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John Simon.

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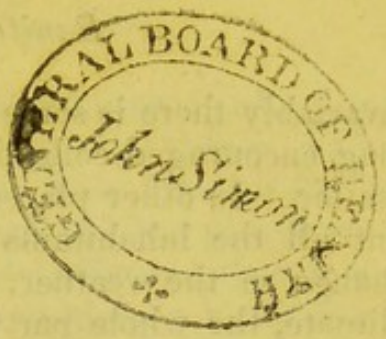

ON THE SANITARY STATE OF THE COUNTIES OF DEVON AND CORNWALL.

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 townspeople 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 court-yard 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 sea-weed, &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; aud 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 approximity 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 prejudical 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. Joce, 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.

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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 commissioners 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 morbific 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 morbific 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 3 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 4, 5, and 6 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 2, 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 medern, 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 oozings 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
113	15	22	16	12	15	26	46	16	6

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
79	9	10	14	10	12	21	12	15	0

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 af 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 neigh bourhood. 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.	CAUSES OF DEATH.																	
			Epidemic Diseases.					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.
			Fever.	Small-Pox.	Measles.	Hooping-Cough.	Total.	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	1	2	2	1	6	..	..	6	..	6	..	2	1
Tradesfolk, or persons similarly circumstanced, and their families	82	35·89	6	2	..	4	12	6	1	3	1	11	5	..	24	2	31	1	13	14
Labourers, artisans, and others similarly circumstanced, and their families	303	28·99	12	16	12	22	62	12	4	6	10	32	18	7	67	5	97	11	39	62
All classes	401	30·96	19	18	12	26	75	19	7	11	12	49	23	7	97	7	134	12	54	77

No. 2.—Return for the parts of Truro situate in the Parish of *Kenwyn*.

Professional persons or gentry, and their families	17	37·6	..	..	..	..	..	1	..	..	1	2	..	..	3	1	4	2	3	6
Persons engaged in trade, or similarly circumstanced, and their families	56	29·99	1	..	1	5	7	2	..	..	4	6	6	..	12	..	18	6	9	10
Labourers, artisans, and others similarly circumstanced, and their families	144	27·28	4	4	3	8	19	7	2	1	10	20	15	..	17	2	34	14	25	32
All classes	217	28·53 nearly	5	4	4	13	26	10	2	1	15	28	21	..	32	3	56	22	37	48

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—*continued.*

No. 3.—Return for the whole of Truro.—Both the above Tables.

Condition or Occupation.	Total Number of Deaths.	Average Age of the deceased.	Epidemic Diseases.					CAUSES OF DEATH.												
								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.
			Fever.	Small-Pox.	Measles.	Hooping-Cough.	Total.	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 . . .	33	40·47 nearly	1	..	..	..	1	2	2	2	2	8	..	..	9	1	10	2	5	7
Persons engaged in trade, or similarly circumstanced, and their families	138	33·5 nearly	7	2	1	9	19	8	1	3	5	17	11	..	36	2	49	7	22	24
Labourers, artisans, and others similarly circumstanced, and their families	447	28·44	16	20	15	30	81	19	6	7	20	52	33	7	84	7	131	25	64	94
All classes	618	30·01	24	22	16	39	101	29	9	12	27	77	44	7	129	10	190	34	91	125
No. 4.—Return for the Workhouses of the Truro Union situate in St. Mary's and St. Clement's.																				
Paupers in the workhouses . .	94	45·24	1	1	..	..	2	2	..	..	1	3	2	2	21	..	25	6	34	24
All classes	712	32·02	25	23	16	39	103	31	9	12	28	80	46	9	150	10	215	40	125	149

TABLE 2.—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 the Organs 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.
Fairmantle 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	

TABLE 3.—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,

Spry, Truran, and Paull, the Medical Officers for the Truro Union, in the Town of Truro, and Periods 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.
St. Clement.					Kenwyn.		St. Mary.			St. Clement.						Kenwyn.		St. Mary.			St. Clement.					
W	M.	F.	W		M.	F.	W	M.	F.	W	W	M.	F.	W		M.	F.	W	M.	F.	W	W	M.	F.	W	
	..	..		..	..	..		..	..			..	..		..	..	..		..	..			..	..		..
	..	..		..	..	..		..	..			..	..		..	..	..		..	..			..	..		..
	..	..		..	..	..		..	..			..	..		..	2	1		1	..			..	2		6
	1	..	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		..	..	2	6
	..	..		1	..	..	1	..	1		1	..	..		1	2	3	3	3	2	1	1	2	2		14
	..	..		2	..	..		..	1			1	1		3	..	2		6	4	3		3	2		17
	1	3	3	20	4	3	2	..	2	1	3	4	1	8	14	18	30	4	44	31	6	3	9	22	13	154
	1	..		6	..	..		..	..			2	..	1	2	2	6		3	3			4	..	1	18
1	..	..		2	..	..		..	..		1	1	..	1	1	3	1		1	1		2	1	..	1	7
1	..	4	1	5	..	1	1	..	..	2	1	..	..	3	1	1	2	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
2	1	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

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

TABLE 4.—Showing the *Pauper Sickness* and Mortality from certain Diseases in the parts of Truro situate in the Parish of Kenwyn, from Lady-Day, 1839, to December 31, 1840; and the *Deaths among all Classes* in the same parts, from July, 1837, to December 31, 1840, from the same Diseases; and also during an Epidemic, or Hooping-Cough, in 1838; distinguishing the several Localities and the Sexes.

Localities.	Fever.				Small-Pox.				Acute Diseases of the Respiratory Organs.				Acute Disease of the Digestive Organs.				Hooping-Cough.		Total Deaths of all Classes from these Diseases.		All Diseases.	
	Pauper Sickness.		Deaths among all Classes.		Pauper Sickness.		Deaths of all Classes.		Pauper Sickness.		Deaths of all Classes.		Pauper Sickness.		Deaths of all Classes.		Deaths of all Classes.				Deaths of all Classes.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Lemon Street	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	11
Lemon Quay	..	..	..	..	..	1	..	.	..	..	..	1	..	..	..	..	..	..	..	1	..	1
Fairmantle Street	..	..	..	..	..	..	..	..	1	..	3	1	1	..	..	..	1	2	4	3	8	10
John Street	1	1	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	1	..	1	3	2
Carclew Street	1	1	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	1	2	1	1	3
Lemon Row	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	1	..	..
Daniell Street	..	..	..	..	..	..	1	..	1	2	..	1	..	..	..	..	..	..	1	1	4	12
Charles Street	3	8	..	..	..	.	..	..	3	3	1	2	..	3	1	..	..	..	2	2	6	14
Back Lane	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	1
Calenick Street	8	5	..	1	..	..	1	..	4	..	1	..	2	4	..	..	1	..	3	1	5	14
Kenwyn Street	6	10	2	2	1	..	1	1	2	2	1	3	5	4	2	1	1	3	7	10	25	30
Frances Street	..	2	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	1	1	1	3	4
George Street	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Andrew Lane	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Dominic Street	..	..	..	..	..	..	..	..	..	1	..	1	4	2	..	..	..	..	..	1	..	1
Edward Street	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Castle Street	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	3	4
Castle Hill	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jermyn Griest	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	20	32	2	3	1	2	3	1	12	11	8	10	14	18	4	1	4	8	23	23	64	107
	52		5		3		4		23		18		32		5		12		46		171	
No. of the above Paupers who died	1	2	..	..	1	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE 5.—Showing the same Particulars as in Table 4, for the Parts of Truro situate in the Parish of St. Mary.

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

TABLE 6.—Showing the same Particulars as in Table 4 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.	M.	F.	M.	F.
Mill Place	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Campfield Lane or Hill	..	1	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	5
Baynard's Court or Backlet	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..
Trurovean Terrace	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Paul's Terrace	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	5
Factory Lane	..	3	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2	1
Cook's Row	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
St. Clement's Terrace	1	1	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	1	2	5
Prospect Row or Place	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1
Paul's Row	..	1	..	1	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	1	3	2
Rosewyn Row	..	..	..	1	..	..	..	..	..	3	..	1	2	1	..	..	..	..	..	..	..	2	2	7
Middle Rosewyn Row	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	1	..	4
Lower Rosewyn Row	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..
Little Rosewyn Row	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rosewyn Lane	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	1	..	..	..	..	2	..	1	2
Mitchell Hill or Bodmin Street	1	1	2	1	..	1	1	..	..	1	1	..	..	2	..	2	2	..	..	..	6	1	13	13
Thomas's Court or Backlet	..	2	..	..	..	..	..	..	..	..	..	..	2	4	..	..	..	..	..	..	..	..	..	..
St. Clement's Street	5	4	..	2	..	..	..	2	..	2	..	..	4	2	..	1	2	1	..	..	2	6	17	24
Cock's Backlet, Row, or Court	..	4	..	..	..	..	..	..	..	..	..	..	1	..	..	.	..	..	..	..	..	..	..	..
Old Bridge Street	..	1	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	2	4	1
New Bridge Street	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2
St. Austle Street	..	1	1	..	..	..	..	..	..	..	1	1	..	..	1	..	..	2	..	..	..	..	9	7
Eyre's Court or Backlet	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1
St. Clement's Hill	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Fenis's Buildings or Terrace	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
James Place, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3
Trafalgar Row	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2
Daniell's Meadow	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	2	1	1	1
Bennallack Row (now called Paul's Row)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	11	21	3	7	..	6	3	2	1	10	3	5	13	14	3	4	4	6	..	..	13	19	68	94
	32		10		6		5		11		8		27		7		10		..		32		162	

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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 per centage 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.* 6¾*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 2s. 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 :—

	s.	*d.*
6 gallons of flour at 16*d.*	8	0
½ lb. soap	0	3½
¾ lb. candles	0	4½
1 lb. butter	1	0
¼ lb. sugar	0	2½
1½ 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	9½

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 fagots. 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—

	s.	*d.*
7 gallons of flour, at 1*s.* 6*d.*	10	6
3 ditto of potatoes, at 2½*d.*	0	7½
3 lbs. of salt butter, at 1*s.*	3	0
2 lbs. of cheese, at 7*d.*	1	2
2 ozs. of tea, at 3¾*d.*	0	7½
1 lb. of sugar, at 7½*d.*	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:—

	s.	*d.*
6 gallons of flour, at 9*d.*	4	6
1 lb. of butter, at 10*d.*	0	10
4 lbs. of bacon, at 4½*d.*	1	6
2 lbs. of cheese, at 6*d.*	1	0
½ oz. of tea, 5*s.* per lb.	0	2¾
2 ozs. of coffee, at 2*s.* per lb.	0	3
Salt and pepper	0	1
¼ lb. of soap, at 6*d.*	0	1½
¼ lb. of candles, at 6*d.*	0	1½
1 lb. of sugar, at 6*d.*	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:—

	s.	*d.*
5 gallons of flour, at 1*s.* 1¼*d.*	5	6¼
2 lbs. of butter, at 10*d.*	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 :—

	s.	*d.*
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	5	9

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 :—

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

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 :—

	s.	*d.*
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	12	3

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

	s.	*d.*
Bread	1	0
½ lb. of meat	0	3
1 gallon of potatoes	0	3
Total	1	6

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 :—

	s.	*d.*
4½ gallons of flour, at 6*d.*	2	3
Grinding, baking, and yeast	0	5
7 lb. of beef, at 2½*d.*	1	5½
2½ lbs. of cheese, at 2½*d.*	0	6
(Or, instead of cheese, 1½ lb. of butter, at 4*d.*)		
Oatmeal and salt	0	2¼
1 oz. of tea	0	2
½ 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	6	0

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 10*s.* 6*d.* 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 2*s.* 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, developes 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 ca es, 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 14*s.* 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 16*s.* 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 same 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 fact 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 Westfirle 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 apparantly 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.

1*st March*, 1841.

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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 versâ*.

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 cesspools 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 12½ 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° 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-steeet, 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 3*s.* to 3*s.* 6*d.* 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 2*s.*

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 perflation 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 2*s.* 6*d.* 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 3*d.* 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 12*s.* per week, and she lets each room at 2*s.* 6*d.*, sometimes 3*s.* 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
	2,117
Add .	562 in the workhouse.
	2,679

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
	18,275	16	8

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.* 3¼*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 40⅝ 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; hooping-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 members	357
	737		737

The Medical Report for 1839.

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

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

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.

	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.
Sporadic Diseases. Epidemic, Endemic, and Contagious Diseases.	Typhus	2	..	2	..	..	..	3	..	..	..	1	..	..	..	..	..	2	..	1	..
	Typhoid Fever	9	15	3	3	1	2	7	16	3	..	1	..	..	..	..	..	1	1	..	1
	Scarlatina	2	2	..	..	1	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..
	Diarrhœa	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
	Erysipelas	8	2	2	2	..	..	6	2	..	2	4	..	..	..	..	..	2	1	1	..
	Ague	..	2	1	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..
	Syphilis	21	21	7	6	..	..	22	25	6	2	..	..	..	..	..	..	5	2	2	1
	Total	44	42	15	11	2	2	42	46	9	5	6	..	..	..	..	..				
Sporadic Diseases. Of the Nervous System.	Cephalitis	1	1	1	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..
	Hydrocephalus	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..
	Convulsions	1	..	1	1	..	..	1	1	..	..	1	..	..	..	..	..	..	..	..	..
	Chorea	..	1	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
	Epilepsy	4	..	1	..	..	..	3	..	1	..	1	..	..	..	..	..	..	..	..	..
	Apoplexy	2	..	1	..	..	..	..	..	2	..	1	..	..	..	..	..	1	..	..	..
	Paralysis	2	2	11	5	..	1	5	2	6	3	2	1	..	..	..	..	..	..	..	..
	Delirium Tremens	4	1	..	..	..	..	..	..	2	1	2	..	..	..	..	..	..	1	..	..
	Total	14	6	16	6	1	2	9	5	13	4	7	1	..	..	..	..	1	2	..	..
Sporadic Diseases. Of the Respiratory Organs.	Laryngitis	4	2	..	..	..	..	4	1	..	1	..	..	..	..	..	..	..	1	..	..
	Bronchitis	14	1	7	2	1	..	10	3	9	..	1	..	..	..	..	..	1	..	..	1
	Pneumonia	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..
	Phthisis	11	4	6	6	..	..	12	8	2	2	3	..	..	..	..	..	7	2	2	2
	Asthma	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
	Total	31	7	14	8	1	..	26	12	13	3	4	..	1	..	..	..	10	3	2	3

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

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

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.
Sporadic Diseases. Of the Urinary Organs.	Nephritis	..	1	1	1	..	..	..	1	1	1	..	..	..	..	..	..	..	1	1	..
	Ischuria	7	..	1	..	..	..	1	..	5	..	1	..	..	..	1	..	2	..	..	..
	Diabetes	1	..	1	1	..	1	1	..	1	..	..	..	..	..	..	..	1	..	..	..
	Granular Disease	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..
	Cystitis	..	..	3	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..
	Stone	2	..	2	..	3	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
	Stricture	1	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..
	Total	12	1	9	2	3	1	2	1	10	1	2	..	3	..	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	..	1	..	..	..	..	..	..	..	..	..	..
	Dysmenorrhæa	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
	Menorrhagia	..	3	..	2	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..
	Ovarian Dropsy	..	1	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1
	Hydrocele	4	..	6	..	..	..	7	..	1	..	2	..	..	..	..	..	..	..	..	..
	Total	6	29	7	28	..	..	9	54	2	2	2	1	..	..	..	..	..	..	..	1

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.
Sporadic Diseases.	Of the Organs of Locomotion.	Arthritis	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
		Gout	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
		Rheumatism	23	16	28	6	2	1	18	11	17	5	10	3	4	2	..	..	..	..	..	..
		Joint Diseases	8	8	20	18	9	8	12	11	3	4	3	1	1	..	..	..	1	..	2	2
		Diseases of Bones	11	..	16	5	5	..	13	5	6	..	3	..	2	..	..	..	..	..	..	..
		Total	44	24	64	29	16	9	43	27	28	9	16	4	7	2	..	..	1	..	2	2
	Of the Integumentary System and Cellular Membrane.	Phlegmon	6	6	3	2	..	..	5	6	2	2	2	..	..	..	..	..	..	..	..	..
		Carbuncle	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
		Ulcers	17	16	30	14	..	..	11	14	19	9	9	4	8	3	..	..	..	..	..	..
		Fistula	6	1	5	..	2	..	3	1	3	..	3	..	..	..	..	..	1	..	1	..
		Cutaneous Affections	2	3	3	3	1	1	1	5	..	..	3	..	..	..	..	..	..	..	..	..
		Total	32	26	41	19	3	1	20	26	24	11	18	4	8	3	..	..	1	..	1	..
	Of uncertain Seat.	Hæmorrhage	2	1	1	..	..	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..
		Scrofula	2	6	22	23	10	8	13	14	1	6	..	1	..	..	..	..	..	..	2	..
		Carcinoma	1	2	..	3	..	..	..	..	..	3	1	..	..	2	..	..	1	..	..	..
		Debility	2	2	1	..	1	1	1	..	..	1	1	..	..	..	..	..	..	1	..	..
		Total	7	11	24	26	11	9	17	15	1	10	2	1	..	2	..	..	1	1	2	..

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 Infirmary.	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.

	Residents.	Deaths.	Strangers.	Deaths.	Total Admissions.	Total Deaths.	Ratio.
For 1 Year. Parish Infirmary	199	34	86	22	285	56	1 in 5
For 1 Year. West District .	328	20	32	..	360	20	1 in 18
For 1 Year. 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.	
					— of Population.	— of 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
	Erysipelas	2	4	6		
Of the Nervous System.	Encephalitis	24	13	37		
	Hydrocephalus	31	24	55	all under 14, except 1 adult female.	
	Apoplexy	16	16	32		
	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 Respiration.	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		
Of the Organs of Digestion.	Diseased Heart	14	8	22	3 under 2 years and 2 under 15.	
	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. 2, f. 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 1½ 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, "caresìa di annoni."

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.

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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 12*s.* 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 8*s.* a-week; they worked early and late, by which they earned 12*s.* per week more—netting 20*s.*, while the labourer who received no parochial employment was struggling to obtain 11*s.* 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 9*d.* or 1*s.* 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.

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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 remarkable 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 pro-

perty. 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 Hambledon (Bucks) the inmates of the parish cottages, says Mr. Lord, the respectable guardian of that parish, provide refreshment for all the bad characters 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.

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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*l.* to 6*l.* per month	0 12 0
3. Furnace men and others gaining the higher rates (from 6*l.* to 12*l.* 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 2*s.* 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*s.* 6*d.* 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; 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

* 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.

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 5*s.* to 10*s.* 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.* 10*s.*, 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 ¼ 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 10*s.* 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 ⅛ to ⅐ 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, particularly 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 :—

* 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

"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 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 :—

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."

"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 cot-

tage 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,

Abergavenny, rural portion,
Chepstow, „
Monmouth, „
Newport, „
Pontypool, „
Crickhowel, „

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 7*s.* 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.* 12*s.* 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 in-

stance 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 accomodation 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 whic 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 10¼		28 1 8¼
No. 1. Amount of rate for quarter ending December 22, 1838, at 2*s.*	3,158 8 7¼	1,870 11 8¼	1,573 9 7
No. 2. Do. do. do. March 22, 1839, at 1*s.* 8*d.*	2,949 2 9	1640 12 8¼	1,297 7 7¼
Shire Hall Rate	73 2 0		
No. 3. Do. do. do. June 22, 1839, at 1*s.* 6*d.*	2,681 13 9	1,635 5 10¼	1,140 0 8¼
No. 4. Do. do. do. Sept. 22, 1839, at 1*s.* 6*d.*	2,648 18 4	1,444 17 11	1,152 18 7
	12,149 0 4	6,591 8 3	5,191 18 2¼
Also uncollected, but collectable			365 13 11
			5,557 12 1

Total number of properties assessed	3,049
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 woolsorter, 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.

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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.)

Ampthill Union.

LETTER from Clerk to the Guardians.

"*Ampthill, 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 workhouse, 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."

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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, strickly 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 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.

* 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.

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 elevation 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.* 3¾*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 Beuvoir. 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 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

* 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.

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 Guiltcross 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 9*s.* 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 1*s.* 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 9*s*., and they vary, generally speaking, from 10*s*. to 12*s*. a week for

* 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.

day labour. There are about 2*s*. or 3*s*. 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 5*l*. to 6*l*. 10*s*., 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 fore-fathers. 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 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 standand 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 cottagees, 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.—Shephard'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, for want of proper 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 Samford 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 5*s*. a-week to the occupier of the dwelling, who was rented at 4*l*. 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, 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 in-

* 4th Annual Report, p. 104. † Ib. p. 106. ‡ Ib. p. 148.

sidious 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 untouched 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.

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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."

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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

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 tregedy 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 remaining 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 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.

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 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.		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.
	8	. .	Abbey Barns . .	11	. .	4	. .	. .	. .	24	18
1	155	8	Kensington . . .	. .	4	. .	. .	. .	. .	7	17
1	26	1	Curzon-street . .	. .	2	. .	. .	. .	. .	3	19
	94	2	Burton-road . .	34	8	19	7	6	. .	9	38
2	32	. .	High-street . . .	. .	. .	. .	2	. .	. .	6	9
2	19	. .	Cannon-street . .	. .	2	. .	. .	. .	. .	2	38
	62	2	Waterloo-street .	. .	3	. .	4	. .	. .	. .	15
3	88	. .	Litchurch-street .	16	3	7	1	2	. .	3	14
	63	. .	Leonard-street . .	6	. .	. .	2	. .	. .	4	5
4	73	. .	Grove-street . .	2	1	. .	. .	. .	. .	1	3
4	20	1	Hill-street . . .	. .	. .	1	1	. .	. .	2	5
	47	4	Spring-gardens .	6	2	5	1	2	. .	35	9
	47	. .	Canal-street . .	1	7	. .	4	. .	. .	. .	15
	84	4	Siddal's-lane . .	6	. .	6	. .	. .	. .	3	3
5	29	. .	Rivett-street . .	16	. .	5	1	. .	. .	2	4
	51	. .	Burrows-walk . .	18	5	. .	. .	. .	. .	2	1
	67	2	Castle-street . .	5	5	. .	. .	. .	. .	27	27
6	101	7	Morledge . . .	20	7	8	1	2	. .	13	27
6	47	1	Cockpit-hill . .	2	. .	. .	. .	. .	. .	1	5
	88	. .	Devonshire-street .	10	1	4	. .	. .	2	5	5
	45	1	Albion-street . .	3	3	. .	. .	. .	1	3	16
7	15	. .	Albion-place . .	5	. .	. .	. .	. .	2	16	2
	130	7	Eagle-street . .	20	4	10	. .	2	3	10	37
	45	3	Bloom-street . .	9	2	. .	. .	. .	. .	4	7
	107	9	Bag-lane . . .	17	2	11	4	1	. .	23	27
8	42	3	Thorn-tree-lane .	7	. .	1	. .	3	. .	5	6
8	21	2	Cross-lane . . .	. .	6	2	3	. .	. .	. .	21
9	41	2	St. James's-lane .	8	1	5	. .	1	5	6	18
10	150	11	Sadler-gate . . .	16	7	4	5	1	2	17	52
10	60	7	Bold-lane . . .	4	10	2	2	. .	1	5	38
	145	11	Willow-row . .	12	10	17	6	7	. .	29	52
	135	11	Walker-lane . .	38	24	7	10	2	. .	23	215
11	66	2	Goodwin-street .	6	1	4	3	. .	. .	23	13
	25	2	Orchard-street . .	3	. .	11	. .	. .	. .	8	1
	51	3	St. Helen's-street .	10	1	8	6	. .	. .	16	25
	26	1	St. Helen's-walk .	9	. .	. .	. .	4	. .	2	7
	182	12	Bridge-street . .	33	3	25	2	28	11	58	74
	40	4	Lodge-lane . . .	11	2	3	1	2	. .	35	14
12	118	. .	Parker's-street . .	. .	1	2	. .	. .	. .	11	2
			Parker's-flats . .	7	. .	15	. .	7	. .	17	2
	136	2	Nunn-street . .	15	. .	12	7	2	. .	28	30
	49	1	Green-street . .	20	1	8	2	11	. .	26	17
13	48	3	Ford-street . . .	13	1	5	. .	. .	. .	8	8
13	80	6	Agard-street . }	21	7	20	4	8	2	48	49
	18	2	Short-street . }								
	97	9	Brook-street . .	42	3	36	3	9	. .	68	25
	30	2	Brook-walk . . .	11	4	8	5	5	. .	6	27
14	51	1	Mundy-street . .	5	2	8	5	. .	1	15	20
	61	. .	William-street . .	4	. .	. .	. .	. .	. .	1	2
	39	1	Leaper-street . .	3	1	. .	. .	. .	. .	1	4
15	37	8	St. Michael's-lane	11	4	2	3	. .	. .	14	26
	138	9	Bridgegate . . .	21	1	9	3	4	. .	32	19
16	57	2	River-street. . .	16	1	7	2	9	. .	21	10
16	40	2	Bath-street . . .	6	. .	1	. .	1	. .	4	3
	54	. .	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.
			Brought forward .	512	153	291	103	125	30	753	1150
17	184	. .	Darley	52	1	15	. .	. .	. .	67	3
18	37	. .	Chester-place . .	29	. .	17	. .	2	. .	57	6
	52	3	City-road . .								
	74	3	Nottingham-road .	12	2	. .	7	1	1	14	3
19	81	3	Osmaston-street. .	. .	2	6	1	6	. .	18	10
	110	7	St. Peter's-street .	. .	3	8	10	. .	1	9	66
	76	6	Full-street . . .	1	2	6	1	. .	. .	25	5
	58	5	St. Mary's-gate . .	2	2	. .	. .	. .	. .	5	
	154	6	Friar-gate . . .	. .	. .	2	. .	1	4	8	9
	42	4	Queen-street . .	3	4	1	1	2	. .	4	14
	58	3	King-street . . .	2	. .	. .	. .	. .	. .	17	
20	92	2	Ashborne-road . .	. .	. .	. .	2	1	. .	5	7
	46	. .	Uttoxeter-road . .	. .	. .	2	2	2	. .	12	1
			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 haphazard, 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, in-

deed 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. 10, 11, 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 professional 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 3, 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 11.) 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 5, 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	..	All three young children, and Remittent Fever.
		Total	51	22	3	

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.
	£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,

To È. Chadwick, Esq., WM. BAKER, M.D.

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.	Average age of deceased.	CAUSE OF DEATH.																						
			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	10	49				1	1	2				2			1	1	1			1	3	2
Tradesmen . .	125	38	10		9		19	2	1	2	4	9	7	4	19	30	12			12	12	45
Labourers and artisans . .	752	21	89	2	40	1	132	36	10	7	88	141	58	15	169	242	28		8	36	52	149
Paupers in the workhouse .	22		1		2		3	1				1	1		6	7		1		1	4	6

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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 over-

flow 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 imperfectly 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 Dolinan 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 diarrhœa, 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 diarrhœa. 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 diarrhœa 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 quan-

tity 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 beforementioned 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 morbific 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.

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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 communitates 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 churchyard 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

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 it 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

* 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.

number of houses which they contain, from four to twenty, and 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 carcase-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 skinners' 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 $4\frac{9}{16}$ 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 14¾	Deaths	163	or about	1 in 12¾	of the whole number of deaths.
Eruptive Fevers*	2592	„	1 in 18¼	„	286	„	1 in 7¼	
Pulmonary diseases†..	6642	„	1 in 7	„	308	„	1 in 6¾	
Cases of Phthisis.....	578	„	1 in 79½	„	370	„	1 in 5⅝	
Cases of disordered stomach and bowels‡..	5962	„	1 in 7¾	„	47	„	1 in 44½	„

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 Children . . .	72	0	71	0	74	1	69	2	35	1
Bronchitis . .	45	5	42	4	45	7	32	5	50	9
Chronic Bronchitis . . .	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 4½, in Manchester rather more than 3½, 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 7¾ per cent.
Liverpool	6,627	504	1 in 13 „ 7½ „
Manchester.	6,706	533	1 in 12½ „ 8 „
Leeds	4,289	245	1 in 17½ „ 5¾ „
Birmingham	3,359	123	1 in 27 „ 3¾ „
All the registrations in the county of Warwick, including the parish of Aston, but not the parish of Birmingham . . .	4,825	295	1 in 16¼ „ 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		187
William Street	6	Sun Street	2		

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 1½	
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 1*s.* 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 drank 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 hun-

dredweight: 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 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:—

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 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.

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 outbuildings 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.

Printed by William Clowes and Sons, Stamford-street,
For Her Majesty's Stationery Office.

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.

Printed by WILLIAM CLOWES and SONS, Stamford-street,
For Her Majesty's Stationery Office.

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.	Lowest description of Cottage.				Average description of Cottage.			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.
COUNTY OF SALOP:—										
Atcham	2	6*l.* to 50*l.*	1*l.*	About 12.	2	25*l.*	3*l.*	3	50*l.*	4*l.*
Bridgnorth	1 & 2	6*l.*	2*l.*	No.	3	10*l.* to 15*l.*	3*l.*	3	25*l.*	4*l.* 10*s.*
Church Stretton	1 & 2	Not stated.	2*l.*	About 40.	2	Not stated.	3*l.* 10*s.*	3	40*l.*	4*l.* to 5*l.*
Clun	2	30*l.*	2*l.* 10*s.*	Yes.	2	40*l.*	3*l.* 10*s.*	3	50*l.* to 70*l.*	5*l.*
Drayton	2	10*l.* to 20*l.*	1*l.* to 1*l.* 10*s.*	No.	3	20*l.* to 30*l.*	2*l.* to 3*l.*	3	40*l.* to 50*l.*	3*l.* to 5*l.*
Ellesmere	2	20*l.* to 40*l.*	1*l.* to 3*l.*	Yes.	3	40*l.* to 60*l.*	3*l.* to 5*l.*	3 & 4	60*l.* to 80*l.*	4*l.* to 6*l.*
Madeley	1	..	15*s.* to 30*s.*	Yes.	2	2*l.* 12*s.* to 4*l.*	..	2	..	5*l.* to 7*l.*
Newport	2	20*l.* to 25*l.*	2*l.* 10*s.*	Yes.	3	35*l.* to 45*l.*	3*l.* to 4*l.*	4	60*l.* to 80*l.*	4*l.* 10*s.* to 5*l.*
Shifnall	2	20*l.* to 40*l.*	3*l.* to 4*l.*	No.	3	60*l.*	4*l.* to 5*l.*	3	70*l.* to 80*l.*	5*l.* 5*s.*
Wellington	2 &	10*l.* to 20*l.*	1*l.* 5*s.* to 2*l.*	No.	3	30*l.* to 60*l.*	3*l.* to 4*l.* 10*s.*	4	50*l.* to 80*l.*	4*l.* to 5*l.*
Wem	1 & 2	20*l.*	2*l.* to 2*l.* 10*s.*	Yes.	3	30*l.*	3*l.* 10*s.*	3	50*l.*	5*l.*
COUNTY OF CHESTER:—										
Great Boughton	2	20*l.* to 30*l.*	1*l.* to 2*l.*	Yes.	2	30*l.* to 50*l.*	2*l.* to 4*l.*	4	50*l.* to 70*l.*	4*l.* to 6*l.*
Wirrall	2	20*l.*	2*l.*	..	3	40*l.*	4*l.*	4	50*l.*	5*l.*

* Dwelling-rooms include both day and sleeping-rooms.

Name of Unions.	Lowest description of Cottage.				Average description of Cottage.			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.
North Wales:—										
Anglesey . . .	1	9*l.* to 15*l.*	..	Yes.	1	15*l.*	2*l.*	2 & 3	25*l.*	3*l.*
Bala. . . .	2	5*l.* to 8*l.*	15*s.* to 30*s.*	Yes.	2	30*l.*	3*l.*	4	40*l.*	4*l.*
Bangor	1	..	1*l.* 10*s.* to 2*l.*	No.	2	30*l.* to 50*l.*	3*l.* to 4*l.*		50*l.* to 60*l.*	3*l.* to 4*l.* 10*s.*
Carnarvon . . .	1	12*l.* to 25*l.*	35*s.* to 50*s.*	Yes.	1	15*l.* to 25*l.*	40*s.* to 50*s.*	2	30*l.*	2*l.* 10*s.* to 4*l.*
Conway . . .	1	15*l.* to 20*l.*	1*l.*	Yes—¼ of the whole.	3	20*l.* to 25*l.*	2*l.*	2	25*l.* to 30*l.*	3*l.* to 4*l.*
Corwen	1	25*l.* to 30*l.*	1*l.*	Yes.	2	25*l.* to 30*l.*	25*s.*	3	..	2*l.*
Dolgelly . . .	2	20*l.*	1*l.* 10*s.*	Yes.	2	25*l.*	2*l.*	2	30*l.*	2*l.* 15*s.*
Festiniog . . .	1	10*l.* to 15*l.*	15*s.* to 20*s.*	..	1	20*l.*	25*s.* to 42*s.*	3	24*l.* to 40*l.*	2*l.* to 3*l.*
Holywell . . .	1	15*l.* to 20*l.*	15*s.* to 40*s.*	Yes.	2	25*l.* to 30*l.*	2*l.* to 3*l.*	3	40*l.* to 50*l.*	4*l.* to 5*l.*
Llanfyllin . . .	1	5*l.* to 10*l.*	1*l.*	No.	2	10*l.* to 20*l.*	2*l.*	3 & 4	20*l.* to 40*l.*	3*l.*
Llanrwst . . .	1	12*l.* to 15*l.*	20*s.* to 25*s.*	Yes.	2	18*l.* to 25*l.*	2*l.* to 55*s.*	3	30*l.* to 35*l.*	3*l.* to 3*l.* 10*s.*
Machynlleth . .	1	..	15*s.* to 20*s.*	No.	2	30*l.*	20*s.* to 30*s.*	3	60*l.*	3*l.* to 3*l.* 10*s.*
Newtown . . .	2	..	2*l.*	..	..	..	..	4	70*l.*	5*l.*
Pwllheli. . . .	1	5*l.* to 9*l.*	14*s.* to 20*s.*	About 185.	1 & 2	16*l.* to 20*l.*	30*s.* to 40*s.*	2 & 3	16*l.* to 25*l.*	2*l.* to 2*l.* 10*s.*
Ruthin	1	18*l.*	25*s.*	No.	2	32*l.*	..	2	40*l.*	..
St. Asaph . . .	1	10*l.* to 20*l.*	25*s.* to 30*s.*	No.	2	20*l.* to 30*l.*	30*s.* to 50*s.*	2	30*l.* to 50*l.*	50*s.* to 70*s.*
Wrexham . . .	1	12*l.* to 20*l.*	18*s.* to 50*s.*	..	2	24*l.* to 40*l.*	50*s.* to 70*s.*	3	40*l.* to 60*l.*	4*l.* to 5*l.*

* 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 and other busy periods of the year from which no data can be derived.]

