—"That cases of this character are so common in the various yards of Kirkgate, York-street, Marsh-lane, Goulden's-buildings, and Lisbon-court, that they cease to be observed particularly; and that it is no uncommon thing for Irishmen to be seized with fever after lodging a night or two in some of our notorious receptacles for itinerants."

The size of the houses and the necessary accommodation for the comfort, cleanliness, and decency of their inhabitants, it is scarcely necessary to dwell upon. It is doubtful whether many of the deaths which occur in the manufacturing as well as in the agricultural districts, especially from diseases of the chest, do not originate from this source alone. The horrible state of the atmosphere in many of the bed-rooms of the humbler classes is familiar to the medical profession, and its consequences admitted on all hands. I have touched before on the immoral results of but one sleeping-room; there should be two at least to every dwelling, whether there are children or not. How often is a temporary separation of even man and wife necessary in cases of epidemic disease, and especially in phthisis, which is, alas, too little understood; and in cases of death how essential also it is to have two rooms, to separate the living from the dead until interment takes place. Whatever may be the price of land, there is always room upwards, or should be at least, to give height to sleeping-rooms, and a chance for ventilation: height is of the first importance, and should be enforced. This of itself would almost prevent cellar dwellings from becoming residences, or would make them such as to be less objectionable. Of the necessity for other accommodations, such as privies and places of deposit for ashes and vegetable refuse, there will not be two opinions, and it needs no argument to enforce attention. It would, however, be of lasting advantage to have the word nuisance, *i.e.*, the punishable nuisance, more clearly defined than it now is, in a sanitary law; for without it is so, privies, which are built fronting the public road, and of which there are dozens in Leeds, and ash-houses, with their scattered deposits on causeways, will not be removable. Ash-places should be open to the air by large pipes when forming the basement of dwellings, as is too frequently the case, or they should be surrounded by walls of a sufficient height to protect the houses from their effluvia when open to the atmosphere altogether; and as they are built in narrow

passages as part of clumps of cottage dwellings, having, in fact, sleeping-rooms over them, it is necessary to enact that there should be no such building in future, but that to every 5 or 6 houses erected a privy should be added, attached as out-houses, but not further connected with the dwellings themselves. Nothing would be more easy than some such arrangement, and decency as well as necessity demands it. As an instance of the requirements which are necessary, I refer to the plan of the nuisance in the yard in page 5 of this Report, which I not only, since it was drawn, have brought under the notice of the local authorities, but have absolutely obtained their view of it; and yet, notwithstanding the urgency of the case, there exists no power to compel its removal. In the first place, there is no common sewer in the street; in the second, the natural course would take the water on to private property; and so it remains, exhaling its putrid miasm over the whole neighbourhood. Might not the Board of Control have power to declare nuisances, and to enforce their removal. Powers are provided by the Municipal Act, as well as by local Acts, in all towns which have corporate bodies, to remove nuisances where they exist; but there is so much difficulty in obtaining information by private parties against neighbours or neighbourhoods where they exist, and in defining what is legal nuisance, that they remain untouched.

The establishment of public baths and pleasure-grounds would highly contribute to the health and comfort of both sexes. In Leeds, some years ago, a public company established a swimming-bath of large dimensions, which, on every Saturday in the season, is open to the working classes at the charge of 2*d.* each. But baths are requisite in more than one locality of a large town, and might in many instances be afforded by the civil authorities so as to be gratuitous to the bathers. Public walks and gardens, and places of innocent amusement and recreation, and, in fact, whatever can tend to produce moral results in the labouring classes, ought to be considered as duties confided to the educated classes, who are, after all, but trustees of all that they have, for the commonwealth. If it is asked where these requirements are essential, it is answered, that in every large town they are demanded by the necessities of congregation. In the broad fields and pure air of villages, the necessity for room wherein to imbibe oxygen into the lungs, physical enjoyment, and of promenading where the beauties of nature can add to the moral happiness of the people, is not felt; but in smoky atmospheres, where pure air is an unknown luxury, and amid the pent areas of mill walls, where there is no vegetation visible, every means is required to keep up the bodily strength and to enlarge the mental.

In looking at the number of streets across which clothes-lines are drawn, on which to hang their linen, one cannot but imagine the straits to which the working classes must be put, to enable them weekly to accomplish this object. We feel country-washed linen a

luxury, whether for cleanliness or for appearance; surely it is not too fervent to imagine, that the more homely clothing of the humble classes might add to their comfort, if dried out of doors, and in other places than the public streets, or within doors, in the already too exhausted atmospheres of their dwellings.

It is highly dangerous to permit as a practice the drying of clothes in the public streets; but in taking away this little privilege, we must remember the condition of the poor, and provide for them accordingly.

We have an excellent botanical garden in Leeds failing for want of subscribers, whose use is limited to those who can afford to pay for admission. Is there any reason why this should not be also appropriated once a-week gratuitously to the use of the poor, and that an annual subscription from the borough rate should enable the proprietors (where boroughs have no other funds) to afford this gratification to the labouring classes, under protective regulations?

The necessity of public cemeteries far away from the living cannot be too strongly enforced. To have dead bodies putrefying and exhaling within the precincts of a town, is a practice highly to be deprecated, and its consequences seem hitherto to have been strangely overlooked. At this moment Leeds is said only to have room for interments for six months longer, and yet measures have been refused by the vestry to lay a rate for the purchase of a cemetery; and although the fact has come before the magistrates that the dead are interred, and immediately disinterred and removed to other graves, that the ground in which they were first placed may be made available for other interments. Disgusting and degrading as is this notorious fact, the consequences of this early removal of bodies in a putrescent state is highly detrimental to the public health, and perhaps there is no law on the Statute Book which requires more immediate attention than this. By several Acts of Geo. III. & Geo. IV. it is the right of every parishioner to be interred in the parish burial-ground; and powers are given to churchwardens, with the consent of the vestry, to rate the inhabitants for the purchase-money of additional burial-grounds; but if the vestry refuses to grant the rate, whatever may be the requirements of the parish, in this particular there is no remedy. It may thus occur, and does now happen in the town of Leeds, that in a few months there will be no more room wherein to bury the dead. Places of public worship have sprung up without provision for the interment of the poorer part of their congregations, who are necessarily taken to the parish burial-ground: and yet a church-rate, because it is a church-rate, though attempted to be obtained only for the purposes of a public cemetery, has been refused, and no legal remedy exists by which the difficulties can be overcome.

Leeds, which has not been well supplied with pure water hitherto, has now abundance from one of the best sources, and of the

purest quality, and provision is made for giving it very cheaply to the poor.

The extension of fever hospitals in large towns is essential to their welfare. Nor ought they to be left to private charity for their maintenance. It is known that fever, though generated in low quarters of a town, travels by insidious stages to the higher, and in so doing scatters its seeds upon rich and poor alike. Whatever tends to the preservation of the public from contagion, then, is a public benefit, and ought to be paid for by the whole community. The Fever Hospital has been one of the most useful institutions that has been founded in Leeds by its benevolent and charitable people. The lives which have been preserved within, by attention and skill, and without, by the removal of contagion from other inhabitants, are incalculable. It is shown by the map that fever prevails in all the district which formed the tract of the cholera in 1832; and that it maintains the same localities through succeeding years the books of the institution satisfactorily demonstrate. For instance, in the years 1838, 39, 40, and 41, there were removed from the following localities the cases of typhus fever here shown—

	1838.	1839.	1840.	1841.
Boot and Shoe Yard	25	9	46	4
Wellington Yard	11	11	19	5
Workhouse	1	2	11	7

During 1840, the cases of typhus fever occurring in the Boot and Shoe-yard were so numerous that the overseers refused to give any further relief to persons who were found lodging there, because of the charge which these typhus cases threw on the parochial funds, by their admission to the Fever Hospital: the cases also which have previously been mentioned in this Report, show how certain localities generate fever to a great degree. It may be said, however, that the records of the Fever Hospital, giving only the cases that are removed into it, are not a criterion of the amount of fever affecting the better classes of society; but it must be remembered that the working classes are a more numerous body than the middle or upper classes, and that if each case so admitted be merely an example of a local cause, it is more than probable that that cause operates upon the homes of the poor more severely than the rich. Presuming, however, that the domestic servants indicate that fever prevails in the well-ventilated parts of the town, we should look for the name of the street to point out where these are, and we find but an instance or two of fever happening in such neighbourhoods; while in referring to the mothers and children at home who have been admitted into the hospital, we find them comprising by far the most numerous class of all the cases that were admitted through the year. The large amount of mill-girls who are affected by typhus speaks both against locality and labour: the heated and moist atmospheres of flax-mills, and the perpetual variations of temperature by currents of air blowing upon the skin,

no doubt render their constitutions more susceptible of local influence. From the returns of the Fever Hospital, it is clear that the cases of labourers admitted into the House of Recovery are those of itinerants who are affected by the unwholesome character of their town-lodgings. But if they were not—if they arise from the action of miasm taken abroad—there is the greater necessity for these lodging-houses to be under sanitary control, for the protection of the inmates, amongst whom fever might be thus casually introduced. Whilst on the subject of fever, I may be permitted to say, that there were admitted into the House of Recovery in 1840, from various localities in Leeds, including a few cases from the neighbourhood—

116	cases of simple fever,
183	„ typhus,
14	„ variola,
19	„ scarlatina,

out of which there were 65 deaths.

It is highly important also to notice, that almost all these cases occurred between the ages of 8, 30, 36, 40, 50, and 60, and that out of the total number the following persons were of the occupations attached, viz:—

Sempstresses	7	Weavers	9
Mill-girls	46	Shoemakers	12
Nurses	10	Mechanics	8
Labourers	65	Cloth-dressers	6
Domestic servants	46	Mothers and Children at home	104
Vagrants	10		

The rest being cases of one or two to particular occupations. The whole number of cases occurred in 52 localities, every one of which has been so distinguished for many years.

The classes most affected by fever are thus shown to be mill-girls, labourers, domestic servants, and mothers and children at home; and there can be no reasonable doubt that all these persons more or less imbibe contagion from local causes.

Of what immense advantage it would be to have every medical charity placed under statistical regulations, and responsible to the Home-office for their returns of cases admitted within their walls! It is remarkable, that this has not been long ago thought of sufficient importance to place them all under one kind of statistic discipline, embracing every particular connected with the inmates both as to sex, disease, residence, local causes, wages, labour, &c., facts which would be useful beyond measure to the legislature, the philanthropist, and, above all, to medical science. An aggregate detail of such cases would form a table of which it would be idle to calculate the value. In the House of Recovery at Leeds, for instance, till within two or three years there has been no correct record kept of any case, and in many instances no record at all either of the residences or the localities of fever; and yet how essential it is that both these should be correctly stated, and how useful

it would be to trace each case to its origin, and develop the causes which are so fatal to human life: such a universal register would in a few years render a first-rate service to everything relating to longevity, whether as connected with trades or occupations, or local influences, or climate; and as it would be quite unexpensive, the opportunity lost is without excuse.

The smoke nuisances come perhaps a little late under consideration, but it is not less important than any of the preceding causes requiring remedial measures. There is a crusade at present against long chimneys, which is likely to bring forward every suggestion which science and ingenuity can add to abate the evil. The table of the deaths in Leeds gives also the number of steam-engines, with their mode of application, and their aggregate horse-power, which, be it remembered, has arisen in Leeds within the period of 57 years. This table shows the number of steam-engines in the borough of Leeds to have increased from two engines and twenty horse-power, which it then had, to 362 engines and 6600 horse-power, which it now has; an increase most amazing in a power so productive, and requiring a consumption of fuel to an enormous extent. But it is not only steam-engines that form the smoke nuisance: dye-house pans, whose chimneys are very low, and generally built alongside the brooks and rivulets, and contiguous to the dwellings of the poor, pour out their dense volumes of unconsumed carbon, which traverses the streets and fills the houses. I have before stated that the consumption of coal in Leeds has been recently estimated at 200,000 tons annually; but this estimate appears to me to be much below the mark. Taking the consumption of coal, however, at this amount, it must be manifest what a condition of atmosphere every working day in the week exists. It is interesting to observe the change which takes place on the Sunday, when the manufactories and furnaces are unemployed: there is then doubtless the smoky atmosphere of a large city, but the eye may traverse from an elevated station over the whole edifices, and see from hill to hill. The remedy for this nuisance is, however, I fear, yet involved in some obscurity. Many attempts have been made during a considerable period of time to discover a means by which less smoke might be emitted, on the principle of saving fuel, of which smoke forms one of the most valuable components. Most of these have, however, been laid aside as ineffectual or too expensive—affording no saving in fuel, requiring too much power—affecting the condition of the boiler, by alternations of heat and cold, or being too complicated in their machinery to be long in effective order.

A patent was some time ago taken out by Witty, for burning the smoke of small furnaces without engines, and was, I believe, effectual; but it is not in general use, although most imperatively demanded by the necessity of the case. Then again, scarcely any invention which has been promulgated has been applicable to furnaces without engines, or, at all events, has been applied; the

greatest direction of thought having been given to furnaces where power might perform some part of the process. The revolving grate and Stanley's feeder seem at present to have the most general reputation, not for burning all the smoke, but as throwing out the least quantity with the smallest detriment; and there is no doubt that if all parties were compelled to adopt them, and use them, if there were no other means existent, these alone would effect an amazing benefit. Both these patents, however, require power, and are therefore probably inapplicable on that account to furnaces without engines. The patents now in vogue are three in particular: viz., Hall's, of Leeds; Hall's, of Nottingham; and Williams's, of Manchester; all of which are in operation in the town of Leeds. The first consists of a division of the fire-plate into two parts, one-half of which, as I am informed, is fed at a time; and that thus, when the other half is fed, the first being red-hot, its smoke is brought into contact with the heat of the first half, and is consumed.

The principle of the patent taken by Mr. Hall of Nottingham is that of clearing the fire-grate by a valve, which, as it is drawn forward by power every time the fire requires renewal, carries also the coal along with it, and feeds the fire; whilst air is thrown into the front of the fire, which has first been heated by being made to pass through tubes in connexion with the flue.

Mr. Williams's patent, of Manchester, I do not so fully comprehend, but I believe the introduction of air for the better consumption of the carbon of the coal is one of its leading features. It seems to be taking the lead, at present, in public opinion, and has had the strongest testimonials in favour of its scientific principles. I imagine that air will be admitted, one day yet, into the revolving grate, and that that will be a means of further improving the advantages which it already has. My own opinion is, but I give it with the utmost deference, that wherever furnaces are fed by hand and not by machinery, that the most perfect system will fail for want of care on the part of the engineer, or by particular opinions as to the means of raising the necessary power. We must not overlook the fact, that a very great many boilers, connected with engine-power in the country, are working on a pressure far greater than would be accomplished if the engine regulated, as in the revolving grate, its want of steam by its own act, throwing out of gear its machinery when sufficient steam is generated, and throwing it in again when more steam is required. There is perhaps no greater difference existing in anything of the same nature than in the mode of firing engine-boilers, and it will be found very difficult to steer the proper course between necessary control and unnecessary interference.

On a review of this part of the subject, it appears to me that the public attention is now so thoroughly directed to it, and so much dissatisfaction exists on the prevalence of smoke, that remedial measures will be taken without delay. Michael Angelo Taylor's

Act, which is, I believe, "The Smoke Act," is hardly sufficiently comprehensible as to the declaration of the nuisance. It is necessary to swear that a chimney is a nuisance personally to the complainant, and this is a mode of engendering offensive feelings, and not sufficiently broad to abate the evil without considerable expense to the prosecutor if the party were litigious; again, "that which is everybody's business is nobody's," and although at this time public attention in Leeds is actively aroused to the smoke nuisance, the population is indebted to the zeal, personal labour, and the expense of the town-clerk for an inquiry which, if successful, will certainly lead to one of the greatest improvements of recent times. But a remedy for an evil so crying should not be left to the zealous service of individuals. It should be part of the powers of the Board of Civil Control to regulate the smoke nuisance along with all other nuisances, by whom the applicability of a general Act to various localities would be better understood.

The last important remedial measure to which attention is directed, is the means by which the provisions of a sanitary law are to be carried into effect. The obvious authorities to whom only the great powers with which any such Act must be clothed can be delegated, are those whom the legislature has already called into operation and entrusted with civil government, viz., the Town Councils of boroughs in the first instance; secondly, where there are no Town Councils, but there are Commissioners under local Acts, then to such Commission; and thirdly, where there are neither Town Councils nor Commissioners, then to the Magistracy, or to Committees nominated by the Magistracy in the divisions under their jurisdiction; but in all cases there should be the paid co-operation of medical men in whom the board could have confidence. Such boards I would denominate Boards of Civil Control, or give to them some name by which they might be understood as distinct from existing authorities. The number composing it might be regulated by the population; for the sake of argument, say 12 in number to every 100,000 of the population, and in that ratio, either under or over, to any population whatever. Of these 12, two should be the senior medical officers of public institutions, where they can be obtained, and where not, then the best and most competent practitioners in the neighbourhood in whom the board might have confidence. These officers should be paid at the rate of two guineas each for every sitting, and not more; and whatever might be the number of sittings of the General Board, which never ought to be less than once in every four weeks, the sittings of the medical officers need in no case exceed one half of the number. The whole expenses of such a board, and the application of its powers, will of course have to be levied by a rate which ought not to exceed 5*d.* in the pound on the annual value of the district under its control. The present rateable value of the borough of Leeds is 295,582*l.* 2*s.* 10*d.*, and a rate of a penny in the pound would raise therefore

annually more than 1200*l.* for the purposes of the board, which, with 5*d.* in the pound as its maximum, would give ample provision for all the sanitary improvements which time and circumstances might suggest.

In the consideration of the foregoing Report, and in the facts which are presented, I have endeavoured to exhibit the town of Leeds (certainly one of the most unhealthy towns in England) in its true condition, a condition which equally characterizes most of the manufacturing towns of England which have risen from existence into importance during the last half century, with the most amazing rapidity. It is to be sincerely regretted that, with the growth of manufacture, and thereby with the means of improvement, that so little attention has been generally directed to the social and moral welfare of those whose physical strength has contributed so much to the capital of the districts in which they dwell. But it is the fact, that the great interests of the country have flourished on the moral and physical strength of the labouring population, which have suffered on the one hand by all the local influences without, which are consequent upon neglected congregations, and within, by neglect of moral discipline and restrictions, which, had they been employed, might have made mills, manufactories, and workshops, blessings wherever they were erected; and it is a matter of sincere congratulation, and will be, to every well-wisher of his country, that the Poor Law Commissioners of England have instituted an inquiry fraught with such immense benefit to the population of the empire.

No. 24.

FIRST REPORT

ON THE STATE OF THE DWELLINGS OF THE LABOURING CLASSES
IN CUMBERLAND, DURHAM, NORTHUMBERLAND,
AND WESTMORELAND.

By SIR JOHN WALSHAM, BART.

Newcastle-upon-Tyne, 16th April, 1840.

GENTLEMEN,—I. As the earliest instalment of the information due from me in reply to your circular of the 11th of last November, that severe personal illness, and the undiminished pressure of general business in a district of great extent and complicated interests have allowed of my presenting,—I now proceed to offer to your notice three tables, in which I have been anxious to arrange the voluminous data I have succeeded in collecting during the last three months, after such fashion that the leading points

of your sanitary inquiry, in its bearings upon what may be termed the habitation statistics of the four counties under my superintendence, may be seized at once and without trouble. Of these tables—

Enclosure A. comprises both an abstract and an analysis of the replies to 15 queries (which I circulated in every part of my district) relative to the state of the dwellings of the labouring classes in respect of the cost of building and repairs; the amount of rent paid and accommodation afforded; the state of drainage, &c.

Enclosure B. comprises an abstract of the replies to 13 queries (which I circulated in the urban Unions of my district) relative to the rating of small tenements and the operation of building societies.

Enclosure C. comprises a few plans of cottages recently erected on different estates in my district upon improved principles.

II. Under the head of Enclosure A., I have given the substance of a great many interesting returns from the chief towns and seaports of Northumberland, Durham, and Cumberland, as well as from the agricultural, manufacturing, and mining districts of these very remarkable counties; and with a view to the readiest development of results, I have classed such returns into three divisions, and again into 30 subdivisions.

The first, or Northern Division, refers principally to Northumberland, of which the cottages and tenements are treated of in eight subdivisions, viz. :—

Newcastle	Chief town of the division.
Alnwick	} Agricultural market towns.
Hexham	
Tynemouth	} Seaport towns.
Berwick	
Long Benton, Walls- end, &c. . . .	} Coal districts.
Rothbury	
Castleward	} Rural districts.

The second, or Southern Division, refers exclusively to the county of Durham, of which the cottages and tenements are treated of in 14 subdivisions, viz. :—

Sunderland	Chief town of the division.
Darlington	} Agricultural market towns.
Durham	
South Shields	} Seaport towns.
Stockton*	

* Stockton and Gateshead are respectively, the one as a seaport, the other as a manufacturing town, classed with reference rather to purposes of analytical comparison than to strictness of definition.

Auckland	} Coal districts.
Houghton-le-Spring	
Heworth, &c.	
Yarm	} Rural districts.
Whickham	
Teesdale	} Lead-mining districts.
Weardale	
Barnard Castle	} Manufacturing towns.
Gateshead*	

The third, or *Western Division*, refers collectedly to Cumberland and Westmoreland, of which counties the cottages and tenements are treated of in eight subdivisions, viz. :—

Carlisle	Chief town of the division.
Penrith	Agricultural market town.
Whitehaven	Seaport town.
Workington	Coal district.
East Ward	} Rural districts.
Allonby	
Cockermouth	} Manufacturing towns.
Wigton	

III. In addition to the above returns, I have also annexed to Enclosure A. an analysis of the results observable on perusal of its contents, from which analysis it may be collected—

- 1st. That privies are much rather the exception than the rule; and that drainage is quite ineffectual in the urban, but relatively good in the rural districts; whilst cottages and tenements are, generally speaking, in a fair state of repair, as well indeed they may be, having regard to the abundance of building materials in these parts.
- 2ndly. That there are rarely, if ever, more than two rooms in any cottage or tenement, the second room (except in pit rows) being merely a pantry; that eight persons constitute a not uncommon average of the inhabitants of a single room; but that none hereabouts live in cellars; though in the lodging-houses eight or ten families, numbering from 20 to 40 individuals, are sometimes to be found (*e. g.*, in Carlisle, Gateshead, and Stockton) heaped together in one apartment.
- 3rdly. That the maximum of rent for a cottage or tenement is 6*l.*, and the minimum 2*l.*; 3*l.* being, however, the average; that the cost of building such cottages or tenements varies from 70*l.* to 30*l.*; the average being, however, about 40*l.*; and that no perceptible difference as to the amount of rent has here followed on the introduction of the Union system of Poor Laws; partly, no

* See Note, page 349.

doubt, because the payment of rent by the parish had obtained much less extensively than in the south.
4thly. That the average cost of annual repairs may be stated at about 7*s.*, and the average portion of earnings required to pay rent at about—

$\frac{1}{10}$ th in large towns.

$\frac{1}{12}$ th in market towns and seaport towns.

$\frac{1}{13}$ th in coal districts.

$\frac{1}{13}$ th in rural districts.

$\frac{1}{9}$ th in lead-mining districts and manufacturing towns.

With reference to the 14th query* (certainly the most important of the whole in a practical sense), as well as to the replies, which it has elicited, and which will be found in Enclosure A., I propose in a future report to consider in detail how far we have evidence that cases of fever or other disease are attributable to a want of drainage and cleanliness in the cottages or tenements of my district; and I will therefore confine myself for the present to observing, that in towns the connexion of fever with the want of drainage and cleanliness is undeniable and undenied, while in rural districts such connexion appears to be but rarely traceable, owing no doubt partly to some little superiority of accommodation, but principally to the modifying effect which free ventilation of air cannot fail to produce on the unhealthful influences of accumulating filth.

IV. Under the head of Enclosure B., and arranged (as to the classification of the queries and replies) in manner similar to Enclosure A., I have placed the opinions which are held on the various points incidental to the rating of cottages and small tenements, both by influential and by practical persons, having local experience of the following populous districts, viz. :—

Tynemouth	}	Northern division.
Berwick-upon-Tweed		
Castle Ward		
South Shields	}	Southern division.
Sunderland		
Gateshead		
Carlisle	}	Western division.
Penrith and West Ward		
Whitehaven		
Cockermouth		

The replies to the first eight queries in this enclosure are hardly susceptible of analysis or abbreviation, and I do not think that I could usefully place their substance before your Board in any more condensed shape than that in which they are within pre-

* "Do you know of any cases of fever or other diseases to be properly attributed to the bad state of repairs or want of drainage in the cottages of the persons so attacked?"

sented, and I beg therefore to refer you to the document itself for detailed information respecting the standard of value with regard to which rates are deemed collectible from cottage property; as also respecting the exemption of the occupiers of a certain description of these tenements from payment of rates, the direct or indirect interference to that end of the owners of such property, &c.

Respecting the last query (the 13th),* it is curious and instructive to observe that all *my witnesses* (most of them, be it remarked, being themselves extensive owners of cottage or tenement property) concur emphatically as to the expediency of rating the landlords instead of the occupiers of small tenements: they differ, indeed, as to the amount at which the liability of the landlord should cease, some being for 5*l.*, and some for 9*l.*, but on the principle they are all agreed.