Name of Labourer.	Age.	Day-work.		Piece-work.		No. of days not at work.	Total earnings of the Man.	Age of Wife, (if any).	Earnings of Wife.	Ages of Children.		Earnings of Children.	Total earnings of Family.	Average weekly Income.
		No. of days at work.	Wages earned.	No. of days at work.	Wages earned.					Boys.	Girls.			
			£. s. d.		£. s. d.		£. s. d.		£. s. d.			£. s. d.	£. s. d.	s. d.
1. Reuben Simmons . .	47	364	31 4 0	..	..	..	31 4 0	35	5 16 7	2	10—8	..	37 0 7	14 2½
2. John Smith	15	364	15 12 0	..	..	..	15 12 0	..	..	..	..	..	15 12 0	6 0
3. Samuel Hesmer . . .	25	364	31 4 0	..	..	..	31 4 0	23	1 1 6	2	..	..	32 5 6	12 4½
4. J. Homewood. . . .	13	364	14 6 0	..	..	..	14 6 0	..	..	..	..	..	14 6 0	5 6
5. John Parks, jun. . .	29	304½	30 8 6	7½	1 14 2	..	32 2 8	30	4 1 9	5—1	9—7—3	..	36 4 5	13 11
6. Thomas Streeter . . .	34	45½	5 11 7	260½	34 10 0½	6	40 1 7½	34	2 12 8	10—8 4—2	6	0 16 6	43 10 9½	16 8¾
7. John Gilbert	39	124	11 6 5½	169½	28 16 1	13½	40 2 6½	39	2 11 6	15—10 8—6 4	13—2	6 14 5½	49 8 9	19 0
8. Jonathan Homewood .	40	231½	21 5 0	73½	12 15 6½	7½	34 0 6½	30	3 2 4	11—8	5—2	0 16 6	37 19 4½	14 7
9. John Hobbs	45	179½	16 9 6½	124¾	19 18 1	5¾	36 7 7½	40	2 12 11	14—11 8—6 3	..	6 9 0	45 1 3½	17 4
10. Stephen Card . . .	29	119½	10 19 1	162	17 13 1	31½	28 12 2	28	..	3	1	..	28 12 2	10 9½
11. James Adams . . .	28	364	31 4 0	..	..	..	31 4 0	30	0 16 1	..	1	..	32 0 1	12 3½
12. William Sands . . .	17	364	18 4 0	..	..	..	18 4 0	..	..	..	..	..	18 4 0	7 0
13. Thomas Fenner . . .	40	364	31 4 0	..	..	..	31 4 0	..	..	14	19—17 12—10	21 0 4½	52 4 4½	20 1
14. Henry Parker . . .	35	364	28 12 0	..	..	..	28 12 0	34	1 18 11	7—3 1	9—5	..	30 10 11	11 8¾
15. James Field	43	232½	22 12 3	79½	10 15 1½	2½	33 7 4½	..	..	..	..	..	33 7 4½	19 10
16. Henry Baker. . . .	37	71½	7 1 6½	221½	28 6 5	19½	35 7 11½	30	1 6 7	3—1	9—5	..	36 14 6½	14 0¾
17. John Parks, sen. . .	51	81	7 8 6	195½	37 2 10½	35½	44 11 4½	46	2 6 7½	15—13 11	9—5	9 4 9	56 2 9	21 7
18. Henry Skinner . . .	35	149½	13 14 1	155	16 9 10½	7	30 3 11½	35	0 17 0	..	..	..	31 0 11½	11 10¾
19. John Bryant	43	136½	12 9 9½	162½	20 11 10½	19	33 1 8	41	..	9	12	0 14 3½	33 15 11½	13 0
20. William Tutt	28	95½	8 15 3	203½	26 19 9	13	35 15 0	22	4 3 10	5—1	3	..	39 18 10	15 1
21. George Cottingham . .	30	104½	9 11 7	205½	23 13 8	2	33 5 3	27	2 15 2½	4—2	6	..	36 0 5½	13 10¾
22. Obid. Cottingham . .	26	179½	14 18 9	122½	12 16 8	7	27 15 5	..	..	..	..	..	27 15 5	10 8
23. John Haiselden . . .	40	139¾	12 16 2½	135½	19 2 1½	26	31 18 4	41	5 5 8½	9—7 5—1	13—11	..	37 4 0½	14 3½
24. George Haiselden . .	32	162½	14 17 11	141¼	14 0 6½	9½	28 18 5½	25	1 2 9	7	5—3 1	..	30 1 2½	11 6½
25. James Gaston . . .	55	242¾	20 2 11	18	1 18 1	51½	22 1 0	..	..	..	..	..	22 1 0	8 5¾
26. George Gaston . . .	25	164½	13 14 2	90½	6 0 2	65	19 14 4	..	..	..	..	..	19 14 4	7 4½
27. Edward Parks . . .	21	220½	18 7 6	79½	6 4 5½	12	24 11 11½	..	..	..	..	..	24 11 11½	9 5¾
28. George Adams . . .	17	272	15 6 1½	9	0 18 6	31	16 4 7½	..	..	..	..	..	16 4 7½	6 2½

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.
s.		*s.*	
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.

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For Her Majesty's Stationery Office.

ON THE TATE 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 occupiers 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 10*s.* per week, out of which they pay 1*s.* 9*d.* 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 tenantable. 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.* 5½*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.

4.

William Haynes of Oakamoore (wire-drawer), wages 1*l.* 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 18*s.* per week, with a wife and seven children; his family are in a miserable condition.

6.

John Banks, of Cheadle (collier), wages 18*s.* per week, wife and three children; his house is in a filthy state, and the furniture not worth 10*s.*

7.

William Weaver, of Kingsley (boatman), wages 18*s.* per week, wife and three children; he is a drunken, disorderly fellow, and his family entirely destitute.

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.

John Hammonds, of Woodhead (collier), wages 18*s.* per week; has six children to support; he is a steady man, and saving money.

5.

George Mosley, of Kingsley (collier), wages 18*s.* per week; he has a wife and seven children; he is saving money.

6.

William Faulkner, of Tean (tape-weaver), wages 18*s.* per week; supports his wife and seven children, without assistance.

7.

Charles Rushton, of Lightwood-fields, wages 14*s.* per week; he supports his wife and five children in credit.

8.

Richard Barlow, of Cheadle (labourer) wages 12*s.* per week; wife and five children, in miserable circumstances, not a bed to lie on.

9.

Thomas Bartlem, of Tean (labourer), wages 14*s.* per week, his wife earns 7*s.* per week, five children; he is very much in debt, home neglected.

10.

Thomas Johnson, of Tean (blacksmith), wages 18*s.* per week, his wife earns 7*s.* per week, three children; he is very much in debt, and his family grossly neglected.

8.

William Sargeant, of Lightwoodfields (labourer), wages 13*s.* per week; he has a wife and six children, whom he supports comfortably.

9.

William Box, of Tean (tape-weaver), wages 18*s.* or 20*s.* per week; supports his wife in bad health, and five children.

10.

Ralph Faulkner, of Tean (tape weaver), wages 18*s.* or 20*s.* 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 population, 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.

* History of Manchester.

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 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 subjoined 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.

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 1*s.* 6*d.* 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 3*d.* each.

Mr. Walker, the proprietor of an extensive silk-mill at Patricroft, near Manchester, describes the crowded state of an Irishman's house near his mill some time back. The man was em-

RENTS OF THE DWELLINGS EXAMINED.

	Number of Dwellings.		
	Manchester.	Salford.	Total of Manchester and Salford.
Paying a weekly rent of 1*s.* 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 2*s.* 11¼*d.*
9,538 dwellings in Salford, average weekly rent 2*s.* 10*d.*

37,724 dwellings in Manchester and Salford, weekly rent 2*s.* 11*d.*

ployed 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 9*d.* 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*l.* or 70*l.* 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	ditto	46,050
3d	ditto	ditto	26,322
			109,491

Allowing 4½ persons to each house or cottage, it would give for the

1st class . . .	167,035
2d ditto . . .	207,225
3d ditto . . .	118,449
Making a total of	492,709 persons,

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, 8¾ 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.

A Return of the Rents and other particulars of the Cottages and Tenements occupied by the Labouring Classes in the District of _____ Union.

_____ *Relieving Officer.*

Names of Townships or Parishes in the District.	Lowest Class of Cottages or Tenements, Rents not exceeding 1s. 6d. per week.							Second Class of Cottages or Tenements, Rents above 1s. 6d. and not exceeding 2s. 6d. per Week.							Third Class of Cottages, or Tenements, Rents above 2s. 6d. and not exceeding 4s. per Week.						
	Number of Cottages or Tenements.	The description of Persons occupying them, and probable Amount of Wages or Income weekly.	Cost of Erection of this Description of Cottage.	Probable Cost of Repairs annually on each.	Description of Owner, whether Manufacturer, Land Owner, or built by private Speculation.	Are they provided with Ovens or Boilers?	Are they properly drained, and provided with Privies?	Number of Cottages or Tenements.	The Description of Persons occupying them, and probable Amount of Wages or Income Weekly.	Cost of Erection of this Description of Cottages.	Probable Cost of Repairs on each annually.	Description of Owner, whether Manufacturer, Land Owner, or built by private Speculation.	Are they provided with Ovens or Boilers?	Are they properly drained, and provided with Privies?	Number of Cottages or Tenements.	The Description of Persons occupying them, and probable Amount of Wages or Income weekly.	Cost of Erection of this Description of Cottages.	Probable Cost of Repairs on each annually.	Description of Owner, whether Manufacturer, Land Owner, or built by private Speculation.	Are they provided with Ovens or Boilers?	Are they properly drained, and provided with Privies?

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, allowing for Repairs, &c.			No. 2. Second Class of Cottages, average 2s. 3d. per Week, or £5. 15s. per Year, allowing 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 11/20	395	94	9 14/20	26,377
Macclesfield	2,481	38	8 1/2	3,864	60	9 11/20	2,557	84	10 17/20	50,639
Stockport	3,457	28	11 13/20	5,032	53	10 17/20	6,436	98	9 6/20	68,906
Altrincham	1,200	49	6 13/20	1,352	79	7 6/20	540	101	9	30,139
Northwich	1,615	52	6 1/4	2,121	75	7 10/20	212	89	10 4/20	26,906
Nantwich	1,994	47	7	1,158	74	7 3/4	471	108	8 9/20	30,992
Lichfield	1,281	34	9 11/20	1,227	68	8 9/20	320	148	6 1/20	22,749
Newcastle	1,502	57	5 14/20	1,135	78	7 7/20	251	136	6 14/20	16,476
Stoke-upon-Trent	2,181	45	7 4/20	5,610	60	9 11/20	946	90	10 2/20	37,220
Woolstanton and Burslem	2,292	50	6 1/2	2,993	90	6 8/20	295	150	6 1/20	23,567
Tamworth	1,278	47	7	376	69	8 7/20	134	117	7 16/20	12,175
Cheadle	1,438	40	8 3/20	805	67	8 12/20	169	101	9	14,473
Uttoxeter	672	29	11 4/20	471	40	14 8/20	..	..	..	12,837
Burton-upon-Trent	2,100	40	8 3/20	1,270	90	6 8/20	125	115	7 17/20	24,667
Leek	1,281	47	7	650	63	9 1/20	104	86	10 13/20	18,387
Chapel-en-le-Frith	713	60	5 8/20	215	79	7 6/20	95	123	7 8/20	10,448
Hayfield	270	50	6 1/2	534	80	7 4/20	627	140	6 1/2	9,493
Glossop	142	60	5 8/20	559	80	7 4/20	1,050	90	10 2/20	9,631
Bakewell	2,519	58	5 12/20	424	87	6 12/20	74	146	6 1/4	25,879
Chesterfield	1,969	45	7 4/20	2,618	70	8 4/20	128	105	8 10/20	34,246
Belper	3,324	40	8 1/20	2,542	67	8 12/20	661	107	8 1/2	33,388
Derby	1,035	45	7 4/20	2,855	75	7 10/20	1,026	155	5 17/20	25,484
Salford	680	53	6 1/20	3,741	46	12 1/2	5,445	75	12 1/20	52,366
Chorlton-upon-Medlock	527	44	7 8/20	2,463	54	10 10/20	4,261	83	10 12/20	46,465
	37,119	40*	8	46,050	65	8 3/4	26,322	92	9 3/4	663,890

* General Average.

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 per centage 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 expressing 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 de-

cided 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 20*s.*, 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 neighhourhood, 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 untenantable 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.

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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.

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,

* Dr. Channing on the Elevation of the Working Classes.

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
VauxhallRoad 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
GreatGeorge's 9	66	64	181	234	34	66	645	15,265
RodneyStreet 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
NorthToxteth 15	10	20	35	68	18	24	175	24,067*
SouthToxteth 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 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 supposed amount of the part within the borough.

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.	Population, 1831.	No. of Fever Cases in 6 Years.	Wards.	Population, 1831.	No. of Fever Cases in 6 Years.
Vauxhall Road	20,871	1708	Everton and Kirkdale	7,109	52
Exchange Ward	12,605	1359	Scotland Road	20,545	576
St. Paul's	14,891	642	Rodney Street	9,322	128
St. George's	15,265	645	Abercromby	10,891	144
Castle Street	8,469	620	Lime Street	15,863	281
St. Peter's	9,256	347	St. Anne's	14,875	477
Pitt Street	12,561	447	West Derby	5,613	29
			West, Toxteth Park	24,067	175
			South, Toxteth Park		162
Total	93,918	5768		108,285	2024
Per centage of cases on population.	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.					
				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.	Per Centage 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.	Population. 1831.	Deaths by all Causes	Per Centage.	Deaths by Epidemic Diseases.					
				Deaths by Fevers.	Per Centage.	Deaths by Small-pox, &c.	Per Centage.	Total.	Per Centage.
Liverpool	165,175	6,627	4·012	580	·351	559	·338	1139	·689
Districts including Lancaster, Preston, Toxteth Park, Wigan, Blackburn, Warrington, Bolton, Halifax, Huddersfield, Bury, Rochdale	669,447	17,686	2·641	930	·138	2221	·331	3151	·470
Districts including Burnley, Colne, Todmorden, Hebdenbridge, Haslingden, Accrington, Chorley, St. Helen's, Leigh, Chowbent, &c.	199,413	4,701	2.357	316	·158	505	·253	821	·411
Districts comprising the Agricultural Unions of Ormskirk, Fylde, Garstang, 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 Distict.

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 more 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, cesspools, 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, Padiham, 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 uncleanliness.

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, Prescot, 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 Prescot 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 40*s*. 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, 5*s*. 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 of 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.

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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* ,,

* During one year (1837) more than 7000 cases of fever were treated by the two dispensaries alone.

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 5½.

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

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 10½ 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.

* The average distance between the rows is perhaps about 9 feet; and the average number of houses in a court, from 6 to 8.

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 communication 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 accessary 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

* I have thought it unnecessary to give the data on which these estimates are founded.

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 descrip-

tions, 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 morbific 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.

* 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.

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 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 propor-

tioned 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 8½ square yards to each, there occurred only 72 cases; in other words, 1 in 16½ 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	
Oriel-street .	6	*1 in 9½	*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.
North-street .	7	1 in 5¾	
Crosbie-street	7	1 in 12	
Johnson-street	7¾	1 in 11¼	
Banastre-street	8	1 in 12¼	
Addison-street	8½	1 in 16½	
Primrose-hill	14⅔	1 in 26½	

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 2½ of the inhabitants were yearly attacked with fever; while in Barker-court, in the same street, having 4⅓ 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 1⅓ square yards to each, 1 in 2¼ were annually attacked; while the inhabitants of Elm-court, with 4¼ 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 $2\frac{1}{3}$
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	$1\frac{1}{3}$	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 16*s.* 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 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 Liver-

* 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.

pool. 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 numerously 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 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.

* 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.

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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.

* On the Prevention of Infectious Fevers, 1801, page 73.

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 recieved 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 contra-distinction 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 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 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

* The Management of the Poor in Scotland, Edinburgh, 1840, page 19.

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."

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 popu-

* Medical Histories and Reflections. On the Prevention of Fever in Great Towns, 1795, vol. ii page 180.

lation 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 their 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 and perhaps peculiar feature of the House of Recovery is, that

* Account of the Establishment of Fever Wards in Manchester by Dr. Ferriar, in Medical Histories, 1798, vol. iii. page 72

† Ib., page 84.

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 temporay 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

* Clinical Lectures in the Manchester Royal Infirmary, 1834, page 193.

† Origin and Progress of Malignant Cholera in Manchester, 1833, page 106.

drains, ditches full of stagnant water, dunghills, pigsties, &c., 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 puplic 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 occuring 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 certain y 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 occurence 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. Gaulter 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 develope 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 accomodate 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, whitewashing, 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 helplesss 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 morbific 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,

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 2*s.* in the pound, was in 1826 and 1827, 5*s.* . . . . 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 hygiène, 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 necessaries of life; for individuals whose higher wages and regular

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 preconceived 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 sewering, 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 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.

To the Poor Law Commissioners.

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For Her Majesty's Stationery Office.

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 em-

ployment, 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 preluding 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 pro-

ducing 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-jambs, 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 ashe-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
	£113 13 0	£103 2 9	£79 18 6	£71 10 9

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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 fœtid 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 ancle-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 acommodation 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.
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 preven-

tive 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 droughty 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.

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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*l.* Annual Rent.	Population of the Working Classes at 4½ to a House.
	A.	R.	P.	A.	R.	P.	A.	R.	P.			
North . .	28	1	0	63	3	0	92	0	0	12,506	2,109	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 par-

ticular 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 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 Timble 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 communcating 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 informa-

tion 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 per centage. In one *cul-de-sac*, in the town of Leeds, there are 34 houses, and in ordinary times, there dwell in these houses 340

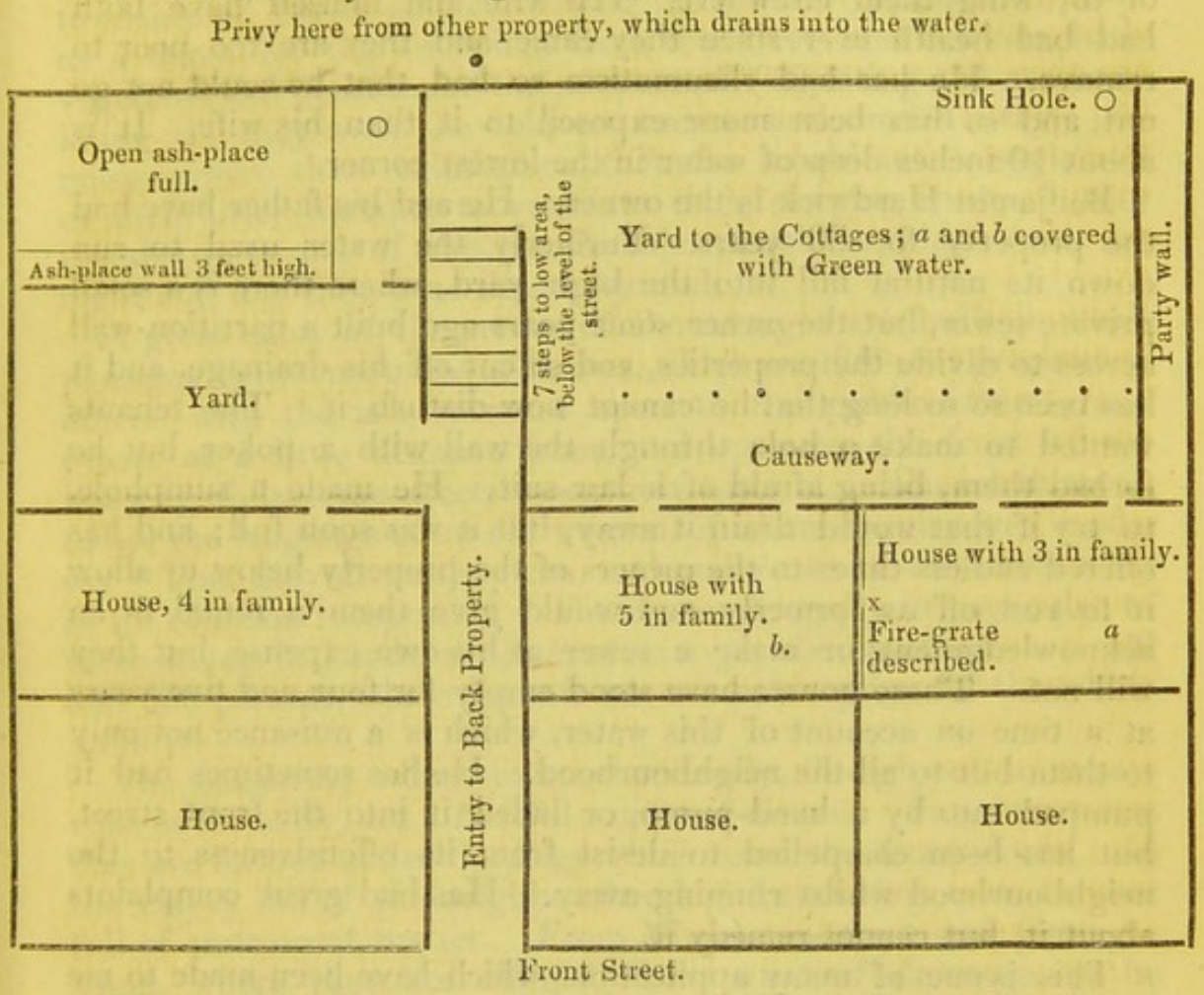
persons, or ten to every house; but as these houses are many of them receiving-houses for itinerant labourers during the periods of hay-time and harvest, and the fairs, at least twice that number are then here congregated. The name of this place is the Boot and Shoe-yard, in Kirkgate, a location, from 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*.



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 so long that he cannot now disturb it. The tenants wanted to make a hole through the wall with a poker, but he forbad 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 immense 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 pthisis 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 familyhis 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 form 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 takento 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 cleanlinesss, 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 vares 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 vegitation 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 excremen-

titious 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 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

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

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 4*s.* or 4*s.* 6*d.*

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 14*s.* 3*d.*, while in the highest year, and including the wages of the children, they are seen to be 1*l.* 1*s.* 7¾*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.	Population.	Births & Deaths in 1838 in each District.	
	Acres	Roods.	Paved.	Sewered	Bad.	Total.			Births.	Deaths.
1. North	63	3	37	18	43	80	2794			
1. N. East	75	3	27	15	66	93	3813	28,775	1269	1219
2. East	111	..	35	16	87	122	3461			
2. South	57	1	10	1	13	23	1236	23,039	858	808
2. Kirkgate	27	2	15	9	3	18	645			
3. Mill-Hill	101	2	35	21	13	48	984			
3. West	176	0	53	4	72	125	3305	30,306	1077	839
3. N. West	82	1	32	3	45	77	2141			

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						
		Good.	Bad.	Acres.	Rds.	Houses.	Population.	Births.	Deaths.
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

	Acres.	Rds.	Streets.	Population upon the Acre.	Population upon the Street.	Births.	Deaths.
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 that in No. 1.

We may observe further, also, that in 173 streets, out of which 109 are described are 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*l.* 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*l.* annual rent. Taking, then, this rental as the line of demarcation, and multiplying the number of houses under 10*l.* 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*l.* 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	87,613

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.
Butcher	370	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Butter-factor	28	.	1	.	1	.	.	.	.	.	.	.	.	.	.
Cabinet-maker	258	2	.	.	.	1	.	.	.	.	.	.	.	.	.
Callenderer	16	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Carpenter	31	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Carpet-weaver	86	2	.	1	.	1	.	.	.	.	.	.	.	.	.
Cartman	52	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Chair-maker	9	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Charwoman	177	.	4	.	.	.	.	.	.	.	.	.	.	.	.
Clock-maker	26	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Clothier	234	25	5	2	2	4	.	.	.	.	1	2	.	.	.
Cloth-dresser	3001	12	.	.	.	.	.	.	.	.	.	.	.	.	.
Cloth-weaver	440	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Clothes-dealer	8	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Collector	10	.	1	1	.	.	.	.	.	.	.	.	.	.	.
Collier	128	.	.	2	1	.	.	.	.	.	.	.	.	.	.
Comb-maker	18	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Coal-dealer	29	1	.	.	.	.	1	.	.	.	.	.	.	.	.
Confectioner	65	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Corn-dealer	23	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Cooper	88	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Coach-smith	18	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Corn-miller	66	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Cropper	4	4	.	.	.	.	.	.	.	.	.	.	.	.	.
Drysalter	19	1	1	.	.	.	.	.	.	.	.	.	.	.	.
Dyer	646	4	.	.	.	2	.	.	.	.	.	.	.	.	.
Earthenware-dealer	7	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Furniture-broker	11	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Female servant	3579	.	3	.	1	.	.	.	.	.	.	.	.	.	.
Farmer	60	7	.	.	.	.	.	.	.	.	.	.	.	.	.
Gardener	113	7	2	3	.	.	.	.	.	.	.	.	.	.	.
Gasman	9	1	1	.	.	.	.	.	.	.	.	.	.	.	.
Glassblower	4	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Greengrocer	48	2	1	1	.	.	.	.	.	.	.	.	.	.	.
Grocer	168	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Gunmaker	13	2	1	1	.	.	.	.	.	.	.	.	.	.	.
Hairdresser	77	2	.	1	.	.	.	.	.	.	.	.	.	.	.
Hatter	79	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Hawker	109	.	4	.	.	.	.	.	.	.	.	.	.	.	.
Independent Persons	1676	48	201	25	60	28	63	2	10	.	6	.	.	.	.
Ironfounder	22	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Ironmonger	22	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Jobber	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Joiner	677	6	1	3	.	.	.	.	.	.	.	.	.	.	.
Labourer	2028	28	3	7	1	4	3	.	.	.	.	.	.	.	.
Leather-dresser	11	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Linen draper	176	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Linen-weaver	199	4	.	1	.	.	.	.	.	.	.	.	.	.	.
Lodging-house-keeper	95	.	2	.	3	.	.	.	.	1	1	.	.	.	.
Mechanic	710	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Male servant	388	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Mangle-woman	39	.	3	.	.	.	.	.	.	.	.	.	.	.	.
Maltster	45	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Mason	408	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Matron	3	.	.	.	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 annexed 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
3. of 1000	Persons engaged in in-door labour and handicraft	Charwomen	1 in 44
		Joiners	1 in 75
		Cabinet-makers	1 in 86
		Blacksmiths	1 in 187
		Cap-makers	0 in 62
		Carvers and Gilders	0 in 104
5. of 1000	Persons engaged in trade	Saddlers	1 in 31
		Booksellers	1 in 41
		Upholders	1 in 61
		Bakers	1 in 63
		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 livers; 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 aud 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.

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	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Teething	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Diarrhœa	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Consumption	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
Accident	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Œsophagus	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Mesenteric diseases	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hooping Cough	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Scarlet Fever	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Dropsy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	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	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
Convulsions	6	7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Inf. Lungs	2	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Water in the Chest	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of the Brain	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Teething	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dropsy	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Water in the Head	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Scarlet Fever	.	.	.	.	1	1	1	1	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Gangrene	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.
Measles	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Croup	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Accident	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	.	3	2	1	1	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	1	.	.	

comprises WHITKIRK, TEMPLENEWSAM, AUSTHORPE, THORPE, STAPLETON, Agricultural and Colliery.

17		18		19		20		25		30		35		40		45		50		55		60		65		70		75		80		85		90		95		100		Total		Grand Total.
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.	M.	F.	M.	F.	M.	F.	
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	2	.	2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	5	9
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1
.	.	.	1	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	1	.	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	4	2	6
.	.	.	.	.	.	.	.	2	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	2	5
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
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.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	2
.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	3
.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
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.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	2	1	3
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	1	2
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2	.	1	.	.	.	.	4	5	9
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	1
.	.	.	1	.	.	1	2	3	3	1	.	2	1	.	.	.	1	.	1	.	2	1	1	2	1	1	1	4	2	.	2	1	.	.	1	.	.	.	26	31	57
																																						Deaths under 5 . .	7	11	
																																						,, over 5 . .	19	20	
																																						Total . .	26	31	

which comprises CHAPELTOWN, POTTER NEWTON, ROUNDHAY, and SHADWELL, persons having town occupations also).

17		18		19		20		25		30		35		40		45		50		55		60		65		70		75		80		85		90		95		100		Total.		Grand Total.
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.	M.	F.	M.	F.	M.	F.	
.	.	1	1	.	1	1	3	.	1	1	1	.	.	.	1	1	1	.	.	.	.	1	.	1	.	.	.	3	.	.	.	.	.	.	.	.	.	.	13	11	24
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																																						Deaths under 5 . .	20	18	
																																						,, over 5 . .	26	22	
																																						Total . .	46	40	

WORTLEY.—Deaths in 1840. Population of the Registration District, which Colliery and

Diseases.	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17	
	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.	M.	F.
Infl. Lungs	12	5	5	1	.	.	.	.	1	1	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Teething	4	3	4	6	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Measles	1	2	6	2	.	2	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Diarrhœa	3	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Water on the Brain	1	3	1	5	.	.	1	1	.	1	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.
Erysipelas	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
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Typhus	.	2	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	1	.	.	1	.	.
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Scarlet Fever	.	1	.	1	.	3	2	3	.	1	.	.	1	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
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Thrush	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dis. of Stomach	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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	48	44	17	25	1	10	6	5	2	5	1	3	1	3	1	1	2	.	.	2	2	.	1	4	.	1	1	3	1	1	2	1	2	2	1	.

	M.	F.
Deaths under 5	75	92
„ over 5	79	107
Premature	0	11
Total	154	210

mprises KIRKSTALL, HEADINGLEY-CUM-BURLEY, BRAMLEY, and HORSFORTH,
griculture.

18		19		20		25		30		35		40		45		50		55		60		65		70		75		80		85		90		95		100		Total.		Grand Total.
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.	M	F	M.	F.	M.	F.	
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2	2	.	6	9	4	7	2	10	2	2	5	5	2	4	3	8	3	4	9	3	5	8	8	11	4	8	5	6	3	2	1	.	.	.	.	154	199	353
																														Premature					.	.	11
																																				Total		364

KIRKSTALL.—Deaths in 1840. Population of the Registration District, which
Manufacturing, Agricultural,

Diseases.	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17	
	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.	M.	F.
Convulsions	16	17	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Water on Brain	.	4	1	1	1	2	.	1	.	2	.	1	1	.	.	1	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Croup	.	1	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Typhus	6	3	.	1	.	.	.	.	1	.	.	1	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
Debility	5	6	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Teething	2	1	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hooping Cough	5	3	.	2	.	1	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Scarlet Fever	1	1	4	5	5	2	3	2	6	4	3	.	1	1	1	1	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	1
Consumption	.	1	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	1	.	.	1	,	.	.	1	1	.	1	1	.	1	2	2	3	1	.
Infl. of Bowels	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	1	1
Measles	2	1	3	6	2	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dropsy	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.
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Thrush	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Lungs	.	.	2	2	2	.	.	1	1	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Diarrhœa	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
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Infl. of Brain	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sore Throat	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Water in the Chest	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dis. of Bladder	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Dis. of Heart	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
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Hæmorrhage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dysentery	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Common Fever	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Infl. of Liver	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Cholera	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rheumatism	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Total	39	41	19	25	11	12	5	5	11	10	6	2	4	1	2	7	1	3	.	1	3	2	1	1	3	2	.	4	1	.	1	2	3	4	3	2

	M.	F.
Deaths under 5	91	95
,, over 5	94	96
Total	185	191

omprises WORTLEY, ARMLEY, FARNLEY, and GILDERSOME.
nd Mercantile.

18		19		20		25		30		35		40		45		50		55		60		65		70		75		80		85		90		95		100		Total.		Grand Total.
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.	M.	F.	M.	F.		
																																			18	18	36
																																			5	12	17
																																			1	2	3
																																				1	1
	1		1	1											1																				8	11	19
				1																															8	7	15
																																			3	3	6
					1																														6	8	14
			2	4	6	3	6	2	7	4			3	1	2	2	1	1																	28	18	46
			1																																26	36	62
																																			3	5	8
													1					1		1		1														9	10	19
							1											1		1						1										5	5	10
																																				1	1	1
																																				1	1	1
	1			1						1						1																				7	4	11
																																			5	3	8
												1																								1	1	2
																																			1	3	4
																																				2	2	2
1																																			1	1	2
						1	1							1																						3	2	5
																1	1			1																1	2	3
																																				4	1	5
							1																			1											1	1
																																				1	3	4
						2				1																											2	2
												1						1																		4	1	5
									1																											1	1	2
																																				4		4
																																				1		1
																																				4		4
																																				1	4	5
																																				1		1
																																				5	2	7
																																				2	2	4
																																				1		1
																																				1		1
																																				1		1
																																				1		1
																																				3		3
																																				1		1
																																				1		1
																																				1		1
																																				2	3	5
																																				1		1
																																				1		1
																																				2		2
																								3	3	3	6	1	3	2	1					9	13	22
																		8								1										1		1
1	1	1	4	7	7	6	10	4	7	8	1	4	6	4	5	8	2	5	2	4	3	3	1	3	3	8	9	3	3	2	1	.	.	.	.	185	191	376

Premature	8
Not stated	7
Total. . . .	391

HOLBECK—Deaths in 1840. Population of Registration

Diseases.	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17	
	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.
Convulsion	40	20	4	1	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Decline	10	7	1	.	3	1	1	2	.	.	.	.	2	.	.	.	.	1	.	.	.	.	.	.	.	.	1	1	1	1	.	1	.	1	.	.
Hooping Cough	2	2	.	4	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Croup	1	1	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hydrocephalus	3	1	1	1	.	2	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Lungs.	7	8	8	8	.	1	2	3	1	1	1	2	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.
Infl. of Bowels	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Measles	1	.	1	1	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Teething	1	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Common Fever	.	1	.	.	.	1	.	.	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Spina Bifida	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Jaundice	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Brain	.	3	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cholera	1	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Thrush	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Inanition	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Intest. Irritation	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Bronchitis	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
Scarlet Fever	.	.	.	.	1	1	1	.	1	.	1	1	.	1	2	2	1	.	1	.	1	.	.	1	.	1	.	.	.	.	.	.	.	.	.
Typhus	.	.	.	.	.	.	.	1	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.
Dropsy	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Accident	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. Liver	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Spinal Complaint	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dis. of Heart	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Scorfula	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Apoplexy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Diarrhœa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Dysentery	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Total	69	49	19	18	5	6	6	9	4	5	6	4	4	3	3	2	3	3	2	1	2	1	.	3	.	1	2	1	1	2	1	2	1	1	.	.

	M.	F.
Deaths under 5	109	91
,, over 5	87	98
Total	106	189
		196
		12
		397

istrict, which comprises Holbeck, Beeston, Churwell.

18		19		20		25		30		35		40		45		50		55		60		65		70		75		80		85		90		95		100		Total.		Grand Total.
.	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.	M.	F.	M.	F.	M.	F.	
																																				47	21	68
.	1	2	.	6	1	4	2	4	1	1	4	1	3	2	.	2	1	.	1	3	2	.	2	.	1	.	.	.	.	1	.	.	.	.	.	.	14	35	79
																																				3	7	10
																																				2	2	4
																																				5	7	12
				1	.	.	1	1	.	1	.	.	.	.	.	1	.	2	.	.	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	29	26	55
																																				1	3	3
																																				3	2	5
									2																											2	2	4
																																				1	6	7
					1																					1									2	1	1
																						1														.	6	2
																																				4	1	5
										1						1																				1	2	3
																		1																		1	1	2
				1	2						1		1																							9	8	17
						2		2				1	1	1		1		1		1		1	1	1			2									5	12	17
															1																					1	1	2
				1		1		1										2	2			1														6	2	8
					2		1		1					1		1	1		1					1	2												3	6	9
										1											1															1	1	2
											1																									1	.	1
																				1	1	1	1	.	.	1										2	3	5
																											2									.	1	1
																																				2	4	6
																						1	2	.	2	.	.	1	2							.	1	1
																										.	6	2	.	1	1	1	1	1	1	2	6	8
																																				1	1	2
1	2	.	9	6	5	6	7	5	5	7	3	4	4	5	6	3	4	5	6	7	6	7	3	6	3	11	3	2	.	2	1	1	1	.	.	.	196	189	385
																																				Premature		.	.	12
																																				Total		.	.	397

HUNSLET.—Deaths in 1840. Population of the
Manufacture, Colliery,

Diseases.	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17	
	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.	M.	F.
Decline. . . .	1	2	2	2	3	2	.	.	.	1	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	2	1	.	1	3	.	.	.	3
Teething . . .	3	1	4	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Convulsions . .	15	6	.	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. Lungs . .	9	5	4	4	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Diarrhœa . . .	2	4	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Brain . .	1	.	.	1	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hydrocephalus .	4	1	1	5	2	2	.	.	.	.	.	.	2	.	.	.	.	.	.	.	1	2	.	.	.	.	1	.	.	.	.	.	.	.	.
Hooping Cough .	1	1	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Scarlet Fever . .	8	4	3	14	8	7	4	7	10	6	12	5	4	5	3	3	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Spinal Complaint	1		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Croup	.	.	1	2	.	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Measles . . .	.	.	1	1	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Small-pox . . .	.	.	.	1	1	.	1	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dropsy	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.
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Hæmorrhage . .	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Pleurisy . . .	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Total . .	41	25	17	36	19	14	7	9	16	10	13	6	7	5	3	3	3	1	2	2	.	1	4	1	1	1	1	3	1	.	1	4	1	.	.

	M.	F.
Deaths under 5 . . .	113	100
,, over 5 . . .	99	102
Total . .	212	202
		212
		44

egistration District comprising HUNSLET.
ottery and Glass.

18		19		20		25		30		35		40		45		50		55		60		65		70		75		80		85		90		95		100		Total.		Grand Total.
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.	M.	F.	M.	F.	
.	.	.	2	8	5	7	2	.	6	3	2	3	2	4	3	2	2	.	1	2	.	2	2	2	1	.	.	.	.	.	.	.	.	.	.	.	42	44	86
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																																				Premature . .			30
																																				Total. , .			444

ROTHWELL.—Deaths in 1840. Population of the Registration District, Colliery and

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.
Small-pox	3	2	1	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Scarlet Fever	1	2	1	1	4	2	1	4	.	1	1	2	1	2	1	.	.	.	.	1	1	.	.	1	.	.	.	.	.	.	.	.	.	.
Erysipelas	1	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Measles	.	.	.	1	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
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Dis. of Stomach	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
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Total	21	11	7	7	6	4	3	4	.	2	4	3	2	2	2	.	.		1	1	1	.	2	1	1		1	.	.	.	1	1	2	3

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 Inspectors, 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

which comprises Rothwell, Middleton, and Lofthouse, with Carlton.
Agricultural.

17		18		19		20		25		30		35		40		45		50		55		60		65		70		75		80		85		90		95		100		Total.		Grand Total.
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.	M.	F	M.	F.	M.	F.	
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																																						Deaths under 5 .		41	31
																																						„ over 5 .		31	20
																																								72	51

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?