V. The queries numbered 9, 10, 11, and 12 relate to *building societies*, which are extremely popular and rapidly increasing in various parts of my district, and upon which, as having an indirect but not, I think, an unimportant bearing on the question before me, you will not perhaps be displeased that I should take this opportunity of briefly commenting.

The various building societies in the three divisions (into which for the purposes of this report I have apportioned my district) present some few unimportant differences in matters of detail, but are nearly all based upon the following plan:—

Each member subscribes for so many shares as he may think fit, subject to such limitation of the total number to be held by one person as may be fixed by the rules. A subscription of 10*s.* per month entitles him to a share of 120*l.*; and a subscription of 5*s.* per month to a half share of 60*l.* From time to time, as the money raised by means of subscriptions, premiums, &c. amounts to a sufficient sum, the privilege of receiving in advance the amount of a share is sold to the highest bidder, and the premium which he gives (frequently, in Newcastle, amounting to 30*l.* or 35*l.*) goes to increase the society's funds. The purchaser of this priority is allowed to take, at the same rate of premium, as many sums of 120*l.* each as he holds shares, provided they do not exceed three or four. He is allowed a few weeks to provide a security. If he has determined to build, he receives the amount of the shares by instalments as the building advances, and according to the report of the society's inspecting officers, mortgaging, however, the ground and buildings to the society; if, on the other hand, he makes a purchase of ready-built property, the whole of the money is at once advanced on mortgage of it, upon the officer's report that the security is satisfactory. The amount advanced is generally nearly equal to the value of the property. The person

* "What is your opinion generally as to the expediency of exempting the occupiers of small tenements from the payment of rates, and of collecting them from the landlord?"

who thus "buys out" his share or shares pays 10s. per month per share by way of interest, in addition to his monthly subscriptions of the same amount; and if the subscriptions and interest be regularly paid, he will hold his property at the termination of the society, discharged from the mortgage, which will have been liquidated by the monthly subscriptions. If at any time no member should bid for the priority of buying out, lots are drawn, and the person on whom the lot falls is compelled to take the money, or at least to pay interest for it from the expiration of the time allowed by the rules for providing a security. At the end of 20 years, had there been no premiums, no interest, and no expenses or losses, the society would terminate, and each member having paid 120*l.* would be entitled to receive that sum; but as considerable premiums are generally obtained, as interest is regularly charged, as the expenses of management are inconsiderable, and as losses by the inadequacy of the security seldom occur, the societies are expected to terminate at a much earlier period; and consequently, the subscriptions actually paid for a share of 120*l.* will be considerably less than that sum. The members buy out *chiefly* for the purpose of *building* property; not unfrequently, however, they do so for the purpose of purchasing house property already built, either new or old. In Newcastle-upon-Tyne and Gateshead, the societies consist chiefly of tradesmen, journeymen, &c., but many of the workmen in the large factories are also members. The sums raised in these towns are very considerable. The receipts of one society in Newcastle are about 300*l.* a-month.

There are occasionally societies to be found in my district conducted on a different plan (such as the Carlisle and Stockton Building Societies) in which houses are built by the society and are allotted to the different subscribers; but these societies have been almost wholly superseded by the more modern system, as above described. The one great object, however, of all similar associations is to enable their respective members to build a dwelling-house, to purchase a dwelling-house, or to buy land whereon to erect a dwelling-house, *by means of a small monthly subscription*; and as these building societies have proved equally profitable and attractive to the industrious classes of most of the great towns of the northern counties—as their avowed purpose is to ensure domestic and personal comfort to those classes—and as Parliament has already taken a protecting cognizance of their constitution—I am disposed to persuade myself that building societies offer the fairest mark upon which to essay the practicability and efficacy of a Building Act. On the difficult question of a Building Act, nevertheless, my ideas are not sufficiently matured to allow of my further following out the subject I have thus started; I may perhaps, with your permission, resume it in another report; but I must now solicit that same permission to conclude the present report with the trifling explanation necessary

to a right appreciation of the contents of the third and last enclosure.

VI. Under the head of Enclosure C., I have annexed five plans of cottages; to each plan I have also annexed a descriptive memorandum, and to those memoranda I have only to add that the instances to be met with in my district of cottages and tenements of superior arrangement and accommodation are singularly few and unremarkable. In the rural districts, the cottages on the estates of the greatest proprietors have rarely more than one single room for every purpose. In the pit-rows and in towns they have nominally two rooms, but even there the inhabitants are accustomed to live and sleep (irrespective of sexes) in the same room; and of conveniences for cleanliness, to say nothing of improvements for the more economical management of fuel and household resources, there are scarce any instances, properly so called, to be seen, except perchance in ornamental cottages adjoining the residences of such powerful noblemen as the Duke of Northumberland, Earl Grey, the Earl of Lonsdale, &c.: discouraging facts these, which I attribute chiefly to the local practice of letting cottages, with the farm on which they stand, to the great farmers, who can naturally care but little (so that they have house-room for their hinds and labourers, rent free and weather proof) for the details of cottage reform, and of whom many would probably look upon pantries, separate bed-rooms, and clear drainage as superfluous luxuries unknown to the late and unnecessary to the present generation—and upon the use of privies, *vice* the adjacent dunghill, as uselessly calculated to deteriorate the manure.

I have the honour to be, Gentlemen,

Your very obedient servant,

J. W.

The Poor Law Commissioners,

&c. &c. &c.

NOTE.—The enclosures referred to in the foregoing paper could not be inserted (regard being had to their volume) consistently with the purpose and arrangement of this Report; the subject matter, however, of such enclosures is otherwise sufficiently developed and illustrated in the two next-following communications.

J. W.

No. 25.

SECOND REPORT

ON THE STATE OF THE DWELLINGS OF THE LABOURING CLASSES
IN CUMBERLAND, DURHAM, NORTHUMBERLAND,
AND WESTMORELAND.

BY SIR JOHN WALSHAM, BART.

Newcastle-upon-Tyne, 15th May, 1840.

GENTLEMEN,—In my first report on the state of the dwellings of the labouring classes, I briefly pointed out a few of the general results to be collected from the tables appended to that report under the head of Enclosure A.: I now beg to present you with some additional and more detailed illustrations of the same topics.

I. As to the general state of the dwellings in towns, *Mr. Ingledew*, the chairman of the Newcastle Union, observes:—

“In Newcastle-upon-Tyne the operatives, labourers, and other poor persons occupy generally single rooms, and sometimes two rooms, of old houses of from two to four stories high, situate in the old and closely built parts of the town. Very many of these houses, from the circumstance of every window not absolutely necessary for light being stopped up in order to avoid the window-tax, are ill ventilated; indeed to such an extent is this economy carried, that the stair-cases of some of the large houses thus occupied are nearly without windows.

“One family usually occupies one room only: perhaps a tenth part of the families of these classes may occupy two rooms.

“These houses are seldom provided with privies. The drainage of the town is, however, pretty good, and the roofs of the houses are kept in a tolerably good state of repair; but the windows in many instances are neglected and suffered to go into decay.”

Of the city of Carlisle, *Mr. Rowland*, vice-chairman of the union, reports as follows:—

“Carlisle in its main streets seems tolerably clean; but when you get into private lanes and private yards, there is filth enough. I remember, during the cholera, the inhabitants turned out, and in a body pulled down pigsties, and got various nuisances removed.

“There is one street called *Jollie's-buildings*, three stories high, and one story underground, which is let at high rents, to the poorest description of persons: many of the rooms in the lowest story are used for the reception of ashes and night-soil.

“Carlisle, though it abounds with beautiful walks, generally has them accompanied with filthy, putrid gutters, and there seems no mode of compelling any one to clean them out. The city is surrounded with such nuisances. On the south side, at the foot of *Betchergate*, there is a

gutter, perhaps a mile long, which conducts the filth of that quarter through the fields into the river Petteril. The stench in summer is very great. The filth seems to accumulate from want of descent, and probably the whole descent is in the first field next Betchergate. If this gutter was paved, and the descent made regular, I have no doubt it would keep itself clean.

“On the west side there is what is called the Dam, which formerly had a stream of water constantly flowing through it, but now only occasionally. This dam extends from Mr. Slater’s cotton-mill through a most populous part of the town, till it empties itself into the Eden below the castle. It is a broad shallow stream of filth, proceeding from all the drains in the neighbourhood, and is a convenient place for the inhabitants to empty all sorts of washings into. During the hot months the whole town is frightened that it will generate fever. If water cannot be got, it ought to be narrowed and paved; but who is to do it?”

“On the north-west side of the town, a common sewer, into which numerous water-closets, &c. empty themselves, discharges itself into an open gutter under the castle walk, and another open gutter proceeds along the bridge embankment into the Eden: the smell from each in summer is intolerable.

“On the north-east side of the town, at the bottom of Rickergate, is another stagnant gutter of a most putrid description, which also runs into the Eden. The blood from several killing shops runs into it.

“The great cause of dirt and dirty habits in northern towns is the state of the privies used in common by the inhabitants of small houses and single rooms. No one is anxious for the post of keeping them clean, and some individuals really seem to have a pleasure in dirtying them; and when the place gets filthy, they use the outside, or even the foot-paths of the streets.”

The destitution of drainage, as above described, is very fearful; but Mr. Rowland is not singular in his denunciations of the evil, nor is Carlisle a solitary instance of the want of effective drainage. The late *Mr. Nesbit*, of Stockton, one of the best relieving officers in England, (and who has since fallen a victim to typhus fever, caught in the zealous discharge of his duties,) thus reported to me on this point:—

“The drainage is very defective in some of the streets and lanes in Stockton. In Norton there is a great want of proper sewers. Drains are laid from the houses of the respectable inhabitants, and run into an uncovered ditch on each side of the street. The houses of the poorer inhabitants have cesspools and privies in the yard behind their house, but for want of a drain there is frequently stagnant water. I am informed that attempts have been made to have common sewers, but for want of a law to compel every one to contribute his portion, it could not be done.”

And *Mr. Brown*, clerk of the Teesdale union, to illustrate the necessity and utility of drainage, states:—

“The residence of the labouring population within the Teesdale union, especially in Barnard Castle and the more populous villages, is mostly in large houses let into tenements. At least four-fifths of the weavers in Barnard Castle live in such residences, and about one-half of all the other labouring poor in the union. The tenements which form

the residences of the weavers and other labourers in Barnard Castle are principally situate in Thorngate, Bridgegate, and the lower parts of the town, and in confined yards and alleys. The houses are many of them very large: I am told of some where there are as many as fifty or more individuals under one roof. There is generally, perhaps, one privy to a whole yard (or onset as they term them), embracing five or six houses. From the crowded state of these dwelling-houses, and the filthiness of many of their inmates, disease would undoubtedly arise more commonly than it actually does; but the river Tees flows at the foot of each yard, running alongside of all the houses in Bridgegate: the impurities are thus speedily carried away, and the evils which might otherwise be expected from the effluvia of vegetable and other bodies in a state of decomposition are prevented: besides which, the houses in general being large, and the poorer class in the upper stories, they are more protected against cold and damp."

II. The state of the common lodging-houses in towns is a subject of almost as frequent observation on the part of my informants as defective drainage. Thus, in regard to Newcastle, *Mr. Ingledew* says:—

"There is a considerable number of lodging-houses in Newcastle, some of the rooms of which are frequently occupied by from 15 to 20 persons each. In these houses the most deplorable scenes of profligacy and depravity are met with, both sexes being crowded together in a manner injurious to both health and morals."

Mr. Fowler, chairman of the Stockton union, speaking of the town of Stockton, observes:—

"A medical gentleman told me in Stockton this morning that, in the common lodging-houses where travelling vagrants are frequently attacked with fever, &c., and in many cases die, the beds are the very next night occupied by fresh inmates, who, of course, are infected with the same disorder."

The late relieving officer for the same town (*Mr. Nesbit*) answered a query of mine as follows:—

"I have frequently had occasion to complain to the magistrates against the lodging-houses taking in so many lodgers, but the law in this respect is so defective that they could render me no assistance. On a Sunday last July, I went to see a man (a travelling musician) who was very ill of the small-pox, and died a few days afterwards. The house contained four small rooms, and was situated in a back yard in a very narrow, confined, dirty lane. There were 40 people in the house, and they were not all in that lodged there. Four months ago I went into a room in the same yard; the room was very dirty; it was 9 feet broad by 15 feet long, and contained four beds, in which slept two men, four women, and thirteen children. I found in one of the beds two children, very ill of scarlet fever; in another, a child ill of the measles; in another, a child that had died of the measles the day before; and in the fourth, a woman and her infant born two days before; and the only space between the four beds was occupied by a tinker hard at work."