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' Regulation Act in particular, and by the Chimney Sweepers' Act, which comes into operation in 1842, the line of demarcation has been more fully drawn than heretofore, and really active labour now commences as early as nine years of age; and though it is true that, both in the mining districts and others, of which some are almost domestic, young children of 7, 8, and 9 years old are to be found employed, yet the law has made no provision which affects them in any way. We can only, therefore, instance those who are recognised and protected by the law, as showing at what age active labour commences in this country. The Factories' Regulation Act provides that persons under 13 years of age shall be called children, and that no child under 13 years of age shall be employed more than nine hours in any one day, nor more than 48 hours in any one week; and that no young person, *i.e.* any person between the ages of 13 and 18 years, shall be employed more than twelve hours in any

one day, or 69 hours in any one week; with this proviso for both classes, however, that lost time may be made up by the additional labour of an hour a-day, for twelve days if necessary, in a factory where steam is the moving-power, and of half an hour a-day, *ad infinitum,* if needful, where the loss of time has been occasioned by deficiency or excess—where water is the motive-power—but with this anomaly also, that whilst the common law of the land recognises 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 3*s*. or 4*s*. 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 stinted 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 prejudical 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, sewering, 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 sewered, 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 persumed 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 sewering, 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 sewering, 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 ventilators: 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; aud 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

philanthrophist, 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 tnken 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.

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REPORTS

ON THE STATE OF THE DWELLINGS OF THE LABOURING CLASSES IN CUMBERLAND, DURHAM, NORTHUMBERLAND, AND WESTMORELAND.

By Sir John Walsham, Bart.

I.

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, Hexham	Agricultural market towns.
Tynemouth, Berwick	Seaport towns.
Long Benton, Wallsend, &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, Durham	Agricultural market towns.
South Shields, Stockton*	Seaport towns.
Auckland, Houghton-le-Spring, Heworth, &c.	Coal districts.
Yarm, Whickham	Rural districts.
Teesdale, Weardale	Lead-mining districts.
Barnard Castle, Gateshead*	Manufacturing towns.

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, Allonby	Rural districts.
Cockermouth, Wigton	Manufacturing towns.

* 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.

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 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

* "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?"

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 presented, 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

* "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?"

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 who thus "buys out" his share or shares pays 10*s.* 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.

II.

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, disgorges 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 Cockermouth 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 cleanlines, 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 potatoe-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 Cockermouth, 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 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.

III.

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 Cockermouth 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 Cockermouth 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 Cockermouth 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,	
5. Tynemouth,	In the county of Northumberland.
6. Hexham and Wooler,	
7. Cockermouth and Keswick,	In the county of Cumberland.
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 2*s*. 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 pants—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 Cockermouth 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 Cockermouth, 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."

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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 fœtid 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,

To Dr. Dehane. EDWARD H. COLEMAN, *Surgeon.*

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 Graisley-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,

To Dr. Dehane. JOHN TALBOT CARTWRIGHT, *Surgeon.*

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 ancle 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,

To Dr. Dehane. JAMES GATIS.

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.

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ON THE FEVERS WHICH HAVE PREVAILED IN EDINBURGH AND GLASGOW.

By Neil Arnott, Esq., M.D.

Gentlemen,

It gives remarkable simplicity to all inquiries respecting health, to know that among the things and influences around man on earth, in regard to which he can exercise controul, there are only four which he needs to obtain, and two which he needs to avoid, that he may have uninterrupted health for as long as the human constitution is formed to last; in other words, that only by some want or misuse of the requisites, or by the direct agency of the noxious agents can his health be impaired or his life be shortened.

This knowledge gives a singular interest to the contemplation of the past history and present condition of men and societies, by explaining innumerable facts which have much affected their welfare, and by suggesting important measures for securing that welfare in time to come. It explains, for instance, why certain climates, situations, occupations, &c., have been more or less healthful than others; and why, in respect to healthiness, great changes have arisen in climates, situations, occupations, &c., both from what may be called accidental causes, and from the efforts of intelligent minds, guided by experience in the pursuit of good. And it must be such knowledge or general principles which shall account for any present or future local prevalence of disease, and shall prescribe the fittest means for combating the evil. Then to such knowledge must reference be made when questions are to be answered like those lately proposed through the Poor Law Commissioners to medical men and magistrates respecting the sources and means of removing serious disease in certain localities in England and Scotland. I had the honour to be requested to aid in this inquiry in relation to the fevers which have prevailed in Edinburgh and Glasgow, and the present short statement is the sum of what I have seen and thought:—

The four things to be obtained, above referred to are, fit *air*,

temperature, aliment, and *exercise* of the bodily and mental faculties: the two things to be avoided are *violence* and *poisons.* For the sake of easy inspection, the whole six are exhibited in the following table, in which also are placed, in a second and third column, names of deficiency and excess in relation to the four necessaries.

The Four Necessaries.

In fit Kind and Degree.	In Deficiency.	In Excess.
1. Air	Suffocation . . . . Unchanged Air.	Excess of Oxygen.
2. Temperature . . .	Cold (intense) . . .	Heat (intense).
3. Aliment:—		
Food	Hunger	Gluttony, or Surfeit.
Drink	Thirst	Swilling water.
4. Exercise:—		
Of the body . .	Inaction . . . . . or	Fatigue or Exhaustion.
Of the mind . .	Ennui	Want of Sleep.
	Certain depressing passions, as fear, sorrow, &c.	Certain exciting passions, as anger, jealousy, &c.
Of the mixed social aptitudes.	Solitude	Debauchery.

The Two Noxious Agents.

1. Violence:—
   Wounds,
   Fractures,
   Dislocations,
   Burns, &c.
   Lightning.

2. Poisons:—
   Animal, Mineral, Vegetable.
   Certain of these, such as *alcohol* in its various forms, opium, tobacco, &c., which in large quantities kill instantly, when they are taken in very moderate quantity can be borne with apparent impunity, and are sometimes classed as articles of sustenance, or they may be medicinal, but if taken beyond such moderation, they become to the majority of men destructive slow poisons.
   Contagions,—as of plague, small-pox, and measles.
   Malaria of marshes, thickets, and of filth.

Any person who has not already reviewed this subject in a general manner will be struck to find how large a proportion of the diseases known to him are arranged, even in popular apprehension, under single particulars or simple combinations of the particulars above noted as their causes. Need we recall, for instance, how many of the diseases of England are known to proceed from fault in temperature alone, as our winter colds, catarrhs, quinsies, pleurisies, croups, rheumatisms, &c.—that others spring from insufficient or bad food among the poor, and from surfeit or too stimulating food among the rich—others again from crowded and ill-ventilated apartments among the manufacturing labourers and such sedentary persons,—and so forth? And as in the present day persons do not look for preternatural or miraculous occurrences among the phenomena of living bodies any more than among those of the earth itself or of the heavenly bodies, so every disease is believed to be an occurrence perfectly in the course of nature, and a necessary consequence, therefore, of certain preceding occurrences which are said to have brought or caused it, and which occurrences may be studied and analyzed.

Some of the causes when in slight degrees act so slowly as to be long unperceived by the vulgar, as in the instances of insufficient exercise, faulty ventilation of the dwellings, certain kinds of food and drink, &c.; and indeed, it is only of late, since statistical records have been brought to bear on the subject, and have shown that in various conditions of air, temperature, food, and exercise, the average duration of life in societies is affected to the extent of some known proportion, that even the best-informed persons can be said to estimate with tolerable accuracy the influence on health of many of the circumstances.

But all can understand that as the races or breeds of sheep, cattle, horses, &c. are produced and change strikingly according to the pasture, climate, and treatment given them, so does the human constitution slowly become modified by kindred circumstances to conditions not deemed diseases but called temperaments and varieties, compatible with health and long life.

Of the causes of disease set down in the table, the two last noted, viz., contagions and malaria, as might be expected from many of them being unperceived by sight or by any other human sense, and being therefore known to exist only by their effects, have been more lately known and less understood than most of the others. And even at the present day the enlightened inhabitants of New York might see yellow fever destroying its thousands among them, and yet remain in doubt whether it had been imported from elsewhere or had been generated among themselves, and whether it were passing from one person to another or were received by all who had it from the soil or the air of the place.

The men of the present time, however, by being able to consult and to compare the records of many ages and of many countries,

have ascertained in relation to this subject such facts as were referred to in a former report made to the Poor Law Commissioners on the fevers, &c. of London, and published in the volume for 1838 of their printed Reports. Among these facts are the following: That in many situations on earth where there is going on the putrefaction or decomposition of animal and vegetable substances, and often in proportion to the amount of this, there arises into the air an exhalation now called malaria, which produces the state called fever. In hot countries, with marshy or thickly-wooded localities, there spring up the fevers named the bilious remittant, the jungle, and the yellow fever; and in situations where men congregate and human filth is added, the fever called plague appears, as in Egypt and elsewhere, around the Mediterranean. In colder climates there are the intermittant marsh fevers or agues; and where human filth abounds, there spring up the fevers called typhus, putrid, scarlet, erysipelas, gaol fever, ship fevers, &c. And it is ascertained that many of these, when once generated in a single case, spread afterwards rapidly from person to person by contagion or infection, as it is called. Then the careful examination of the recorded facts seems to show that how much soever persons may be rendered liable or predisposed to any of these fevers, by cold, hunger, fatigue, debauchery, mental depression, or other of the causes of disturbed health set forth in the above table, they no more can have the fevers, if the aërial poisons of original generating filth or subsequent contagion be withheld than gunpowder can be made by mixing its other ingredients while the sulphur is wanting.

If, after the influence of the malaria from filth had been noted, the question had been put in England, Where may we expect to see the effects of it most strikingly manifested? the answer, until about 60 years ago, must have been, "In the prisons of the kingdom." In proof, let the appalling narration of the philanthropic Howard be consulted, the bent of whose mind carried him into those abodes of misery, that he might witness the facts and afterwards labour, as he did with success, to lessen the evils. Wherever he found a crowded prison, there also, almost certainly, he found that gaol fever was frequent, and that the source usually was the felons' dungeon, which, still more than other parts, was without ventilation, without drains or other means of cleanliness, with little light, and which consequently remained in the most noisome condition. The gaolers in many instances were unwilling to accompany him into some of the cells, alleging the danger of catching the fever, of which other gaolers had died. And he relates that often after such visits his clothes were so impregnated with the disgusting effluvia of the place that he could not bear to travel in a close post-chaise, but had, even in rainy weather, to pass from town to town on horseback. Then he could not use the book in which while in the cell he noted what he saw until after it had been

heated and aired before a fire; and even the phial of vinegar which he used to smell as a security to him, quickly became so offensive that he had to change it frequently. He states further, that in his time (about the year 1780), and in preceding times, when many more malefactors than now were executed every year, a still greater number of the prisoners usually died of the fever than by the gibbet, and among which were not a few whom misfortune had rendered unable to pay all their debts, and whose creditors, although not allowed by law to stab or poison them, could have the savage wish and threat literally accomplished—"that they should rot in gaol." Then the disease often spread extensively in neighbourhoods, carried thither by prisoners after their release. And in the first fleet which sailed from England in the American war, 2000 people died of fever, carried into ill-ventilated ships by persons taken as sailors from the prisons. But perhaps the most striking occurrences of this class were such as "the Black Assizes at Oxford," where prisoners from the dungeon brought for trial into the crowded and ill-ventilated court-house so poisoned the atmosphere that all present were almost immediately affected, and before 40 hours had elapsed, the judge, the sheriff, and about 300 others were dead: and this was far from being a singular instance of the kind. Howard, at page 9 of his work, refers to several others, in which the judges fell sacrifices.—While Mr. Howard knew England only, he believed that gaol fever sprung from impurity alone, but after he had seen equal filth in continental prisons without the fever, he questioned whether, owing to English habits, the change from liberty to confinement, and from the full diet to prison fare, might not affect his countrymen more than their neighbours. His difficulty would probably have been removed had he been aware of the influence of climate, as above referred to, on diseases arising from apparently the same causes; and had he known what I have explained in my work "On Warming and Ventilating," that during the warmer summers and colder winters of European continental countries than of England, the usual difference between the temperatures of the external atmosphere and of the air within doors is much greater than in England, with corresponding difference of specific gravities, and therefore that the ventilation of dwellings, going on through apertures of the same magnitude, is also much more complete in them than in England.

It was with such facts before us as are related in the preceding paragraphs that, in a Report on the fevers of London, made to the Poor Law Commissioners in 1838 by Dr. Kay, Dr. S. Smith, and myself, we recommended as the great preventive and remedy the adoption of measures to maintain purity of air in and about the dwellings of the poorer classes, who, from other causes connected with their poverty, are particularly liable to have the disease. The wisest government may often have difficulty in main-

taining such a state of the political body that the labouring classes shall all have abundance of good food, clothing, and other necessaries of life; but any government, by simple legislative enactments, may determine that streets and houses everywhere shall be constructed to be well drained and ventilated, and that there shall be a proper service of scavengers, &c., thus preventing any hurtful original generation of malaria, and if contagious disease by any means be induced, so diluting the poison by plenty of pure air as to extinguish the epidemic.

Dr. Alison, the distinguished professor of medicine in Edinburgh, thought that in the Reports referred to, too much importance had been attached to malaria, and too little to other particulars noted in the above table, and usually classed under the general head of "destitution," and which are here represented, in relation to fever, as only predisposing causes. The answer to this animadversion is given in my observations on the Report which contained it, and which, with my observations, will probably be published with this paper. In those observations I have touched upon the subject of contagion with the view of showing, that to hold contagion to be the sole cause of any disease, is in effect to assert either that the first person who had the disease got it from somebody who had it before him, or that the disease was created in him as a separate and distinct existence, neither of which opinions has ever been deliberately maintained; and I did it with the further view of remarking that a great impediment to the spread of correct notions on the subject of the origin of diseases has been the opinion very general among professional men, that diseases might proceed from contagion alone, or else from certain combinations of such circumstances as cold, hunger, fatigue, &c. occurring in the ordinary course of nature, but that the same could not proceed indifferently from both the one source and from the other. Yet no truth in medicine is now better ascertained than that diseases proceeding from the influence of an accidental combination of ordinary circumstances do become contagious, that is, do spread from one person labouring under the disease to another person at the time in health.

To show in what ways the analysis of the subject of the welfare of communities has been attempted by some able and zealous men who have laboured at it, I may mention that, at the meeting of the British Association for the Advancement of Science held at Glasgow in September, 1840, the following four views were given as to the cause and chief remedy of the misery and diseases prevailing among the poor of Scotland, not one of which made particular account of the malaria of filth to which the London reporters had attached so much weight:—

1st. The benevolent and eloquent Dr. Chalmers held that the want of good religious training was the cause, and that church extension was the remedy.

2nd. The enlightened Dr. Alison held that destitution was the cause, and a good poor law for Scotland the remedy.

3rd. Another excellent man stated that the abuse of intoxicating drinks was the cause, and a legislative or other suppression of this the remedy.

4th. And finally, another gave his reasons for believing that want of national education was the cause, and the establishment of such schools as he described the remedy.

Now, to a person not scrutinizing those statements closely it might appear that great differences of opinion on this very important subject existed among those who had the most considered it, and that little trust therefore was yet to be placed in professional or other opinions upon it; but, on a closer examination, the apparent difference vanishes.

1st. By religious training and church extension Dr. Chalmers evidently meant something which should make the whole people temperate, industrious, orderly, and cleanly—prosperous therefore, and all possessed of abundance of the goods of life. That such a reform, if effected, would cause nearly all diseases to disappear there can be no doubt: and so far is the scheme from being at variance with that of those who prepared the Report on London, and who advise the maintenance of purity of air in dwellings as the chief means necessary for the prevention of fevers, that, in addition to giving the good which they aimed at, it seeks to give all the other goods which should change this earth, often in religious books called a vale of tears, to a paradise or heaven. The pity is, that the many good men who have before hoped to see such results accomplished by such means have met with difficulties not foreseen and which they could not surmount—difficulties which have not yet disappeared.

2nd. The advocate of national education anticipated from the adoption of his scheme most of the advantages hoped for by Dr. Chalmers, and judged it less likely than that of Dr. Chalmers to be opposed by sectarian interests; and he knew that in the degrees in which it has already been obtained, it has effected prodigious good. Then a good education could not fail to teach the effects of filthy dwellings and the means of avoiding them by cleanliness.

3rd. The opponent of intoxicating drink had to show, not only the direct injury done to the health both of mind and body by intoxication, but that by inflaming vicious propensities, and suspending and weakening the understanding, it often left the victim as if he had received neither religious training nor secular education. And so far was he from being opposed on great points to Dr. Chalmers and the proposer of national education, that he thought that of money saved by persons becoming temperate one of the chief uses would be to secure the useful cultivation of the mind.

4th. Lastly, Dr. Alison, in urging the relief or prevention of

extreme destitution by a good poor law for Scotland, sought the many undoubted and great advantages obtained elsewhere by the existence of such a law; among which are the removal of obstacles to the spread of religion, temperance, and education, and security to a certain extent against the filth which is sure to accumulate where extreme want and despair make people regardless of causes of diseases generally. But that a good poor law will not prevent fever is proved by the sickness occasionally seen in various towns in England where such law has long existed.

It follows therefore that the four apparently different proposals have so nearly the same objects in view, that the advocate of each values the object specially named by him chiefly because it is supposed to bring the other three along with it. And although no one of the proposals furnished a precise answer to the question given to the London reporters, "What is the immediate or proximate cause of spreading fever, and can that cause be removed?" they do in no sense contradict the answer given by the London reporters,—that impurity affecting the air is the cause, and the prevention, diminution, or copious dilution of that impurity the remedy for the evil; and they suggest no obstacle to the doing at once by public enactment that which is important and comparatively easy, because other important objects cannot be obtained at the same time.

Now, in the survey which I had the opportunity of making in September, 1840, of the state of Edinburgh and Glasgow, all appeared confirmatory of the view of the subject of fevers submitted to the Poor Law Commissioners by those who prepared the Report in London.

In Glasgow, which I first visited, it was found that the great mass of the fever cases occurred in the low wynds and dirty narrow streets and courts, in which, because lodging was there cheapest, the poorest and most destitute naturally had their abodes. From one such locality, between Argyll-street and the river, 754 of about 5000 cases of fever which occurred in the previous year were carried to the hospitals. In a perambulation on the morning of September 24th, with Mr. Chadwick, Dr. Alison, Dr. Cowan (since deceased, who had laboured so meritoriously to alleviate the misery of the poor in Glasgow), the police magistrate, and others, we examined these wynds, and, to give an idea of the whole vicinity, I may state as follows:—

We entered a dirty low passage like a house door, which led from the street through the first house to a square court immediately behind, which court, with the exception of a narrow path around it leading to another long passage through a second house, was occupied entirely as a dung receptacle of the most disgusting kind. Beyond this court the second passage led to a

second square court, occupied in the same way by its dunghill; and from this court there was yet a third passage leading to a third court, and third dungheap. There were no privies or drains there, and the dungheaps received all filth which the swarm of wretched inhabitants could give; and we learned that a considerable part of the rent of the houses was paid by the produce of the dungheaps. Thus, worse off than wild animals, many of which withdraw to a distance and conceal their ordure, the dwellers in these courts had converted their shame into a kind of money by which their lodging was to be paid. The interiors of these houses and their inmates corresponded with the exteriors. We saw half-dressed wretches crowding together to be warm; and in one bed, although in the middle of the day, several women were imprisoned under a blanket, because as many others who had on their backs all the articles of dress that belonged to the party were then out of doors in the streets. This picture is so shocking that, without occular proof, one would be disposed to doubt the possibility of the facts; and yet there is perhaps no old town in Europe that does not furnish parallel examples. London, before the great fire of 1666, had few drains and had many such scenes, and the consequence was, a pestilence occurring at intervals of about 12 years, each destroying at an average about a fourth of the inhabitants.

Who can wonder that pestilential disease should originate and spread in such situations? And, as a contrast, it may be observed here, that when the kelp manufacture lately ceased on the western shores of Scotland, a vast population of the lowest class of people who had been supported chiefly by the wages of kelp labour remained in extreme want, with cold, hunger, and almost despair pressing them down—yet, as their habitations were scattered and in pure air, cases of fever did not arise among them.

Several intelligent inhabitants of Glasgow stated that they were persuaded, if any capitalists would buy the ground of these wynds and pull down the houses to substitute better houses in wide streets, with good drainage, the increased rental would make the speculation, even to them, very profitable, while the saving to the community of the cost of supporting the wretched widows and orphans of men who die of the diseases generated in the place would exceed the amount of any rent which the property could produce. This case would well illustrate a truth, not the less certain because men are slow to learn it, that there are few if any instances of men doing good to their fellow men for which a very ample return is not in some shape made sooner or later to themselves.

Edinburgh stands on a site beautifully varied by hill and hollow, and owing to this, unusual facilities are afforded for perfect

drainage; but the old part of the town was built long before the importance of drainage was understood in Britain, and in the unchanged parts there is none but by the open channels in the streets, wynds, and closes or courts. To remedy the want of covered drains, there is in many neighbourhoods a very active service of scavengers to remove everything which open drains cannot be allowed to carry; but this does not prevent the air from being much more contaminated by the frequent stirring and sweeping of impurities than if the transport were effected under ground; and there are here and there enclosed spaces between houses too small to be used for any good purpose but not neglected for bad, and to which the scavengers have not access.

Another defect in some parts of Edinburgh is the great size and height of the houses (some of them exceeding ten stories), with common stairs, sometimes as filthy as the streets or wynds to which they open. By this construction the chance of cleanliness is lessened, the labour of carrying up necessaries, and particularly water for the purposes of purifying is increased; and if any malaria or contagion exist in the house, the probability of its passing from dwelling to dwelling on the same stair is much greater than if there were no communication but through the open air. Illustrating how malaria may be produced, I may state that in making a round of observation with Mr. Chadwick, the Police Superintendent, and others, we visited a house at the back of the Canongate, which in former days had been the chief inn of the city, but now, with its internal court-yard of steep ascent, is occupied by families of the labouring classes. In the court-yard a widow of respectable appearance, who answered some of our questions, occupied a room which appeared on the ground-floor, as seen from the court, but was above a stable, now used as a pigsty, opening to the lower level of the external street. A little while before, on the occasion of the dungheap being removed from the pigsty, two children who lived with her, a daughter and a niece, were made ill by the effluvia from below, and both died within a few days.

The facts here referred to go far to explain why fatal fever has been more common in Edinburgh than from other circumstances would have been anticipated.

Two or three of the Reports, which I have happened to see, sent by intelligent medical men to the Poor Law Commissioners on the diseases prevalent in their localities, strikingly confirm the view here taken as to the influence of malaria in the production of fever.

For instance, in the report furnished by a society of physicians and surgeons at Birmingham, it appears:—that fever and kindred ailments are little seen there, and that the great

differences between Birmingham and other towns where fever prevails are—1st, that it is built on hilly ground, from which there is easy drainage; 2nd, that there is throughout the town abundance of water from excellent wells; 3rd, that the filth from drains is at once carried away by the small and rapid streams which pass through and near the town; 4th, that none of the people live in cellars below the levels of the streets and drains, cellars always becoming, as seen in Manchester and elsewhere, receptacles and retainers of filth; 5th, that the houses of the greater part of the labouring population are small distinct dwellings, one for each family, placed, it is true, around courts not very open, but, in contrast with the large houses of Edinburgh above referred to, because there is here clear responsibility as to who should keep the house clean, there is almost sure performance of the duties; and if by any accident foul air should be generated in a house, it cannot, as in a large house, spread to other families, for there is no communication for person or malaria but through the open air.

Another striking instance is that furnished from Nottingham, where fever was met, not, as might be expected, only in the low ill-drained parts of the town, but remarkably also and obstinately in one of the most elevated and airy streets; but, on closer examination, it was found that the drain of the street was cut quite level or without a descent, and that consequently it did not empty itself, but allowed all its filth slowly to ooze or soak into the adjoining soil, rendering the whole putrid like a dunghill.

And another is furnished by Derby, where in a certain street of fifty-four similar houses fever prevailed much in six houses near the middle, while it did not at all appear in the others. On examination, after a time it was discovered that by accident the six houses had been left unconnected with the public drain.

The perusal of the other reports will, I have no doubt, furnish many facts equally instructive.

In conclusion, I may observe that the engineering art now possesses the means of removing from towns all impurities of the kinds above referred to, as effectually almost as if they were absolutely annihilated at the time of their production. A system of close drains may be constructed, into the continued stream of which every noxious thing may at once fall through traps that do not allow the escape even of odour, the inlets from the street-gratings being similarly guarded. And from one or more points, according to the extent of a drain; communication may be made with a close chimney, by the action of which the foul air produced in the drain will pass through the fire, and, in supporting the combustion, will itself be changed, and, as a poison, destroyed.—Indeed, if it were determined that invalids and other inhabitants of a large town should, in their sitting and sleeping-rooms, breathe, not the

town atmosphere, necessarily charged with the smoke, dust, and smells of the town, in which it is known that many common vegetables cannot live, and many delicate persons have their lives much shortened, but absolutely the pure country air of the most salubrious windward localities in the neighbourhood,—the object could be easily obtained by extending the use of such air channels, with simple propelling apparatus as have already been introduced for the ventilation of single buildings, and the expense for individual houses might not be greater than that at which another kind of air, namely, gas for lights, or water, is now distributed. Pure air on a hill top costs nothing, and through a single channel, with section of 25 feet square, or through several channels of smaller size, as much air might be sent as 100,000 people use in breathing.

When it was proved lately before a Commission of the French Institute that all the sewers of Paris, if made as they easily might be, to convey at once into the river Seine every impurity produced in the city, would not add a 9600th part to the stream, so that afterwards the admixture could scarcely be detected even by nice chemical tests, it was thought desirable to adopt the plan; but the representations of gardeners and farmers around the capital showed that a quantity of manure would thus be lost, very necessary to the success of their labours,—and the plan was abandoned. The value of town manure may be estimated by the fact that a portion of the drainage of Edinburgh spread, with the name of fœtid irrigation, upon certain level lands towards the sea, has increased the value of these lands by more than £5000 a-year; and that if the whole drainage of London could be so used at a sufficient distance from the town, the value would exceed £500,000 a-year. Now, engineers who pump from the Thames many miles above London, to supply pure water to the inhabitants, could as easily, by pumping away to any desired distance the fluid from the drains, supply the most valuable manure yet known—fluid town manure—to the horticulture and agriculture of the district; and the purity and beauty of the Thames, where it passes through London, would be preserved. Fluid manure, by sinking at once into the earth, is much less offensive to the neighbourhood, and affects less the purity of the atmosphere, than an equal quantity of solid manure, spread, as it usually is, on the surface of the earth.

I have the honour to be,
Gentlemen,
Your obedient Servant,
NEIL ARNOTT, M.D.

To
The Poor Law Commissioners.

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OBSERVATIONS ON THE GENERATION OF FEVER.

By Dr. W. P. Alison.

I take the liberty of observing, that the queries of the Poor Law Commissioners appear to have been framed very much in accordance with the belief that the original cause of typhus or contagious fever is a malaria arising from putrescent animal and vegetable matters, and from excretions from the human body, accumulated and corrupting; and that this malaria is developed wherever men congregate and bring together such corrupting matters. This belief is distinctly avowed, both in the Report of Drs. Arnott and Kay, and in that by Dr. Southwood Smith (pp. 12 and 32 of Reports on the Sanitary State of the Labouring Classes); and the recommendations of these gentlemen are accordingly founded on the supposition, that by removing all such causes of vitiation of the atmosphere, contagious fever may be arrested at its source, and thus all the evils resulting from it be prevented.

Now, although I highly respect all these gentlemen, I think it my duty to state to the Poor Law Commissioners (and in doing so I am confident that I express the opinion of a great majority of the medical men in Scotland, who have seen much of the diffusion of typhus fever among the lower orders), that this opinion is not merely a speculative one, but one which ample experience entitles us to regard as erroneous; and, at all events, that there is no reason whatever for believing that the contagious fever which has prevailed more or less extensively in Edinburgh for the last 25 years has any such origin, or can be suppressed by any such measures.

As, however, I believe that all means of preserving, as far as possible, the purity of the atmosphere in this and other cities, are advisable with a view to the general health of the citizens, and will even have a certain degree of effect in restraining the extension of fever, it may be thought that in stating the grounds of my opinion on this subject, I am troubling the Poor Law Commissioners with an unnecessary discussion on a purely speculative question.

But I beg it may be observed, that those who believe continued and contagious fever to proceed originally from a malaria, formed in the way above stated, will naturally think that they do enough for its ultimate prevention in any community, if they carefully remove all such causes of its supposed production; and may therefore suppose, that nothing is incumbent on them in regard to the condition or mode of life of the inhabitants of towns infested with such fevers, excepting only to remove from them by all means in their power putrescent animal and vegetable matters; in which case, I am confident that experience teaches that their

labours will be in vain; and in Edinburgh in particular, I am convinced from ample observation that a great deal of money might be expended in removing various nuisances, such as irrigated meadows in the neighbourhood, and dunghills in various parts of the town,—all of which would be perfectly ineffectual in preventing the recurrence of epidemic fever, as long as the condition and habits of the poorest of the people, and their resources when reduced by any cause to destitution, in this city and in the other parts of Scotland, continue as at present.

I consider, therefore, that I shall not at all transgress the limits of the inquiry which the Poor Law Commissioners have set on foot in stating the grounds of my belief, first, that the contagious fever of Edinburgh does not originate in a malaria generated in the manner above stated; and secondly, that there is a much better prospect of preventing the introduction, and checking the diffusion of a disease, to which a large portion of the lower orders in Edinburgh are peculiarly liable, by other means of improving their condition, and particularly by a more liberal and better-managed provision against the destitution of the unemployed, or partially or wholly disabled poor, than by any measure directed merely to the removal of those nuisances.

It will be observed, that I do not enter into the question whether the effluvia arising from putrescent animal and vegetable matters can produce remittent fever, or the yellow fever in hot climates, or agues in the more temperate climates. The question is, whether the continued fever prevalent in Edinburgh, often taking the form of typhus, called also the malignant or spotted fever, and spreading as it undoubtedly does by contagion, originates from this cause.

Although it has often been supposed by medical men that continued fever may originate in this way, yet the greater number of those who have carefully investigated the subject, since medicine has been cultivated on strictly scientific principles, have rejected this theory of its origin; and I would refer particularly to facts stated by Drs. Bancroft and Chisholm, as clearly showing that no such result as the generation of continued fever necessarily results from any conceivable accumulation of putrescent animal or vegetable substances. Afterwards I shall show that the general negative proposition, which these facts authorize, is confirmed by the experience, in regard to continued fever, of various great towns, and particularly of Edinburgh.

The following are extracts from Dr. Bancroft's work on yellow fever, but from that part of it in which he treats of the supposed origin of continued or typhus fever:—

"Most writers on the subject of contagious fever have believed that it might be generated—first, by an accumulation of those disgusting matters commonly denoted filth; secondly, by the offensive vapours emitted by putrefying dead bodies, or by other matters in a putrid

state; and thirdly, by crowding persons when healthy in ill-ventilated and unclean places.

"I hope that we shall always find within ourselves sufficient motives to remove or avoid filthiness, even when convinced that it does not produce contagious fever. Whence this belief of its doing so was derived I am unable to explain, but it has probably been confirmed by the frequent coincidence of such fever with nastiness and offensive smells in the dwellings of indigent people. There is, however, no necessary or natural connexion between the former and the latter.

"Many writers of celebrity, and among them the great Lord Bacon, have thought that no effluvia were so infectious and pernicious to mankind as those which issued from putrefying human bodies.

"There are facts, however, on a large scale which completely decide the question; two of these deserve particular notice. The first relates to exhumations in the church-yard of St. Elei at Dunkirk, in the year 1783; and the other to those made three years afterwards in the church-yard of the St. Innocents at Paris. I shall, to avoid repetition, here describe only the latter. The church-yard of the St. Innocents at Paris, situated in one of the most populous quarters of the city, had been made the depository of so many bodies, that although each area enclosed more than seventeen hundred square toises, or near two acres, yet the soil had been raised by them eight or ten feet higher than the level of the adjoining streets. Numerous complaints having been made concerning the offensive smells which arose from this spot, and sometimes penetrated into the adjoining houses, and the public mind being greatly alarmed, it was at last determined to forbid all future burials there, and to remove so much of the superstratum as would reduce the surface to the level of the streets. This work was undertaken in 1786, under the superintendence of M. Thouret, a physician of eminence in Paris, and in two years he accomplished the removal of that superstratum, almost the whole of which was impregnated or infected, as M. Thouret styles it, with the remains of carcases, and of quantities of filth thrown upon it from the adjoining houses.

"'The exhumations,' says this gentleman (in the narrative of them which he published in the Journal de Physique for 1791, p. 253) 'were principally executed during the winter, but a considerable part of them was also carried on during the greatest heats of summer. They were begun with every possible care, and with every known precaution, but they were afterwards continued almost for the whole period of the operations without employing, it may be said, any precautions whatever; yet no danger manifested itself in the whole course of our labours—no accident occurred to disturb the public tranquillity.'

"It does not appear, after the fullest inquiry, that any febrile disorder was ever produced by this immense mass of corruption during the removals made in 1786, &c., or while it was suffered to remain as a burying-ground. The grave-diggers were indeed sometimes thrown down suddenly, and for a time deprived of sense and motion (as in what is termed asphyxia) by the concentrated vapours which escaped, upon accidentally breaking open by their spades the abdominal viscera of bodies in an early stage of putrefaction. These vapours also, in a more diffused state, are said to have sometimes produced nausea, loss

of appetite, and in a course of years paleness of countenance, debility, tremors, &c. But fever of any kind does not appear to have been ever noticed as resulting from the offensive or putrid matters of this church-yard, either to the grave-diggers or to the neighbouring inhabitants.—See Annales de Chimie, tome v., p. 154, &c.

"It is well known that M. Berthe, professor of medicine at Montpelier, and two of his colleagues in that university, were sent by the government of France into Spain, to examine and report upon the nature of the yellow fever, which had proved so fatal in several towns of Andalusia in 1800. M. Berthe has published the report of the Commission of which he was a member, and it has mentioned that being at Seville only a few months after the epidemic had ceased, he frequently visited the burying places just without the city, in which the victims of the fever had been interred.

"In one of these grounds south-westward of the city 10,000 bodies had been buried; in two others 7000 or 8000; and in that of Triaria about 4000.

"The heats of the spring," says M. Berthe, (which I need not observe are considerable at Seville) "were at this time beginning to be felt, and the ground of these burial places being clayey, was already cracked into wide and deep crevices, through which a fœtid odour was exhaled, the results of the decomposition which was going on among these heaps of bodies.

"Filled with alarm at the calamities which might be produced by such masses of putrefaction, M. Berthe and his colleagues represented these supposed dangers to the Spanish government, and then went by Cadiz, where they found the churches more or less filled with putrid emanations from the same causes; but as they did not discover that these supposed fomites of infection were productive of any mischief, their fears concerning them seem, at length, to have subsided completely, for in their reply to the president and members of the Board of Health, who had subsequently requested a statement of their opinions, they expressly declare their belief that 'if the yellow fever could be produced by the effluvia coming from putrefying bodies, it was evident that such a misfortune must already have taken place.'

"Thus it appears, that the putrid emanations from the bodies of many thousand persons who had recently died of the yellow fever did not produce any such disorder.

"Again, it appears to have long been an universal opinion, at least among those who have admitted the existence of any infectious fevers, that, to use the words of Dr. Cullen (First lines of the Practice of Physic, sect. LXXXI.) the effluvia constantly arising from the human body, if long retained in the same place without being diffused in the atmosphere, acquire a singular virulence; and in that state being applied to the bodies of men, they become the cause of a fever which is highly contagious. But if this were so, with what certainty would it not be effected in a variety of places which are entirely exempted from it! Take for instance those in which the natives of Kamschatka dwell constantly during seven months of the year, and which are called yourts; these are sunk seven or eight feet below the surface of the ground, and are covered with thatched roof in the form of truncated cone, open at

the top; they consist of one small apartment which usually contains six families, with their utensils and stock of provisions for the winter, the chief part of which is dried fish almost putrefied.

"If the combination of personal filth with putrid smells and foul air were capable of creating the contagion of fever, every yourt would necessarily be a focus of infection; but they never complain of the noxious air that prevails in these habitations. Instead of being generally attacked by contagious fever every winter, they seem to enjoy as good health during this season of confinement as any other people; and fevers are not even mentioned in the list of diseases which that respectable traveller Mr. Lessep either observed or heard of, as existing among them.

"The people of the island of Oonalaska also inhabit yourts or subterranean dwellings, each common to many families in which they live in horrible filthiness. But these people notwithstanding are seldom attacked by any other disease than scurvy.