Mr. Foreman, master of the Gateshead workhouse, says, in reference to the borough of Gateshead:—

“Leonard’s-court, the entrance to which is from the main street, consists of eight houses on each side, each of them containing eight rooms. The footpath on each side of the court is flagged, but the cart-road is not paved, and all the filth that has accumulated since these buildings were erected has been thrown into the street, which has thus been absolutely raised above the level of the flags. In this court there are eight common lodging-houses, and the number of lodgers sometimes amounts to 100; at this time it is 50; eight or ten sleeping in a room upon the most unwholesome straw. The buildings are in general good, but the wretched and filthy state of the houses can scarcely be conceived. From this part many of our applications arise. It is indeed a source of physical and moral disease.”

And of Carlisle, it is remarked that—

“It frequently happens in small lodging-houses where Irish and other tramps lodge for the night, that ten families sleep and lodge in one room.”

III. With relation to the dwellings of the agricultural and mining labourers:—

Mr. Chrisp, of Alnwick, one of the largest farmers in Northumberland, states:—

“The older cottages in the country, such as were generally built by the farmer for his servants, consist of a rough wall of lime and stone, covered with thatch, and with nothing but an earthen floor, except a flag-stone or two near the hearth. Cottages of a superior description have been latterly erected by the landlord when he agrees to build, being covered with blue slate, the side walls plastered, and the floor of stone flagging; these are much more dry and comfortable, but are still seldom of more than one apartment.”

Mr. Stokoe, clerk of the Hexham union, says:—

“The cottages of the pitmen and lead-miners generally consist of two or more rooms. Those of the agricultural labourers rarely exceed one room, with such division in it only as can be effected by the arrangement of the furniture of the occupant, or by a temporary kind of partition or ‘hallan,’ all of which, together with the fire-place and its appurtenances, are removed by the tenant on quitting the premises, much of course to the detriment of the building.”

Mr. Grey, of Dilston, Receiver of Greenwich Hospital, and one of the most eminent agriculturists of the North, observes:—

“A labourer’s cottage usually consists of one common apartment, with a small room and pantry besides. We build them now with a loft for the younger members of the family to sleep in, the access to it being by a step-ladder from below.”

Mr. Spedding, vice-chairman of the Cocker-mouth union, &c., points out the probability of a sad result from the *one-room* system:—

“The rural peasantry are clean and comfortable in their homes, but there is a well-known defect bearing directly upon the bastardy department of the Poor Laws, viz., the custom of sleeping almost promiscuously, for want of separate rooms, which is very generally the case in

the superior kind of farm-houses, and I fancy universally in the small cottages.”

Mr. Woodman, town clerk of Morpeth, communicates the following remarks on the Rothbury country :—

“The cottages are not generally provided with privies, but the want is not so great as in a town. The natural drainage of the district is generally good. The country is very mountainous, the soil thin and lying upon porphyry or sandstone ; the streams flow rapidly upon rocky beds ; the little valleys upon the margin of the streams consist of a sharp gravelly soil. The only exception is the tops of the highest mountains, which are often marshy, the soil being a black vegetable mould which retains the water like a sponge. The drainage of the farm-yards is often insufficient, the water from the dunghills being permitted to stagnate in pools close to the doors of the houses. I would here particularly dissent from the opinion so strongly expressed, first by Cobbett, and then by William Howitt, that the labourers in this county occupy miserable sheds ; such is not the fact. The cottages consist generally of two rooms, built with stone, and thatched with heath, which forms a warm durable roof : they are not ceiled, and although this may not to the eye present so neat and comfortable an appearance, I am assured it tends greatly to preserve the health of the inmates by the improved ventilation it allows ; nor is there any want of warmth, as there may be in a roof of slate or tile. But I am convinced that even where the roof is formed of these materials, a numerous family would be far more healthy without a ceiling, which in many cases almost touches their heads. Any person who in the morning, when the door is first opened, has experienced the mephitic air of a cottage, even of the neatest and cleanliest, such as are met with in a park, must be satisfied of this.”

Mr. Trotter, clerk of the Auckland union, thus reports to me :—

“In this district the coal-trade has increased to so considerable an extent within the last few years as to require additional accommodation for the workmen. Houses and cottages have consequently been erected in the neighbourhood of the several collieries. The coalowners are at all times anxious to exhaust as little of their capital as possible in the erection of these dwellings, and gladly avail themselves of the houses erected by individuals at rents averaging from 7 to 10 per cent. on the outlay. The demand is, however, much greater than the accommodation afforded in this way, and the owners of the different collieries are under the necessity of building for themselves. This they do on some convenient plot of ground within a mile and a half from the colliery. The cottages are usually built in rows and squares ; and although they are very convenient and substantial in the *inside*, consisting of two well-sized rooms with a small teefall for pots and pans on the back part, still there is a lamentable deficiency on the *outside*, the houses being frequently crowded together in bad situations where the drainage is not effectual. The privies are sometimes used in common for two or three houses, and the ashes and offal are thrown out at a little distance from the door, where, from the imperfect drainage, and the piggeries, which the pitmen frequently put up for themselves in an inconvenient situation, there is an amalgamation of filth and dirt which must be very injurious to the

health of the inhabitants. The cottages are occasionally erected in low situations near the water-side, which is likewise prejudicial to the health and comfort of the inmates.

“In one or two instances within my knowledge, a plot of ground of one-twelfth of an acre has been attached to the pitmen’s cottages for their use. I, however, regret to say that I do not think it has answered the benevolent purpose intended. The ground, although used at first, has since been neglected, and I believe has in most instances been abandoned. But there is in general the appearance of comfort in the inside of their dwellings, which are clean and well furnished.”

Mr. Coulthard, relieving-officer of the Chester-le-street union, states:—

“There can be little doubt that where there are sufficient sleeping-rooms for the proper separation of the sexes, the moral habits of the inmates will assume a very different tone from that of the same description of inmates who have only a single room for all domestic purposes.

“The pitmen’s houses generally, in my district, are neat and well furnished, the furniture usually consisting of a good feather-bed, mattress, sheets, blankets, quilts, and a counterpane and hangings, the foot-poles mahogany, carved in the modern style, a double chest of drawers, a clock, a handsome looking-glass, and half-a-dozen chairs, with other cottage requisites, which altogether will cost from 20*l.* to 40*l.* The pitmen’s cottages generally present the agreeable appearance of neatness, economy, and comfort; and on Sundays and holidays, their dress is quite as neat as their cottages.

“Of the workmen employed in the iron-manufactory, the cottages of the moulders, blacksmiths, and wrights, together with their furniture and external appearance, are much the same as the pitmen’s. But the rest of the workmen do not present the same agreeable appearance; their furniture and dress are inferior to those above described; and I think they stand lower in the moral scale of society. This, perhaps, may in some degree be attributable to the nature of their employment, which is extremely hot, and which will of course have a tendency to create thirst; consequently they spend more time and more money at the ale-tap than those whose employment is in a more moderate temperature. Besides, many of the men employed about the iron-works and cinder ovens are what are here called “tramps” from different counties of England, Scotland, and Wales, who have contracted a sort of restless habit, and who consequently have not the same motive for endeavouring to secure domestic comfort as those whose comforts depend almost entirely upon the locality of their employment.”

Finally, *Mr. Archbold*, clerk of the Houghton-le-Spring union, also says:—

“Pitmen’s cottages at most of the new collieries are better built than those at the old ones, and the situation of the villages is decidedly better chosen, being usually upon sloping ground, by which means water does not stagnate and filth of all kinds is swept away by a shower of rain. With very few exceptions, the pitmen’s rows (as they are called) at old collieries, are built upon dead levels, and where the drainage, &c., it is not attended to, the filth is often suffered to accumulate till it be-

comes a great nuisance. I would particularly point out South Hetton and a colliery village near Kelloe in support of my views.”

IV. I mentioned in my first report, that I proposed on a future occasion to consider in detail how far we have it in evidence that cases of fever or other disease are attributable to the want of drainage and cleanliness in the cottages or tenements of my district. The returns with which you have been furnished by the medical officers will, no doubt, have placed you in possession of a large amount of exact information on this subject; but I do not therefore think it superfluous, with reference to a question of so much importance, to extract from the communications that have been made to me such additional particulars as may contribute to produce a correct impression of the magnitude and extent of the evils arising from these sources. I have, however, been able to meet with but few cases in which any reports of the Boards of Health, established during the prevalence of the cholera, have been preserved; and I have included in the subjoined extracts all the information that I have obtained from such reports:—

Mr. Ingledew, of Newcastle, states that—

“Cases of fever often occur in, and are attributed to, the old ill-ventilated and damp houses, rendered worse by the want of cleanliness on the part of the occupiers.”

Mr. Chrisp, of Alnwick, observes:—

“I have frequently heard medical gentlemen attribute disease to want of drainage and ill-ventilated damp cottages. The village of Shilbottle was noted as being scarcely ever free from typhus fever; but three or four years ago, upon this being represented to the noble proprietor (the Duke of Northumberland), an old quarry, constantly standing full of stagnant water, was filled up, and disease has not been so prevalent since.”

Mr. Atkinson, the very intelligent and well-informed relieving-officer of Berwick upon Tweed, reports:—

“One of our paupers recently died of fever, in a house situate in a lane called the Narrow Lane, and very properly so, as its breadth is not nine or ten feet. In this lane, and I think in the same house, the cholera originated a few years ago, and also the typhus fever, by which so many deaths have occurred in Berwick lately. In consequence of the death above alluded to, I have had to remove three children to the workhouse to avoid the fever, and I brought the matter under the consideration of the Board of Guardians yesterday, for the purpose of getting their permission to allow me to get these premises fumigated and properly cleaned with hot lime, &c. It is much to be regretted that the justices have no legal authority to make it compulsory on landlords or their agents to see that the houses which are occupied by so many families are kept in a state of cleanliness, and to provide privies and ash-pits suitable to the extent of the premises and number of families.”

Mr. Sinclair, the able auditor of the Berwick union, communicates the subjoined important facts:—

“ In 1832 I was secretary to the Board of Health for Berwick, and I well remember that nearly all the cases of cholera which happened (and the mortality was two out of every three) were of persons occupying single rooms in the dirty and closely-populated parts of the town: and so also during the last summer, several cases of typhus fever occurred in Berwick, which mostly terminated fatally: the persons so attacked were of the labouring class, and lived in single rooms.”

Messrs. Reed and Brunton, clerks of the Sunderland union, report that—

“ Infectious diseases and fevers are more frequent amongst the habitations of the poor than the more commodious houses of the rich; and there can be no question that diseases, if not absolutely engendered by bad drainage and the want of proper ventilation in places densely inhabited (which there is every reason to believe is the case), are at all events greatly aggravated and rendered more destructive of health and life, and less manageable by medical treatment. This was made apparent in the winter of 1831-2, when the town was visited with cholera. On that occasion there were some instances of the people residing in the airy parts of the town being attacked with the disease, and falling victims to it, but they were rare; and for the most part, the ravages of the disease were confined to the badly ventilated and densely inhabited parts of the town.”

Dr. Mordey, of Sunderland, writes thus:—

“ This town was found, when the cholera broke out amongst us, in a very deplorable state, both as to the wretchedness of the poor and the filthy condition of the streets and lanes, more particularly in the parish of Sunderland. The dwellings were crowded, filthy, and bore every appearance of extreme want, and it was found that many people were existing on the lowest possible scale of nourishment, and clothing was deficient amongst them. The streets and lanes were equally neglected and filthy, nay disgusting, as every impurity was allowed to remain exposed, and many people were found who had accumulated quantities of manure in their houses. The moor was allowed to remain undrained, the exhalations from the ditches were noxious, and if the disease did not make greater havoc amongst us it was mainly owing to the sea-breeze passing freely over the moor, ventilating and purifying the streets and lanes exposed to its influence.

“ This town, owing to its situation, is well adapted for being well-drained, but either from negligence or ignorance, there are no common sewers of any extent, except those in the High-street. The scavenging is loosely and badly performed, through the careless inspection of the surveyors, and with the exception of the High-street, the streets are seldom or never swept, and if they are, the mud is allowed to remain in heaps until it is retrodden to its former state. There appears to be little or no arrangement made for the accommodation and convenience of the poor, which makes their habits filthy and disgusting. Much might be done by the corporation insisting upon the narrow lanes being kept more orderly and cleanly.”

Mr. Grey, vice-chairman of the Stockton union, observes:—

“ Upon the first appearance of the cholera a committee was formed to

take such measures as were deemed most expedient for the health of the town ; but their exertions appear to have been directed altogether to the abatement of public nuisances, and considerable improvements were effected in sewers, drainage, &c. under their superintendence. Dr. Keenlyside informs me that many of the dwellings of the lower classes were found in a most filthy and unwholesome state, and were white-washed and otherwise cleansed by order of the medical attendants at the public expense."

Mr. Fowler, still speaking of Stockton, adds :—

"The medical men, in their reports to the Board of Guardians, have frequently stated fever to have arisen from the want of proper drainage. I have endeavoured to prevail upon the owners of one street in particular in Stockton to make a drainage, but without effect. The street is hardly ever free from fever."