"The Greenlanders and Esquimaux appear by the accounts of those celebrated navigators, Davies, Frobischer, Baffin, Henry, Ellis, &c., as well as Bishop Egede, and Crantz, to live during the greater part of the year in very close, ill-ventilated, and crowded habitations, (without chimneys), which notwithstanding the great severity of the cold, they keep extremely warm by their numbers and breath, assisted by a single burning lamp in each, and by excluding fresh air so completely that any other people would think themselves in danger of being suffocated by the offensive vapours; and yet fever of any kind is a rare disease among these people, though like those of Kamschatka, &c., they are much disposed to scurvy.

"Having stated these facts in regard to the supposed effects of crowding human beings in small unventilated habitations in northern countries, let us see what effects result from similar causes in the warmer regions. And here the African slave-ships most obviously present themselves for examination; until within a few years, these vessels notoriously conveyed human beings across the Atlantic in a state of closer compression and in an atmosphere more offensively impregnated with human exhalations and excretions than could probably be found in any other place of confinement. I am fully convinced that fever of any kind rarely occurs on board these vessels, though great mortality has frequently happened from other diseases, and more especially from dysentery. Dr. Trotter who was formerly surgeon to a slave-ship, after noticing what I have just stated from Dr. Lind, adds, 'the confinement of so many wretched creatures in a small space deservedly attracted the animadversion of a physician investigating the sources and progress of contagion. But contagious fevers we find are not their diseases.'—See Medicina Nautica, vol. i. p. 184.

"That this fever often exists in prisons cannot be denied; but this circumstance can afford no evidence of its having been generated therein, any more than the multiplication of vermin in such places could demonstrate the spontaneous generations of these and other insects by the nastiness which favours the deposition and hatching of their eggs. For this purpose I will resort to the observations and testimony of Mr. Howard, than whom no man ever took more pains to ascertain the truth concerning the prisoners, or stated it with more

exactness and candour; and the result of all that he either heard or saw is, that the gaol distemper is not known in the prisons abroad.

" ' In regard to the prisons at Vienna,' Mr. Howard says, (at page 106 of the same work), ' there are between three and four hundred prisoners, many of them confined in loathsome and dark cells for life, executions here being very rare. There was no fever or prevailing disorder in this close prison.'

" At page 117 of the same work, Mr. Howard, describing the great prison of Naples, La Vicaria, says, ' it contained when I was there, according to the gaoler's account, 980 prisoners. In about eight large rooms communicating with one another, there were 540 sickly objects who had access to a court surrounded by building so high as to prevent the circulation of air. In seven close offensive rooms were 30, some prisoners almost without clothes on account of the great heat; and in six dirty rooms communicating with one another were 50 women. From the heat of the climate one might imagine the gaol fever would be very likely to prevail; but I did not find it in any of the prisons.'

" Near the end of his work on Prisons, (viz. at page 467,) Mr. Howard brings the result of his observations and inquiries concerning the cause of the gaol fever to this pointed conclusion: ' If it were asked,' says he, ' what is the cause of the gaol fever, it would in general be readily replied, the want of fresh air and cleanliness; but as I have found in some prisons abroad cells and dungeons as offensive and dirty as any I have observed in this country, where, however, this distemper was unknown, I am obliged to look out for some additional cause for its production.' Mr. Howard's further experience in his subsequent tour over a great deal of Europe and into Turkey, (in 1785-6 and 7), being in conformity with his preceding statement, he repeated it in the same words in his work on Lazzarettoes, p. 231.

" This ' additional cause,' which Mr. Howard thought it necessary to look for in order to explain the production of gaol fever, can be no other than the contagion thereof.

" ' The origin of the gaol infection,' says Dr. Lind, ' is a point at present entirely unknown. No person has given us the least satisfactory accounts how or where it is generated. It does not seem to originate in air, and there are many prisons abounding with filth and impurities perfectly free from it. In ships also an infection is generally imported from the land, and many that have been long in a very dirty condition at sea bring their men quite healthy into the harbours.'

" From the preceding facts and considerations, I think it may be safely inferred that filth, crowding, putrid human effluvia, and deficient ventilation, though favourable to the retention and accumulation of febrile contagion where typhus fever exists, or has existed, and consequently to its activity, do not of themselves either generate or enable the human body to generate that contagion."

Another collection of facts, on a large scale, equally decisive on this point, is given by another author, strongly opposed to Dr. Bancroft as to the origin of the yellow fever of hot climates, but agreeing with him as to that of the typhus fever of Europe.

By Dr. Chisholm, Edin. Medical and Surgical Journal, vol. vi. p. 90.

" We are frequently told by medical writers, more especially system

writers, that the fevers which often desolate armies have their cause in the effluvia proceeding from the putrefaction of the unburied bodies of men and horses slain in battle. This, I am very much inclined to believe, is a mere theoretical idea, and I believe so principally for two reasons:—1. We have innumerable instances of prodigious slaughter in battle without this effect being the consequence to the living. 2. In all instances adduced in support of this opinion we find most powerful, acknowledged, and indisputably ascertained morbid causes existing fully sufficient to this effect without resorting to a doubtful cause.

"There are grounds of belief, that even the concentration of the miasmas of putrid animal substances does not give rise to fever, and seldom if ever to disease of any description.

"1. In the neighbourhood of Bitton, in Gloucestershire, about a mile from Wellsbridge, there is what is called a bone manufactory, in which animal bones, after the extraction of their medullary oil by boiling, are distilled with a view to the usual products, muriate of ammonia and sulphate of soda. From this manufactory a fœtor of the most offensive nauseating nature proceeds, and fills the atmosphere for nearly a mile around, diminishing in strength as it recedes from its course, and in proportion to its dilution. The country is thickly inhabited, and near the manufactory itself in the village of Oldland, the population of which is very considerable; yet in not one instance has this manufacture proved in the smallest degree injurious to health. This exemption from disease in the manufactory of sal ammoniac has been noticed by Morveau and Chaptal. (Edin. Med. Journal, vol. ii. p. 295.)

"2. Between Bristol and Hanham, on the banks of the Avon, is Corham, remarkable for nothing but its having been chosen for the site of an extensive manufactory for the conversion of dead animals into a substance resembling spermaceti, a project which has been relinquished several years ago. I made a good deal of inquiry into the result, as far as it affected the health of those immediately engaged in the process, and of the inhabitants of its thickly-peopled neighbourhood. The foreman or superintendent, Richard Bolston, was two years employed constantly in this business; and during that time resided in the midst of dead animal bodies, horses, asses, and dogs, many of which were left to pass through the natural process of putrefaction. He had three labourers under him, and he declares, that neither himself nor any of these men suffered a moment's sickness. Bolston declares, that although the stench was offensive in the highest degree, yet he and those with him sustained no injury; and to this the inhabitants of the country around bear ample testimony both in relation to Bolston and themselves.

"Another remarkable fact is well known, where the manufactory of refined sugar is extensively carried on, butchers preserve the blood of the slaughtered animals in open tubs, kept in close small shut-up houses, sometimes for several weeks, until the quantity required is completed, or until there is a demand from the sugar-bakers for it. It is then, in a putrid state, conveyed through the public streets in carts, or drags to the sugar-houses, emitting the most offensive effluvia, and extremely annoying to all those who pass it. It is seldom immediately

used by the sugar-bakers, but kept by them in casks in a putrid state, filling the air of the manufactory, and frequently of the vicinity, with its putrid miasmas. But what is the result to the workmen, or to the inhabitants of the surrounding houses? Nothing inimical to health. This fact exists constantly in the city of Bristol, where, in general, the streets are extremely narrow, and the houses excessively crowded and ill ventilated; and yet the harmless nature of these exhalations may be daily verified.

"Mr. Newman, surgeon, in Stokes Croft, Bristol, procured for me from friends the following interesting particulars concerning the leather-dressing business. 'Our men are generally healthy, and the most so of the labouring poor. Many have been in our service and knowledge fifteen and twenty years, and I do not recollect one case of this kind of fever occurring (in our establishment) in London. The last process in dressing is to put the skins into a pit of water to soften them, which is often used two or three times, that is for two or three parcels, before it is changed, until the stench is intolerable. After this process, the skins are struck out over a beam, and hung up side by side as close as possible in a small room, excluded from external air, which we term a stove. In this state they remain until they heat and slime so that we can pull off the wool.'

"A gentleman (a brother of Mr. Newman's) in the leather-dressing trade (but not in the same house), in Bermondsey, informs me, 'that so far from our workmen being unhealthy, or particularly subject to fevers, the reverse is the fact. The men employed look generally robust and healthy. In a concern in this line of business of fifty years' standing, in which fifty men are constantly employed, the men have been uniformly healthy: and the men who work upon the raw skins from which there is a constant and profuse exhalation of putrid steams, and those employed at the lime and tan-pits, are equally healthy.' Mr. Newman, the writer of the above, says that there are about sixty leather-dressers' and tanners' yards in Bermondsey, and in them about 700 men are constantly employed."

"Cook (Third Voyage, vol. ii.), Dixon (Voyage, p. 173), and La Perouse (Voyage, vol. i. p. 134), all agree in their description of the astonishing filth of the native Indians of Port St. Francis, on the north-west coast of America, La Perouse says, 'their cabins possess a nastiness and stench to which the dens of no known animal in the world can possibly be compared; and yet these people seem to be acquainted with some of the necessary arts of civilized nations, and enjoy uninterrupted health.'"

Dr. Chisholm concludes—

"1st. That the theory of ingenious chemists, founded on experiments or speculations, to prove the pestilential influence of putrid animal effluvia, receives no support from practical knowledge or the known economy of nature.

"2. That in no known and well-ascertained instance are putrid animal exhalations productive of pestilential fevers.

"3. That in every instance which seems hitherto to have been investigated, wherein putrid animal effluvia have been supposed to be the cause of epidemic malignant fever, other agents of a less dubious character and well ascertained nature exist."

Additional facts to the same purpose, and on a large scale, have been observed in France.

These statements are so perfectly in accordance with those of the greater number of medical men who have carefully attended to the origin and extension of contagious fever in the British islands, during the present century, that I cannot help expressing my surprise at finding that the old doctrine of fevers in this climate, originating in the effluvia from putrescent animal substances, had been recommended on so respectable authority to the attention of the Poor Law Commissioners.

To show that the doctrine has been expressly rejected by men whose opportunities of observation, and whose accuracy and judgment entitle their opinions to respect, I may quote the words of the late Dr. Bateman, who stated, in 1815, that in twelve or fourteen years of practice in the public dispensary in London, he had seen continued fever only in a few Irish families. "Yet," said he, "every dispensary physician knows that dirt, accumulated human effluvia, and every cause that has ever been assigned for continued fever, except contagion, exists continually, and to a very great extent, among the lower people in various parts of London."

But I would beg to refer more particularly to the statements of the very extensive experience of the physicians in Ireland, who have reported at different times on the contagious fever, unfortunately so prevalent there at different times since 1800; and the results of most of whose observations have been concentrated in the works of Drs. Barker and Cheyne, and of Dr. Harty, and in the Dublin Hospital Reports, and Transactions of the College of Physicians.

These gentlemen indeed say much, and justly, of the influence of foul or vitiated air in *favouring the extension or diffusion of fever;* but they seldom even allude to the supposition of fever *originating* in putrid effluvia, evidently because they were perfectly aware, as we are in Scotland, of numberless districts in which such effluvia abound for many years together without continued fever ever showing itself; and were further aware, as we are, that when fever does show itself, and extends in such a district, it may very often be distinctly observed to have been *imported* from another district already infected, *i. e.* to have originated in the cause admitted by almost all medical men as its true source, the specific contagion.

Dr. Barry of Cork, who is one of the physicians most strenuous in recommending the removal of filth and nuisances of all kinds, states it only as a mere possibility, that fever may be generated by such means, and afterwards gives what appear to be perfectly fair and (inasmuch as they are supported by extensive experience) conclusive arguments against that supposition.—See Barker and Cheyne, vol. i. p. 295.

I can state as the result of twenty-five years' observations in all parts of Edinburgh, that although I have seen fever prevailing some hundreds of times in places where putrid effluvia abound, yet there is not a single such district, in which I have ever seen it, which I have not known to be at other times, and for several years together, perfectly free from it, notwithstanding the continued existence of the putrid effluvia, and even although the disease very frequently was prevailing in the neighbouring streets or closes.

The doctrine regarding the external causes of continued fever, which has been adopted almost universally by the Irish physicians, is perfectly in accordance with all that I have ever seen of it, or heard of it, in Edinburgh or other parts of Scotland, viz. that it may probably sometimes originate spontaneously in the human body itself (particularly under the influence of long-continued mental anxiety and depression), but that its chief and, in a practical view, its only certain source is a specific contagion, arising from the living human body already affected by it, which putrid effluvia can no more generate than they can generate small-pox or measles, which is liable to variation in intensity, and even in kind, in different seasons, and which is favoured in its effects on healthy persons by various conditions, properly termed auxiliary or predisponent causes, but of themselves inadequate to produce the disease.

Now among these auxiliary or predisponent causes I willingly admit that foul or vitiated air, gradually enfeebling the constitution, is one of the most powerful; but in attempting directly to remove this we not only do not attack the source of the disease, but in the present state of the city of Edinburgh, as I think it easy to show, we neither attack the most important and fundamental, nor the most remediable, of its auxiliary causes.

First, as to the irrigated meadows in the neighbourhood of the town:—anxious as I am, for the credit, and even for the health in other respects of the inhabitants, to see such a nuisance removed, I yet think it my duty to express my conviction, that any money expended for that object will be found wholly ineffectual in diminishing the liability of the inhabitants to contagious fever. This opinion is rested on the following grounds:—

1. Any one who has observed the vitiated state of the air of the closes, of the passages, and stairs, and more especially of the rooms, in those parts of the old town in which the poorest of the inhabitants dwell, however strongly impressed he may be with the efficacy of foul air as a cause of the extension of fever, can hardly by possibility think of resorting to the foul air of the marshes, more than a mile off, for an explanation of the extension of the disease by this means, or suppose that the draining of these marshes can make any perceptible difference on the atmosphere of the rooms in question.

2. The parts of the town in which I have seen the disease extend most rapidly are by no means those which are nearest to the marshes. The central and most thickly peopled parts of the town and the Grass-market, and West-port, are those in which it is usually most prevalent, but the principal marshes are to the eastward of the town, a mile distant from the former district, and at least a mile and a half from the latter; and many intervening districts, and in some instances villages close upon the marshes, are almost uniformly comparatively exempt from fever.

3. The season of the year in which fever always prevails most extensively in Edinburgh is the winter and early part of the spring, when the exhalations from the marshes are less than in the summer and autumn, and when the wind is very generally from the west (and often very high); when therefore the principal marshes are completely to leeward of the town and no exhalations from them can possibly reach it.

I may add, that twenty years ago when fever prevailed much in Edinburgh, many of the inhabitants accused a number of dunghills situated in the immediate vicinity of several of the great roads leading out of the town, in like manner as many of them now accuse the marshes. Several of the medical men then consulted gave a decided opinion, on similar grounds to those which I am now stating as to the marshes, to the effect that although the removal of the dunghills, as a nuisance, was proper, yet no perceptible effect, as to the liability of the inhabitants to fever was to be expected from that measure. The dunghills were removed, but twice since that time, viz. between 1826 and 1828, and between 1837 and 1839, epidemic fever has spread in Edinburgh, more extensively than it had ever done before that time.

It is certain, however, that in the interior of the city there is a great deal of filth, external to the houses, depending partly on the imperfect state of the sewers and the want of proper receptacles in the narrow closes, where the houses are piled above one another in lofty *lands*, and partly on the great collections of manure which the proprietors of stables and cow-houses are allowed to make, for their own convenience, in closes which are inhabited by numerous poor families. I have stated that it would be very desirable for the health of the city if legislative measure could be employed to redress these grievances, which would require the prohibition in future of houses being erected of more than a certain height in proportion to the intervening alleys or closes between them; and would require also the prohibition of such depôts of manure, although private property, being made in the immediate neighbourhood of inhabited houses. But I apprehend that both these measures would be expensive, and the former could not be really effectual for a considerable length of time.

But even if these measures were adopted, I fear that a careful

examination of the circumstances in which epidemic fever is most readily diffused, here and elsewhere, will not allow us to anticipate that by any such means, without a permanent improvement of the condition of the poorest inhabitants of this city, the liability to continued fever can be materially diminished; and for this opinion I beg to state the following reasons:—

1. The city has undergone within my recollection a very considerable improvement in point of cleanliness and ventilation, so far as the streets and everything exterior to the houses are concerned. The service of the scavengers is much better performed than formerly; the dunghills formerly mentioned on the outskirts of the town have been removed; a deep and spacious covered drain has been made along the Cowgate and back of the Canongate, and many of the crowded and ill-ventilated buildings, in which I have known fever to spread epidemically, have been removed, and either better houses substituted or wide openings left. Thus the greater part of the south side of the Castle-hill and West-row, the whole of Liberton's-wynd, the greater part of Forster's-wynd and Bell's-wynd, and of several closes in the Cowgate and Grass-market have been pulled down; and several of the oldest and most filthy large tenements in the High-street, in Blackfriars'-wynd, in High-school close Canongate, &c., have been nearly deserted. But there has been no corresponding improvement in the health of the city; the inhabitants of such places have merely crowded into other parts of the town, where their habits and mode of life continue as before, and their numbers are, I believe, increasing; and within the last three years (previous to which time most of these improvements had been effected) epidemic fever has been both more extensive and more fatal than at any former time.

2. I have had many opportunities of observing that, among the most destitute of the people in Edinburgh, fever often spreads rapidly in situations as well ventilated and as far removed from any filth, external to the inhabited rooms, as can be desired. For example, in the highest stories of some of the highest houses in the vicinity of the High-street (particularly at Covenant-close, Dickson's-close, and Skinner's-close), I have seen numerous and rapid successions of fever cases originating from individual patients; while even at the same time, in the lower parts of the same common stairs, worse ventilated and nearer to the collections of filth to be found in the closes, but which are inhabited by people better employed and in more comfortable circumstances, fever has not appeared, or not spread.

In two instances which have come under my observation very lately (at the foot of the old Fishmarket-close, Cowgate, and in Douglas-court, Leith-wynd), fever has affected many individuals in the upper stories of lofty tenements, while the inhabitants of the

lower stories, being generally in better circumstances, although in the closer vicinity of very filthy courts or passages, have escaped entirely.

From many such observations, I infer that the filth, which really most effectually favours the extension of fever, at least in this city, is that which exists *within the inhabited rooms* in many parts of the town, and which is inseparable from that destitute mode of life which many of the lowest of the inhabitants, particularly during winter, habitually lead.

The question which has been put to me, in very distinct terms, by the Poor Law Commissioners, whether the destitution without the filth, or the filth without the destitution, is more effectual in the production or extension of fever, is one which, I am afraid, hardly admits of a direct answer, because, in Scotland at least, we have no destitution without filth; but we have many examples of filth without destitution, *i. e.*, of families living in close, ill-aired rooms, and of dirty habits, but regularly employed, and suffering no peculiar privations; and although we often see fever affecting several members of such families in succession, yet I can say with confidence, from many such cases as those I have just mentioned, that fever neither makes its way into such families with the same facility, nor extends through them with the same rapidity and certainty, as in the case of the unemployed, or partially employed, disabled, and destitute poor.

That the destitution and irregular mode of life, connected with the destitution, of many of the lower ranks in this as in others of the great towns in Scotland, are the chief cause of the frequent diffusion of epidemic fever in them, and that this is not merely owing to the filth which is always found in connexion with such a mode of life, I conclude from the following considerations:—

1. It is a general principle in pathology, established by the general experience of medical men in all ages, in civil life as well as in military or naval service, that contagion, and indeed any other cause of acute disease, acts most rapidly and most certainly on the human body when enfeebled by deficient nourishment, by insufficient protection against cold, by mental depression, by occasional intemperance, and by crowding in small ill-aired rooms, all which are the inevitable effects and concomitants of destitution in the poorest inhabitants of this and other great towns.

2. It has been very generally observed, on a large scale, in the history of contagious fever, that it has spread most rapidly and extensively, and assumed the form of an epidemic, in circumstances where most or all these conditions have been present; for example, after scarcities, after the sudden cessation of the employment for numerous labourers, in exhausted, impoverished, beaten armies, besieged towns, &c.

3. This has been especially the result of very numerous and careful observations made in Ireland on epidemic fevers, precisely

similar to those lately prevalent in Scotland, and from which, in fact, very many of the cases occurring in Scotland during the present century have obviously originated. At this moment a large proportion of the cases of fever in the infirmary here are Irish labourers and their families, who have irregular employment in the neighbourhood.

The experience of the physicians in all parts of Ireland in the great epidemic which began in 1817, was collected and digested by the eminent men appointed by government for that purpose, and commented on by others; the peculiar efficacy of want and misery in causing the extension of the disease, seems to have been observed and admitted by every one of the practitioners, and confirmed by the inquiries of every one of the reporters to government, and other authors who have written on that epidemic; and the only question on which these authors appear to differ is as to whether want and misery are sufficient to engender the disease, or only give efficacy to the specific contagion.

The following are the statements of the late *Dr. Cheyne*, first as to the results of his own observations in Dublin, and afterwards as to those of the reports he had received, and the inquiries he had made, throughout the whole province of Leinster:—

"Where the disease was introduced among such communities of the poor as *had little connexion with the higher ranks of society*, and were destitute of employment, and consequently ill-supplied with food and clothing and fuel, among such as from the severe pressure of the times were so dispirited as to be indifferent to the danger of infection, it spread with celerity, and pertinaciously maintained its influence."

Medical Report of the Harwick Fever Hospital, by J. Cheyne, M.D., from Dublin Hospital Reports, vol. ii., pp. 45 and 49.

"The state of the poor when the epidemic appeared was worse than it had at any former time been known, in consequence of a succession of unfavourable seasons; in Wexford, at the period of my inspection, it was still very miserable. In some places, not one-half of the labouring poor had employment; many of the farmers had discharged all the labourers they were wont to employ, and few, if any, retained the usual number. Turf in most places was uncommonly dear; the clothes of the poor were nearly worn out, and many of them slept in their body clothes for want of blankets. Thus depressed in strength and spirits, they were thrown open to the disease which everywhere existed among them, and which it was generally thought was propagated not merely from one neighbour to another, but by the swarms of beggars who overran the country. From Dublin to Gorey I heard complaints of the injury which the country had sustained from the beggars who were banished from Dublin last year by the Mendicity Association. Many of these wanderers laboured under fever, and others probably conveyed contagion from house to house in their clothes.

"In 1817, but more especially towards the close of that year, there was a great scarcity of wholesome food, in many parts amounting to a famine, and also of fuel; the clothes of the poor were worn out; and

many of them were in a state of dejection of mind from these hardships, and from a general failure of employment.

"At this period the common continued fever of the country became epidemical; at first it raged with severity, in some places carrying off considerable numbers; it began to abate in severity about the middle of summer, 1818, since which time it has almost everywhere become less frequent also, so that in general it has ceased to be epidemic. Since it began to abate in severity, its duration in individuals has been much shortened, but with a proportionate tendency to relapse.

"The disease has spread through families in which ventilation or cleanliness were neglected or unattainable—has been conveyed from one cabin to another by the friendly visitors of the sick—but has been still more widely disseminated by strolling beggars and labourers traversing the country in quest of employment; and, lastly, the unseasoned servants of fever hospitals have, with scarce an exception, contracted the disease. In the upper ranks few comparatively have caught the fever, and of these a large proportion have been medical and clerical attendants upon the sick. The disease has been most destructive in those parts of the country where the poor have least intercourse with the rich."

From Report on the State of Fever in Leinster, by Dr. Cheyne; from Barker and Cheyne on Epidemic Fever in Ireland, vol. ii., pp. 138 and 165.

The following is the statement of *Dr. Barker*, after a similar examination of the whole province of Munster:—

"It appears in every part of the preceding five counties of this province, epidemic fever has prevailed to an extent unprecedented in the recollection of any person living: that it is now generally on the decline, which is more steady than at any former period; and that in many places it has almost totally disappeared: that it commenced, in most parts of the province, about the end of 1816, or beginning of 1817, with the scarcity of provisions, and general distress consequent thereon; and that the peculiar circumstances of the people, arising from want of employment, have greatly furthered its progress. It would therefore appear highly probable that its diffusion arose chiefly from strangers and mendicants moving through the country, and carrying with them the seeds of infection. The crowding of apartments, and the increase of filth, and neglect, the consequences of the condition of the people at that time, must have tended also to disseminate contagion.

"As to the preventive means to be adopted, in order to obviate its future increase or recurrence, it is evident that every measure serving to diminish pauperism and mendicity must have a tendency to render fever less frequent, by removing causes which favour its progress."

Report on the State of Fever in the Province of Munster, by Dr. Barker; from Barker and Cheyne on Epidemic Fever in Ireland, vol. ii., p. 45.

Dr. Crampton, after a similar inspection of the province of Connaught, reported as follows:—

"The classes of people who were, comparatively speaking, exempt from fever, were those who had abundance of good food, who were

well supplied with clothing and fuel, who were less exposed to the inclemency of the seasons, and whose minds were at ease, or at least above the feelings of despondency.

"The lower orders were almost the only sufferers from fever, in the first instance; they were precisely under those circumstances which rendered them highly predisposed to disease; so that it only required that any of the usual exciting or occasional causes of fever should be applied, to ensure a full development of the disease. They were feeble for want of sufficient sustenance to enable them to work; they often wanted food; they searched the fields for roots and herbs; the potatoes were bad and unwholesome; they were chilled for want of comfortable clothing or fuel; they were dispirited and desponding for want of employment. All these circumstances exhausted their constitutions, and it only required that they should undergo some slight exertion, or be exposed to cold, and fever inevitably followed such exertion or exposure. The poor, unable to pay their rents, quitted their tenures, or were ejected from them, and assembled in wandering hordes. Fever broke out among them, from the privations they suffered, and from their necessary exposure to wet and cold; and they disseminated it wherever they went."

Report on the State of Fever in Connaught, by John Crampton, Esq. M.D.; from Barker and Cheyne on Epidemic Fever in Ireland, vol. ii., pp. 98, 100—102.

"I am inclined to attribute the great prevalence of the disease in this county to the large portion of mountainous districts it contains; the inhabitants of which, in many instances as soon as they became distressed, quitted their homes, crowded into the towns, and brought filth and infection along with them."

On the State of Fever in Tyrone, from the same, vol. ii,, p. 122.

"The unusual quantity of rain which fell in the autumn of 1816 rendered provisions deficient in quantity and quality. It also deprived the poor of their usual supply of fuel, which they were unable to remove from the bogs where it was cut. These privations, combined with want of employment, produced a great depression of spirits, under which they became highly susceptible of receiving the contagion of fever. There is great reason to apprehend that this predisposition to fever will exist, more or less, till the habits and manner of living of the lower orders be radically changed.

"As a proof of the foregoing statement, it may be adduced that the poor were uniformly the greatest sufferers, and fever seemed to rage among them in a degree proportionate to the privations they had endured."

Report on the State of Fever in Ulster, by James Clarke, Esq., M.D., from the same, vol. ii., p. 125.

Again, in the elaborate work of Dr. Harty, published about the same time, and likewise founded on reports from all parts of the country, although several opinions are stated at variance with those of the government inspectors, we find the causes of the extension of fever stated in almost precisely the same terms:—

"The influence of famine is equally powerful and characteristic, necessarily producing such crowding of the poor, and such deficient

ventilation of their dwellings, as seldom fail to excite fever under the aggravating combination of despondence, want, and uncleanliness. The moment a scarcity of food is felt, more especially if accompanied by any deficiency of employment, the poor of the country, particularly of mountainous and other districts where the wealthier population is scanty, rush towards the cities and towns in search of employment and of food; there they occupy the lowest description of lodgings—waste houses, or the most wretched hovels. If unable to procure a sufficiency of food by their labour or begging, they pawn or sell their furniture and clothing, aggravating by this temporary relief their future sufferings. Thus are they brought together in great numbers, and crowded into filthy and unventilated abodes, unfit for human beings; the nakedness of the inmates compelling them in inclement seasons to be huddled together for the sake of warmth, and to exclude by every means every possible access of the external air. In this way it is that famine and fever are so intimately connected; not indeed directly, but indirectly. In the same way, though in a lesser degree, are fever and want of employment related; for as famine presses on the whole pauper population of a country, so want of employment affects a portion of that population, while the community at large are in the latter instance much better enabled to relieve their wants. Though provisions be plentiful and good, yet if deficiency of employment deprive the poor man of the means of purchasing food, he is so far placed in the same situation as if famine prevailed, with this difference merely, that the food he can procure is not unwholesome. In other respects the same effects arise,—mendicancy, crowding, deficient ventilation, uncleanliness, despondency, &c.

"The influence of employment in preventing or checking the inroads of epidemic fever is exemplified in several of the private communications in the Appendix. That influence was manifested in a most striking manner at the Merino Factory, in the county of Kilkenny, during the late epidemic; in that factory about 400 of the peasant youth of the neighbourhood are employed and educated; they reside with their parents, into whose (formerly wretched) hovels they have brought neatness and comfort, so that the immediate vicinity of this establishment furnishes a remarkable contrast to the ordinary aspect of the more remote parts of the country, both as regards the improved cultivation of the soil and the general appearance, habits, and comforts of the peasantry. When famine and fever ravaged the county Kilkenny, both were severely felt in all the parishes and towns adjoining to the factory, and yet such was the effect of the general employment it afforded, and of the principles of economy and independence it encouraged, that a single pauper was not to be found within its district to claim charitable relief; nor did fever, though prevalent in all the surrounding districts, make any impression on the families connected with the factory."

See Report of a Committee of the Dublin Society, with Minutes of Evidence respecting Merino Factory.

Dr. Cheyne, in his official Reports, mentions it as worthy of

record, that in the county Louth the fever disappeared everywhere shortly after employment was restored to the poor.

From an Historic Sketch of the Causes, Progress, Extent, and Mortality of the Contagious Fever, Epidemic in Ireland, during the years 1817, 1818, and 1819. By William Harty, M.B., pp. 180 and 212.

The following statement is made by one of those authors on the Irish epidemic fevers who has expressed himself most strongly (and on good grounds) against the idea of destitution being the sole cause of fever:—

"The author is far from denying the powerful agency of want and misery in diffusing epidemic fevers; he has ever regarded those evils as in conjunction with certain moral habits, which he looks upon as their natural and inevitable consequences, to be the chief, the great, he would say it emphatically, predisposing causes of fever in this country; but he holds the opinion that these evils alone are incapable of generating continued fever in any individual instance, much less in its epidemic form, and that to produce this effect the combined agency of another set of causes, which, in medical language, we call exciting causes indispensably necessary. The latter class of causes will operate with tenfold effect upon an impoverished and enfeebled multitude."

Dr. O'Brien, in Dublin Medical Transactions; new series; vol. i, part 2, p. 260.

I shall only add the emphatic expressions of *Dr. Grattan*, one of the physicians who had seen the most, and given the most accurate descriptions, of the fever in Dublin, and one of the few Irish physicians who favours the idea of fevers originating occasionally from putrid effluvia:—

"Next to contagion, I consider a distressed state of the general population of any district as the most common and the most extensive source of typhus fevers. The present epidemic is to be referred principally to the miserable condition of the poorer classes of this kingdom; and so long as their state shall continue unimproved, so long will fevers continue to prevail, probably not to its present extent, but certainly to an extent sufficient to render it at all times a national affliction."

Report of Fever Hospital, Dublin, in Transactions of College of Physicians; vol. iii., p. 363.

Now although we have not seen in Scotland so general and complete destitution, nor so wide-spreading epidemic fever as these gentlemen have witnessed and described in Ireland (and which has repeatedly recurred in Dublin and in other parts of Ireland since these statements were written), yet a considerable proportion of the lower orders in Edinburgh, and I believe in every great town of Scotland, are reduced every winter, and especially on occasion of the suspension of any considerable works, or of scarcity of provisions, to a condition very similar to that above described as existing so generally in Ireland; and the

accounts which have been quoted, of families partially or wholly unemployed, scantily and irregularly fed, and depressed in spirits, obliged to part with their bed-clothes and part of their body-clothes for subsistence, collecting in town in winter because there are no resources for them in the country, crowding together into small rooms in the district and worst aired (because the cheapest) parts of the town, and frequently infected with fevers by men wandering in search of employment, or by travelling beggars,—might really stand for a description of the circumstances of that portion of the inhabitants of Edinburgh (partly Scotch and partly Irish) among whom I have most frequently seen fever introduced, and almost always observed it to spread most certainly and most rapidly. In one instance, I remember a poor family wandering in search of employment, and infected with fever, who were driven from one part of the town to another, and introduced the disease into three different districts, all inhabited by very poor people; and I traced not less than fifty cases of the disease to communication with that family, notwithstanding that several of its members were successively taken into hospitals. And it cannot be denied that all the seasons in which fever has been unusually prevalent in Edinburgh have been seasons of unusual privation and suffering, from want of employment or scarcity of provisions.

I think myself justified, from the very frequent observation of such facts, in applying the experience of physicians in general in all countries, and especially of those who have witnessed the fever in Ireland, to its extension in Edinburgh, and concluding that the "want and misery" of a certain portion of the inhabitants, and the filth *within the houses*, the crowding, the negligent and reckless habits, and the occasional intemperance, which are the usual concomitants, and I believe the natural results, of this want and misery, are with us, as in Ireland, the great predisposing causes of fever, to which its frequent and general diffusion in this and other large towns in Scotland is chiefly to be ascribed.

And when I compare this state of things in these towns with the comparatively limited extension of contagious fever in most of the great towns in England, and reflect on the resources which are there provided for persons likely to fall into a similar state of destitution, I cannot doubt that it is to the existence of the compulsory provision against indigence in England that the comparative exemption of those great towns from this great evil is mainly to be ascribed.

I need hardly say that, according to the practical administration of the Poor Laws in Scotland, there is no legal provision for that destitution which results merely from want of employment; and that the allowances to aged, infirm, and disabled persons, and to widows and orphans, are so small as in many instances not to preserve them from the state of destitution above described.

To show that I make no exaggerated statement of the destitute

condition of a very considerable part of the population of Edinburgh, or its close approximation to that state of want and misery which all the Irish physicians characterize as the chief or "emphatically the great predisposing cause of the extension of fever," I shall subjoin an analysis of the answers returned to queries circulated by the association lately formed for obtaining an official inquiry into pauperism as in Scotland. These answers are from clergymen, medical officers of dispensaries, and others frequently visiting the poor, and from the visiting members of the society for relief of the destitute sick; and they relate to the condition of the poor in a winter when there was no unusual severity of weather, failure of employment, or scarcity of provisions.

Analysis of the Answers returned to the Queries addressed to Individuals who have much acquaintance with the Condition of the Poor in Edinburgh.

The Committee of the Association recently formed for obtaining an Official Inquiry into the Pauperism of Scotland will feel much obliged by your returning to me answers to the enclosed queries at your earliest convenience.

(Signed) P. D. HANDYSIDE, M.D.
Secretary.

Edinburgh, 10, *Shadwick Place*,
April 8th, 1840.

Queries.	Answers.	Yes.	No	
1. Have you seen, during the last or recent winters, many persons and families in a very destitute state? State numbers if possible, and population of the districts. 26 out of 28 answered—Yes.	Medical practitioners generally dispensary officers.	10	0	
	Lay visitors of the poor.	7	1	Not in his district.
	Clergy and Missionaries	9	1	
2. Have you seen many whose furniture, bedding, and clothing had been pawned or sold for subsistence within the same period? 22 out of 25—Yes.	Medical practitioners	7	2	Doubtful.
	Lay visitors.	7	0	
	Clergy and missionaries	8	1	
3. Have you seen many whose food you had reason to believe to be scanty and precarious? 27 out of 28—Yes.	Medical practitioners	10	0	
	Lay visitors.	8	0	
	Clergy and missionaries	9	1	
4. It being commonly believed that most of these destitute families are intemperate, have you seen a considerable number whom you had no reason to suppose to have been peculiarly so? 20 out of 25—Yes.	Medical practitioners	8	2	Doubtful.
	Lay visitors.	5	2	
	Clergy and missionaries	7	1	
5. Does it consist with your knowledge that many labourers with families are out of work during some months of the year? 24 out of 26—Yes.	Medical practitioners	9	1	
	Lay visitors	7	0	
	Clergy and missionaries	8	0	

Queries.	Answers.	Yes.	No.	
6. Is this the case also as to many artisans? 19—Yes.	Medical practitioners .	7	0	
	Lay visitors	7	0	
	Clergy and missionaries	5	0	
7. Also as to many single women, or widows with families. 23 out of 25—Yes.	Medical practitioners .	6	2	Doubtful.
	Lay visitors	8	0	
	Clergy and missionaries	9	0	
8. Do you see many instances of several women, or families, associated together in single small rooms, in order to lessen rents. 13 out of 15—Yes.	Medical practitioners .	7	2	
	Lay visitors	2	0	
	Clergy and missionaries	4	0	
9. What are the ordinary profits of employment for women of the lowest rank when employed?	Medical practitioners . 2 only answer, from 4*s.* to 5*s.* per week.			
	Lay visitors . . . . 3 answer, 3*s.* or less per week.			
	Clergy and missionaries 4 answer, about 3*s.*			
10. Are these employments generally overstocked in Edinburgh? 18 out of 19—Yes.	Medical practitioners .	4	1	Dr. Coldstream, Leith.
	Lay visitors	7	0	
	Clergy and missionaries	7	0	
11. Are many of these destitute families or persons in receipt of assistance from their parishes? Nothing conclusive.	Medical practitioners .	1	1	
	Lay visitors . . . No distinct answers; several say, "Very little assistance, if any."			
	Clergy and missionaries very much the same answers as the lay visitors			
	One missionary states, that of 103 destitute families only 29 have parochial relief.			
12. Are many who live in Edinburgh entitled to assistance from other towns or country parishes, but not obtaining, or not claiming it? 9—Yes.	Medical practitioners .	4	0	
	Lay visitors	4	0	
	Clergy and missionaries	1	0	
	N.B. 25 families in this predicament, and very destitute, known to me at this moment.—W. P. Alison.			
13. Are there many such families or individuals, who are now chargeable in Edinburgh, but who have only recently come from other parts? 7—Yes.	Medical practitioners .	1	0	
	Lay visitors	5	0	
	Clergy and missionaries	1	0	
14. There having been a very great increase of applications to your society of late years, do you think that this has been chiefly owing to a real increase of destitution, or to the benefits of the society having been extended to many not so destitute as those formerly relieved by it? 7—Increase of destitution.	Medical practitioners .	1	0	Increase of destitution.
	Lay visitors	6	0	Ditto.
	Clergy and missionaries, no distinct answer.			
15. Are you aware of instances of very poor persons, or widows with families, who have been three years or more in Edinburgh, but have been unable to establish their claim to parochial assistance from want of landlord's receipts, or any other causes? 5—Yes.	Medical practitioners .	1	0	
	Lay visitors	3	0	
	Clergy and missionaries	1	0	
	N.B. Above 20 such cases, very destitute, known to me at this moment. W. P. Alison.			