Mr. Brown, of Barnard Castle, continuing his report, states that—

"A surgeon of great intelligence and practice in the town of Barnard Castle has always found the most obstinate cases of typhus and other epidemics, and also rheumatism, to prevail amongst the houses on the west side of the principal street. These houses slope towards the moat of the old castle, which is not sufficiently drained ; and the thick and high walls of the ruins of the castle retain the damp and prevent the accession of the western winds to the moat and many of the houses. In the interior of the castle, now used as a garden, there is a stagnant pond which ought to be drained off ; this pond is nearly opposite the yards which are full of the residences of the poorer classes, and called the Swamp. Disease is often found to exist in these yards, and the surgeon I have referred to attributes to it the dampness of the moat (upon or on the margin of which the houses are built) and to the pond before mentioned. All the houses on the west side of the street have one step, and some more, down from the street. I am also told by the same surgeon that very many of the cases of fever and rheumatism which he attends may be fairly traced to the dampness of houses or want of sufficient drainage of the ground previously to building, and their being built below the level of the adjoining ground, by which the moisture is thrown into them."

Mr. Mounsey, clerk of the Carlisle union, says in his report to me—

"I know of no cases of fever or other diseases attributed to the bad state of repair of the dwellings ; but when the cholera raged in Carlisle there were the greatest number of cases in the dwellings near the English and Irish Damside, which was attributed to the imperfect supply of water down the dam race, into which all the drains and sewers in that part of the town empty themselves ; consequently there was then and still is a great quantity of stagnant water and filth, which cause a most disagreeable effluvium in the neighbourhood. In fact it is much worse now than it was at that time, the Corporation dam across the river Caldew having given way, by which the dam was supplied with the surplus water from the mills : it is at present the greatest possible nuisance. The cases of cholera began near Messrs. Cowan's mill, and raged down

the damside, few cases occurring in any other part of the town. There is also the greatest proportion of fever cases in this neighbourhood. Common sewers or drains are also very much wanted in all the other parts of the town."

Mr. Brisco, chairman of the Whitehaven union, writes:—

"At Low Mill there is now a family of the name of Jackson suffering from typhus fever, arising, I consider, from want of ventilation and damp situation, and from the room in which they live being above a room filled with potatoes, which decay very fast from the place being so damp. There is no plaster between this potato-room and the inhabited room above. Another family at Low Mill has had the fever, and one of them, a girl, the mother of an illegitimate child, has died of typhus. This case of fever, I consider, has arisen from the family (consisting of nine persons) inhabiting only one room and two closets, the whole space within the outer walls being not more than seven yards by five, and also from there being a low wet pigsty and dunghill within two yards of the door, so that no air could come in at the door except over the stench of the sty and the fermentation of the dunghill. The name of this family is Rothery. The whole of the population at Low Mill inhabiting the row of cottages are constantly more or less suffering from diseases, arising, I think, from the following causes, viz., the great number living in each house, the dampness of the houses, owing to their being built against high ground behind, and the constant wet state of the ground close before their houses, about five yards broad, arising from a total deficiency of drains, and from a row of wet pigsties across this space, containing pigs or ashes, or manure. The only circumstance which saves them from some awful visitation is the river passing close beyond the row of pigsties."

Mr. Woodman, of Morpeth, in reference to the same point, says:—

"The only instance I am aware of in this neighbourhood of a contagious disease prevailing to any extent was at Ulgham, about 1832. The disease, as I am informed by my friend, Dr. Hedley, was typhus fever, and commencing at one house in the village, gradually spread from house to house until every cottage at both sides of the *lower* end of the village was attacked with it. Now at the eastern or lower part of the village is a piece of very flat marshy land, and beyond it a pool of stagnant water: these, I have no doubt, were the origin of the miasma; and as far as its influence extended, the disease spread, while the upper end of the village, which is perfectly dry, was entirely exempt from disease."

Mr. Foreman quotes the following description of the state of the town of Gateshead, written at the time of the visitation of the cholera; adding that he is quite sure that there is no change for the better:—

"It is impossible to give a proper representation of the wretched state of many of the habitations of the indigent, situated in the confined streets called Pipewellgate and Hillgate, which are kept in a most filthy state, and to a stranger would appear inimical to the existence of human beings, where each small, ill-ventilated apartment of the house contained a family with lodgers in number from seven to nine, and seldom more than two beds for the whole. The want of convenient offices in the neighbour-

hood is attended with many very unpleasant circumstances, as it induces the lazy inmates to make use of chamber utensils, which are suffered to remain in the most offensive state for several days, and are then emptied out of the windows. The writer had occasion a short time ago to visit a person ill of the cholera. His lodgings were in a room of a miserable house situated in the very filthiest part of Pipewellgate, divided into six apartments, and occupied by different families to the number of 26 persons in all. The room contained three wretched beds with two persons sleeping in each; it measured about 12 feet in length and 7 in breadth, and its greatest height would not admit of a person's standing erect; it received light from a small window, the sash of which was fixed. Two of the number lay ill of the cholera, and the rest appeared afraid of the admission of pure air, having carefully closed up the broken panes with plugs of old linen."

The *Rev. H. Lowther*, speaking of Workington, mentions that—

"The houses of those who fell [in the cholera] were generally of the most filthy description, many of them having pigsties close to their rooms."

Mr. John Steel, of Cocker-mouth, clerk to the magistrates, adds, that—

"With very few exceptions, the cholera selected the indigent, living in crowded, ill-ventilated places, more particularly if in low confined situations on a level with the water."

And to conclude this section, *Mr. Thomas Miller*, relieving officer of Wigton, thus reports his experience:—

"I may particularly name Golden Square, where fever often prevails. One room, a few steps below the street, is subject to be flooded every rainy day, and from this cause is never dry. The family who occupy it have been constantly on the sick list."

V. Respecting the improvement apparent in the condition of labourers who occupy improved tenements in superior situations, I have several communications in point:—

Mr. Wilson, relieving officer of Newcastle, reports that—

"Prudent labourers in full employment generally occupy better tenements, and the condition of their families is consequently superior to those living in poorer tenements, although earning the same amount of wages."

Mr. Bell, relieving officer of Alnwick, states that—

"The general condition of labourers who occupy improved tenements in superior situations is in every respect superior to that of labourers under the bondage system.* Some of the above description of labourers are also engaged on the bondage terms, but they merely avail themselves of this to secure constant employment."

* Since this Report was written, a very able and interesting "Appeal in Behalf of the Peasantry of the Border," has been published by the *Rev. Dr. Gilly*, which forcibly exposes the wretchedness of the bondager's habitation, at the same time that it upholds (most justly) the other advantages of the bondage system.

Mr. Grey, of Dilston, observes:—

“An improvement in their dwellings, and better accommodation, contribute much to the cleanliness and comfort of the families, and give them habits of order and neatness. I have often observed labourers’ families, when moved from a bad cottage to a better, exert themselves to gain advantage by their superior accommodation, in the improvement of their furniture, and in the greater order and cleanliness of all their establishment.”

Mr. Pyle, of Earsdon, a medical officer of Tynemouth union, says:—

“I have always observed that the condition of the labourer is improved by his proximity (in point of dwelling) to a higher class, especially when the latter take an interest, and exercise an influence, over him: in such cases he is more happy, more contented, and a more respectable member of society than the labourer who is less advantageously situated. Of this we have instances here as elsewhere.”

Mr. Sinclair, of Berwick, communicates that—

“The improvements in the cottages in rural districts are so recent that no visible change in the condition of the labourers can yet be stated. In town, the rooms occupied by mechanics are undoubtedly better; and the wages being higher, the general condition of such persons, both as to furniture and clothing, is of a higher grade. My knowledge does not enable me to point out individual cases, but still I have a general knowledge of the inmates of tenements in town.”

Mr. M. W. Swinburne, of South Shields, observes that—

“Very great improvement is perceptible in the dwellings of those who have separate sleeping apartments and requisite conveniences. In general the ventilation of cottages and tenements is bad, but this is much to be attributed to the habits of the poor, few of whom fully understand the comfort of a clean and wholesome dwelling.”

Mr. Tweddle, relieving officer of Darlington, details the following interesting circumstance:—

“The tenements of the labourers are very much of the same description, the principal difference being in the size of the garden, which when large enables the labourer to feed a pig and sometimes to keep a cow; and the larger the garden, the greater are the industry and sobriety of the occupier.

“With respect to cottage gardens, I think it right to name a circumstance which took place in one of the townships of this Union. About eight years ago, a piece of boggy ground, left by will to the poor of the township, not worth 5*s.* per acre, was drained by the vicar of the place at an expense of about 15*l.*, and divided into eight gardens, containing 30 perches each. These gardens were let to eight cottagers with large families, who previously to that time were, with the exception of one, constantly in receipt of the parish funds during winter. The rent fixed for each garden was 10*s.* clear of taxes, tithes, and rates, and premiums of 5*s.* and 3*s.* were offered for the best and second-best cultivated patches. As soon as they obtained possession, they set to work with alacrity and perseverance. The first crop produced was only a medium one, failing principally from the land being drained too late in the spring

season, which prevented them from getting it planted with potatoes at the proper time; but the next year, and every year since that time, the crops have been most productive and beneficial to the cottagers, enabling them to supply their families with potatoes and vegetables, and also to keep a pig. Besides, a spirit of rivalry is kept up to this day by the premiums, each trying to excel his neighbour in the neatness and productiveness of his little farm. And to crown the whole, a spirit of independence immediately arose among them, so that with the exception of one, who was taken seriously ill this summer, and continued so for some time, neither the overseer nor the relieving officer has had occasion to visit their abodes with a view to administer relief for the last eight years."

Mr. James Gray, clerk of the Chester-le-Street union, states that—

"Where the situation of the labourer is attended to in regard to his domestic comforts and conveniences, it has a most decided effect upon his habits both as regards industry and the fostering of a spirit of independence."

Mr. Mounsey, of Carlisle, reports that—

"Agricultural labourers, living in the country, with a comfortable cottage and garden, are certainly much better off than those living in Carlisle and earning little more than a common weaver without being able to get agricultural employment for their families, many of whom are brought up to weaving. There is little doubt that spinners and mechanics with families between 10 and 18 years of age earn more wages than labourers with families of the same age, but their means of expenditure make them worse off. Weavers living in the country and earning the same wages as those in the town are, generally speaking, industrious and much better off than those in the town. The increased comforts of a country labourer, with a more comfortable dwelling, better fed and clothed, his family always under his eye, and contented with his situation in life, tend to elevate him much above town labourers, and to withdraw him from public-houses and the habits of intemperance to which they lead. His example, too, together with the advantages of a village-school, has a salutary influence on the habits and morals of his children, and ensures to their parents in return a little pecuniary assistance in their old age."

Mr. Hasell, chairman of Cumberland and Westmoreland, writes in reference to the neighbourhood of Penrith, that—

"There must be a few exceptions in all cases of this sort, but I should say that, generally speaking, the country cottages in this district are of a superior description, placed in healthy situations, kept very clean by the labourers' wives, who are very active and industrious, and that there are no circumstances about them likely of themselves to create disease."

Mr. Benn, agent to the Earl of Lonsdale, corroborates *Mr. Hasell*; he says:—

"Most of the cottages in this district have a day-room, two bed-rooms, pantry, and other conveniences. Many of our cottages are fitted up from ancient tenements belonging to the yeomanry who have sold their estates, and the land having been laid to other farms, the buildings make very roomy and comfortable dwellings. The condition of our

labourers is of course much better than that of those less advantageously situated."

And lastly, *Mr. Brisco*, referring to Whitehaven, observes:—

"In this district there are no cottages with a day-room, scullery, pantry, three bed-rooms, and convenient receptacles for refuse, and for fuel; but my father, *Sir W. Brisco*, living in the Wigton Union, has provided these accommodations for his labourers, and the consequence has been an astonishing improvement in all respects, particularly in the labourers' cleanliness and sobriety."

To the instructive facts which the above unexceptionable evidences supply, it would, I conceive, be quite superfluous to add further explanatory comments or more detailed illustrations; I only permit myself, therefore, to place summarily before you the points, as I apprehend them, that these evidences necessarily tend to establish, viz. :—

1st. That in *urban districts* the want of drainage is as notorious as it is alarming.

2ndly. That lodging-houses are but receiving and reproducing agents of the most abominable nuisances—both physical and moral.

3rdly. That the generality of the cottages of labourers, and, to a certain extent, of the house-rows of miners, although suffering far less from defective drainage and ventilation than town tenements, have yet their own peculiar (but easily remediable) evils: among which, however, that of the sleeping-room, common to the labourer's whole family—men and women, girls and boys—is the most serious.

4thly. That to bad drainage and ventilation the worst ravages of the cholera are traced by several of my witnesses; whilst the popular voice ascribes to the like causes (and seemingly with one accord) the continuous existence and fatal consequences of fever in particular places.

5thly. That labourers who occupy a better class of cottages in well-chosen situations are generally allowed to be more cleanly and more healthy—more industrious and independent also—than those less favourably situated; in support of which interesting point let me, in conclusion, beg your attention as well to the statement of *Mr. Tweddle*, of Darlington (one of the best relieving officers in my district), as to *Mr. Brisco's* very valuable testimony respecting the success that has attended *Sir W. Brisco's* endeavours to elevate the condition and habits of his peasantry through the medium of improved habitations.

I have the honour to be, Gentlemen,

Your very obedient servant, J. W.

No. 26.

THIRD REPORT

ON THE STATE OF THE DWELLINGS OF THE LABOURING CLASSES
IN CUMBERLAND, DURHAM, NORTHUMBERLAND,
AND WESTMORELAND.

BY SIR JOHN WALSHAM, BART.

Newcastle-upon-Tyne, 10th June, 1840.

GENTLEMEN,—Adverting to the Reports which I have already had the honour to submit to you, in reply to your Circular of the 11th November last, there remain two questions to which you have invited my attention, and upon one of which I have not yet had an opportunity of commenting, whilst upon the other I am desirous of bringing under your notice several illustrative communications with which I have been supplied, in addition to those referred to and tabularized in my Report of the 16th April last. Of these questions, one relates to the expediency of a legislative measure in the nature of a Building Act, and the other to the propriety of either exempting small tenements from the payment of rates, or collecting them from the landlord.

I. On the necessity of a Building Act in large *towns*, the parties to whom I have applied for information, and whose practical experience renders them most able to afford it, are almost unanimous.

Mr. Robert Plummer, one of the magistrates of Newcastle has favoured me with some very valuable observations on this subject, which I do myself the pleasure of presenting to you at length. After premising that as his experience is for the most part limited to town and suburban districts, he shall confine his observations chiefly to the class of tenements that belong to them. *Mr. Plummer* says,—

“First, then as to the expediency of a Building Act. In many respects such an Act is desirable, say in regard to sewerage, to receptacles for refuse, and other out-door conveniences, to the prevention of the spreading of fires when such occur, to the supply of water for personal and domestic use, to ventilation, to the internal arrangements of each separate tenement, and to the general arrangement of the buildings built for or containing tenements so as to keep each family as distinct as the nature of the case will admit of.

“It is to be observed that in this district (and I believe in towns generally, not excluding, in this particular, even streets for superior buildings), sewerage is for the most part greatly deficient, and in suburban districts there is frequently none, or only open drains; that receptacles for refuse are sparingly supplied and sometimes wholly omitted, and privies for the most part are wanting; [that arrangements for saving rain-water or meeting the increase of population by increasing the supply of water by artificial means are little thought of, and the rain-water is commonly allowed to run to waste; that the partition walls are imperfect, and the general style of building is ill calculated to delay the

progress of fire ; that the ventilation, especially of inner rooms, where there are any, is not regarded ; that the internal arrangements amount to almost nothing, each tenement being confined to one apartment ; and that, in order to save expense, one door-way commonly serves four and sometimes more families, and one staircase two or more families, thereby making the comfort of three or more families subservient to the conduct of one, and this is a frequent source of ill-will, discourtesy, quarrelling, and crime.

“ I am decidedly of opinion that in so far as a general Building Act could be made to embrace these particulars, and induce an improvement upon the present state of them, it would be highly useful. This Act might very well be made to apply to all tenement houses to be built after a certain day, and after a limited number of years to include all tenement property whatever, so as gradually to bring the property already built under its operation. It is very doubtful whether all these objects should be included at first, as, until the public saw the beneficial working of the measure, they might be disposed to think too tight an Act as being an uncalled-for interference with private property, speculation, and emolument, especially as for a time the inferior and less costly old tenements would, in rent, compete powerfully against the new and more costly. There should also be, I think, a separate provision in the Act for old property when converted into tenements. In the progress of towns, what were once good situations often become inferior ones, and a conversion of the property becomes necessary : it is clear, however, that such a conversion must depend largely upon the nature of the existing buildings, and the arrangements in this case cannot, excepting at great cost, be made so complete as if the ground were unbuilt upon.

“ In this town, the practice is for a workman’s family to live in one room only ; of course there are numerous exceptions to this, but the general practice is so, and the tenements are built with that view.

“ In respect to the ability of the working classes in towns to pay an additional amount of rent commensurate with the increase of convenience a Building Act would secure to them, I have no doubt that they are quite able, generally speaking, to do so. The usual rent of a room in and about Newcastle is 3*l.* per annum. Some may reach 4*l.*, and some are a little under 3*l.*, according chiefly to size. I speak now of rooms usually occupied by workmen, artificers, and the ordinary class of labourers. This sum is a fraction under 1*s.* 2*d.* per week ; and when it is considered that the wages of these parties run between 15*s.* and 40*s.* per week, the bulk being at about 21*s.*, it must be evident they can afford to pay an additional rent. Not a few workmen earn more than 40*s.* per week, and the lowest class of labourers 12*s.* ; and it must always be borne in mind that where there is a family, the receipt in wages is for the most part greatly increased by the earnings of the younger branches.

“ I think, then, that a Building Act might be devised that would secure many essential benefits to the working classes. The points I would most insist upon are :—

“ Separate entrances ;

“ Receptacles for ashes and refuse ;

“ Privies ;

“ Each room to have one window to the day ;

“ Sufficient party walls ;

“The buildings not to be above two stories high when the rooms or floors are let separate; and sewerage and rain gutters or spouts.

“The main sewerage in existing public streets and roads should be made to fall upon the property rateably; where an entirely new plot is laid out the proprietors should be compelled to provide sufficient sewerage in the first instance, and the maintenance should afterwards become a public charge. This would require that inspectors should be appointed, and a provision should be made for appointing these in each locality.”

Mr. Plummer's opinions and suggestions are fully borne out by the subjoined statement from Alderman Reed, of Sunderland, which, whilst treating of a Building Act, reverts again to the painful subject of bad drainage and its results:—

“It is my decided opinion that a Building Act would be eminently useful, and would be a great boon to the labouring classes. In the parish of Sunderland (with which you know I am most intimately connected), I am afraid we are past redemption. We have not an inch of ground in the parish but what is built on; and the great mass of the houses in the parish are densely crowded with human beings, for whom there is no convenience in-doors, and in the great majority of the lanes there is not a drain from one end to the other. These two evils, with the antipathy of too many of the labouring classes to habits of cleanliness, render their abodes the nurseries of fever, and, I think, I may safely say, that fever never fairly leaves them. But setting Sunderland aside as incurable (for I cannot see any remedy at all except in a system of drainage on so large a scale as to be beyond the means of the present paving boards to accomplish), I find that the New Town* (as it is called) of Bishopwearmouth is built with little more regard to the health and comfort of the inhabitants. The houses or cottages are certainly not so high, nor are the streets (if they may be so called) so narrow, as in the worst parts of Sunderland; but there is an equally complete disregard of order and irregularity; and drainage is a word that seems blotted out of their vocabularies. It is truly lamentable to see neat little cottages, just built, which ought to be the abodes of comfort and cleanliness, with a dunghill and a morass almost at every door. And what makes the want of sewers more apparent here than in Sunderland is the want of pavement, so that the filth which is continually thrown down soon wears away the soil and makes a deposit hole which even that best of scavengers, a deluge of rain during a thunder-storm (and which we often rejoice to see in Sunderland), cannot purify.

“I know not sufficient of the nature of the Building Act to which your papers refer to go into much detail on the subject; but I am of opinion that the Legislature would confer a great boon on the labouring classes in particular and on the public generally, were they, in such an Act, to make it imperative on a person opening out a new street, that before he laid the foundation of one house he should thoroughly provide it with ample sewerage.”

Mr. Cowen, the chairman of the Gateshead union, corroborates the opinion expressed by *Mr. Plummer*, as to the ability of the town labourer to pay an increased rent for increased comfort. He observes:—

“I am of opinion that if a legislative measure in the nature of a

* By the New Town, I mean that part which lies mainly to the north-west of Bishopwearmouth church, and which is composed almost entirely of cottages for the labouring classes.

Building Act, to regulate the building of cottages, could be so framed as to meet the object for which it would be intended, much benefit would result from it. I think the labouring classes in towns, whose wages generally are good, could afford to pay a little additional rent for increased comfort and accommodation; but in the rural districts, where the wages are much less, I fear this would hardly apply: yet even in the rural districts, if such additional comfort was afforded, I think the labouring classes would be much benefited by it, and might pay a little more rent for such increased accommodation."

Mr. Heysham, late mayor of Carlisle, says:—

"I think there can be no question that many of the diseases so very prevalent among the labouring classes may be attributed in some measure to imperfect ventilation, want of cleanliness, &c., in their dwellings, and also to the want of out-door convenience. If, therefore, any legislative measure could effectually remedy these evils, it would be productive of unmixed benefit to all classes of society, and more particularly so in large manufacturing towns." *Mr. Heysham* adds, indeed, "But it must also be recollected that these improvements will be attended with additional cost, and at present I am fully convinced that the great majority of the working classes in this country could not afford to occupy tenements of this description.

Mr. Brisco, however, the chairman of the Whitehaven union, observes:—

"I believe that if the houses were built on a better plan, as to convenience *in* the house and *outside*, the inhabitants would be much more frugal, cleanly, healthy, and happy, and much better able to pay a somewhat higher rent under those circumstances, than to pay the present rents under existing circumstances."

Speaking of the Rothbury Union, *Mr. Woodman*, the then clerk, says:—

"I do not think any legislative measure to regulate buildings is required. But," he adds, "in towns, I certainly think such an enactment would be attended with the most salutary consequences; even in such small places as Morpeth and Alnwick it is desirable."

II. In regard to small towns and rural districts, however, the opinions of my correspondents on the necessity of a Building Act are conflicting. *Archdeacon Headlam*, speaking of Barnard Castle, observes:—

"From the inquiries I have made in this neighbourhood, it does not appear that a legislative measure in the nature of a Building Act would tend to introduce any improvement in building dwellings for the labouring poor. Great improvements have taken place in this respect on many estates of this district within the last 20 or 30 years, and I do not think that a compulsory law would increase this tendency to improvement."

Whilst *Mr. Brown*, the clerk of the Teesdale union, seems to imply that a Building Act would be beneficial, he says:—

"I have to observe that, in my opinion (corroborated by that of medical men with whom I have conversed), some of the sanitary requisites in the building of labourers' tenements would be, the previous draining of the ground; and, if a cellar is not made underneath for their coals

and the rooms boarded, that the ground-floor should be a little raised above the level of the street or adjoining ground; the walls not to be under a given thickness; the fire-places to be so constructed as to throw equable warmth over the rooms; and the windows to have moveable ventilators. After all, much depends upon the habits of the inmates, and their disposition to cleanliness and order."

And *Mr. Sinclair*, the auditor of the Berwick union, states:—

"I do certainly think that a Building Act is necessary. Many of the country cottages are in a miserable state; and the circumstances of the landlord do not generally seem to be the reason why better ones are not built. It is true that where new ones are being erected, they are improvements on the old ones in point of finishing; but there is not any uniformity of accommodation, or any attempt to construct them with a view to an economical management of fuel either in cooking or in maintaining a proper temperature in the rooms."*

Moreover *Mr. Hasell*, chairman of the West Ward union, &c., speaking of a rural district, observes:—

"With respect to a Building Act, although it is perhaps difficult to legislate on such matters, the evils resulting from imperfect drainage, want of privies, and above all, want of sufficient separate bed-room accommodation are so manifest, that I should say a remedy ought to be attempted. As such improvements would apply not so much to size of building as to superior arrangement, I do not see why they should burden the labourer with much increase of rent. If any increase took place it would at all events be small, if such improvements became general, and would be far more than counterbalanced by the advantages resulting to the labourer in the way of health, cleanliness, and want of temptation to immorality."

But *Mr. Spedding*, vice-chairman of the Cocker-mouth union, adds:—

"I doubt if a Building Act would be of any service here, unless the Boards of Guardians could, by any securities against abuse, be made the rent-payers. But I believe very great and general benefit in point of health would arise from giving the Boards of Guardians power to build privies, in number and locality at their discretion, and to keep them in decent order, and also power over the general cleansing and draining of towns and villages, both by enforcing private and parochial liabilities in that respect, and also by incurring expense in case of need, and providing for it out of the rates. The utmost expenditure that could arise under such a power would be moderate, and probably a negative quantity compared with the saving under the head of sick and medical relief almost certain to be effected by it, and soon too.