REMARKS ON DR. W. P. ALISON'S "OBSERVATIONS ON THE GENERATION OF FEVER."

By Neil Arnott, Esq., M.D.

Dr. Alison, actuated by his enlightened anxiety to lessen the sufferings of the poorer classes in Scotland where a legal provision has not yet been made for many cases of extreme destitution, has deemed the occasion of the English Poor Law Commissioners submitting queries to the medical practitioners of Scotland, as to the contagious fever there, a good opportunity for urging his object, and he has assigned the destitution common among the lower classes as the great source of the fever. But in doing this, he has referred to reports previously made to the same commissioners by Dr. Kay, Dr. Southwood Smith, and myself, on the causes and prevention of fevers in London, where provision for the destitute has long existed, in a way which would lead ordinary readers to conclude that a great difference of opinion existed among the medical men of this country on these very important subjects. To leave the apparent difference unexplained would be to hazard some loss of public respect and of influence for professional opinions.

The reporters in London ascribe the breaking out of fever, when it does not arise from contagion, or infection, to the action on bodies more or less disposed to be affected, of something which proceeds from putrescent animal and vegetable substances, and which, mixing with the air, produces noxious malaria; and they recommend, as the chief means of preventing the new generation of the disease, the removal, as far as possible, from where people reside of every kind of filth, and at the same time such free ventilation as, by diluting any unavoidable aërial impurity, shall render it innoxious. Contagion itself they describe not as the original cause of the disease, but as that which spreads or diffuses it among all classes of the people, saying, (page 104 of Poor Law Report for 1838,) that where the disease has once sprung up, "the bodies of persons affected by it give out a contagious malaria often more quickly operative than the original cause;" and in relation to this is recommended, in addition to means of cleanliness and ventilation, the establishment (page 137) of fever hospitals or receptacles, to allow the immediate separation of persons attacked. In complete accordance with these views as to the efficacy, however the disease may have arisen, of the ventilation which will sufficiently dilute the aërial poison, Dr. Christison, the distinguished brother professor of Dr. Alison, and who has been similarly labouring in the midst of the typhus in Scotland, says in his late Treatise on Fever, published in "The Library of Medicine," at page 159, that, "So far as minute observation of

several violent epidemics (in Edinburgh) during the last 20 years can determine the point, moderate precautions will render the infectious atmosphere inert." "Cleanliness and ventilation will speedily extinguish any epidemic:" and he gives the striking illustration of the effect of different degrees of concentration of the poison observed in the wards of the Edinburgh hospitals, into which, if fever patients were admitted only, under a certain proportion to the other patients, the fever did not spread, but if beyond that proportion, the persons about them were seized, and very exactly in the ratio of their exposure to the infection—the nurses preceding the clerks and house surgeons, these the dressers, and these the general students and physicians; and it was remarked that none of the persons so attacked, when removed to their private dwellings, communicated the disease to their attendants, (pages 157 and 158).

Dr. Alison, using forms of language which might preface the expression of opinions directly opposed to those above enunciated, says (at page 21 of his paper), "that in a practical view, its (the fever's) only certain source is a specific contagion arising from the living human body already affected by it," and "favoured in its effects on healthy persons by various conditions which may be termed auxiliary or predisponent causes, but which of themselves are inadequate to produce the disease." "Among these, foul or vitiated air is one of the most powerful."—Yet he allows, and says the opinion is "held almost universally by the Irish physicians," who have had so much experience in the matter, "That it (the fever) may probably sometimes originate spontaneously in the human body itself, (particularly under the influence of long-continued anxiety and depression,") and he admits the constant concomitant influence in such cases among the poor of malaria or impure effluvium, by the observation at page 26, "that the filth which most effectually favours the extension of fever, at least in this city, is that which exists within the inhabited rooms, and which is inseparable from the destitute mode of life which many of the lowest inhabitants, particularly during winter, habitually lead."

He advises, (page 3,) as the great means of preventing the introduction or diffusion of the disease, "a more liberal and better managed provision against the destitution of the unemployed or partially or wholly disabled poor."

In these propositions, apparently thrown out in the hurry of composition, when the writer had vividly before him his great object of charity, the legal provision for the poor, and perhaps before he had fully examined the reports to which he referred, or while a feeling existed that they did not furnish him so much aid as he had wished, there is less clearness and precision than is usual in Dr. Alison's writings, and to this mainly is owing the apparent discrepancy of opinion. For, 1st, as to the causes of

the fever, both parties allow that certain combinations of unfavourable circumstances can generate it, and that contagion powerfully diffuses it, the difference being, that Dr. Alison attributes a greater proportion of the cases to contagion than the others do, a conclusion which, for Scotland, the facts observed in Scotland as compared with England probably warrant; and while the London reporters deem filth or malaria the great and essential element among the circumstances in which the disease may be newly generated, Dr. Alison specifies depression of mind as the chief, and deems the foul air subordinate. Then as to the means of preventing and checking, the London reporters advise principally against allowing any accumulation of foul air, whether of new malaria, or transmitted infection, or contagion by "good drains, scavengers, plentiful supply of water, free ventilation, prevention of overcrowding among the poor and fever hospitals, to allow of immediate separation of those attacked," (pages 105 and 137,) and they trust to judicious administration of the English poor laws to prevent other unfavourable concomitants, as cold, hunger, and mental depression. Dr. Alison, on the other hand, calls for a good poor law for Scotland as the great desideratum, to relieve extreme destitution. The difference here is not between two opinions on the same subject as a careless reader might believe, but between two opinions on different subjects, first, as to what is most wanted in England in regard to typhus fever, and second, what is wanted in Scotland, in regard both to typhus fever and to other important objects. Had Dr. Alison sought only security against typhus, and held, as in one place he states, that practically its only source is contagion, he would have seen that the cleanliness and ventilation, which Dr. Christison says, "will speedily extinguish any epidemic," might be obtained in a considerable degree independently of supplies of food, clothing, or fuel. No one can doubt that the epidemic fevers, which in Ireland, particularly in the years of scarcity or famine, and in a less degree in Scotland, sweep off multitudes of the people, spring from or are connected with the existing destitution, as might equally be said of a shipwreck of some of the distressed people emigrating to another land, but still it is right in every case to turn the attention from the remote to the immediate cause, the avoidance of which, possibly easy, may save from the disaster, as perhaps foul air or want of ventilation in the one case and rotten planks in the other. If the destitution were relieved by grants of money, the ignorant receivers might not know how best to use the means supplied. Evincing further that much care was not bestowed by Dr. Alison on the composition of this paper, it may be remarked, that the word *spontaneously*, if used at all, was not more applicable to the production of fever by one acknowledged cause or set of causes than by another, by depression of mind and filth, for instance, than by contagion.

The following remarks may give somewhat more precision to some of the views to be entertained on these subjects:—

The original cause of Typhus Fever, or any other contagious disease, cannot be deemed "a specific contagion arising from a living human body already affected by it," because that opinion would involve the admission, that the first person who had the disease must have received it from another who had it before him. It is therefore necessary to assume either a distinct miraculous creation of the disease, or to hold that a certain combination of circumstances around and within the body, possible in the usual course of nature, may generate it, and which combination, having happened once, may happen again and again. The combinations which originally produced some of the contagious diseases, as small-pox, measles, hooping cough, may have occurred rarely, perhaps not more than once since human records began; while others, as those producing yellow fever, plague, scarlet fever, typhus, &c., may have occurred very frequently, as indeed they are now constantly presenting themselves anew. The important question then is, What modification of the circumstances referred to, of which those influencing the health are conveniently classified under the heads of *air, temperature, aliment, exercise of the faculties, violence,* and *poisons* conveyed by the air or otherwise, will produce the disease?

First, it has never, I believe, been held that any degree of temperature alone, or of hunger or thirst, or of surfeit alone, or of fatigue or inaction alone, or of supply of respirable air alone, has produced contagious fever, or that any combination of these, such as occurs amongst shipwrecked mariners left on a bare rock, without impurity of air, has produced the disease; but, on the other hand, there are innumerable instances acknowledged by all observers, professional and others, and referred to in the popular as well as scientific language of every country, in which the most destructive fevers have sprung up, where all known conditions were natural, save the existence of a miasm or emanation from situations in which there was putrescent organized matter.

Thus along the low marshy shores and flats of tropical countries where vegetation and animal life abound, with a corresponding amount of putrefactive destruction, there spring up, and often only in the direction in which the wind blows, the well-known fatal remittent, yellow, jungle and other fevers, as of India, Sierra Leone, Vera Cruz, &c. Then may be noted the marsh or intermittent fevers of temperate climates, as those of the Campagna di Roma, Walcheren, and the marshy districts of England. Then the fact presents itself, that in warm countries, as Egypt and Syria, where in the dirty dwellings human filth is added to what other may be around, there arises the fatal plague of these countries; and in colder countries, under nearly similar circumstances, we see the typhus or malignant fevers of England and the European conti-

nent. Then, showing the connexion of the last-mentioned fevers with malaria, there are very numerous facts to prove that the removal or avoidance of such matters as produce malaria, without any other measures, will extinguish or prevent the fevers. This has been remarkable in the case of London, in which, before the great fire of 1666, destructive epidemics raged at short intervals, killing frequently one-fourth or more of the population, but in which, since the widening of the streets and better drainage and ventilation which followed the fire, without other notable change in the condition of the people, there has been no disease meriting the name of epidemic; the worst has been the cholera a few years ago, which killed only at the rate of one person in about 250. Corresponding facts have been presented in other cities, and even in particular streets and quarters of cities, and in single houses, where the formation or cleansing, or covering of a filthy drain, has caused fevers to disappear from the localities so improved, while it has remained as before in other situations near. Striking facts, in illustration of these positions, were set forth in the joint Report of Dr. Kay and myself. As additional facts to exemplify kinds of malaria, I adduce the following five, which were accidentally detailed by persons who had witnessed them, in a small party of military and medical men in which I lately sat:—1st. During the Burmese war, two soldiers, in digging a grave for a comrade, accidentally opened a coffin previously there, and inhaled putrid effluvium, which caused the death of both within 30 hours. 2nd. Of three men employed to spread on a field the manure of prepared bones lately introduced, one died on the second day, and the other two narrowly escaped. 3rd. In the Hornet corvette, while in the West Indies, several persons died of fever with black vomit, in consequence of inhaling putrid effluvium from a vessel of preserved salmon, which had been accidentally broken or pierced. 4th. In the Pyramus sloop of war, being at the time one of a very healthy fleet in the West Indies, fever sprung up at sea to an extent which induced the commodore to have the people withdrawn and the ship completely fumigated; some days after the crew returned to her, the fever re-appeared, and then, on closer examination, it was found to have sprung from a collection of mixed filth under the timbers, rendered wet by recent leakage. The boatswain and some men who superintended the removal of the filth were made very ill, but not one other case appeared in the ship afterwards. 5th. A party of officers, passing from one West India island in which yellow fever prevailed to another which was healthy, were attacked on their voyage by yellow fever. On arriving, they were placed near the barracks in the officers' quarters, which were detached from the general building, and in which at the time there were other officers with their families. Of these last mentioned the greater part took the fever, and five of them died, but there did not occur

one other case in the island. Such facts as have been now referred to or reported prove the poison arising from putrescent matters, modified very variously by minor circumstances, to be of signal potency in alone producing fevers, and to be in that respect unlike cold singly or hunger, or depressed mind, which cannot produce them without other aid.

With such evidence then before me, and I here reiterate only for myself, as I have not had the opportunity of communicating with Drs. Kay and Southwood Smith, I must deem malaria to be fully of the importance described in the joint Report. To adduce the fact that certain kinds of filth, with foul effluvium, exist in certain well-known situations, as in tan-yards, slaughter-houses, stables, &c., without producing typhus, would no more prove that other kinds, as from foul drains under certain circumstances of intensity, duration, state of the persons, &c., do not produce it, than the fact that around certain jungles and marshes, generally where there are constant diluting currents of wind, no fever has been seen, proves that there is no jungle or marsh fever anywhere. In the mass of extracts given by Dr. Alison from authors who have written on fever, I find much which strongly corroborates the views here taken, and no fact is stated which may not be explained in accordance with these views and with common physical laws. A remarkable error has been committed, not by Dr. Alison, but by many reasoners on fevers, in thinking that they had to assert either that the fevers were altogether contagious, or altogether non-contagious. There can now be no doubt that every contagious disease has had its origin without contagion.

In conclusion, then, I have the satisfaction of thinking that the real difference of opinion between Dr. Alison and the London reporters is small indeed, and certainly I believe there is no difference as to the importance of an improved poor law for Scotland, in relation to the health of the people as well as for other objects. If in any case I found myself holding a different opinion from Dr. Alison on a subject which he had fully considered, and on which he had deliberately expressed his thoughts, I should conclude that it was a subject which I had myself to study again.

N. Arnott.

London, 24th August, 1840.

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ON THE STATE OF THE LAW AS REGARDS THE ABATEMENT OF NUISANCES AND THE PROTECTION OF THE PUBLIC HEALTH, IN SCOTLAND, WITH SUGGESTIONS FOR AMENDMENT.

By John Hill Burton Esq., *Advocate.*

Edinburgh, 16, *Duncan Street*, 28*th Dec.*, 1840.

Gentlemen,—In conformity with the instructions contained in your communication of 14th November, requesting information as to the state of the law regarding nuisances in Scotland, and suggestions for amendment, &c., I have the honour to report as follows:—

Common or Substantive Law.—The word "nuisance" is of comparatively late introduction in the nomenclature of the law of Scotland, and the subjects now comprehended under it in the reports are generally to be found in the older books under the head of "Public Police." The word is not held to embrace all the matters that appear to come under the two divisions of public and private nuisance in England. Questions as to riotous houses, malicious impediments on highways, and others involving a breach of the peace or an intention to inflict injury, are not treated under this head, but have their respective departments in the criminal law. Questions as to the obscuring of ancient lights, the right to the use of thoroughfares and streams of water, and others of the like kind, involving the adjustment and limitation of the rights of neighbours with regard to each other, are generally discussed under the title "servitudes," in conformity with the classification of the civilians. Thus narrowed in its application, the word nuisance, in the law of Scotland, corresponds rather with its popular than its technical signification in England, and is seldom applied to any other cases but those in which one party, by his direct operations or by his negligence, occasions something offensive to the sight, smell, or hearing of another.

There is another difference between the law of Scotland and that of England, which, though it will be more distinctly brought out under the subject of procedure, it is of importance to keep constantly in mind; and that is, that by the common or unwritten law of Scotland there is no such distinction as that between public and private nuisance. In Scotland there is no such procedure as that of indicting a nuisance, nor is there any analogous form,—any machinery by which those responsible for the perpetration of a nuisance can be prosecuted on the public account, or by which the interest of the public at large can be adduced as influencing the decision of the question, whether a nuisance shall be abated or not. To this general statement there is a partial exception in the edile powers of the Dean of Guild, which I shall have to consider further on. The powers conferred by local

police and other statutes are likewise exceptions. The bodies acting under these are, however, restricted to their literal statutory powers. As an illustration of the extent to which they are thus hampered, I quote the opinion of two eminent lawyers, whom the Commissioners of Police of Edinburgh consulted as to the best means of getting a stop put to the system of irrigating meadows with the contents of the common sewers, mentioned in the Report of the Select Committee on the Health of Towns. They say, "We think that an action of law would not be competent at the instance of the memorialists, in their representative capacity of Commissioners of Police. Such an action, we think, could be maintained at the instance only of those who individually are the sufferers; and even such parties may be precluded from insisting, if they had either come to the nuisance or had submitted to it so long as to amount to acquiescence."*

The law on this subject must be gathered from a series of cases reported in the books, the majority of which involve questions of special damage to property, few of them bringing out any general ruling principle that can be adduced as a fixed precedent. It seems to be established by the cases cited below, however, that where any man can show that his neighbour, either by the direct effect of operations, or the neglect to remove noxious substances, does injury or occasions risk to his health or property, or generally renders life uncomfortable to him, the cause of annoyance must be removed, and damages paid for any mischief that may have been occasioned.† With very few exceptions, the subjects of complaint in these cases were produced by manufacturing operations, which were said to pollute water or taint the atmosphere. The more important of them were actions brought by the owners of running streams or of property on their banks, complaining of the water being polluted by such operations. The prevalent subject of complaint is that damage has been occasioned to real property, and it is a frequent incident in such damage that dwelling-houses are rendered less profitable to the proprietors from the vicinity of the nuisance.

It is not unusual to find that when individuals prosecute nuisances, they represent not only their own individual hardships, but those of their neighbours. I have not found any instance, how-

* Opinion of Mr. Duncan M'Neill and Mr. Patrick Shaw.

† Kinloch *v.* Robertson, 20 June, 1756, Morison's Dictionary, 13,163: Kinloch *v.* Ogilvie, 27 Nov., 1781, ib. 13,183; Palmer *v.* Macmillan, May, 1793, ib. 13,188; Vary *v.* Thomson, 2 July, 1805, ib. *voce* Public Police, App. 4; Thomson, 15 Dec. 1807, ib. App. 5; Charity *v.* Riddle, 5 July, 1808, ib. App. 6; Miller *v.* Stein, Nov., 1791, Bell's Cases, 334; Russell *v.* Haig, Nov., 1791, ib. 338; Scott *v.* Cox, 5 July, 1810, Faculty Decisions; Farquhar *v.* Watson, 19 Jan., 1813, ib; Dowie *v.* Oliphant, 11 Dec. 1813, ib.; Kelt *v.* Lindsay, 8 July, 1814, ib.; Arrott *v.* Whyte, 27 Nov., 1826, 4 Murray, 149; Chief Commissioner's Opinion in Hart *v.* Taylor, 19 July, 1827, ib. 307; Millar *v.* Marshall, 8 Nov., 1828, 5 ib. 28; Scott *v.* Commissioners of Police of Leith, 7 March, 1835, Dunlop, &c. Reports; Dunn *v.* Hamilton, 11 March, 1837, ib.; Collins *v.* Hamilton, 14 April, 1837, ib.

ever, in which a complaint has been founded solely on the effect produced on the health of the public at large or of the neighbours. The individual litigants have generally mixed up the subject of the health of themselves, and of their servants, tenants, &c., with the other items of damage occasioned or rendered probable. On such pleas medical testimony has been adduced, or the court has remitted to physicians to report. The public health has, in the ordinary cases, only been incidentally, and in some instances irrelevantly adduced, in the course of the loose mixture of argument and fact which the older system of pleading in our courts admitted of. In one case, however, where the question in its earlier stages passed through the Court of the Dean of Guild, as noticed below, he, as a municipal officer, remitted to medical men, "That they report as soon as they conveniently can, whether the operation of manufacturing glue is, from the nature of the materials used or otherwise, attended with injurious consequences to the health of persons living in the vicinity of the place where the manufacture is carried on."* This case was afterwards carried into the Court of Session, where it was decided on grounds distinct from those of the public health.

It will be readily collected from these views, that the law of Scotland affords no instances where the manner of living which the people choose to adopt (either with regard to the nature and situation of their dwelling-houses or otherwise), is interfered with on the ground either of their own individual health being affected or of their becoming a centre whence disease may be communicated to the public at large. A litigation for the abatement of a nuisance requires two distinct parties—one who is specifically and directly injured, another whose conduct inflicts this injury. In England I find the following doctrine laid down:—"It hath been holden to be a common nuisance to divide a house in a town for poor people to inhabit in, by reason whereof it will be more dangerous in time of infection of the plague."† In Scotland, though formerly any public regulations or restrictions which the courts of law approved of were very arbitrarily enforced, without much respect to individual rights, I cannot find any parallel doctrine. The nearest approach to it that I have observed is exemplified in a late decision on circumstances arising out of the sanitary regulations adopted during the visitation of cholera in 1832. Before the disease had reached Edinburgh, some rags sent from the diseased districts to a dealer in Edinburgh were intercepted by the police on their approach to the town. They were then conveyed to a neighbouring parish, and deposited with the proprietor of a paper-manufactory. The local Board of Health, hearing of the occurrence, sent a deputation to investigate the conduct of the depositary, who consented to the removal of the

* Charity *v.* Riddell, *ut supra.*

† Rolle's Abridgment, Bacon's Ab., *voce* Nuisances.

rags. By the directions of this Board, which was self-constituted and acted without the warrant of a magistrate, the rags were deposited in a field, such efforts being made for their preservation as their remaining in the open air admitted of. An intimation was sent to the proprietor that he might remove the rags to any place he might choose "out of the parish." The proprietor declined to interfere, but (the rags being injured) raised an action of damages. He had a decision in his favour both from the Sheriff and the Lord Ordinary: the former taking the view that the circumstances were insufficient to justify the interference of the Board; the latter holding that the Board, though entitled to interfere, should have had the property removed to a place of safe keeping. The Inner House of the Court of Session, however, decided in favour of the Board, on the ground "that in the circumstances of the case, and in consideration of the state of alarm for cholera then prevailing in the country, it was the duty of the pursuer to have given the required consent, or to have taken other measures for the removal of the rags, reserving his claim against the Board of Health, or its officers, for any damage he might then have sustained, and which must have been inconsiderable."* This case is only adduced as the strongest application of the doctrine *salus populi suprema lex*, to the public health, that I can find. I do not consider it as bearing much on the subject immediately under discussion, or that it is a precedent warranting the opinion that our law contains sanctions for the enforcement of permanent sanitary regulations. In all its circumstances, indeed, and especially in its indemnity to private parties acting without the intervention of constituted authorities, it applies exclusively to the case of an emergency.

The doctrine that litigations regarding nuisances are in all cases to be looked on as mere private questions between individual parties, is well illustrated in the strict application to this branch of the law of the following exceptional doctrines:—1st. That the right to create a nuisance may be made permanent by its use during the period of prescription;†—this should, by analogy with other cases, be a period of 40 years, but on some occasions the doctrine seems to have been held that a far shorter period will establish the right, if there has been acquiescence. 2nd. That no

* Davidson *v.* Glenny, 6 March, 1835, 13 Shaw and Dunlop, 624.

† The doctrine in England seems to be, that a private nuisance may prescribe, but that a public nuisance, being an offence, cannot. In the words of Lord Ellenborough (in Rex *v.* Cross, 3 Camp., 227), "It is immaterial how long the practice may have prevailed; for no length of time will legitimate a nuisance." There is one case, indeed, occasionally referred to as showing that there may be exceptions to the rule, viz., Rex *v.* Smith, 4 Esp., 109. This, however, was rather a question of competing privileges, than of nuisance in its sense of an injury to the public. The privilege of a highway was claimed on the one side; that of the right to occupy part of it as a market, on the other: and it seemed to be considered that the right of buying and selling upon it was a limitation under which the privilege of highway was enjoyed.

man who comes to the neighbourhood of a nuisance is entitled to call it in question.* Unless an instance I shall afterwards mention in illustration of the authority of the Dean of Guild may be considered an exception, I know no case in which the comfort or health of the public has ever been pleaded in mitigation of the strict application of these rules. There is one case, of the year 1791, in which, from some fragmental notes preserved of the opinions of the judges, it would appear that two of them hinted at a distinction between nuisances that are public and those that are private, seeming to hold that the same acquiescence which would sanction the pollution of a stream of water would not justify one that impregnated the atmosphere. The distinction is, however, only dubiously hinted at, and was not brought out in the case; the dispute regarded the additional pollution produced in a stream which received the contents of common sewers, by discharging into it the refuse of a distillery.†

The following remarks are made by Lord Ivory on this subject:—

"It is to be observed that what might at first have been removeable as a nuisance, will no longer be so if permitted to remain uncomplained of for a great length of time. Thus, in consequence of usage for more than half a century, the proprietors of lands through which the foul burn (a stream arising from the common sewers of Edinburgh) passes, have been found entitled to stop its course and to stagnate the accumulated filth in ponds upon their respective properties, for the purpose of collecting the deposited manure.—*Duncan, &c.*, 9th June, 1809, *Fac. Coll.* A similar judgment was pronounced as to a long-established nuisance in the river Ness.—*Magistrates of Inverness*, 20th June, 1804, Dict., p. 13, 191. Where the nuisance has existed before the party complaining acquired his property, so that he came to it and not it to him, or where the work or manufactory creating the nuisance has been constructed under his eye, the case becomes still more unfavourable, and a shorter period of acquiescence will be requisite to support it.—*Colville*, 27th May, 1817, *Fac. Coll.*; *Duncan*, 9th June, 1809, *supra.* It is a nicer question, how far the previous existence of other nuisances in a particular situation will be held to sanction the intrusion of a new one; and perhaps

* The doctrine laid down in England is, "If a certain noxious trade is already established in a place remote from habitations and public roads, and persons afterwards come and build houses within the reach of its noxious effects, or if a public road be made so near to it that the carrying on of the trade becomes a nuisance to the persons using the road: in those cases the party would be entitled to continue his trade, because his trade was legal before the erection of the houses in the one case, and the making of the road in the other." Abbott, C. J., in Rex v. Cross, 2 C. and P., 484. In Scotland, so far as can be collected from the cases, the question would lie not between the manufacturer and the public, but between him and the private party to the action; and so, if the nuisance were created in the centre of a crowded town, it would be a good defence that the party complaining came to the neighbourhood after it had commenced.

† Russell v. Haig, Nov. 1791, Bell's Cases.

it would be difficult altogether to reconcile the decisions on this head." *

The first case here noticed, regarding the employment of the contents of the common sewers of Edinburgh, has already been alluded to. It is to be regretted that as, at the period when the case occurred, there was no making up of issues or distinct separation of the law from the fact, it is difficult to extract from the decision the precise rules it was intended to sanction. On a perusal of the printed pleadings, including the "Proofs," I find much argument and evidence to show, first, that the nuisance is detrimental to health, and second, that it is continually increasing in magnitude: whence it is argued that prescription cannot apply to it in its full extent at any given point of time. The court does not appear to have acceded to the opinions in the medical evidence. There can, however, be no reason for doubting the conclusiveness of the evidence as to increase, and hence the decision forms something like a precedent for the doctrine, that if operations creative of nuisance have existed unchallenged for a certain period, their extent may be indefinitely increased. It has indeed been found that the existence of noxious manufactures will not justify the erection of additional buildings for such a purpose, approaching closer to the vicinity of the persons complaining of them.† The decision, however, in the case of Duncan has created the general opinion that where the operations are of a nature to be gradually and imperceptibly enlarged there is no remedy; and such is the feeling in the public mind with reference to the system of irrigation, which since the date of the above decision has been annually increasing. From the opinion of counsel above quoted, it has been seen that the commissioners of police are excluded from prosecuting: no other public officer or public body is in a capacity to do so, and the individuals who complain of the nuisance are all in the position of having "gone to" it. An action is now in court for abating the nuisance, but the manner in which it is raised is but a further illustration of the difficulties in the way of such prosecutions. The nuisance being in the vicinity of the palace of Holyrood House, the action is raised by the Queen in the capacity of a proprietor and probable occupant, in virtue of an old Act which exempts the Crown from the effect of prescription by acquiescence.

Some provisions in the laws of the road must be considered as a portion of the law for the abatement of nuisances in Scotland. The general Turnpike Road Act is the 1 and 2 Wm. IV., s. 43. By s. 96, a penalty of 50*s.* is incurred by any party committing certain nuisances and obstructions on a road, such as killing any beast on the road, or on an exposed situation near it, suffering water, filth, or other offensive matter to flow from adjacent pre-

* Notes to Erskine's Institute, 218.
† Charity *v.* Riddle, *ut supra.*

mises on the road, &c. By s. 87, any trustee, surveyor, or other authorized person may remove substances laid on the road and dispose of them. Prosecutions may be raised by the Procurator Fiscal, by any trustee, or by any authorized officer of the trustees. (s. 109.) There are local turnpike acts in the various districts in which provisions as to drainage, &c. are generally to be found. With regard to the other high roads, the general law applicable to them is embodied in old Acts which make no provision for the removal of nuisances; but these roads are in general under the operation of district local acts, in which there are provisions resembling those of the general Turnpike Act. These regulations, in whatever form they exist, are often no further enforced than to the extent necessary for the preservation of the roads from material injury. Whoever has travelled through Scotland cannot have failed to remark that there is in general no practical restriction to the accumulation of filth on the sides of roads passing through villages.

It may here be relevant to notice a late decision of the House of Lords, which, until some new system is adopted, either by legislative enactment or in a course of decisions, is felt to impede individuals in seeking redress for nuisances occasioned by the acts or negligence of persons acting under the authority of public bodies, *e. g.* road trustees, commissioners of police, &c. It had been for some time the practice in Scotland to make the funds in the hands of such bodies available for compensating damage done by the operations of their servants. Damages were so awarded in the Court of Session against road trustees for the mischief done by the overturning of a vehicle, occasioned by the carelessness of a person in the service of a contractor employed by the trustees. On an appeal, the Lord Chancellor suggested the consideration, "Whether the rule applying to the liability of trustees, which seems to have been adopted in Scotland for a considerable number of years, and which is directly contrary to any rule we have here, is a rule that ought to continue to prevail in Scotland." It was further urged, that the practice adopted in this respect was not in conformity with the other principles of the law of Scotland. The decision in the Court of Session was consequently reversed.* Entirely apart from any question as to the merits of this decision, it will easily be perceived, that an alteration which shuts up one channel of recourse without opening another, or which, at all events, leaves the public in doubt as to how the practice will be further settled by the courts of law, must in the mean time add to the difficulties already in the way of obtaining redress of nuisances.

Procedure in the ordinary Law Courts.—The common-law remedy for a nuisance in existence is an ordinary personal action, concluding either for cessation of the nuisance or for cessation

* Duncan *v.* Findlater, 23 August, 1839, Maclean and Robinson's Appeals.

and damages. The question may in the first instance come before the sheriff of the county, or, if the nuisance be within a burgh, before the magistrate. Until lately, if the action involved a question as to heritable or real property, as most questions of nuisance do, the sheriff had no jurisdiction. By a late statute, however, his authority has been "extended to all actions or proceedings relative to questions of nuisance, or damage arising from the alleged undue exercise of the right of property, and also to questions touching either the constitution or the exercise of real or predial servitudes; and all persons against whom such actions shall be brought shall be amenable to the jurisdiction of the sheriff of the territory within which such property or servitude shall be situated."* Actions that have had their commencement in the Sheriff's or other local court, may be carried into the Court of Session by advocation; a process analogous to that of *certiorari* in England.

When a case is in the Court of Session, whether it has originated there, or has been brought from an inferior court, it must go to a jury, the Jury Court Act specially including "all actions brought for nuisance." The union of jury trial with the procedure of the Court of Session is comparatively recent, and the system has hitherto been found both costly and tedious. I requested two gentlemen who have particularly studied the practice of the court, and who have written works on the subject, to give me their notion of the probable cost and continuance of an action to remove a nuisance, supposing the question to be a simple one, between parties desirous of bringing it to a speedy adjustment, and frugal of litigation. The expense was estimated at 200*l.*, and it was remarked that hitherto there had certainly been no case so cheaply settled. With regard to time, it was observed that "the pursuer's agent would not be to blame" if he got the trial through in two years. It is unfortunate that, since the application of jury trial to questions of nuisance, there are no cases to be found in the books bearing upon the subject more immediately in view, viz., the removal of nuisances injurious to any considerable portion of the public; and I can only illustrate the cost and time liable to be incurred in such litigations, by analogy from cases of private nuisance. I have no doubt, indeed, that it is owing to such cost and delay that public nuisances are so seldom prosecuted. As the man who should engage in such a project would involve himself, for the advantage of the public, in all the cost, toil, and anxiety that attend a litigation about private property, in opposition to an adversary who may have some profitable speculation to protect, it is not wonderful that few are found to make the sacrifice. I have no reason, however, to think that there would be any generic difference in the incidents of cost and time in the two classes of cases, and the principles of law which I have endeavoured to ex-

* 1 and 2 Vic., c. 119, s. 15.

plain show that it is only when it affects himself, that any one can pursue a nuisance, however public may be its effect. In this view I obtained some particulars from agents employed in two cases reported in the books, where the nuisances complained of affected private property. One of these occurred in 1828, and may be adduced as a medium case—the costs on both sides amounted to about 600*l.* The other I cite as an extreme case, and an illustration of the extent to which such a litigation may be carried. It commenced in 1834, and terminated in 1839, a rather brief period for the amount of business transacted, for there was a jury trial and a bill of exceptions; then an appeal to the House of Lords, and then another jury trial. The account of the agent on one side in Edinburgh amounted to 1890*l.* To this have to be added the expense of the jury trials in Glasgow, estimated at 1000*l.*, and that of the appeal, estimated at 600*l.*, making altogether costs to the amount of about 3500*l.*, incurred on one side.

If any work is in progress which will inevitably create a nuisance, or if the continued existence for a period, however brief, of any nuisance actually in existence, is shown to involve the risk of irreparable or very extensive damage, the party affected may obtain an "interdict," or injunction to suspend operations until the main question of their legality be tried. The applicant has in the general case to find security, that if the decision be against him, he shall indemnify the other party for the damage occasioned by suspending his operations. Interdict may be granted either by the Court of Session or by the local judge. In the case of an application to the latter, the question may be carried to the superior court by suspension.

Functions of the Dean of Guild.—I come now to describe more particularly the especial edile powers of the dean of guild, to which I have already frequently alluded. If my statement should be found deficient in clearness and consistency, I have to plead in excuse that the authority of this officer varies according to local usage, that it is imperfectly described in the authorities, and that the few decisions affecting it occurred at intervals from each other in which many alterations had taken place in the state of society and the administration of justice.

The dean was the principal officer and special representative of the merchant guild. In this capacity he is found in the older records of the corporations to have possessed different degrees of authority, with reference to other corporate officers, according to the time and the place:—being on some occasions invested with the powers of chief magistrate, and on others, acting as a mere subordinate executive officer of the municipality. By a statute of the sixteenth century, he was invested with an important jurisdiction in mercantile questions, which has long fallen into desuetude. Before the Scottish Burgh Reform Act, he was generally a member of the town council, according to the "sets" or constitutions

of the different burghs. By that Act (3 and 4 Wm. IV., c. 76) the separate municipal authority of the dean, and his right to a seat in council, were abolished, except in the larger towns, viz., Edinburgh, Glasgow, Aberdeen, Dundee, and Perth. In the smaller burghs, the guildary retain the right to elect their dean or chairman for their own internal purposes, but the municipal functions to which he was competent are directed by the Act to be performed by a member of council elected by a majority of councillors.