"A Building Act might possibly be of use in large towns and populous manufacturing districts, where builders are in the habit of making speculations or investments in cottages for the poor, and where employment and wages are such as to afford in rent the interest of the outlay; but here, if it operated at all, it would be to hamper if not to repress improvements. It is clear that, considering the matter generally, you can supply the poor with improved habitations only by making them directly or indirectly pay for them. The object, therefore, is to raise the

* See also Dr. Gilly's "Appeal in Behalf of the Border Peasantry," with reference to the same district of which Mr. Sinclair speaks.

plebeian standard of convenience, and to make a taste for rational daily comfort supersede the present rage for sensual excitement. To this end I think a law might conduce which gave the Guardians power to build or rent a few *model cottages*, and sublet them to the most deserving of the out-relieved paupers, by way at once of example and encouragement. Consider whether such a plan could not be concocted without containing within itself the seeds of financial failure. In the meantime, however, and pending all such questions, the more I reflect upon my former suggestion as to making all Guardians 'ex-officio scavengers,' the more I am confirmed in my conviction that it is, under present circumstances, the most immediate practicable improvement in a sanitary point of view. In this district, which is naturally healthy, wherever fevers *prevail* and recur, they are traceable to *removeable* causes; but the people themselves are inert; their thoughts are engrossed by the great business of finding daily food; and they will not listen to any lectures upon the theory of infection, or the connexion between dirt and disease. If taught this by a few practical examples, they would soon become co-operative agents in the important business of cleansing."

The *Board of Guardians* of the Cocker mouth union, however, thus report their collective opinion:—

"That if some legislative provision should be made by which the builders of cottages should be compelled to pay more attention to the planning and laying them out before built, and to the future keeping of them in repair, with proper cesspools and drainage, and a plentiful supply of good water, it would materially tend to the diminution of disease and lessen the privations which too many of the manufacturing and labouring population suffer, partly from the want of such conveniences, but more especially from the high price of provisions, which at this time exceeds the remuneration which the labourers and certain classes of manufacturers receive for their labour."

On the other hand, the *Rev. Richard Matthews*, chairman of Wigton union, says:—

"I beg leave to state that, in my opinion, so far as regards this part of the country, any legislative measure in the nature of a Buiding Act would be inexpedient, the dwellings of the labouring classes here being in general equal to their habits of life and means of subsistence. Those that reside in the town of Wigton do not receive higher wages than those of a similar class who live in the country, and are therefore not better able than the latter to pay for increased accommodation in their houses. Cottages in the rural districts have in many instances, when landed property was more divided, been small farm-houses, and are, to say the least, proportionate to the condition of the persons who inhabit them. In short, the poverty of the labouring classes must be diminished, and their intelligence and prudence increased, before better dwellings than those they now occupy would be of any use to them. Not only an ability to procure, but a *taste* also for, the decencies and comforts of life must be imparted, before they can be enjoyed."

And to conclude this portion of my inquiry, *Mr. Crackanthorpe*, chairman of the East Ward union, &c., remarks:—

"The district comprised within this Union is, as you are well aware, almost entirely agricultural, and only contains the two small towns of Appleby and Kirkby Stephen; and from the general observation which

I have been enabled to make of the condition of the cottages in the villages and rural parts, I am decidedly of opinion that no legislative measure in the nature of a Building Act is required. The houses are in general quite sufficient for the accommodation of a labouring family; and although they do not always contain what, if all our wishes were fulfilled, may be by some considered necessary, nevertheless they are upon that scale that I do not think any interference on the part of the Legislature would be justified. I beg, however, to limit my observations strictly to the agricultural districts in this neighbourhood, as I can easily conceive that in large and populous towns some regulations may be required for the health and comfort of the population which are not at all applicable here."

III. On the subject of rating small tenements, of which I have already made brief mention in my first Report, there is no difference of opinion in my district. *Mr. Plummer's* observations thereon are these:—

"The payment of rates by cottages is an important question; but after giving it much consideration, I incline to the opinion that all property in use ought to pay. I arrive at this conclusion chiefly from a consideration of the high rents paid by the lower orders, for they appear to suffer in this matter as in every other—they pay the highest in proportion; this arises in great part from the necessity of the case, from the additional risk and trouble that attach to low property. Generally speaking, 1000*l.* laid out in great houses will not yield nearly the amount of rent that the same sum laid out in tenement property will. It appears to me, therefore, that no good reason can be given why tenement and cottage property should not pay rates. The difficulty is, who should pay them, the landlord or tenant? I think the easiest and simplest, and, considering the rents, the proper plan would be to make the landlord liable to rates for all dwellings with or without appurtenances let at under a certain sum, say 6*l.* or 8*l.* Stables, byres, detached shops, &c. let separately, it would be advisable, perhaps, to rate the tenant for. For all property, to the rates on which the landlord is made liable, it would be desirable that there should be as little opportunity left open for disputes as possible; and therefore a system of fixing the value on which the rates shall be charged should, in my opinion, be devised, which should serve, say for three, five, or seven years, similar in plan to the system of tithe commutation, the party paying of course rate only upon such portion as is occupied from time to time when the rate is laid on. The overseers might be empowered to lay the rate on as at present, subject to an appeal to the rate-payers; or the overseers might have power to call in a local sworn valuer to assist them. Difficulties there would no doubt be in commencing such a system, but it would, I think, soon work well. The valuers to be sworn at the special sessions held annually for passing overseers' accounts; and they might, perhaps, advantageously be made officers elective by the rate-payers, and be subjected to annual re-election.

"I do not think exemption from the rate has the effect of deteriorating the quality of tenement buildings; the question is one of rent.

"At present a different practice prevails in different localities; in some districts tenements are rated—in others not. In this neighbourhood the general practice is not to rate them, unless the tenements are

taken by collieries or manufactories, and this not universally so, some parishes and townships acting differently. At South Shields, I believe, tenements are all rated. Certainly no valid reason can be given why they should be rated in one place and not in another, and it would be very desirable to assimilate the practice."

Alderman Reed, of Sunderland, in addition to his replies to the printed queries which I have tabularized in my first Report, remarks:—

"With regard to the second point of the inquiry, viz., as to rating, I cannot say that it has ever come under my observation that tenements have been built purposely of such quality and appearance as to prevent them being rated. Landlords of such like property know very well that the tenants their houses are intended for cannot, from their circumstances, be called on to pay the rates; but with regard to the statement that the benefit of the exemption goes to the landlord, I can fully bear it out; and I am confident that in the great majority of cases the rates on such property, instead of going into the hands of the parish officer in aid of the parish funds, actually go into the pocket of the landlord, in the shape of an increased rent, which he receives and often *claims on the ground of such exemption.*"

Mr. Tinley, the chairman of the Tynemouth union, says:—

"I am decidedly of opinion that *no kind of property* should be exempt from payment of poor's rate; but I think whenever a house is let to more than two tenants, the landlord ought to be liable. I know scores of cases where a house occupied by four or five tenants produces one-third more rent than a similar one in the occupation of an individual, and the only drawback is the chance of occasionally losing a portion of your rent."

Mr. Cowen, speaking of the Gateshead union, states:—

"I have often thought it desirable that as great a number of the labourers' cottages as possible should be rated to the poor's rate in order to prevent imposition by the parties who receive parochial relief; but I have seen the difficulty of collecting rates from the occupiers of small tenements, and would say the landlords should pay the rates upon such tenements."

Mr. Heysham, of Carlisle, observes:—

"Until very lately I have no hesitation whatever in saying that I always considered it advisable that all occupied property should be rated to the poor's rate, and also that the occupiers themselves should pay the rates. There can be no question, however, that in numberless instances, these as well as other local rates have long been severely felt by the poorer classes; still the difficulty always appeared to me to be where to draw a correct line, and from my own experience I think I may safely say that almost any exemption, except to individuals in the actual receipt of parochial relief, invariably gives great dissatisfaction to other parties, and is upon the whole productive of more harm than good.

"The great reduction, however, that has taken place within the last few years in the price of labour, the very fluctuating state of the trade and commerce of this country, together with many other circumstances, which I need not enumerate, have, I must confess, induced me to view this subject in a somewhat different light: in fact, I now begin

to fear that in a little time it will not be possible to collect any rates from the occupiers of tenements let for less than 5*l.* or 6*l.* per annum; and I think I may also venture to add that property of this description is now, and has long been, anything but profitable to the owners, except to extensive manufacturers, who let it to their own workpeople, which enables them to secure the whole rent without any trouble or expense."

Mr. Hasell's often-quoted letter contains the following instructive passage:—

"In recommending that landlords should be rated rather than occupiers in cases of small tenements, I do so not because I think that such occupiers would gain any pecuniary advantage from the arrangement, for I conclude that in a vast majority of instances the occupier would in fact pay his amount of rate in the shape of increased rent, but because I think it would enable the overseers to collect the poor's rates with more ease, and without irritating and vexing poor labourers, who are often called upon to pay rates when they have made no provision for the payment, and when unable to pay are subjected to what is to them an expensive process (speaking comparatively) for the recovery of such rates. In Penrith, by a sort of understanding between the landlords and parish officers, landlords have been rated for several years, not merely for small houses occupied by tenants, but for large houses and lands so occupied likewise, and I remember no instance of a complaint against a landlord so rated for non-payment of poor's rate, whilst we have frequently had to proceed against occupiers for the recovery of rates, both in the town and in the country parishes. I conclude such landlords have regularly paid the rates, though we could not have compelled them to do so; and as landlords of this description are, generally speaking, persons of ability to pay the rates at once when called for, a considerable benefit would, I think, result from generalizing the system as far as small tenements go, and from shifting the liability in such cases from the occupiers to the landlords. I mention 9*l.* per annum as the limit, because, if 10*l.* were named, it would cause indirectly an alteration in the present law of settlement, unless section 66 of the Poor Law Amendment Act should be repealed; and it seems reasonable that a person who rents a tenement of sufficient value to give him a settlement should contribute as long as he is able to the funds from which he may afterwards, in case of sickness, infirmity, or misfortune, have to draw relief or support."

The *Board of Guardians* of the Cockermonth union, state,—

"That if the owners of houses below the value of 10*l.* per annum were compelled to pay the rates instead of the occupiers, it would have a tendency to secure with less difficulty a more uniform collection, without bearing heavily upon such owners, and would also in some degree ease the burden of the poor, inasmuch as the owners frequently let their houses under a promise to pay the rates themselves, thereby inducing the tenant to offer a higher rent than he otherwise would; but if from any cause the tenant becomes unable to pay his rent in due time, the landlord then refuses to pay the rates, and the overseers are obliged to compel payment from the tenant, by which proceeding the tenant is damnified to the amount of his rate so paid."

The *Rev. Richard Matthews*, of Wigton, reports:—

“ If small tenements were exempted from the payment of rates, I am of opinion that the owners and not the occupiers would ultimately reap the benefit. The former are commonly rated and pay the rates in this neighbourhood; and as experience proves this usage to be convenient here, I can see no reason why it should not be made the law of the land.”

And furthermore, *Mr. Crackanthorpe* writes to me thus:—

“ I confess that I am very much inclined to recommend that the rates of cottages generally should be paid by the landlord, as there is frequently great difficulty in collecting them, and exemptions are claimed which, as regards the proprietor, are unjust. At the same time it must be observed that one argument against giving relief to paupers would be taken away, viz., that poor persons not, or scarcely, in a better condition than the applicants are, would be contributing to their relief: but on the whole, I am inclined to think that in no case should cottages be exempt, but that whenever the rent is under 5*l.* it should be paid by the landlord. On no ground can I conceive that cottages should be entirely exempt, except those belonging to the cottagers themselves who may be too poor to pay the rates; but even in this case I believe they feel a pride in contributing their share to the general fund.”

It remains only that, in closing this Report, I should take leave to submit that by an examination of the opinions which it contains, and the measures (founded on such opinions) which it indicates, we are unavoidably led to these conclusions:—

- 1st. That a Building Act, of the nature so well conceived and lucidly sketched by Mr. Plummer, is of unquestionable (and indeed unquestioned) expediency in reference to *towns*.
- 2ndly. That although it is not quite so clear whether a Building Act could, in practice, be advantageously adjusted to the peculiarities and wants of purely *rural districts*, it would yet appear to be desirable, for the reasons stated by Mr. Hasell, the Rev. Mr. Matthews, and Mr. Crackanthorpe, that such Act should certainly not be limited, in its operation, to urban communities exclusively.
- 3rdly. That as regards the propriety—not to say necessity—of rating the owners instead of the occupiers of cottage and tenement property of low annual rental, no one (as I have had occasion to remark more than once in these papers) I have ever met with in the four northern counties can now be said to entertain a doubt upon the question.

I have the honour to be, Gentlemen,
Your very obedient servant, J. W.

Alnwick, 1st March, 1841.

GENTLEMEN,—With reference to your circular letter of the 9th of September, 1840, in which (after a direction to me to inquire into and remedy the neglect of certain medical officers in my district to furnish the returns due from them under the Sanitary Inquiry—a direction that I immediately and successfully acted upon),

you proceeded to draw my attention to the provision made in the towns for the supply of water for the use of the labouring classes, as well as to the beneficial effects of drainage on marshy localities,—with reference to that circular, I beg to submit for your information and use some extracts from letters I have received from gentlemen conversant with the condition (*quoad*, the circular's subject-matter) of the four northern counties, and especially of the towns and neighbourhood of—

- | | | |
|-----------------------------|---|---------------------------------------|
| 1. Gateshead, | } | In the county of Durham. |
| 2. South Shields, | | |
| 3. Barnard Castle, | | |
| 4. Sunderland, | } | In the county of North-
umberland. |
| 5. Tynemouth, | | |
| 6. Hexham and Wooler, | } | In the county of Cum-
berland. |
| 7. Cockermouth and Keswick, | | |
| 8. Penrith, &c., | | |

But I have been disappointed, I regret to say, of some valuable notices that I expected ere this to have received respecting Newcastle-upon-Tyne; I understand, however, and (so far as my own observation goes) believe that great town to be, upon the whole, well supplied with water by companies.

I have the honour to be, Gentlemen,

Your very obedient servant,

J. WALSHAM, *Assistant Commissioner.*

No. 1.—Extract from letter, dated January 7th, 1841, from *W. H. Brockett, Esq.*, one of the magistrates, and late mayor of Gateshead:—

“The supply of water to the poor of this borough is anything but satisfactory: it is true a large portion of the poorer description of persons reside by the river-side, and are thus provided with this necessary of life at their own doors, but, elsewhere, the supply is either uncertain and deficient, or expensive. There are no public fountains as in almost all large towns, but here and there a ‘well’ or spring, occasionally provided with a pump in a state of repair, but more frequently without one; some of them, in fact, being in fields at a considerable distance from the populous parts of the borough. The water-company, which have a reservoir on Gateshead Fell, whence the town—that is, the *paying* portion of its inhabitants—is supplied, have placed fountains in the principal streets, at convenient distances, where the water is *sold* to poor and rich alike, at a small but still, to an indigent family, a prohibitory charge. Of course the wealthier classes have the article introduced by pipes into their houses.

“Public fountains could be erected at a trifling expense, and, I dare say, the necessary quantity of water might be procured from the company at a reasonable charge; and it strikes me that some regulation of that kind would be much more practicable, advisable, and beneficial, even than any statutory requirement of the introduction of water-pipes into new buildings. The residences of the wealthy need no such enactment; and in those of the ‘poor and needy’ the landlords would

experience little difficulty in evading it—they would raise the rent in proportion to the cost of water, and *vice versâ*.

“Water-companies would gladly, I am persuaded, come to terms with the public in this matter, especially such of them as from time to time apply to Parliament for incorporation or for additional powers. With such the legislature might make it a *sine quâ non* that public fountains should be supplied, if not gratuitously, at least on very reasonable conditions.

“Another matter is of great importance in connexion with a supply of water. Fire-plugs should be required to be fixed in every town, at convenient distances, and duplicate keys thereof to be placed in the hands of the police. Until very lately, this was not the case in Gateshead; and since the arrangement has been made, much good has ensued from it.”

No. 2.—Extract from letter, dated January 11th, 1841, from R. Shortridge, Esq., chairman of the South Shields union, &c. :—

“With respect to water, this town is mainly supplied from a very copious and excellent spring about a mile and a half distant from it, from whence the water is brought by pipes either into the houses of the more wealthy, who pay so much per year for it, or it is sold to the poorer classes at the public pumps (or pants as they are called here), at so much per pail or bucket. An Act of Parliament was got for these water-works many years ago, and they are held by an individual (Mr. Rippon, of North Shields), who receives the revenue from the sale of the water as above. The quality is excellent, and the supply ample for all who can afford to pay for it; at the same time if it was either to be had gratis or to be laid into the houses, there is little doubt that the saving of expense and labour would cause it to be much more plentifully used, both on the person and the dwellings, and thereby contribute greatly both to health and cleanliness: such a house as mine pays 2s. a-year, and at the pants they pay one farthing per pail.

“With respect to the other part of your inquiry, we have no marshy localities to complain of. The only part that may be considered damp is what is called the Mill Dam, which formerly was a sheet of water into which the tide flowed from the river, but of late years it has been built upon, though from its low situation it perhaps is not so well drained as it might be. It is, however, a very small part of the town, though it is about the centre of it. On the whole, I look upon this place as a very healthy one, for we never almost have any infectious diseases prevailing in it; and for many years I have remarked that when Newcastle and Sunderland have been visited with such disorders as fevers, &c., we have escaped. This, perhaps, may partly be accounted for by the fresh air from the sea, and the continual flow and influx of the tide (though this equally applies to all sea-ports), and partly to the circumstance that we have no confined or unhealthy occupations for the working-classes of people. Should any sanitary regulations be made, perhaps none would be more beneficial to this town than the more frequent cleansing and removal of dung-hills, particularly those of the butchers' shops, for each one here has its slaughter-house attached to it, where the offal is allowed to accumulate and remain much too long; in fact, it would be a great improvement if the slaughter-houses were compelled to be out of the town altogether, as the scenes of them must tend very much to brutalizing consequences.

“ With respect to drainage, I presume it must not only have a very material effect upon the bodily health, but upon the mind also. I remember some years ago, a medical man of considerable practice at York told me that a village in that neighbourhood was remarkable for the number of idiot children it contained. It was suggested that it should be drained, as the peculiarity might arise from its swampy nature. This was done, and along with it idiocy was banished.”

No. 3.—Extract from letter, dated January 15th, 1841, from *George Brown, Esq.*, clerk of the guardians of the Teesdale union:—

“ In reply to your letter of the 9th instant, touching supply of water and other sanitary matters, I beg to state that to convey water into the houses of cottagers in pipes is expensive; and in some localities, from want of level and other requisites, impracticable without force-pumps on a large and costly scale. The cottagers are, moreover, very generally careless; and the pipes and other apparatus would soon be suffered to become obstructed, or otherwise injured or rendered useless. The old system of public pumps is, after all, the best and most useful plan; and in legislating, it should be provided that there should be at least one common pump for every dozen houses—to be kept in repair at the joint expense of the owners of those houses; or the guardians of every union, or other public functionaries, should in every district be compelled, out of some general parochial fund, to provide pumps or other means for the supply of water, on a scale proportioned to the number of inhabitants.

“ I apprehend that there is now no fund out of which our town’s pumps and other public reservoirs of water can lawfully be repaired: this is a serious evil, and ought forthwith to be remedied.”

No. 4.—Extract from letter, dated February 3rd, 1841, from *Thomas Reed, Esq.*, one of the aldermen of the borough, and late vice-chairman of the Sunderland union:—

“ I believe Sunderland South (that is, Sunderland and Bishop Wearmouth) is better supplied with water than most places; there having been, from time immemorial, numerous wells in the parish of Sunderland whence the public has been supplied with excellent water at a very moderate rate; and, in addition to these, a water-company was formed a few years ago in Bishop Wearmouth which supplies the two parishes, both by means of private pipes and by pants placed in various parts. The water from the water-works is also very good, and is sold to persons buying small quantities at one farthing per skeel—a measure which you may know from your long experience in the North, and which is, I believe, calculated to hold four gallons; but, from the difficulty of carrying it full, has seldom more than three put into it. At the pumps in Sunderland the same price is charged. At Monk Wearmouth, however, the supply is very bad: there were formerly pants or pumps in the town, whence the public was supplied, but when Messrs. Pemberton’s pit was won, the water was drained from the pants, and the only supply now is from a well about half a mile from Monk Wearmouth, on the Newcastle turnpike, and is supplied at one halfpenny per skeel—the extra charge is no doubt for carriage, as the water on the Monk Wearmouth side is conveyed to the con-

sumers' doors in a cart. There is certainly ample room for improvement here. But as a good supply of pure water is of essential importance to the public health, I should say that even Sunderland and Bishop Wearmouth (with all their advantages) are still miserably deficient; and if any legislative enactment could be obtained to give facilities for an abundant supply, it would be of incalculable benefit as a means of maintaining the health of large towns."

No. 5.—Extract from a letter, dated January 5th, 1841, from *E. H. Greenhow, Esq.*, a medical practitioner of Tynemouth:—

"The town of Shields is very well supplied with water, which in a great proportion of instances is found upon or near to the premises. Besides this, there is a water-company which provides an abundant supply for the lower orders by means of pumps—public fountains—kept by disabled men or widows, who retail it out during six or eight hours daily at the rate of a farthing per skeel—a vessel containing about four or five gallons.

"I can afford no direct information in answer to your second question, as no marsh lands have been drained in this neighbourhood in my remembrance. I have, however, had occasion to remark that fever and other diseases prevail more in one or two small localities where there is standing water. One of these is a row of good houses, standing in an open airy situation and inhabited solely by persons of respectable station, which is built within a dozen yards or so from one of the water-company's reservoirs. This would indicate the importance of providing, in any legislative enactment of the kind you mention, for the removal from the close vicinity of populous districts of all bodies of water—even such as are generally considered innoxious.

"There is one point of considerable importance as respects the public health of towns, which is not alluded to in your letter, but upon which I venture, nevertheless, to trouble you. In towns of second or third-rate size and standing, like North and South Shields, there is generally a very inadequate supply of common sewers. Many of the best parts of North Shields are entirely destitute of these conveniences; and in others where they exist, from being placed too near the surface, and from other defects in their construction, a stranger is very much offended, on entering the houses of even respectable and wealthy persons, by the noxious smell arising from this cause. This state of things must be most injurious to the public health; and any legislative arrangements that would remedy the evil and provide for the formation of such conveniences at the building of each house, would not only be most serviceable in promoting public health but also be conferring a boon as regards public comfort."

No. 6.—Extract from letter, dated January 11th, 1841, from *John Grey, Esq.*, receiver of Greenwich Hospital, &c.:—

"The provincial towns in the Vale of Tyne, *i. e.*, Corbridge, Hexham, Haddon Bridge, &c., in common with all places surrounded by and in the immediate vicinity of high grounds, are plentifully supplied with pure and wholesome water; and the villages and farm offices possess generally the same advantage, as it is an easy matter in most cases to convey a spring or well to the places and diffuse it through the offices, so as to supply at once the dwellings of the people and the

hovels of the cattle. The varying strata of this district, and the seams of gravel which constantly occur, afford a constant supply of pure and wholesome water. The flat country towards the east coast, particularly where it is subject to the continual draining of coal-mines, and where a thick bed of clay prevents the flow of springs to the surface, is often very deficient in this respect; and in many situations the only water to be had is that collected in ponds and tanks, which is of course at some seasons very unwholesome. The northern parts of the country—namely, Glendale and Coquetdale—being a series of hill and dale, resemble the Vale of the Tyne in soil and circumstances conducive to the health of their inhabitants, possessing abundance of streams and springs, but no stagnant water or marshy ground. Ague, the disease of marsh and fen districts, is unknown,—at least I never saw a case of it in this county; and I have been told by a medical gentleman that it scarcely prevails at all now in the island, except in the low parts of London and the vicinity of the Thames.”

No. 7.—Extract from a letter, dated January 22nd, 1841, from *T. S. Spedding, Esq.*, vice-chairman of the Cocker-mouth union:—

“In respect of the supply of water to Keswick, I think we are agreed that there is no deficiency. There are plenty of pumps, and no complaint.

“As for the effect upon local salubrity of the agricultural draining, which is going on now very extensively, and increasing every year, I suppose that no very exact observations have been made, and certainly no sensible effects ascertained. There can be no doubt but good in this respect is done and doing. Braithwaite, a village two miles on the old road to Cocker-mouth, is the only place hereabouts remarkable for fevers; a rapid transparent mountain-stream flows through it, but by perpetual depositions of gravel has raised its own bed above the level of the village, thereby acting rather as a dam than as a drain. My favourite notion is, that if the Boards of Guardians had power to drain such spots out of the rates, and power also to keep their towns and villages clean, as well by direct operations in that behalf as by enforcing the obligation already lying upon other parties to cleanse particular localities, it would act most beneficially upon the public health of their districts. I would include a power to build privies, and to keep them in order; such a power at Keswick might do very great good.”

No. 8.—Extract from a letter, dated February 2nd, 1841, from *H. Addison, Esq.*, vice-chairman of the Penrith union:—

“Penrith is particularly well supplied with pumps and springs, affording water of excellent quality; independent of these it derives great benefit from having a branch of the Pettril running through it. Many of the dwellings of the poor, most particularly those situated in courts and yards, are in a very dirty state, arising chiefly from the want of *certain conveniences*; and although much has been done of late years to remedy this great evil, much still remains to be done. As respects the land, no drainage is required—the whole of the lands in the immediate neighbourhood of the town being perfectly sound and dry.”