The authority of the dean is generally exercised in a court, of which he is either the sole or the principal judge, according to usage. The proceedings, when they are not of a simply routine character, are generally suggested by the legal assessors of the burgh. Some deans are assisted by a council, who inspect premises, and act somewhat in the manner of a jury on a view. In Edinburgh, and probably in some other towns, it is unusual for private parties to prosecute:—there is a procurator fiscal, or public prosecutor, attached to the court, who hears complaints, and prosecutes them if he thinks fit. The authority of the court, so far as the present subject is concerned, is thus briefly set forth by the principal institutional authority: "It belongs to the dean of guild to take care that buildings within burgh be agreeable to law, neither encroaching on private property nor on the public streets or passages; and that houses in danger of falling be thrown down."*

By an Act of the reign of Charles II. (1663, c. 6) the magistrates of burghs are authorized to enforce the repairing or rebuilding of ruinous houses, and are invested with powers (on the owners dissenting or not being forthcoming) to dispose of the buildings to persons who will obey their injunction, or to execute the repairs and levy the cost on the owners. The application of this statute, so far as it is enforced, rests with the dean of guild, partly as a judicial, partly as an executive officer. The dean of guild of Edinburgh is entrusted with the enforcement of the Act (1698, c. 8) which prospectively restricts the height of buildings in the city to "five stories above the causeway," and contains other building regulations, which, like the old Building Acts of London, have chiefly in view the protection of the city from fire.

In conformity with the practice of the city of Edinburgh, no building can be erected, or taken down, or materially altered, without a warrant from the Dean of Guild Court, which is only granted when the immediate neighbouring proprietors of the applicant, and other *ex facie* interested in the alteration, are cited, and have an opportunity of being heard for their interest.

This court cannot easily enforce its jurisdiction when it is resisted; and it is, as already observed, difficult to give any distinct view of the extent of its authority, which is chiefly of a tra-

* Erskine's Institute, 4, 25.

ditionary character, sanctioned by sufferance and habit. It has, however, been occasionally the subject of discussion in the Supreme Court; and I shall now notice the most important points settled in the decisions with relation to the present subject. A very late decision has limited the authority of the dean to questions in which the construction of buildings is involved, declaring that it does not extend to the purposes for which they are used. In this case the outer wall of a cotton-store bounded a public street in Glasgow, where it was represented to the dean that the occupants were in the practice of loading and unloading carts, and raising heavy bales by means of cranes, to the danger and interruption of the petitioners and the public at large. The dean decided in favour of the petitioners, and the other party carried the case to the Court of Session. It was there found that the dean had exceeded his jurisdiction. "It is not enough," said Lord Gillies, "to say that this mode of loading and unloading carts created a nuisance in the public street; for although some questions of nuisance are competent to the dean of guild, it is only when the subject matter of the nuisance is such as falls within his peculiar province. If the wall of a house be impending over the street, and endangering the lives of passengers, it is unquestionably a nuisance, and the dean of guild has jurisdiction to remove it. But this is not merely because it is a nuisance, but because it is an architectural nuisance."*

Reference has above been made to the circumstance that the personal defences that may be urged in support of a nuisance prosecuted in the ordinary courts, and particularly the plea of prescription, have been held not to apply to the cases in which the dean of guild is authorized to interfere. This is illustrated in a case of the year 1774. It had been long the practice for the inhabitants of Glasgow to erect "water-barges," sheds, or pediments over their doorways. It was held that these appurtenances affected the architectural beauty of the town, encroached on the footpath, and threw accumulated water on the streets; an order was therefore issued from the Guild Court that they should all be removed by a certain fixed day. One inhabitant refused to comply, and on being specially adjudicated against in the Guild Court, carried the question into the Court of Session, where he pleaded prescription. The court decided against him, on these, among other, grounds:—"Primo, that this was a case in which there were no *termini habiles* for a plea of prescription, *supposing the water-barges had, by toleration, or the negligence of the magistrate, stood even for* 40 *years*, which was not the fact; secundo, that although the dean of guild can make no arbitrary regulations tending to deprive a person of his property, yet he has certain discretionary powers in the matter of police, and particularly '*ne opere manufacto aut aliquo immisso urbs deformetur*;'

* Donaldson *v.* Pattison, 15 Nov., 1834, Dunlop, Bell, and Murray's Reports, 27.

and the regulation in question fell within those powers in the exercise of which that useful magistrate ought to be supported."*

Besides warranting the doctrine that prescription cannot be pleaded against the dean of guild's regulations, this case, if a general rule can be drawn from it, leads to the inference that not only is that officer entitled to act on pre-established police regulations, but that he is, without regard to established custom, and even because, in his opinion, any such custom is a bad one, empowered to issue *new* police regulations, with which individuals, at whatever personal inconvenience, are bound to comply. Presuming the principle thus sanctioned to be still the law, it becomes important to know to what class of municipal regulations he is limited in the exercise of this discretionary authority. The cases and opinions previously quoted would seem to restrict his authority to questions regarding encroachments and the state of repair of buildings. There is one case, however, that of Charity *v.* Riddell, above referred to, in which the dean of guild considered the question, whether a building intended for a particular purpose would create a nuisance or not, and, in doing so, kept in view the probable effect on the public health. His remit to medical men has been already quoted. The dean's decision was in these terms:—"Finds that the glue-work proposed to be erected by the defender, although not necessarily hurtful to the health of the inhabitants in the neighbouhood, will render the enjoyment of life and property uncomfortable to the inhabitants, and will lessen the value of the adjacent tenement, and therefore finds that the said proposed erection is a nuisance."

Taking the principle deducible from the dean's proceedings in this case, viz., that in his civic operations he is entitled to take the health of the citizens into consideration, and adding it to the doctrine regarding his discretionary powers, supported by the immediately preceding case, we might legitimately draw the conclusion that, in the circumstances of a dean of guild being convinced that all edifices of a certain form and description are dangerous to the health of the occupants, and thus the means of engendering and spreading disease among the citizens, he is entitled to direct all such edifices to be altered or removed. Such an exercise of authority, however, is totally inconsistent with the limited and routine nature of the duties at present performed by the dean of guild. In the times when his jurisdiction was gradually coming into existence and resolving itself into shape, if there had been any such doctrine as that the health of the community as affected by the method of constructing dwelling-houses was a proper subject of municipal regulation, it is very likely that the dean of guild would have assumed and exercised the duty. On personal inquiry, I find that the officers connected with the Guild Court in Edinburgh do not understand the court to possess any

* Buchanan *v.* Bell, 15th Nov., 1774. Morison's D., 13,178.

authority to interfere with private buildings on any ground connected with sanitary regulations. It will readily be imagined that these tribunals, presided over by citizens who are elected to an honorary office for a short period, and who seldom take much interest in the judicial operations that proceed in their name, have not a machinery capable of being applied to any extensive system of sanitary regulations. At the same time, should it be the intention of the legislature to create additional powers for such a purpose, I do not think, for like reasons, that they could be vested in the Dean of Guild Court with any reasonable prospect of efficiency and economy in their administration.

The Commissioners appointed by the Crown in 1833 to report on the state of the municipal corporations in Scotland, directed their attention to the powers and duties of the dean of guild. I give in Appendix No. I. the part of their report that contains suggestions to Government on the subject.

Local Acts applicable to Edinburgh.—As the best means of giving a detailed view of the provisions regarding nuisances in the police code of Edinburgh, I have extracted from a compilation of the Police Acts now in force, made under the authority of the Police Commissioners, those clauses that specially relate to this subject.

The principal statute is the Local Act, 2 and 3 Wm. IV., c. 37. In the minuteness with which it at first sight appears to legislate for the cleanliness of streets and dwellings, it forms a favourable contrast with the previous Police Acts of Edinburgh, and, generally speaking, with those in force in other towns of Scotland. This characteristic is, perhaps, attributable to the circumstance that the Act was prepared at the time when the cholera threatened to visit Edinburgh, and was passed during its prevalence. The clauses prohibiting the accumulation and enforcing the removal of dung and fulzie, enforcing the cleansing of common stairs and areas, prohibiting the keeping of swine in dwelling-houses, and compelling dealers in rags, &c. to fumigate their dwellings, were all introduced on that occasion. They are characteristic in some respects, of the circumstances under which they were prepared. They contain provisions which, in moments of alarm, when multitudes are anxious to enforce them, are quite incapable of stringent application; but they are deficient in machinery for continuous operation, when the public anxiety is lulled. Thus in the section marked 8 there will be found a provision, that if a certificate be presented to the inspector by any two members of the College of Physicians or Surgeons, and by the general commissioners of the ward, that an accumulation of dung or fulzie in a street, lane, &c. is prejudicial to health, it may be removed. It is almost needless to remark how frequently it must occur in districts inhabited by the poorer classes only, that nuisances exist which never attract the attention or interest of a commis-

sioner of police or a medical man; and how often it must happen, that if a physician in the course of his visits discovers a nuisance, that he is quite ignorant of the local enactment which authorizes him to interfere. The term "accumulation," moreover, precludes interference in cases where, though the filth may be extreme, it does not bear that particular character.

On a perusal of the clauses marked 5, 6, 7, and 8, it will easily be seen that their most minute practical arrangements are calculated not so much for the simple removal of filthy or noxious substances, as for securing to the police the undisputed possession of such portions as are valuable for "fulzie" or manure. Yet not even when it is accumulated in this shape is the removal of filth effectually provided for. I am informed that manure is accumulated in courts and sheds in defiance of the efforts of the police, under the very confused exception in the following clause (of section marked 8):—"And if any person or persons shall allow or permit any dung, soil, dirt, ashes, or filth, to accumulate within his, her, or their dwelling-houses or cellars, for more than three days (dung accumulated in any barn-yard or straw-yard, for the purpose of being laid upon the ground under cultivation within the limits of this Act, being always excepted), such person or persons, being lawfully convicted, shall be subjected in a penalty," &c. It will be seen that the permission to accumulate within any straw or barn-yard comes in the position of an exception to the prohibition of accumulation within a dwelling-house, &c. The exception, having no reference whatever to the principal rule, is thus necessarily converted into a sort of separate rule; and the result practically is, that while the rule denounces accumulations within dwelling-houses (where there is seldom means of ascertaining their existence, and consequently of interfering with them), the exception excludes, to a great extent, interference with accumulations in the open air.

But the restrictive clauses of this section are found to be productive of still more serious evils. In that clause which admits of the removal of a nuisance on a certificate from a Commissioner and two physicians, the operation of the enactment is limited to "any accumulation of dung or fulzie on *any part of the streets, squares, closes, ways,* or *passages* within the bounds of this Act." The inspector of police tells me, that several of the most obnoxious and dangerous nuisances have baffled all his efforts to get them abated, because the places where they exist do not come within any one of these restrictive terms. In the centre of a densely peopled district of the old town, where there are several tan-yards, stables, cow-houses, &c., the mixed offal, including putrid animal matter from the tan-yards, is accumulated in a series of tanks, where it is held in solution by the liquid of a common sewer, and so manufactured into manure; with this the police authorities find they have not the power to interfere.

Their inability to interfere with the irrigated meadows, a portion of which is within the bounds of police, has been already noticed.

I have already remarked that while the citizens were under apprehension, from the vicinity or presence of cholera, many of the provisions of the police statutes, which are now inoperative, had a very efficacious appearance. All men were watching their neighbours to enforce the law against them, and even those who profited by nuisances, becoming alarmed, did not in general resist their removal. The provision for compelling keepers of lodging-houses for the poorer classes to give notice to dispensaries when lodgers are seized with infectious diseases (section marked 14), was an improvement on a like clause in a previous Act, and was probably, for some time after it was passed, very efficacious. It is now dormant from the want of a medical police to enforce it.

The section marked 10 contains provision for the cleansing of common stairs and areas. In those common stairs in the better streets, where the middle classes in general live, this section is undoubtedly a means by which people disposed to cleanliness may enforce it on their neighbours; but in the districts where the poorer classes congregate, it is not effectual. It is, I suspect, based on a too confident anticipation of the effect of compulsion on individuals. Some of these common stairs, leading through large clusters of houses, are daily trod by a pretty numerous population, and are liable to deposits of every description of filth. The cleansing of them would be often a serious hardship to the working people to whose residences they lead. In such circumstances, the police authorities, feeling that it would be vain to attempt to operate through the penalties, occasionally cause the filth to be removed by their own officers. It is pretty clear that this must be an unsatisfactory arrangement. There should be a uniform machinery for cleansing, either through the direct action of the police, or compulsion on individuals. In the case of those common stairs leading to the dwellings of the poorer classes which have no street door, I am inclined to think that the former should be the system, and that they should be viewed as upright streets.

There is a serious difficulty in the way of getting any of the police regulations of this class enforced as fixed rules of action, in the absence of a permanent stipendiary police magistrate. For a portion of the suburbs, beyond what is called the royalty, the sheriff-substitute acts as judge of police, but within the royalty the duty is performed by the city magistrates in rotation. Such functionaries have generally lax ideas of the enforcement of any regulation, the breach of which has not the aspect of a moral offence; and having only a temporary authority, they are not willing to characterize it by a war with inveterate habits. Penalties are thus frequently remitted, and the zeal of the officer is damped by

finding that when they have brought an offender before perhaps two or three judges in succession, he has been dismissed by each with an ineffectual reprimand.

The section marked 15 would appear to provide for compulsory sewerage and drainage; but it is found quite inefficacious in the places where its application is most necessary. Whether from a fear that litigation would arise out of the vagueness of the words classifying the persons on whom the expense may be imposed, viz. "the proprietors whose property shall derive benefit therefrom," or from some other cause, it has been impossible to get the authorities to act upon the clause, and the old town of Edinburgh is very destitute of drainage. Until very lately the Cowgate, a long street running along the lowest level of a narrow valley, had only surface drains. The various alleys from the High-street and other elevated ground open into this street. In rainy weather they carried with them each its respective stream of filth, and thus the Cowgate bore the aspect of a gigantic sewer receiving its tributary drains. A committee of private gentlemen had the merit of making a spacious sewer 830 yards long in this street at a cost of 2000*l.* collected by subscription. The utmost extent to which they received assistance from the police consisted in being vested with the authority of the Act as a protection from the interruption of private parties. During the operation they were nevertheless harassed by claims of damage for obstructing the causeway, and their minutes, with a perusal of which I have been favoured, show that they experienced a series of interruptions from the neighbouring occupants, likely to discourage others from following their example.

I have copied a section from an old local Act, passed for the temporary purpose of removing certain slaughter-houses from the interior of the town. The clause is never put in force, and is not printed in the compendium of the police acts issued by authority; but as it is still unrepealed, it must be looked on as part of the police code of Edinburgh.

In the bill which was passed into the police statute of 1832 (2 and 3 Wm. IV., c. 87) there was a clause for abolishing the system of sewer irrigation already often mentioned. In opposing the action at the instance of the Crown, which has been spoken of as in progress, the proprietors of the meadows plead, that they resisted this clause in its passage through committee,* and that they got inserted instead of it the following clause, which they maintain confers on them a vested right in the operations complained of: "Provided always, that in making any such main drain or sewer, or conducting drain, the water at present carried into any existing outlet shall not be diverted therefrom."

* As to the circumstances of the opposition to the clause, see Report of Select Committee on Health of Towns. Question 2000.

Suggestions for Amendment.—In any proposal to legislate for sanitary regulations in Scotland, it will be necessary to keep in view a material obstacle to their practical application, in the absence of any medical police, and particularly in the want of stipendiary medical officers, such as I understand to exist under the English Poor-Law system. In conversation with the Inspector of Cleansing in Edinburgh, I find it to be his conviction that no regulations, however ingeniously devised, can be made permanently efficacious, without the intervention of a responsible medical officer. The more I have examined the law, with a view to practical improvements, the more I have become convinced of the necessity for such appointments. I have, for instance, examined the 41st section of the Act for regulating the Police Courts of the Metropolis, 2 and 3 Vic., c. 71, with a view to discover whether a similar practice could be applied in Scotland. The section authorizes a magistrate, on certificate from two guardians or churchwardens and overseers, and of the medical officer of the parish or union, that the filthy state of a house endangers the health of the inmates or of the public, to cause a notice to be affixed to the house, requiring the occupant to answer the complaint, or cleanse the dwelling within seven days. If the cleansing do not take place to the satisfaction of the medical officer, warrant is to be granted to the guardians, &c. to cleanse, the expense being levied on the occupant by distress and sale. This is a rule which, without the construction of new machinery for the purpose, there would be no means of enforcing in Scotland ; and the same may be said of the provisions of the Act of the last session, for the furtherance of vaccination.

But there is another. and perhaps a still more important point of view in which the utility of a medical establishment devoting its attention to the condition of the poor may be entertained, but one so extensive, and opening up such a variety of detail, that I shall only here glance at it ;—it is the admitted want in Scotland of hospitals or other stipendiary establishments for the cure of the diseased. Many considerable towns, such as Arbroath, Dunfermline, Aloa, Renfrew, &c., are destitute of any such institution. There is no hospital, for instance, in the populous and affluent county of Fife, and many other counties are in the same situation. People who can get the removal accomplished are sometimes conveyed from places 50 or 60 miles distant to the Infirmary of Edinburgh, an institution which has lately been compelled to intimate to the public that, unless some considerable effort be made to increase its funds, it will be compelled to restrict its services. A multitude of the poor have thus to look solely to the gratuitous services of the medical profession. There is doubtless a great deal of disinterested charity thus practised by the profession, but it is not sufficient for the wants of the poor, and if it were so, it would be too great a sacrifice for the public to demand of one

section of society. Where the supervisance of the operation of sanitary regulations, and medical attendance on the sick poor, are entrusted to the same set of medical officers, the one duty might be expected naturally to aid the other, as the labours of attendance would be diminished or increased with the greater or less efficiency of the preventive measures. With regard to the form in which such an establishment should exist—whether it should be connected with Boards of Health, or should form, either separately, or along with such Boards, a feature in the general reform of the Poor Law, must depend on matters of legislation, as to which it is not within my province to make suggestions.

In the provisions for administering the criminal law in Scotland, there are great facilities for the application of judicial compulsion to any regulations that are of a nature to be satisfactorily practised. Each county has a sheriff, with permanent substitutes, one or more, all of whom are stipendiary judges and professional lawyers. The sheriff has jurisdiction in very important questions, both civil and criminal, and in the latter department his operations are generally very prompt and effective. Besides the Lord Advocate and his assistants, who may prosecute for the public interest before any tribunal in Scotland, each local court has its peculiar procurator fiscal, or public prosecutor.

Apart from any specific regulations of a sanitary character that may be made applicable to the whole empire, I am of opinion that much good might be done in Scotland by a simple enactment authorizing public prosecutors to pursue for the abatement (or rather the abolition, for the word abatement has no existence in our legal nomenclature) of nuisances. Although such questions are generally of a civil and municipal nature, the jurisdiction should, I think, be in the criminal courts, both because it is chiefly with regard to them that public prosecutors are accustomed to exercise their functions, and because a simplicity and promptness of operation would be found in the practice of those tribunals, which it would be in vain to seek in the courts of civil jurisdiction. One of the chief difficulties in such an enactment would be the allotment of a punishment. It is not usual to legislate for penalties, leaving their amount entirely to the discretion of the court; and yet it will at once be seen that no graduated scale of penalties would secure to the public the principal object—the removal of the nuisance. A penalty of a few shillings might suffice to deter an individual from repeating a nuisance merely occasioned by carelessness, while a fine of as many hundred pounds might not deter a corporation or a manufacturing company from pursuing profitable but noxious operations in a populous place. The best method of escaping the difficulty is, perhaps, by rendering the mere abatement of the nuisance the primary effect of a judgment against it, leaving a prospective penalty (which, in this form of an alternative, might be left entirely to the discretion of the

court) to be imposed in case of disobedience. Although it might be as well to include police courts among those to which the jurisdiction should be extended, it would not be expedient to leave the important proprietory interests that might be involved in operations looked upon as nuisances, to such tribunals, without some recourse to a higher court; and, therefore, when interests to a certain amount are involved, the defender should have the means of bringing the question before the sheriff. I have ventured to set down in a note some suggestions, on the principle of which such a measure might perhaps be drawn.*

* Suggestions for an Act to Amend the Law for Abolishing Nuisances in Scotland.

1. Act to apply to the following Courts:—
   The Court of Justiciary.
   Sheriff Courts.
   Police Courts authorized by Local Acts, or by 3 and 4 Wm. IV., c. 46.
2. Any such Court empowered to give decree and grant warrant, for the removal of any substance, or the cessation of any operation, dangerous to the health or offensive to the senses of the public, and to give decree and grant warrant for the cleansing of any building or place ascertained to be in a condition that renders it dangerous to the health of the inmates or of the public.
3. Every such warrant to state a time within which it must be obeyed, and to fix a penalty to be paid by the party disobeying it, and to specify the party who shall be so liable.
4. Complaint for the removal, &c. may be made by any public prosecutor authorized to pursue for the public interest in the court to which he complains.
5. Form of complaint to be given in Schedule—to describe the subject of complaint, and specify the parties required to remedy it.
6. Except in the case of the prosecution being before a police court, the complaint to specify whether or not the prosecutor requires it to be adjudicated upon on the verdict of an "assize" or jury.
7. A full copy of the complaint, with a list of witnesses, &c., to be served on every party complained against, fourteen free days before the day of trial, as per 9 Geo. IV., c. 29.
8. If the complaint do not bear that the prosecutor requires the verdict of a jury, any party on whom the complaint has been served may, at any time before 6 free days from the day of trial, petition the judge before whom the case is to be tried, to interpose the verdict of a jury, showing cause; and the judge, if he see fit, may direct the attendance of a jury in the ordinary manner, in terms of 6 Geo. IV., c. 22.
9. If on the day for which the trial is set apart, there be a jury or a sufficient number of jurymen to form an ordinary criminal jury present in court, such party may at any time before such jurors are dismissed, apply to have the case submitted to a jury, showing cause; and the judge, if he see fit, may empannel a jury accordingly.
10. Any party cited to appear before a police court on such a complaint may, at any time before witnesses are examined, apply to the judge to remove the proceedings to the Sheriff Court. If such party either produce certificate of a declaration taken before a justice of peace, &c., in terms of 5 & 6 Wm. IV., c. 62, or emit a declaration before the police judge, in either case to the effect that a decision in terms of the complaint will affect his interest to the extent of 10*l.* or more, and likewise give security to submit and pay all expenses in case of a decision being given against him; the police judge is immediately to transmit all proceedings to the sheriff clerk, and the procurator fiscal of the police court is to intimate the circumstances, with a full copy of the complaint, to the procurator fiscal of the Sheriff Court, who may raise a new complaint in terms of the Act.
11. When the case is called in court, the judge may, on cause shown, if he thinks the end of justice will be served thereby, postpone consideration of the case to some fixed day within 14 days, and may in the mean time appoint skilful persons to visit the premises and report.
12. In case the judge, before whom any such case is called in the Circuit Court of

In considering the practicability of a general system of sewerage, I fear that any plan which tends to laying the whole burden on the adjoining proprietors or other individuals supposed to be more immediately benefited, would be in a great measure inefficacious in the districts inhabited by the poorer classes. It would be a wiser policy to proceed on the understanding that a general system of sewerage in a town, being beneficial to the citizens at large, should in a great measure be accomplished through means of a general tax. It would not be difficult to frame an act, compelling police commissioners in all towns possessed of local acts, and the magistrates of other towns, to construct main sewers in all streets or thoroughfares of a certain description. The tax to meet the expenditure might be divided into two parts, one a temporary impost to pay for a complete system of sewerage in all existing streets, the other a permanent tax to apply to new streets as they are built (unless indeed it might seem expedient that in this case the whole burden should fall on the builders), and to keep existing sewers in repair. The tax for new sewerage to existing streets should be spread over a given number of years, and limited to a certain amount per year, there being provisions for making it continuable under certain circumstances till the whole expense is met. A precedent for a method of apportioning and limiting such a tax, in conjunction with other municipal taxes, will be found in sections 46 and 47 of the Scottish Prison Discipline Act, 2 and 3 Vict., c. 42.

Reference is made in the Report of the Select Committee on the Health of Towns, to the 9 George IV., c. 82, for allowing towns in Ireland to establish a system of Police by a vote of house-

Justiciary, postpone consideration as above, he shall not continue the case to the next circuit, but remit it to the sheriff, fixing in the remit a day for trial within 14 days. If the premises are in more than one sheriffdom, the judge is to fix the sheriff before whom the question shall be tried, and all warrants by such sheriff shall be effectual in other sheriffdoms, as per 7 Wm. IV., and 1 Vic., c. 41, §§ 12 and 19.

13. When the decision of the court is in favour of the prosecutor, a day shall be fixed in the decree for the removal, &c. of the subject of complaint, and for payment of a fixed penalty in case of failure, by the party against whom the decree is given. If the period elapse, and the decree be not obeyed, the judge who granted the same, and any judge competent to such questions as above, may on application from the prosecutor, and on being satisfied that the decree has not been obeyed, grant warrant to officers of court and others to remove, &c., and warrant to levy the penalty by distress and sale. When there is more than one party, each shall be liable to the full penalty, having recourse at ordinary law against the others; but if any party represent to the judge that he has used his best endeavours to get the decree obeyed, the judge may inquire into the circumstances, and, if he think fit, suspend execution against such party.

14. Act not to interfere with right of any party to raise action of damages or otherwise against any one occasioning a nuisance, or to apply for suspension and interdict of a nuisance; and not to interfere with the special regulations concerning nuisances contained in any police or other Act.

15. The Criminal Law, and the usual practice of the Criminal Courts in Scotland, to be applied to the enforcement of the Act, so far as not inconsistent with its special regulations.

16. The High Court of Justiciary, by Act of Adjournal, to frame rules for putting this Act in force, as per 6 Geo IV., c. 23, §§ 4 & 5.

holders. There is a similar Act applicable to Scotland (3 and 4 Wm. IV., c. 46), which has been taken advantage of only in a very few cases, probably from a general ignorance of its existence. It is optional for a town to adopt the whole or a portion of the Act. If a general Sewerage Act were passed, it might be declared that its provisions should immediately become applicable wherever the above Act or any part of it has been adopted.

In 1837 two Bills were brought in for regulating the municipal corporations of Scotland.* Should such a measure be again brought forward, it might be well to adjust the Bills to the enforcement of drainage. The most material clauses with relation to this purpose are those which give town councils a power of taxation to a limited extent for municipal purposes, a power quite consistent with the early constitution of our municipalities. The original drainage and sewerage clauses of these Bills have the same defects as those of the Edinburgh Police Act; indeed they are more vague, as the authorities are only, "*if they consider it reasonable,*" to ordain the expense of sewers "to be defrayed by the proprietors whose property shall derive benefit therefrom."

From the want of a parochial system or of rural municipalities (if the expression may be allowed) in Scotland, I do not see how any efficient means can be found for enforcing sewerage in unincorporated villages and towns without the creation of a special municipal machinery for the purpose. The commissioners of supply are the medium for apportioning and levying county taxes. I do not anticipate, however, that there will be any proposal to tax rural districts, lands and houses, for the sewerage of manufacturing towns that may be situate in the same county. At the same time, to give the landed proprietors dispersed through a county power to make internal arrangements for, and assess taxes in, such manufacturing towns individually, would not only be an unpopular and invidious, but a very clumsy arrangement. Perhaps the utmost that can be done in such cases is to put compulsory powers into the hands of majorities, either of householders at large, or of those who occupy houses of some particular value, there being a reference to the Sheriff in cases of dispute. It should not be overlooked, however, that there is a class of men to whom the power of parochial taxation or assessment has been to a certain extent committed—the heritors, or proprietors rated to the land tax. They nominally share with the kirk session in making up a roll of the poor annually, and fixing the amount necessary for their relief. In the emergency of the cholera too, they were empowered by the temporary Act, 2 and 3 Wm. IV., c. 27, to assess owners and occupants for the purposes of the Act. In some instances it may occur in such unincorporated towns as have just been referred to, that the heritors form a large body of the inhabitants, much interested in the general welfare of the population. It will generally happen, however, that the heritors of a

* See Public Bills, 1837, II. 267.

parish, as a body, will have little interest in the town, or opportunity of understanding its condition: and that they would not be more likely than the commissioners of supply to use beneficially any powers such as those above contemplated.

As to the construction of private drains from dwelling-houses to the main sewers, it might be considered unreasonable to tax the public for a benefit that must tell so directly in its primary effects on the proprietors, while the owners of the houses occupied by the poorer classes have not in general any peculiar claim to special immunities. In the application of a compulsory remedy there are difficulties peculiar to Scotland, in the system of living in flats, or houses built above others. It would often be difficult to persuade the man whose property is six or seven stories from the ground, that by a drain with which he cannot communicate without additional expense, he is as much benefited as the neighbour whose property it passes through. What inequality there would be in the value of the drain to proprietors thus respectively situated, would be, however, to a certain extent met by proportioning the share of cost to the rent, as it is almost universally the case that rents are highest in the street floors, and diminish in proportion to the ascent. Any plan which does not give the authorities power themselves to construct such drains, immediately on the refusal or neglect of the landlord, at his cost, would be quite inefficacious. The next difficulty would be in levying the expense. It is not an uncommon practice to collect municipal taxes from the tenant, making them recoverable by him against the landlord; but there are many impediments to levying so considerable a sum as the expense of a drain on the tenantry in poor districts, and among others there is the practice, so often noticed in the evidence before the committee on the health of towns, of collecting the rent weekly. A modification of such power might, however, be left to the discretionary use of the authorities, by enabling them to "arrest" the rents in the hands of tenants, a practice of continual and very efficient application under the law of debtor and creditor. It resembles the practice of foreign attachment by the custom of London. The arrestee is put to no inconvenience save that of refusing to pay the debt to his creditor, and of keeping it at judicial disposal. Even where rents are paid weekly, though it might be very unlikely that the tenants would keep what should have been their weekly payments accumulating in their hands, the process might still be of use in placing an embargo on the landlord's revenue till he has paid for the drain. As subsidiary to other means of recovery, the authorities might be invested with power to dispose of the property by public auction, paying to the proprietor the balance of the price. To avoid the risk of oppressive costs being accumulated against such proprietors, the procedure should be in the Sheriff's Small Debt Court.

If, in extending sanitary regulations to buildings already in

existence, a system should be adopted which would render it necessary to remove or materially alter houses—say for the purpose of widening streets, &c.—I do not see how the object could be accomplished in Scotland, except by the establishment of a Board having very wide discretionary powers, or through Local Acts specific as to compensation and other contingencies. The difficulties that have to be combated with arise both from the nature of the edifices and from the peculiarity of their tenure as real property. The houses in Scotland are almost universally built of stone, and are of great strength and durability. In Aberdeen and Peterhead, for instance, they are constructed of granite, probably the most durable material that is used for building in any part of the world. Owing to the close packing of the ancient towns within defensive walls, many such houses are, especially in Edinburgh, of gigantic dimensions, and are celled off, as it were, into numerous houses, thus sometimes inclosing in one tenement a population that would make no inconsiderable village. However poorly inhabited, these houses are often valuable from the multitudes they are capable of containing. From their durability, it naturally results too, that the rent bears a far less proportion to the value of the house, than in the case of a temporary brick building. It not unfrequently happens, moreover, that while some portions of a tenement are inhabited by the very poorest classes at low rents, there are other parts, appropriated perhaps to business, which bring a considerable revenue. There is generally a distinct landlord, in many instances there are two, to each separate floor or "land." The tenure by which they hold is a very peculiar one. It is attached to the surface of the earth below, of which they have sasine given them; and should the tenement be destroyed, they retain their right, though it can have no physical representative, till the proprietors who held beneath them, have, by rebuilding, made as it were a pedestal for the real property to be erected on. It is evident that the adjustment of claims in relation to property of such a character, when altered or removed, would be a very complicated business, and would require the exercise of large discretionary powers. In the Report of the Commissioners on Municipal Corporations, already referred to, there are complaints of the difficulties that stand in the way of repairing or rebuilding such edifices when they have grown ruinous or been burned down.

I have reason to believe that in many parts of Scotland the want of a good supply of water is one of the most material impediments to the furtherance of cleanly habits among the working people. Besides the immediate evils of a narrow supply, much time is wasted and many bad habits are acquired by those who have to wait their turn at the wells in a time of drought. Dundee, Stirling, Dunfermline, Lanark, and Arbroath, are all, I believe, imperfectly supplied. The community of Dundee have spent

about 30,000*l.* in a contest between the supporters of two contending water-bills, and I understand that an Act which was passed about three years ago has been found incapable of being put in operation. The evil is rendered more serious by the demand for cooling water for the numerous steam-engines, and the article is so precious that it is for these purposes repeatedly re-cooled by exposure and evaporation after it has been heated. I believe that in many of the colliery and manufacturing districts there is inconvenience, amounting to suffering, from want of water. A full and general remedy to this evil would, I suspect, present still greater difficulties than have been found in the case of drainage. Where there is a positive deficiency of the element on the spot, the means of procuring a supply from another place are so various and so dependent on local circumstances, that nothing but some arbitrary authority, possessed of sufficient funds, could ensure its being obtained in every instance. A clause might be passed compelling all landed proprietors to submit to operations proceeding within their grounds (certain pleasure-grounds, &c., excepted), where these operations are for the purpose of supplying water to some assigned number of people residing within an assigned area, on payment of the mere pecuniary loss that would be occasioned by the operations, to be assessed by the sheriff and a jury when disputed. It would still, however, I fear be the case, that few would be at the trouble of claiming the privilege, and still fewer would incur the necessary expense. The case is different in those large towns, such as Edinburgh, where there is an abundant supply of water monopolized by a profit-seeking corporation. In such circumstances it would undoubtedly be right that the police or other municipal body should be entitled to erect a sufficient number of wells for the use of the poorer classes, and in the district where they live, to be supplied with the water of which any company has a monopoly. To prevent hardship in the case of unprofitable water companies, there might be a clause to the effect, that, where the profits do not exceed five per cent. on the original stock, the water supplied to public wells should be paid for by assessment.

Every person accustomed to frequent the smaller towns in Scotland, or those parts of the large towns where poor people reside, must be struck by the quantities of excrementitious matter and other filth exposed to view, and the absence of proper receptacles for the impurities of the population. From the Report of the Select Committee on the Health of Towns, and the provisions of a Bill of last session, to which I shall afterwards have to refer, I infer that in any measure for regulating the building of houses for the working classes in England there will be a provision for a supply of proper receptacles for filth; and if a practicable means of accomplishing the object in England be found, it will be very easy, under the explanations I shall presently have to make, to

enforce a like provision in Scotland. It is to be regretted that the authorities having the administration of the roads do not exercise with more strictness the means I have mentioned they possess for keeping them free of impurities. In the villages and unincorporated towns, the cleansing of the public thoroughfares is almost the only means which the law, without material alterations, can give for promoting cleanly habits among their inhabitants; and I have no doubt that an improved system in this respect would have a moral influence in inducing the people to adopt less filthy habits within their dwellings. In the larger towns, the filth on the thoroughfares generally arises from neglect on the part of police commissioners and others, or from such defects in the local Acts as those pointed out in the police code of Edinburgh. A system of drainage would, of course, do much to remove this evil, and it would be materially reduced by enabling police commissioners and other municipal bodies to erect a public jakes for every given quantity of inhabitants. I believe there is no unwillingness on the part of municipal bodies to make such erections, and indeed it is generally their interest to do so. They are, however, so perseveringly opposed by private parties, who hunt them with litigation from one locality to another, that they often become weary and give up the project. The litigation generally arises out of a special reservation in Police Acts of the right of private parties to object to such establishments being brought to their neighbourhood. I think much good might be accomplished by authorizing municipal authorities to apply to the sheriff to sanction a locality, on the principle that if, on hearing parties, he do not approve of that suggested, he shall fix on some other, and shall in no case dismiss the process until he has finally authorized the erection to be made in some place or other.

As to any provisions that may be in contemplation for regulating prospectively the building of dwelling-house, if any new machinery is to be adapted to the purpose in England, there will be little difficulty in getting a similar system established here, keeping in view those peculiarities of our internal constitution already pointed out. I have before me a bill brought in during the past session "for improving the Dwellings of the Working Classes," which, if passed into an Act, could not be put in operation in Scotland. It provides that "the council of every borough town, and in parishes and places other than incorporated boroughs, possessing a council, *the Guardians of the poor of the Union in which such parish or place is situated,* or if such parish or place shall not be in any Union, the vestry or other body administering the funds for the relief of the poor therein, shall appoint, and may at their pleasure dismiss, one or more housewardens, who shall be charged with the duty of administering this Act." In a like measure for Scotland, the town appointments might be put into the hands of the magistrates and town councils of burghs

appointed in virtue of 3 and 4 Wm. IV., c. 76 and 77; but in the country districts it would be necessary, in the present state of the Poor Law, that any such appointment should be in the Commissioners of Supply or the justices of peace.

Looking to the habits of the people of Scotland, I would venture to recommend that, in whatever measures may be adopted, little confidence should be placed in the self-executive effects of prohibitions and penalties, though balanced by corresponding rewards to informers, &c., and that the chief trust should be placed in an efficient preventive and inspective machinery. The taking steps that lead to the infliction of penalties is unpopular with all classes; and it is uniformly found to be the case, that when, from neglect in those entrusted with the execution of municipal regulations, breaches of the law have been allowed to go on, and penalties, nominally incurred, to accumulate, no one ventures to combat with the difficulty, and the law falls into desuetude.

I have the honour to be, Gentlemen,
your obedient humble servant,
JOHN HILL BURTON.

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REPORT ON THE LEGAL PROVISIONS AVAILABLE IN GLASGOW FOR THE REMOVAL OF NUISANCES.

By Charles R. Baird, Esq.

Glasgow, January, 6, 1841.

I.—GENERAL LAW REGARDING NUISANCES.

By the common law of Scotland, whatever is noxious or unwholesome to a neighbourhood, or prejudicial to the comforts of life, may be complained of to the Court of Session (the Supreme Court of Scotland), the sheriff (or judge ordinary) of the shire in which the nuisance exists, or to the magistrates (the provost and baillies) of any royal burgh, if the matter complained of be within burgh—and may be stopped or removed by these authorities. Thus, it was found, or adjudged, that a place for slaughtering cattle in the immediate vicinity of houses, within burgh (1); the preparation of blood, as an ingredient in the manufacture of Prussian blue, in a work within three hundred yards of a populous village (2); an establishment for preparing tripe on the ground-floor of a tenement within burgh (3); buildings for the purpose of boiling whale blubber, though proposed to be erected at the end of a town, and where there were other existing works of annoyance, such as tanneries, &c. (4); again, that a slaughter-house in the immediate vicinity of inhabited houses (5); that under certain circumstances a manufactory of soda and bleaching powder (6); and a calico printing manufactory on a stream which it polluted (7)—were found to be nuisances.

On the other hand, it was declared that the roasting of black ashes of soap, in a place which had long been used as a soap manufactory, was no additional nuisance so as to entitle the neighbours to complain (8); that a lamp-black work, glue work, and catgut work, were not removable when situated in the suburbs of a great town, where other works of a like description had been previously erected (9); and that a manufactory of black ash was not a nuisance (10).

What might at first have been removable as a nuisance will no longer be permitted to be so, if allowed to go on uncomplained of for a long space of time; *ex. gr.* A nuisance long established on the river Ness could not be removed (11); and in consequence of usage for more than half a century, the proprietors of lands through which a foul stream (arising from the common sewers of Edinburgh) passed, were found entitled to stop its course and to stagnate the accumulated filth in ponds upon their respective properties, for the purpose of collecting the deposited manure, though the effluvium was extremely offensive (12).

Where the nuisance has existed before the party complaining acquired his property, so that he came to it and not it to him, or where the work or manufactory creating the nuisance had been constructed under his eye, the case becomes still more unfavourable, and a shorter period of acquiescence will be requisite to support it (13).

It is well remarked by Mr. (now Lord) Ivory in his Commentaries upon Erskine's Institutes, "that every question of nuisance depends so much on its own individual circumstances, and the slightest modification in the relative situation and condition of the properties, &c., has so material an effect on the result, that in no class of cases is it more necessary to observe the utmost caution in referring from one what will be decided in another. How very nice are the distinctions on which the Court must sometimes have proceeded will be still further illustrated by a comparison of Dewar, 20th January, 1766, Fac. Coll. Sel. Dec. Dict. p. 12803, where a lime-kiln was found not removable as a nuisance, though situate within 324 feet of the neighbouring proprietor's mansion-house, which, in certain states of the wind, it rendered almost uninhabitable; with Ralston, 29th July, 1768, Fac. Coll. Dict., p. 12808, where another lime-kiln was adjudged a nuisance, it being so near the neighbouring garden that the march hedge was dead, and the trees, bushes, and grass for some way from the march had suffered from the heat." The reporter, therefore, conceives that he will be excused stating more definitely than has been shown by the above quoted cases, what would or would not be considered a nuisance according to the law of Scotland. In all these questions the first point to be determined is, whether the product of the work is noxious and unwholesome; and, secondly, whether, if not absolutely noxious, it render the enjoyment of life substantially uncomfortable (14): and if either of these points be decided in the affirmative, the nuisance must be removed.

There is a general Burgh Police Act for Scotland, 3 and 4 Will. IV. cap. 46, which contains regulations regarding the cleaning of streets, removal of filth, &c.; the repairing or pulling down of ruinous houses, the making of sewers, the providing of public shambles and slaughter-houses, and prohibiting persons using other places for such purposes, with like useful provisions, which might be treated of in this Report, but as the city of Glasgow is excepted in this statute, it is unnecessary to enter upon consideration of it at present.

II.—SPECIAL PROVISIONS UNDER LOCAL ACTS.

Before specifying the legal provisions in the police Acts for Glasgow, it is necessary to state that, besides the special Act for the city of Glasgow, or Glasgow Proper, with a supposed population within the police jurisdiction of 175,000, there are separate Acts for the burgh of Calton and village and lands of Mile-end, with a supposed population of 28,000; for the barony of Gorbals, with a supposed population of 60,000, and for the burgh of Anderston and lands of Lancefield and others adjoining, with a supposed population of 16,000. These districts, though apparently parts of Glasgow, have separate police establishments, constituted by different Acts of Parliament, and are quite independent of each other.

The several police Acts for the city of Glasgow Proper, and the suburbs and district, will now be referred to, in so far as they contain provisions for the prevention or removal of nuisances, or things injuriously affecting public health. To make his Report as brief as he consistently can, the reporter will at present merely give an abstract of the causes for the prevention of nuisances in the different Acts: but will subjoin copies of these causes in an Appendix, in case it should be wished to refer to them more particularly.

By Act 1 and 2 Geo. IV. c. 48, entitled "An Act to Continue, "Amend, and Enlarge the Powers of Two Acts of his late Majesty (Geo. "III.) for Paving, Lighting, and *Cleansing* the Streets, and for regu- "lating the Police of the City of Glasgow;" continued by Act 7, Will. IV. and 1 Vict. c. 48, and now in force, it is provided—

Sec. 91. That if any person shall "kill or slaughter, or scald, singe, dress, or cut up any animal, either wholly or in part, or cause or permit any blood to run from any slaughter-house, butcher's shop, or shamble, into or upon the streets; or shall throw or cart any dirt, dung, ashes, or rubbish upon the pavements," he shall forfeit and pay for the first offence any sum not exceeding five pounds sterling, and for every subsequent offence any sum not exceeding ten pounds sterling.

Sec. 93. "That the public streets, squares, public passages, and principal places, and also the foot pavements within the said city (provided it shall appear expedient to the Board of Commissioners to take charge of the cleaning of the said foot pavements), shall be swept and cleaned by scavengers."

Sec. 96. That the whole closes or thoroughfares within the said city which are not cleaned and swept by scavengers appointed under the authority of the Act, shall be cleaned out, at the expense of the proprietors thereof, at least twice each week, and if the owners or proprietors shall not clean the said closes, they shall pay any sum not exceeding ten shillings sterling for each offence.

Sec. 121. Declares the actions for recovery of the fines competent to the procurator fiscal (the public prosecutor for the burgh) and that "the procedure against offenders shall be of a summary nature," but no power is given to imprison *adfactum præstandum.*

By Act 7, Will. IV. and 1 Vict. c. 48, s. — (p. 9), power is given to the superintendent of cleaning, to remove and dispose of accumulations of filth, "on a certificate by any regular medical practitioner, and a commissioner of the ward," that such should be removed "as a nuisance" "or likely to be injurious to health;" and sec. —, (p. 10), authorizes the punishment of parties selling unwholesome meat, by fines not exceeding five pounds for each offence, besides forfeiture of the meat.

Such are the meagre provisions in the police Acts for the city of Glasgow Proper, for the removal of nuisances, or things injuriously affecting the public health. It is but justice, however, to add, that many of the magistrates of the burgh, and especially their learned assessor, Mr. Davie, have long seen the necessity of having more special and stringent regulations, and the reporter is aware that it is in contemplation to have clauses inserted in the next police Act, to make provision against the

sudden breaking out and rapid spread of contagious or infectious diseases, to regulate lodging-houses for the reception of mendicants and others, to adopt measures for cleaning, and generally for the prevention of nuisances. Such regulations the reporter may here state cannot be too soon brought into operation.

Act 59 Geo. III. c. 3, entitled, "An Act for regulating the Police in the Burgh of Calton and Village and Lands of Mile-end, in the County of Lanark, Paving, *Cleaning*, and Lighting the Streets and Passages of such Districts, &c," provides—

Sec. 10. That in order to prevent the prevalence of contagious diseases by want of cleanliness in the houses of the poorer inhabitants, and by dunghills being dug lower than the surface of the surrounding ground, and allowed to remain for a long time without being cleaned out, the provost and other magistrates shall have power to ordain the proprietors and possessors of the houses to whitewash the inside of them with quick-lime, and to cause the dunghills to be walled in, cleaned out, and raised to a proper level, and that at the expense of the parties for whom the operations are executed.

Sec. 11 enacts, that all closes, lanes, &c., not cleaned and swept by scavengers appointed under the authority of the Act, shall be kept clean at the expense of the several proprietors thereof, and that at a penalty not exceeding five shillings sterling.

Sec. 16 gives power to make common sewers, drains, and water courses, provided all damage done or occasioned by making or repairing the same shall be paid by the Commissioners to the person or persons interested, from the funds to be raised by virtue of the Act.

The Act 3 and 4 Vic., c. 28, being an Act to continue the term, and amend and alter the powers of the Act last quoted, contains some of the most special provisions of any police Act which has come under the reporter's notice for the prevention of infectious diseases, and the removal or suppression of nuisances.

Sec. 20 provides, that no keeper of lodging-houses of an inferior description for the accommodation of mendicant strangers and others, shall receive such lodgers without the house having been inspected and approved of by the superintendent of police, and the superintendent is authorized to fix the number of lodgers who may be accommodated; and to order a ticket, containing the number of lodgers for which each house is registered, and any rules or instructions of the Commissioners of Police regarding health, cleanliness, and ventilation, to be placed in a conspicuous part of each room in which lodgers are received. It also provides, that the keepers of such lodgings offending against any of these regulations, shall be liable in a penalty not exceeding two pounds.

Sec. 21 enacts, that the keepers of such houses, in the event of any person in their houses becoming ill of fever, or other disease, be bound under a penalty not exceeding two pounds, to give intimation thereof to the superintendent of police or inspector, so that the disease may be inquired into and treated, and the magistrates are authorized to order such persons to be removed.

Sec. 22 enacts that on any contagious or infectious disease occurring in any such lodging-houses, or in any house or apartment in any common tenement, &c., where there is reasonable apprehension of such

diseases spreading, the magistrates may cause the remaining lodgers to be removed, and measures to be taken for the disinfecting and cleaning of such houses and apartments, and for the washing and purifying of the persons and clothes of the inhabitants thereof.

Sec. 23 provides that all judicial proceedings for executing the foregoing powers, for the prevention of infectious diseases, shall be summary.

Sec. 24 gives power to the Commissioners to erect a slaughtering house, or shambles, and other accommodations for the slaughtering of cattle: and enacts, that after such premises shall be provided, it shall not be lawful to slaughter cattle except at the public slaughter-house. Parties offending to pay ten shillings for the first, and not exceeding forty shillings for every subsequent offence.

Sec. 26 empowers the magistrates to regulate private shambles ("so as to abate the nuisance or annoyance arising therefrom") until public shambles be provided.

Sec. 27 declares sale of unwholesome meat illegal, and imposes penalties on parties guilty thereof.

The Gorbals Police Act, 4 Geo. IV. entitled "An Act for Regulating the Police of the Barony of Gorbals in the County of Lanark, Paving, *Cleaning*, and Lighting the Streets, erecting a Bridewell, and other Purposes relating thereto," contains few clauses regarding nuisances which are worthy of notice.

Sec. 54 imposes penalties on parties conveying liquids or things produced in the prosecution of gas-works into any river or stream.

Sec. 76, though titled in the margin, "for preventing *nuisances*, annoyances, and obstructions," is directed more against petty annoyances, such as drawing trucks on the foot pavements, than against things affecting public health.

Sec. 80 gives power to make common sewers, drains, water-courses, &c.

Sec. 85 enacts that offensive substances, as from slaughter-houses, privies, &c., shall be removed at certain hours.

Sec. 87 appoints closes to be cleaned by proprietors, under penalty of five shillings for each offence.

The Act for the burgh of Anderston, 7 Geo. IV. c. 119, entitled "An Act for regulating the Police of the Burgh of Anderston, and Lands of Lancefield and others adjoining the said Burgh, in the County of Lanark, Paving, *Cleaning*, and Lighting the Streets and Passages of the said District, and for erecting a Court-house and Gaol therein:"—provides by—

Sec. 31. Power to the provost or baillies, or any of them, to order houses to be washed with quick-lime, and dungsteads to be raised to proper level, "in order to prevent contagious diseases from being prevalent within the said district, by want of cleanliness in the houses of the poorer inhabitants.

Sec. 32 orders closes to be cleaned by proprietors; and sec. 35, dung to be removed from the street, under certain penalties.

Sec. 37 gives power to make common sewers, on certain conditions.

Sec. 53 imposes penalties on parties conveying washings produced in the manufactory of gas, &c., to any streams, wells, &c., whereby the water may be soiled or corrupted.

III.—PRESENT POWERS INSUFFICIENT.

It appears to the reporter that more extensive, at the same

time better defined powers, are required for the prevention and removal of nuisances or things injuriously affecting the public health in Glasgow and suburbs than are conferred by the statutes above quoted. The provisions in the last Act for Calton are very good so far as they extend, and already much good has been done in Calton by the judicious conduct of the magistrates, and by Mr. Smart their intelligent master of police, but there are many evils to which they do not allude, much less afford remedies. There is no power given to see that houses for the poorer classes are properly constructed,—to shut up or pull down ruinous houses,*—to fix the position of dunghills or necessaries and the times of cleaning them,—to open up ill-ventilated closes,—to get the closes properly paved—to make sewers or drains at the expense of parties whose properties would be benefited thereby—to provide an ample supply of water for the poorer classes—or to prevent the continuing interment in over crowded burying-grounds in the midst of populous districts.

That the magistrates of Glasgow have not sufficient powers to do away with nuisances or things injuriously affecting the public health, must be evident to any one acquainted with the Police Acts, and who takes even a glance at the districts, or rather the crowded, filthy, and unwholesome lanes, wynds, and closes in which the poor reside. *J. C. Symonds, Esq.*, one of the assistant handloom weaving commissioners, stated in his Report, p. 51:—

"Though in point of wages the cotton hand-loom weavers are thus decidedly inferior to every other class of operatives, yet in point of physical and social debasement, there exists a portion of the population in the district I have investigated very many degrees worse—I allude to the dense and motley community who inhabit the low districts of Glasgow, consisting chiefly of the alleys leading out of the High-street, the lanes in the Calton, but particularly the closes and wynds which lie between the Trongate and Bridgegate, the Salt-market and Maxwell-street. These districts contain a motley population, consisting in almost all the lower branches of occupation, but chiefly of a community whose sole means of subsistence consists in plunder and prostitution. Under the escort of that vigilant officer, Captain Miller, the superintendent of the Glasgow police, I have four times visited these districts, once in the morning and three times at night; I have seen human degradation in some of its worst phases, both in England and abroad, but I can advisedly say, that I did not believe, until I visited the wynds of Glasgow, that so large an amount of filth, crime, misery, and disease existed on one spot in any civilized country. The wynds consist of long lanes, so narrow that a cart could with difficulty pass along them; out of these open the 'closes,' which are courts about fifteen or twenty feet square, round which the houses, mostly of three stories high, are built; the centre of the court is the dunghill, which probably is the most lucrative part of the estate to the laird in most instances, and which it would consequently be esteemed an invasion of

* The Dean of Guild has power to pull down ruinous houses, threatening immediate danger to the inhabitants, but his power is so ill defined that it is very sparingly exercised, more especially as there is no fund from which to defray the expense of pulling down the buildings.

the rights of property to remove." Again, "in the lower lodging-houses, ten, twelve, and sometimes twenty persons, of both sexes and all ages, sleep promiscuously on the floor in different degrees of nakedness. These places are generally, as regards dirt, damp, and decay, such as no person of common humanity to animals would stable his horse in."

Many of the worst houses are dilapidated, and in a dangerous state, and are condemned by the Dean of Guild Court; a sentence of which the execution appears to be generally postponed, and which renders these abodes doubly desirable to the occupants, as the passing of sentence prevents the levy of rent.

Dr. Cowan, Professor of Medical Jurisprudence and Police in the University of Glasgow, the able writer on Vital Statistics, in a late pamphlet on the Vital Statistics of Glasgow, illustrative of the sanitary condition of the population, writes:—

"The next cause of the diffusion of epidemic diseases is the state of the districts which the poor inhabit, but they have no choice of a locality; their state of destitution ties them firmly to one, and the increasing amount of destitution is annually adding to the density of the population, in the already most densely peopled districts. A reference to the map illustrates this point. In all the districts of the burgh, and in the suburbs, there is a want of sewerage and drainage, and the deficiency is in the ratio of the necessity for it. The streets, or rather lanes and alleys, in which the poor live, are filthy beyond measure; excrementitious matter, and filth of every description is allowed to lie upon the lanes, or, if collected, it remains accumulating for months, until the landlord, whose property it is, is pleased to remove it. The houses are ruinous, ill constructed, and to an incredible extent destitute of furniture. In many, there is not an article of bedding, and the body clothes of the inmates are of the most revolting description. In fact, in Glasgow, there are hundreds who never enjoy the luxury of the meanest kind of a bed, and who, if they attempted to put off their clothes, would find it difficult to resume them. The lodging-houses are the media through which the newly-arrived immigrants find their way to the Fever Hospital; and it is remarkable how many of the inmates of that hospital coming from lodging-houses have not been six months in the city." And he afterwards adds, "Besides the criminal police of the district, a sanitary police is also requisite, and for this purpose much more extensive powers should be vested in the police than they at present possess. Power should be given to remove filth of every description daily. Lodging-houses should be under their *surveillance*, and proper conveniencies, constructed of durable materials, and under the charge of the police, should be erected in the localities occupied by the working classes; the charge of the sewerage and drainage should belong to the department, and legislative powers be obtained to open streets through the dense unventilated districts of the town."—Pp. 34 and 36.

Captain Miller, superintendent of police, in his papers relative to the state of crime in Glasgow, states:—

"It is of great moment, as affecting the state of crime, that the health of the lower classes of the community be strictly attended to. In the very centre of the city there is an accumulated mass of squalid wretch-

edness, which is probably unequalled in any other town in the British dominions. In the interior part of the square, bounded on the east by Salt-market, on the west by Stockwell-street, on the north by Trongate, and on the south by the river, and also in certain parts of the east side of High-street, including the Vennals, Havannah and Burnside, there is concentrated everything that is wretched, dissolute, loathsome, and pestilential. These places are filled by a population of many thousands of miserable creatures. The houses in which they live are unfit even for sties, and every apartment is filled with a promiscuous crowd of men, women, and children, all in the most revolting state of filth and squalor. In many of the houses there is scarcely any ventilation: dunghills lie in the vicinity of the dwellings; and from the extremely defective sewerage, filth of every kind constantly accumulates. In these horrid dens the most abandoned characters of the city are collected, and from thence they nightly issue to disseminate disease, and to pour upon the town every species of crime and abomination. In such receptacles, so long as they are permitted to remain, crime of every sort may be expected to abound, and unless the evil is speedily and vigourously checked, it must of necessity increase. The people who dwell in these quarters of the city are sunk to the lowest possible state of personal degradation, in whom no elevated idea can be expected to arise, and who regard themselves, from the hopelessness of their condition, as doomed to a life of wretchedness and crime. Much might be done to relieve the misery, and to repress the crime of this destitute population, by compelling attention to personal cleanliness, so as to remove and prevent disease, by placing the lodging-houses for the destitute under proper regulations; by preventing the assemblage of a large number of persons in one apartment; by opening up and widening the thoroughfares, and forming new streets wherever practicable; by causing the houses to be properly ventilated, and all external nuisances removed; and by an improved plan of sewerage for carrying away all impurities. Were it possible to adopt measures something similar to these, the health of the community would be greatly improved; and by the breaking up of the haunts of vagrancy, a happy check would be given to the spread of profligacy and crime."—Pp. 14, 15.

And *Dr. Easton*, surgeon to the Police establishment of Glasgow, in a late letter to the Commissioners, wrote:—

"Permit me to direct the attention of the Board to a nuisance which undoubtedly exists, and which, unquestionably, it has the power* to remove. I allude to the multiplicity of dungsteads in the denser parts of the city, and to the filthy state in which most of these are kept. As one fact is worth a thousand theories, allow me to direct especial notice to the following circumstance:—When I was a district surgeon, the district of which I had charge comprehended the south side of the Old Vennal, the east side of the High-street south of the Vennal; the north side of the Gallowgate on to the Spontmouth, and the small square, which is bounded by the south side of Bell-street, on the north, the Candleriggs on the west, the High-street on the east, and by the Trongate on the South. Now the important circumstance is this, tha at least three-fourths of the patients resided in six closes in High-stree —in which *six* closes, extending over a space of fifty yards, there are

* Dr. E. afterwards doubts the sufficiency of the Commissioners' powers, as he says, "the hands of the police ought to be strengthened."

no fewer than eight dungsteads of the largest dimensions, not to speak of the lesser depôts of filth with which many of the stairs in the same locality abound. Without then giving it as my opinion, that these accumulations of decomposing animal and vegetable matter, aided as they are during summer and autumn by heat and moisture, are the *causes* of fever, I think that the whole profession of medicine will agree with me in this, that *these are precisely the circumstances which favour its propagation*, and that the hands of the police ought to be strengthened in their endeavours to abate a nuisance so detrimental to the health of the community."

It would be easy to multiply authorities and statements on this subject, but the reporter thinks he has sufficiently shown that additional and stringent regulations are required to prevent nuisances and things injuriously affecting the public health in the city of Glasgow. That the suburban districts also require such regulations will appear by a cursory inspection of "the lanes of Calton," referred to by Mr. Symonds, the main street of Gorbals and closes leading therefrom, and the dense parts of Anderston, especially the passages from Cheapside Street, Piccadilly Street, &c. &c.

IV.—REMEDIAL MEASURES PROPOSED.

It is not without hesitation that the reporter enters on the next head of the task committed to him, viz., to suggest any additional legal provisions which appear to be required for the sanitary regulation of the city But since he has been called upon to do so, and as he has had at least some knowledge of the condition of the poorer classes in Glasgow, especially since his appointment in 1837, as secretary of the Glasgow Relief Fund, and from his having been a member of the acting committee of the Board of Health in 1838-9, and as he has given this subject his most anxious attention, he proceeds to suggest the remedies which occur to him.

First. While there may be a diversity of opinion as to whether or not the city of Glasgow and suburbs should be placed under one municipal government, one police board, one mode of assessment, and, in short, under a uniform and general system of police, the reporter has no doubt that the majority of his fellow-citizens would concur with him in thinking that, at all events for *sanitary purposes*, the city of Glasgow and suburban districts within the parliamentary bounds specified in the Scottish Reform Act, should be declared one district and jurisdiction.

Second. It is suggested that a Sanitary Commission, or Board of Health, consisting of the Lord Provost of Glasgow, the Provost of Calton, the chief magistrate of Gorbals, the Provost of Anderston, the President of the Faculty of Physicians and Surgeons in Glasgow, the Professor of Medicine and the Professor of Medical Jurisprudence and Police in the University of Glasgow, three Commissioners to be appointed by the Police Board of Glasgow, one by that of Calton, two by that of Gorbals, and one by that of

Anderston, should be appointed (five to be a quorum), with power to name a medical or other officer, inspectors or inspector, clerks and servants, and to adopt and carry into effect all measures necessary, salutary, or prudent, for preventing and removing nuisances or other things injuriously affecting the public health, for the prevention or diminution of contagious or infectious diseases, and for promoting the health, cleanliness, and comfort of the inhabitants of Glasgow and suburbs.

Third. That the said Sanitary Commission, or Board of Health, should be empowered to impose an assessment, from time to time, and as occasion might render necessary, upon the rental or annual value of the lands, tenements, houses, or other heritages within the parliamentary boundary, for the purposes above mentioned; such assessment to be levied and recovered by the several local Boards within the said limits, along with the assessment for the police purposes.

Fourth. That special power should be given to the said Board or quorum:

1. To remove all slaughter-houses, shambles, and manufactories, which produce noxious and offensive effluvia, from beyond the precincts of the city or said boundaries, and that though such slaughter-houses, shambles, or manufactories, should have existed for a length of time uncomplained of.

2. To prevent interment in crowded burying grounds in the immediate vicinity of inhabited houses. Indeed the reporter is of opinion that all burying grounds, as productive of corrupt and fœtid gases, and very detrimental to health, ought to be removed to a distance from any inhabited neighbourhood. The position and condition of the Ramshorn, Calton, and Anderston burying grounds, call loudly for interference.

3. To open up all ill-ventilated lanes, closes, or courts, and for this purpose to purchase ground or tenements, but not on this account to expend more than a *fixed* sum per annum. A consideration of the statements of Mr. Symonds, Dr. Cowan, Captain Miller, and Dr. Easton, above quoted, will lead to the conclusion that the intersection and opening up of some of the dense districts of the city would do much to diminish the sickness of the inhabitants, and greatly lessen the number of deaths.*

4. To make some drains and water-courses where none exist, and to enlarge and improve those which are defective, and charge the expense of the operations against the parties whose properties are benefited thereby.

5. To pull down ruinous houses, or such as are unfit for the habitation of human beings.

6. To regulate the construction of houses for the poorer classes,

* The reporter is happy to be able to state that the magistrates and town council of Glasgow, impressed with these opinions, have appointed a committee to report on a plan for opening up a street through one of the worst districts of the city.

at least to see that their position and construction are not such as to injure the health of those who may inhabit them, and to enforce regulations of the due ventilation of such houses.

7. To see that the houses are kept clean and whitewashed; or power might be given to the Board to whitewash all houses under a certain amount of annual rent *twice* every year.

8. To fix and alter the position of dunghills and privies or necessaries, and the time of emptying them.

9. To regulate lodging-houses for mendicants or others of the poorer classes, and the number of parties who may be lodged therein, with other provisions, such as those in the second Police Act for Calton, sec. 20, 21, and 22. That this is peculiarly required in the city of Glasgow wil be evident on glancing at the Report referred to in Captain Miller's Papers on the State of Crime in Glasgow, a copy of which is given in the Appendix F.

10. To provide an ample and due supply of water to the humble classes, without which, of course, cleanliness, and consequently health, cannot be expected.

11. Power to apply to the sheriff of the county of Lanark (for which reason he was not suggested as a member of the Board of Health), or his substitute, to have the orders of the Board or Commission enforced, and carried into effect, and for recovery of such penalties as the Board may be allowed to enact, and that in the most summary form, without written pleadings, unless the said sheriff or substitute should see necessary to order written pleadings.

To these suggestions the reporter would merely add that, as much disease (as well as pauperism and crime) arises from the vice of intemperance, to which great facilities and inducements are afforded by the very numerous low public-houses, spirit-shops, and tap-room, it would, he thinks, be most advisable to limit the number of these, and to enact that no house under 15*l.* of annual rent should be licensed; at all events, in licensing them, due regard should be paid to the number already licensed, and their local situation, and that the number be not more than a fixed proportion of the families of the general population.

V.—CONCLUDING REMARKS.

Hitherto the reporter has refrained from making any statement, observation, or suggestion, that he did not think it incumbent on him to do, in order to fulfil the duty allotted to him. He trusts, however, he will be excused if, before concluding his Report, he makes one or two observations (which, if not absolutely necessary, are at all events relevant to the matters in hand) on the objections which may be raised against the adoption of the remedial measures he has suggested, and the benefits which would result from such measures. Many will object that if these measures were adopted, there would be an undue interfering with vested interests, as in the case of the shutting up of burying-grounds,

or the removal of long-established manufactories creating nuisances. But to this the reporter briefly answers, the vested interests of individuals should never be allowed to outweigh what is necessary for the safety and health of a whole community. Again, it may be asked, Why compel the periodical cleansing of the houses of the poor, when other classes, merely because richer, are not interfered with? To which the obvious answer is, There is no need of any compulsory provision of this kind being enacted against the wealthier classes. But as the poor are very neglectful in this respect, and as the measure is directly for their benefit, they cannot with any reason object to it. The objection, however, which will be most urged against the measures proposed being carried into execution will be on the ground of expense. But surely it is worth while to expend one, two, or three thousand pounds per annum to improve the sanitary condition of this great community, and especially the physical comfort, health, and happiness of the poorer classes. Besides, the expenditure in the way proposed would materially lessen the amount which the citizens have annually to disburse for the support of the Infirmary or Fever Hospital, or in aiding those whose "bread earners" have been prematurely cut off by contagious or infectious diseases. Even on the score of economy, the reporter submits that the remedial measures suggested should be adopted.* Infinitely more should they be so on higher grounds. Improve the physical condition of the poor, and much will be done to improve their moral condition; make their houses more comfortable, and there will be less flocking to the dram-shops. It might be deemed out of place were the reporter to make any lengthened observation here on the miserable condition of the poorer classes, especially in our large cities and towns; but he may surely be indulged expressing his conviction that their condition calls most *earnestly*, if not loudly, for improvement, and woe be unto they who turn a deaf ear to the call! The higher classes are at present far too indifferent to the condition of the poor. They pronounce them reckless, discontented, dissolute, and degraded; but were their wretched abodes and their general condition minutely examined, the surprise would be that they were not more reckless and discontented: and were their abodes and the general condition of the poor improved, we would not only have less misery and wretchedness, but also less tumult and crime in our land.

Respectfully reported by

CHARLES R. BAIRD.

* The argument for additional sanitary regulations on the ground of economy will receive due weight from those who consider the number who have suffered from fever alone in Glasgow during the last five years (according to a minute satement of Dr. Cowan, 55,499), the expense of treating the patients, the loss of wages, and consequent pauperism.

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ON THE SANITARY CONDITION AND GENERAL ECONOMY OF THE TOWN OF TRANENT, AND THE NEIGHBOURING DISTRICT IN HADDINGTONSHIRE.

3, *Trelleck Terrace, Pimlico, London,*
6th August, 1840.

GENTLEMEN,

I HAVE received your circular letter and queries requesting information as to the sanitary condition of the labouring population in the towns in Scotland, and have endeavoured in the following Report to give all the information which was required. The statistical account of Scotland has afforded some of the facts contained in this Report. I trust the following details will enable those in authority to amend the condition of the labouring classes of Scotland, particularly of those of Tranent, in whose welfare I am more especially interested.

The parish of Tranent is situated in the county of Haddington, bounded on the north by the Frith of Forth; on the east by the parishes of Gladsmuir and Pentcaitland; on the south by Ormiston and Cranstoun; and on the west by Inveresk and Prestonpans. Its area is about nine square miles. The valued rent of the parish in the county books is 10,781*l.* 9*s.* 1*d.* Scots, and the present real rent is nearly 12,000*l.*, exclusive of minerals, which yield about 4000*l.*

The town of Tranent stands upon the edge of a ravine. The ground has a rapid descent to the north. The soil in some places is loamy, in others clayey, and is retentive. There is little or no wood in, or around, the town.

The population of the parish of Tranent was, in 1831, 3620, and is composed chiefly of colliers, fishermen, farm servants, and labourers.

The various forms of continued fever prevailed to a very great extent for several months in each of the seven years I was in practice in Tranent. The total population over which my charge extended I compute, on the whole, at about 4000. During the six years, from the 1st of January, 1834, to the 1st of January, 1840, 536 cases of continued fever occurred in my district, and came under my charge. The proportion of those thus affected in each year is, to the entire population, as 1 to 44. In 1835, the whole number of fever cases for that year was 121, and the proportion of those so affected was to the entire population as 1 to 33.

These cases of fever occurred in all parts of the parish of Tranent, and in some parts of several adjoining parishes. No part of the country over which my practice extended could be said to be exempt during the whole of that time from a visitation

of fever. Fever prevailed, on the whole, in some places more than in others, but it prevailed in no particular parts, either of the country or of the town of Tranent constantly, or even every winter. It was usual for it to prevail in some seasons to a much greater extent in one particular part of the country, or of the town than in others, but this was, in general, in one season or winter only. It was usual for fever, after prevailing to a very great extent in one quarter, and in one season or winter, to continue absent, or only making very partial appearance in the same spot, for several years; and in the mean time to break out and ravage a different quarter every season or winter, to be, in its turn, wholly or nearly exempt from another visitation for several years.

Fever prevailed *every* winter in Tranent, and likewise in rural districts inhabited by farm-labourers only. It prevailed among colliers, day-labourers, and destitute persons, but likewise among persons enjoying ample domestic comfort; farmers, master tradesmen, and that respectable and temperate class of persons, "hinds," those farm-labourers who are paid by the half-year, are supplied with comparatively comfortable cottages, and who have, in many instances, cows maintained at the expense of the master.

The parts of Tranent in which fever was most prevalent, and where it was in general most severe, were the "Coal Neuk," "the Abbey," and several tenements forming three sides of a square, called "Dow's Bounds." These quarters are chiefly inhabited by the most improvident and dissipated colliers; are remarkable for the absence of almost everything that can conduce to the comfort and health of the inhabitants. *The houses in these parts are so ill constructed, and so very badly repaired, that they are accessible to the wind, or are so confined, on the other hand, as to prevent due ventilation.*

Small-pox, scarlet fever, and measles, prevailed occasionally in and around Tranent, the same as elsewhere. Scarlet fever prevailed to a considerable extent in 1836, attacking the children of all classes in equal proportions. In that year 75 were attacked, or more than 1 in every 53 of the population.

Measles prevailed epidemically on two occasions, in 1837 and 1839.

Small-pox was rife in the summer of 1834, and towards the close of the year 1837, 1 in every 105 of the population underwent this loathsome disease. It again broke out in 1838, but to a less extent than in the preceding year.

The seasons at which these diseases were most prevalent varied in respect to the different diseases; continued fever, during the six years already specified, prevailed to the greatest extent during autumn, winter, and the two first months of spring. In some years the greatest amount of fever took place in winter, but in others, autumn and spring were the seasons marked with most cases. During four summers scarcely a case of fever occurred,

but in the other summers—in those of 1838 and 1839—fever prevailed to a considerable extent; and in the following winters and springs to a less extent than occurred in the corresponding seasons of the other four years. The following table will show the proportion in which fever occurred in the several months of the year.

Of the 536 cases of fever above referred to,		88	occurred in	January
,,	,,	73	,,	February
,,	,,	44	,,	March
,,	,,	26	,,	April
,,	,,	20	,,	May
,,	,,	27	,,	June
,,	,,	14	,,	July
,,	,,	11	,,	August
,,	,,	23	,,	September
,,	,,	100	,,	October
,,	,,	59	,,	November
,,	,,	54	,,	December.
		536		

In investigating whether fever was connected with times of particular privation and suffering, I met with facts which will not permit me to say more than that fever bore, on the whole, some relation to the severity of the season, and of destitution,—I mean that destitution which arises from public calamities or suffering, and which differs from that privation which is constantly experienced, and is the result of improvidence and dissipation. It is not, however, consistent with my experience to state that fever broke out wherever and whenever destitution of the ordinary comforts of life was experienced, or that fever became less prevalent whenever and wherever food and money were distributed amongst a fever population, or to state that fever did not make extensive strides amongst that class of people who had a reasonable share of the comforts of life, who were well fed, well clothed, and who inhabited good houses.

After I was requested by the Commissioners of Poor Laws to furnish this Report, I made an analysis of my fever cases, which afforded a result somewhat different from what I had expected, and goes to show that fever was nearly as prevalent among the comparatively comfortable farm-servants, as among the destitute and improvident colliers.

In October, in 1834, 45 colliers and 3 hinds took fever. Computing the collier families, amongst whom this fever prevailed, at 250, and the families of hinds, or farm-servants, at 80, the amount of disease experienced by the colliers beyond their proper proportion over the hinds is as 5 to 1. But in October, 1839, 1 collier and 13 hinds were attacked with fever; and computing the collier families at 350 (a large colliery having been added to my charge), and the hinds at 80, it will then appear that the collier population were comparatively exempt from fever during that month, whilst the hinds, on the other hand, suffered

in an immense inverse ratio.* Last winter, out of about 45 persons on the farm of Riggenhead, 41 or 42 were attacked with fever.

Cholera prevailed to a very great extent in and around Tranent at the time of its general prevalence in 1831 and 1832, and proved a most dreadful calamity. Few places suffered so much as Tranent, and its visitation, with all its attendant horrors, will long be remembered in that district. I applied to the chairman of the Board of Health, and to one of the surgeons who attended, for the number of cases and deaths, and was informed that though the disease prevailed most among the low and dissipated portion of the community, that it spared neither rank, age, nor sex: 283 cases occurred in the parish, and 79 proved fatal.

About five years ago cholera broke out in the neighbouring village of Ormiston; 18 cases occurred, and 7 died.

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ON THE SANITARY CONDITION AND GENERAL ECONOMY OF THE TOWN OF TRANENT, AND THE NEIGHBOURING DISTRICT IN HADDINGTONSHIRE.

3, *Trelleck Terrace, Pimlico, London,*
6th August, 1840.

GENTLEMEN,

I HAVE received your circular letter and queries requesting information as to the sanitary condition of the labouring population in the towns in Scotland, and have endeavoured in the following Report to give all the information which was required. The statistical account of Scotland has afforded some of the facts contained in this Report. I trust the following details will enable those in authority to amend the condition of the labouring classes of Scotland, particularly of those of Tranent, in whose welfare I am more especially interested.

The parish of Tranent is situated in the county of Haddington, bounded on the north by the Frith of Forth; on the east by the parishes of Gladsmuir and Pentcaitland; on the south by Ormiston and Cranstoun; and on the west by Inveresk and Prestonpans. Its area is about nine square miles. The valued rent of the parish in the county books is 10,781*l.* 9*s.* 1*d.* Scots, and the present real rent is nearly 12,000*l.*, exclusive of minerals, which yield about 4000*l.*

The town of Tranent stands upon the edge of a ravine. The ground has a rapid descent to the north. The soil in some places is loamy, in others clayey, and is retentive. There is little or no wood in, or around, the town.

The population of the parish of Tranent was, in 1831, 3620, and is composed chiefly of colliers, fishermen, farm servants, and labourers.

The various forms of continued fever prevailed to a very great extent for several months in each of the seven years I was in practice in Tranent. The total population over which my charge extended I compute, on the whole, at about 4000. During the six years, from the 1st of January, 1834, to the 1st of January, 1840, 536 cases of continued fever occurred in my district, and came under my charge. The proportion of those thus affected in each year is, to the entire population, as 1 to 44. In 1835, the whole number of fever cases for that year was 121, and the proportion of those so affected was to the entire population as 1 to 33.

These cases of fever occurred in all parts of the parish of Tranent, and in some parts of several adjoining parishes. No part of the country over which my practice extended could be said to be exempt during the whole of that time from a visitation

of fever. Fever prevailed, on the whole, in some places more than in others, but it prevailed in no particular parts, either of the country or of the town of Tranent constantly, or even every winter. It was usual for it to prevail in some seasons to a much greater extent in one particular part of the country, or of the town than in others, but this was, in general, in one season or winter only. It was usual for fever, after prevailing to a very great extent in one quarter, and in one season or winter, to continue absent, or only making very partial appearance in the same spot, for several years; and in the mean time to break out and ravage a different quarter every season or winter, to be, in its turn, wholly or nearly exempt from another visitation for several years.

Fever prevailed *every* winter in Tranent, and likewise in rural districts inhabited by farm-labourers only. It prevailed among colliers, day-labourers, and destitute persons, but likewise among persons enjoying ample domestic comfort; farmers, master tradesmen, and that respectable and temperate class of persons, "hinds," those farm-labourers who are paid by the half-year, are supplied with comparatively comfortable cottages, and who have, in many instances, cows maintained at the expense of the master.

The parts of Tranent in which fever was most prevalent, and where it was in general most severe, were the "Coal Neuk," "the Abbey," and several tenements forming three sides of a square, called "Dow's Bounds." These quarters are chiefly inhabited by the most improvident and dissipated colliers; are remarkable for the absence of almost everything that can conduce to the comfort and health of the inhabitants. *The houses in these parts are so ill constructed, and so very badly repaired, that they are accessible to the wind, or are so confined, on the other hand, as to prevent due ventilation.*

Small-pox, scarlet fever, and measles, prevailed occasionally in and around Tranent, the same as elsewhere. Scarlet fever prevailed to a considerable extent in 1836, attacking the children of all classes in equal proportions. In that year 75 were attacked, or more than 1 in every 53 of the population.

Measles prevailed epidemically on two occasions, in 1837 and 1839.

Small-pox was rife in the summer of 1834, and towards the close of the year 1837, 1 in every 105 of the population underwent this loathsome disease. It again broke out in 1838, but to a less extent than in the preceding year.

The seasons at which these diseases were most prevalent varied in respect to the different diseases; continued fever, during the six years already specified, prevailed to the greatest extent during autumn, winter, and the two first months of spring. In some years the greatest amount of fever took place in winter, but in others, autumn and spring were the seasons marked with most cases. During four summers scarcely a case of fever occurred,

but in the other summers—in those of 1838 and 1839—fever prevailed to a considerable extent; and in the following winters and springs to a less extent than occurred in the corresponding seasons of the other four years. The following table will show the proportion in which fever occurred in the several months of the year.

Of the 536 cases of fever above referred to,		88	occurred in	January
,,	,,	73	,,	February
,,	,,	44	,,	March
,,	,,	26	,,	April
,,	,,	20	,,	May
,,	,,	27	,,	June
,,	,,	14	,,	July
,,	,,	11	,,	August
,,	,,	23	,,	September
,,	,,	100	,,	October
,,	,,	59	,,	November
,,	,,	54	,,	December.
		536		

In investigating whether fever was connected with times of particular privation and suffering, I met with facts which will not permit me to say more than that fever bore, on the whole, some relation to the severity of the season, and of destitution,—I mean that destitution which arises from public calamities or suffering, and which differs from that privation which is constantly experienced, and is the result of improvidence and dissipation. It is not, however, consistent with my experience to state that fever broke out wherever and whenever destitution of the ordinary comforts of life was experienced, or that fever became less prevalent whenever and wherever food and money were distributed amongst a fever population, or to state that fever did not make extensive strides amongst that class of people who had a reasonable share of the comforts of life, who were well fed, well clothed, and who inhabited good houses.

After I was requested by the Commissioners of Poor Laws to furnish this Report, I made an analysis of my fever cases, which afforded a result somewhat different from what I had expected, and goes to show that fever was nearly as prevalent among the comparatively comfortable farm-servants, as among the destitute and improvident colliers.

In October, in 1834, 45 colliers and 3 hinds took fever. Computing the collier families, amongst whom this fever prevailed, at 250, and the families of hinds, or farm-servants, at 80, the amount of disease experienced by the colliers beyond their proper proportion over the hinds is as 5 to 1. But in October, 1839, 1 collier and 13 hinds were attacked with fever; and computing the collier families at 350 (a large colliery having been added to my charge), and the hinds at 80, it will then appear that the collier population were comparatively exempt from fever during that month, whilst the hinds, on the other hand, suffered

in an immense inverse ratio.* Last winter, out of about 45 persons on the farm of Riggenhead, 41 or 42 were attacked with fever.

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on many occasions, and in many situations, support a luxuriant vegetation on their surface.

There is a loch in Tranent into which, I believe, water is constantly running. It is provided with an outlet, which communicates with the water-courses of the village; I do not think it was the cause of any of the fever cases which came under my care, but it is calculated to render some of the houses damp in the neighbourhood.

I do not think any means are used in Tranent or in the neighbouring villages for the purpose of removing impurities from the streets, with a view to the health of the inhabitants. In Tranent, the manure and rubbish which collect in the streets are let for a sum of money to a farmer or some person who has occasion for them. I am not quite sure by whom this rubbish is let, but I think it is by the proprietor of the Tranent estate, neither am I aware that the money so obtained is applied to any public purpose. The streets are thus cleansed, not with the view of cleaning them as a public service, but as a source of gain; and it very generally happened, while I resided there, that the public carriage street or road, and the various footpaths, were kept in a most filthy, and, on some occasions, even abominable condition; so much so, indeed, as to offend the senses, and even shock the delicacy of passengers. One man was employed for the collection and removal of these impurities; and when I left Tranent, the depôt for their accommodation was within the town, and in front of several houses. In some of the villages no scavenger was employed, and in all, cleanliness was little observed, saving in the village of Ormiston, which is inhabited chiefly by genteel families.

There is nothing like an efficient system of drainage in Tranent nor in the other villages in the district. There is a piece of drain here and there, but it is very inefficient. There is not even a sufficient water-course in the main streets of Tranent; and it frequently happens during and after a heavy fall of rain, that the carriage-road is covered with water, and that some of the lower class of houses are inundated. In a few parts of the town the water-course is covered with stones or flags. These occasionally fall in, and openings are made. These openings are generally left unrepaired, and are not filled up. Persons frequently get hurt by stepping into them when it is dark. I have myself met with such an accident; and serious mischief would very frequently occur did the inhabitants not pay particular attention to avoid them.

A great gutter or water-course, about four feet deep, passes before Seton Lodge. Some years ago it was quite open. Captain Hutcheson, the proprietor of the house, covered it over at his own expense, finding that the road trustees refused to repair it. In the course of a little time the flags broke under the weight of a cart passing over them; the gap remained open for a long time, to

the great danger of the passengers during the night. Captain Hutcheson, at his own expense, repaired the drain, but it was again broken in the same manner as before; and when I left Tranent, I am pretty sure there was a considerable gap, and it is probable that it remains to this day. The water-course, immediately above this spot, is totally uncovered for about a hundred yards. The depth varies from two to three feet, and its breadth is about three or four feet. The channel has evidently been formed by the current of water; the appearance of the bed is that of a considerable stream. During heavy rains the mass of water is so great as to be sufficient to carry away and drown children. This nuisance is in the heart of the town, and totally undefended.

The effluvia which arise from the putrid materials and stagnant ditches would, if not dissipated and diluted by the winds, constantly produce, in a very marked manner, very great mischief, probably some form of fever, and depopulate the district. But the winds are generally pretty strong, and, by affording fresh supplies of pure air every instant, and by constantly carrying off the effluvia as they arise, prevent, on ordinary occasions, great and striking calamities. The wind readily gets admittance into Tranent, as that village stands on the edge of a ravine, and on high sloping ground. Ventilation forms a preservative of health of a very powerful character, and fortunate it is that indifference and filth cannot effect its exclusion, otherwise I doubt not the consequences would be terrific.

Febrile diseases, usually designated contagious, have prevailed in all classes of houses in and around Tranent: but the greatest amount of these maladies is experienced in the houses of the labouring population. Fever sometimes breaks out in the cottages of the hinds, and sometimes all the members of the family are attacked. These cottages contain in general only one apartment, used for sitting, eating, and sleeping in, by both sexes. The apartment generally is provided with a good dry floor, formed of composition, one window in front, sometimes a smaller one behind, and with a large fire-place. The cottages on some farms are very comfortable, well built, and kept in good repair. They are likewise well furnished, clean, and altogether very comfortable. The cottages on the farm of Greendykes are particularly comfortable; and, did they contain two apartments instead of one, would be good models for cottages of a like character that may be built in future. The floors are almost universally too low; some are on a level with the ground outside, while others are considerably beneath it.

The cottages on the farm of Winton Hill have been recently built, and possess two apartments, which, I believe, were obtained at the request of Mr. Howden, the tenant, who proved to Lady Ruthven, the proprietrix, that this accommodation was desirable. Her ladyship's example is well deserving of being followed, for

landlords could not confer a more wholesome or a more acceptable kindness upon their good servants than by giving them two instead of one apartment.

The cottages inhabited by hinds in the county of Haddington are divisible into two classes, a superior and an inferior. The former are constantly increasing, while the latter are as constantly diminishing in number. The old cottages are almost all very inferior, while those which have been recently built are much better finished and more comfortable. The habitations of the hinds are almost invariably the property of the landlords, and are situated on the farms near the offices. A few hinds live in villages adjoining the farms on which they work. A cottage of the inferior class consists of one apartment about 14 feet long and 12 broad. The habitation is formed of the front and back walls, about 8 feet high, two side walls or gables rising pyramidically to the height of about 20 feet. The roof is composed of thatch or straw, resting upon rafters or beams of wood. There is one fire-place, which is provided with a capacious chimney. The walls are in general substantial, there being plenty of stone on the spot, and lime being abundant in the county. The roof is, in many cases, very inferior. The thatch is often quite rotten, and pervious to rain and wind; and the rafters in many cottages are much decayed. These cottages are not supplied with any ceiling or partition to hide the thatch and rafters, or to protect against the wind and rain that may penetrate the thatch covering when they are given up to the hinds. This great defect is remedied in part in the cottages of some of the more respectable and comfortable hinds, by their putting up a wooden ceiling, which they purchase and carry about with them from cottage to cottage, as a piece of house furniture. In other cottages another and cheaper contrivance is adopted: this is the placing of canvas in the place of wood; and when, as is often the case, this canvas covering is whitewashed, it gives the apartment the appearance, if not the reality, of comfort. In some cottages no ceiling of any kind is used. The appearance of the cottage is then very bad: there appears an immense dark and dingy space, bounded above by ugly thatch, and rafters generally covered with much dust and multitudes of spiders' webs. The floor of these cottages is gegerally beneath the level of the soil outside. For what purpose this arrangement is adopted I cannot understand, unless it be to counteract the inability to keep the cold out, through insufficiency of the door and roof, by its rendering the apartment as much like a hole as possible, and thereby to keep the heat in. The walls in the inside are bare, or only whitewashed. There is one window which is generally about two feet square, and unprovided with hinges, or other appliances, to admit of being opened. The expense, I suppose, is the only reason for this defect. The door is seldom well fitted, is frequently decayed, and admits strong

currents of air. The superior cottages are, with a very few exceptions, about the same size as those just described, have only one apartment, and the floors are below the level of the ground outside; but the walls are plastered, and comfortable ceilings are supplied, the doors are well fitted, the windows are constructed so as to open, and the roofs are covered with slates or tiles. The houses of the colliers and day-labourers are much the same as the inferior kind of cottages inhabited by the hinds.

The houses inhabited by colliers, day-labourers, and other operatives, are in general very inferior in accommodation to the cottages of the hinds. A few of the colliers' houses are good, but the great mass of them are very bad. The roof is frequently insufficient, admitting wind and rain in wet and windy weather; is sometimes composed of thatch, seldom or never renewed, and resting on rafters. In some houses there is nothing between this roof of thatch and the apartment, and the thatch and rafters are covered with the accumulated dust and cobwebs of many years. In some the rafters and thatch are quite rotten and decayed. I was in one house, shortly before I left Tranent, where the rafters were infested with bugs, which occasionally dropped down. In the worst kind of these houses the apartment is ill supplied with light, the windows being only partially supplied with glass, and its place supplied with paper, bundles of rags, and old hats. In some of these houses the windows cannot be opened; and, were the air excluded from admission by the roof and the ill-hung door, there would be little or no ventilation.

In the better houses of the colliers the furniture is ample, and in some is kept with great neatness and cleanliness; but in others, even where the furniture is good, there prevails a shocking amount of uncleanliness.

In many of the houses of the colliers there is great want of necessary furniture, and in a good many I have noticed that the chief articles were one or two chairs, a stool, and a wretched bed and bedstead, and that these were in the most filthy condition. I have seen in some of their houses straw strewed in the corner of the apartment, serving as a bed for the family. But it is not the mere want of furniture that renders these abodes so wretched as they are: there is a fearful amount of filth, dust, &c., accumulated on the walls, floors, and furniture, which, with dirty persons, unwashed rags of clothes, the hot putrid atmosphere usually present, go far to add to the wretchedness of the scene, and to complete the measure of squalid and disgusting misery.

In some of these houses the females are so lazy, and so filthy in their habits, that they carry their ashes and cinders no farther than to a corner of the apartment, where they accumulate and have their bulk swollen by the addition of various impurities. This wretchedness does not arise from the want of money. These colliers are in the receipt of 20*s.* and 30*s.* per week, and I have

been informed by their employers that they might earn much more, would they turn out to work on Monday, instead of drinking, as they commonly do on that day, and even on others.

In times of sickness or helplessness the condition of this class of houses is most deplorably filthy. In the houses of the dissipated colliers the wooden floors are so filthy as to convince the spectator that they are never washed. The floors of cottages inhabited by colliers are composed, I believe, generally of common earth. These floors are very dirty, and so uneven as to make a stranger almost fall. It is not uncommon to see holes or depressions in these floors that would contain a peck or two of sand. These holes have been formed in the course of time by various causes, by the wear and tear produced by heavy shoes, the breaking up of coals by the poker, and by the presence of water spilt upon the floor. No attempt in many cases is made to fill up these cavities, although this might be done at very little expense and trouble. The bedstead is generally covered with dust, and with innumerable fly-marks. In summer, bugs in multitudes may be seen, more especially at night, when the light of a candle is suddenly thrown upon the bedstead. The odour in these apartments is most offensive and sickening, from the long-continued presence of human impurities. Persons not familiar with such situations will be unable to form the most remote idea of the disgusting nature of this atmosphere; but delicacy forbids a more detailed account.

The internal economy of the houses of the day-labourers is on the whole considerably better than that of the colliers, but is still very inferior to that of the hinds. Many of the day-labourers who are well doing and sober are particularly cleanly in respect to their houses. The houses of these men are not much inferior to those of the best hinds. They are clean, well furnished, and the furniture is arranged in good order. On the other hand the dissipated and irregular day-labourers who are very numerous, and form a large proportion of that class, are insensible to the comforts of cleanliness, neatness, and order. The apartments of these people are as filthy, ill-furnished, and squalid as those of the dissipated colliers. I have seen the apartments of these persons in the most revolting condition of filth, darkness, and abject misery—containing only a box or case bed, and one or two stools, with a few other trifling articles, such as a jar for containing water, and a piece of poker. With very few exceptions, the condition of the interior of the houses of the hind population is excellent, most pleasing to the eye, and comfortable. This respectable class, in spite of the defective construction of their cottages, manage to throw an air of comfort, plenty, neatness, and order around their homes. I have often been delighted to observe these characteristics, and not less so to mark the co-existence of pure, moral, and religious principles in

the inmates, the presence of practical religion and practical morals. When the floor wears away, it is repaired; when the walls lose their whiteness, they are whitewashed; and every few days the whole wooden furniture in the house is subjected to thorough cleansing with sand and warm water. The various articles of furniture, and the different household utensils, are kept in places allotted to them; and the earthenware and china, well cleaned, are neatly arranged, and made to serve as ornaments to the apartment. The metal spoons, candlesticks, and pitchers for containing milk and water, are well burnished. The milk taken from the cow may be seen set apart in vessels kept in the nicest order; and beside them lie the churning barrel and strainer. A fire sheds its cheerful influence over the scene; the kettle never wants hot water; and the honest, frugal housewife is ever discharging some household duty in a spirit of placid contentment, attending to her partner when present, or preparing his meals against his return from the fields.

The external economy of the houses of the hinds is on the whole very good. The ground in front of the cottages is kept clean and free of impurities. The little garden, which is almost invariably connected with the cottage, is kept in good order, and is in general well cultivated.

The external economy of the houses of the day-labouring population is, on the whole, much inferior.

The external economy of the houses of the colliers is, on the whole, most intolerably filthy and unwholesome. Heaps of putrid materials are collected in front of the cottages and houses; and the gardens which are attached to many of the cottages inhabited by these persons are overrun with weeds, and are altogether very much neglected.

The houses of the labouring population are not usually supplied with drains. Where they inhabit houses of a superior order but in a dilapidated condition, which they sometimes do, they may have the advantage of drains.

The land around the dwellings of the labouring population is in general well drained, being for the most part let to farmers of wealth and intelligence.

I do not believe that there is a house in Tranent into which water is conducted by pipes. There existed great difficulty on many occasions in getting water at all. During the seven years I resided there, the village was, on the whole, extremely ill supplied with water: it was usual for it to be occasionally absent from Tranent altogether. Last summer the supply of water was stopped for several months. The inhabitants suffered the greatest inconvenience in consequence: they could not get sufficient water to maintain cleanliness of person and of clothes. It was even difficult for labouring people to get enough to cook their victuals; and I know that many of the poor were, in conse-

quence, reduced to the practice of using impure and unwholesome water. On these occasions water was carried to the village from a considerable distance. Some went the distance of a mile: some used barrels drawn on carriages: some employed children to bring it in small vessels; and, I doubt not, many went without it, when it was highly necessary, from inability or infirmity, to go themselves, and from want of funds to employ another for the purpose.

Since the above was written, I have learned from a lady, previously resident in Tranent, that, when cholera prevailed in that district, some of the patients suffered very much indeed from want of water, and that so great was the privation, that on that calamitous occasion people went into the ploughed fields and gathered the rain-water which collected in depressions in the ground, and actually in the prints made by horses' feet.

Tranent was formerly well supplied with water of excellent quality by a spring above the village which flows through a sand-bed. The water flows into Tranent at its head, or highest quarter, and is received into about ten wells distributed throughout the village. The people supply themselves at these wells when they contain water. When the supply is small, the water pours in a very small stream only; and it happens, in consequence, that on these occasions of scarcity great crowds of women and children assemble at these places, waiting their "turn," as it is termed. I have seen women fighting for water. The wells are sometimes frequented throughout the whole night. It was generally believed by the population that this stoppage of the water was owing to its stream being diverted into a coal-pit which was sunk in the sand-bed above Tranent. That pit has been lined with sheets of iron, and the water has lately returned to Tranent in great abundance.

I do not know whether the houses of the hinds are in general supplied with receptacles for filth, &c., but those of the colliers and day labourers I know to be generally without them. The precincts of the cottages of the hinds are in general clean, but there are many exceptions.

It is not common for two or more families to inhabit one apartment in this district. The families of most of the labouring people are crowded, in consequence of the smallness of the apartment. Where there are many children, it is common for ten or twelve persons to inhabit one apartment, and for four children to lie in one bed, both in health and sickness. When a collier has few or no children, he sometimes takes single men and women as lodgers.

There are many regular lodging-houses in Tranent, perhaps from 15 to 20, in which paupers, vagrants, and a few labouring people live. The vagrants reside there for a considerable time, and I have known colliers in employment to reside permanently in these

houses. They are crowded at all hours, but more especially at night. Men, women, and children live and sleep in the same apartment. In one of them I have seen an apartment, about 18 feet long and 10 feet wide, which contained four beds made up constantly, and when the house was "throng," another was added to the number. The lodging-houses are the head-quarters for beggars. The people go about during the day pursuing their avocations, and return home at night to regale themselves with their earnings. These people lie in bed till very late, and, if visited in the forenoon, may be seen sitting beside the fire, roasting herrings or frying meat. They live well amidst their wretchedness..

A great deal of disease prevails in these houses, especially amongst the children; but I do not think fever has prevailed there more than in the habitations of the colliers.

The most worthless class of colliers and day-labourers are uncleanly in their habits. The persons of the colliers themselves are usually well cleaned with soap and warm water, once in the day, after returning from the pit; they would otherwise be most uncomfortable: but the persons of the children, who do not work in the collieries, standing in less urgent occasion of ablution, are allowed in many instances to remain in a state of great filthiness, their faces, hands, and feet appearing seldom or never to be washed, and their hair being allowed to remain in the greatest disorder, and greatly infested with vermin.

The collier, compelled by the uncleanliness of his employment to perform daily ablution, is comparatively seldom troubled with chronic diseases of the skin, while his children, on the other hand, urged by no such necessity, and neglected by the mother who is perhaps employed at the pit, are subject to a very great number of diseases of the skin, and, with comparatively few exceptions, to some of the varied forms of the disease called scall-head.

I do not think pigs are kept in the interior of the houses in or around Tranent. Pig-sties in many instances are erected near the doors and windows of the poor; but these are scarcely a nuisance, the odours being comparatively sweet and pleasant to those emanating from the heaps of manure and ashes formerly referred to, and even from the people and houses themselves.

In many houses in and around Tranent fowls roost on the rafters and on the tops of the bedsteads. The effluvia in these houses are offensive, and must prove very unwholesome. It is scarcely necessary to say that these houses are very filthy. They swarm likewise with fleas. Dogs live in the interior of the lowest houses, and must, of course, be opposed to cleanliness.

I have seen horses in two houses in Tranent inhabiting the same apartment with numerous families. One was in Dow's Bounds. Several of the family were ill of typhus fever, and I remember the horse stood at the back of the bed. In this case the stench

was dreadful. In addition to the horse there were fowls, and I think the family was not under ten souls. The father died of typhus on this occasion.

I visited a house in Tranent in the beginning of this year, in which the only furniture I observed was an old bedstead with some bedding. I think straw was spread in a corner for a bed, and on one side of the fire-place: on the other side of the fire-place there stood a large horse, sharing the apartment, with its back at no great distance from the roof.

With most poor people there existed an unwillingness to go to hospital; but this was overcome in most instances where there appeared urgent occasion for removal. I seldom failed in effecting removal when I was convinced of its necessity. This disinclination arises from the distance, the nearest hospital being ten miles distant, the expense and fatigue of travelling, and a feeling of distrust in respect to good usage from the nurses, who bear a very bad character among the poor classes. I have no doubt whatever that proper persuasion, and the assurance of good treatment, would effect the removal of 18 in 20 of the fever cases, were an hospital on the spot, with a medical man attached, possessing moderate skill, having kindly manners, and bearing a character for integrity.

The hinds almost invariably live in cottages upon the farms to which they are attached. The cottages are generally placed together; and on the farms in East Lothian, which are in general very extensive, the number of the hinds attached to each varies from six to eight.

The hinds are paid in kind, the value of which, I believe, ranges about 25*l.* per annum. The cottage is generally supplied by the farmer to the hind as an equivalent for the latter giving, during harvest, the labour of an individual, generally his wife or grown up daughter, for a certain number of days, I believe about twenty.

Where cows are kept at the expense of the farmer, the hinds manage to make a little money by the sale of milk and butter.

The domestic condition of the hinds is most excellent, and forms a scene quite refreshing to the eye of the casual visitor. The furniture is generally good, sometimes even fine, and almost always remarkably clean. The food of the hind is comfortably dressed, and put down with great attention to cleanliness. Tea is frequently given to their visitors; and on these occasions more neatness and cleanliness is not to be observed in the houses of persons of much higher rank. I have seen silver tea-spoons in the houses of these people.

I have reason to believe that many of the hinds accumulate a little money for the purpose of meeting the contingencies of old age, and of assisting their children on leaving their parent's home. I know that several are possessed of considerable sums of money, which, I am informed, will go as dowries to their daughters when

married, and to assist their sons when they get hindings. I know of one woman who received 30*l.* from her father, I believe a hind, as a "providing," at her marriage.

These people are almost invariably comfortably dressed; wear strong shoes, thick worsted stockings, and flannel underclothes. On the Sabbath the dress of the hind family is in good order, clean, and neat. The hind on that day wears a woollen coat, generally black; the wife, a cotton gown, always in excellent order. The children are similarly dressed, and look highly respectable.

The moral condition of the hinds is such as, I am assured, is equal, if not superior, to that of any class of labouring people in the world. They are religious, attend church regularly, take a great interest in the religious concerns of the district, and regulate their lives, their conversation, and their intercourse and dealings with their fellow men, by the rules of Christianity, as much as any class of people with whom I have ever come in contact.

The hinds are in general well informed; have received good plain education, such as reading, writing, and arithmetic. They are civil and respectful in their manners: they are candid, open, and free of guile or cunning, so common among colliers.

They are remarkable for honesty, and are often trusted with considerable sums of money. Some of the hinds are intrusted by their masters to take the grain to market, to sell it, and to receive the money.

They are good-tempered, forbearing, and not easily excited.

Sobriety forms one of the characteristics of the hind. Many of these people seldom taste whiskey; but this arises not from any artificial tie, such as the abstinence-pledge, which they in general despise, but from a horror they possess at the practice of "drinking," and from a lively perception of the mischief it entails upon some of the labouring population, such as the colliers.

They regulate their affairs with great propriety. Frugality and husbanding of their means are very conspicuous, and are attended with marked advantages. They are careful of their means; turn them to the best advantage; they purchase their clothes and food with ready money, and thereby secure advantages seldom enjoyed by other labouring persons.

At each term the hinds' wives may be seen in numbers going into Tranent and other towns, neatly dressed, with baskets on their arms, to make their little purchases. I have been told by an extensive merchant that the hinds are his best paying customers. In my own dealings with those people I have found them particularly honest and honourable. I have attended the wives of many hinds at their accouchements, and I have seldom left the cottage without a fee being put into my hand. This forms a marked contrast to the conduct of the colliers on those

occasions: in general nothing whatever is to be got from this class. It would be less absurd to look for gold from the clouds than to expect a fee from the generality of colliers on these occasions. They have seldom even the necessaries so essential to the welfare of the patient. There is, indeed, little more provided than cheese and whiskey.

Destitution is little observed among hind families. There are comparatively few cases of destitution among even the old members of hind families. There are, however, a good many cases in which very considerable privation is felt, and which is not at all, or very little relieved. The reasons which I am disposed to assign for the comparative infrequency of destitution among them are these: by husbanding their means, by sobriety, economy, and industry, they lay aside for old age small sums of money: they are sober: they belong to benefit societies, from which they derive assistance when in sickness; they likewise belong to a society which gives them a considerable sum of money in the event of their cows dying. They are good and valued servants, and are generally in possession of the good will and affection of their masters. When they become too old for the "hinding," they are employed at some easy work on the farm, at which they in general continue till within a short period of their death. When old age overtakes them, it frequently happens that the son succeeds the father in the "hinding," and that the son and parents live together, the son on these occasions supporting the parents, either wholly or in part. The son feels this to be a duty; and when the parents die, the son gets the furniture of the deceased, where there has been no parish relief, which is generally the case.

The parents sometimes go and live with their grown-up children, who in general make a point of maintaining them, and attending to their comforts.

The cases of destitution will be mentioned under the general head of destitution.

The day-labouring population is less comfortable. These labourers form a considerable proportion of the population. They in general inhabit houses or apartments in villages, are less orderly, less temperate, and less provident than the hinds. They are paid in general by the week. Among them there exists a good deal of disease, and even abject poverty, produced in a great measure by want of industry, and also by dissipation. Many farmers find difficulty in getting a sufficient number of labourers, and I have seldom heard of there being want of employment for these people.

Along the coast of East Lothian there exists a considerable population engaged in fishing and in seafaring employments. These people, I understand, are very improvident, and are considerably addicted to dissipation. They are generally in want:

live in houses, some of which are kept clean, and some in a state of gross filth. Their earnings, which are occasionally very considerable, are not laid aside, as they might be, for seasons of comparative want, but are generally spent in the purchase of whiskey. These improvident habits lead to great destitution, and likewise to disease. But there is a source of destitution among these people which is almost wholly independent of their own misconduct—this is, the casualties which are frequently occurring at sea among the heads of their families. Boats are constantly being upset, and the fishermen drowned. It is common for a whole boat's crew to be lost at one time, and there are usually four men in each boat. There are a great many widows residing in Cockenzie, a fishing village in the parish of Tranent, who have lost their husbands by casualties at sea. When the husbands are lost, of course the widows and children sink into still deeper privation than before. I understand it is usual to place these widows on the poor-list of the parish, but of this I am not certain. I rather think the chief assistance which they receive is a small sum of money, generally subscribed by the benevolent people in the neighbourhood after the casualty. I have been told by their clergyman, that the fishermen are very charitable on these and like occasions.

The town of Dunbar is chiefly inhabited by a seafaring population, and I have all along understood that the destitution there is very excessive.

The collier population of Haddingtonshire is confined to that quarter of the county which lies to the west of the village of Gladsmuir. It forms the larger portion of the inhabitants of Tranent and Penston, a very considerable portion of the population of Prestonpans and Elphinstone, and forms almost entirely the population of several villages, viz., Newtown, Makemerry, Huntlaw, Cross Houses, and Cuttle.

The number of colliers in Haddingtonshire, including wives and children, I should think was about 3000.

The collier population is very migratory. In most collieries the colliers are constantly going and coming. It is common for them to remain only a few weeks at the same colliery. Some move from colliery to colliery, and yet do not leave the district; some leave the district, and, after remaining away a considerable time, return again to their old situation and to their old acquaintances. I have frequently visited colliers one day and found matters in their usual state, and on returning next day I have found the house deserted and completely empty. This has happened very frequently even when there has been sickness, and that of a serious nature. Sometimes it was known where they had gone to, sometimes I could obtain no information on the subject. I have been often surprised at the migratory habits of these people, for their changes seldom or never afforded any

benefit. I have often remarked to them that it appeared to me it would be better for them to remain where they were than to put themselves to so much trouble and inconvenience for no useful purpose. I attribute this constant changing to several causes. The colliers acquire a roving disposition from the example of their parents and neighbours. They get irritated with annoyances connected with their situation, and think, by changing, to make themselves more comfortable. These people, I believe, are frequently enticed from their employers by rival coalmasters, either in the neighbourhood or at a distance. On these occasions the person hiring them pays all moving expenses and likewise advances money. This unsteady, unsettled life is very much calculated to prove injurious; each change is the occasion of excessive dissipation and often of getting into debt to the coalmaster, who keeps him (the collier) by this means in his employment as long as it is desirable. It is also very hurtful to the character of the rising colliers, interfering so effectually as it does with the little and irregular education which they are wont to receive.

The collier receives very high wages. He is paid according to the amount of his work: a single man, I believe, may make about 30*s*. per week if he is industrious and works six days in the week. A single man, if he has no children, generally employs a boy or a woman to assist him. For this assistance he pays a few shillings per week, but by the arrangement he is enabled to earn much higher wages than if he worked alone. A man, his wife, and perhaps two children, may earn 40*s*. per week if industriously employed during that time.

Many colliers do not make so much money, because they are dissipated, and work only three or four days in the week. Some do not work above two days in the week on some occasions.

Several colliers accumulate considerable sums of money. I have known several to be possessed of some hundred pounds and to be proprietors of houses. Several had votes in the election of representatives in parliament. An old collier, commonly called "Black Tom," died a few years ago; he left several hundred pounds in cash, and about four or five houses. He had a vote in the election of a representative in Parliament.

There was lately in Tranent a young man, a collier, who made enough money to begin business as a grocer and publican. He worked occasionally at the colliery, and his wife kept the shop in his absence. I understand this man was comparatively rich.

In respect to the great majority of colliers no provision is made for the future. Some become members of benefit societies, which ensures them a few shillings per week in sickness, and a few are frugal and save considerable sums of money, which is either put into a bank or lent out at interest, or invested in the purchase of houses. There are several who have three or four houses. One

man told me that he had 400*l.*; and on my expressing astonishment at it, he observed that every collier could save the same if he were only industrious and frugal.

I believe there are several colliers who have money deposited in the banks and elsewhere, unknown to their friends or neighbours. A case of this kind was accidentally discovered. About a year and a half ago, when Scotland was threatened with Chartism, many weak-minded and ill-informed people believed the country to be on the point of revolution, and that the banks were unsafe: one of the colliers, partaking in this fear, went to Edinburgh, withdrew a considerable sum of money from one of the banks, and had his case made public by his being robbed of it by a loose woman, in whose company he had been.

A very large proportion of the colliers is generally involved in debt, sometimes to their employers and almost always to their tradespeople: I may with safety say that eight-tenths of the colliers are never out of debt. The money which they receive on Saturday night is not spent in the purchase of articles to be consumed next week; it in general goes to liquidate part of the debt which has been owing perhaps for months and years. I understand the tradespeople to whom this debt is due charge high, in order to meet the loss of interest on the money and to compensate for the many bad debts which they incur by this system of giving credit even to the dissipated and unprincipled. When the debts of the collier become very great, and when his creditors become clamorous, he avails himself of his migratory capabilities, and goes off to some distant part of the country with his family and furniture, bidding defiance to his creditors, and to commence the same iniquitous system in a new field. I have known individuals to be encouraged to get into debt by tradespeople and others. A publican gave almost unlimited credit to two women actually in a state of derangement from drinking whiskey. A bond was procured on a house belonging to these persons. These women continued to run to the shop of the publican, swallowing whiskey voraciously. It was suspected that the publican wished to get the house altogether, but this was prevented by the interference of a respectable party, who assured me the case was one that would not bear investigation. A man died not long ago who had amassed a large fortune, perhaps 20,000*l.* or 30,000*l.* He rented a colliery, kept a store at which he sold provisions and whiskey to his colliers, and used a coin peculiar to himself in his dealings in the shop with his men.

The domestic condition of the great mass of the colliers may be understood from what has preceded, and from what will be said under the head of destitution in Tranent. This account of their destitution and wretchedness will apply to the greater part of the colliers, perhaps to three-fourths. On the other hand, I am glad to have it in my power to say, that the internal economy of the

houses of several colliers is very good ; that I have observed great order, cleanliness, and the appearance of plenty and comfort in the houses of some in receipt of the ordinary wages only.

I have had occasion to know that medical men, judging from internal appearances of the dwellings of the labouring classes, are liable to be led into erroneous inferences as to the extent of destitution. The appearance of the place or of the person is no test of the want of means or of the highness or lowness of wages. Filth is more frequently evidence of depravity than of destitution ; indeed, in places where the wages or means are really scanty, there is very frequently considerable cleanliness. If a stranger went into the house of a collier, he might exclaim, What extreme wretchedness and destitution ! when in fact, on the Saturday they had received 30*s*., which before the Tuesday had all been squandered. I think medical men, who are not intimately acquainted with the character of the people, are often drawn into mistakes.

The dress of the great mass of the colliers, of perhaps three-fourths, and more especially of the women and children, is extremely dirty, ragged, and highly disreputable, like that of beggars. Many of the men, on the other hand, dress tolerably well, when off work, and there are several, indeed a good many, who dress like respectable master tradesmen on Sundays, with clean linen and woollen clothes in excellent order. All these men are in the receipt of the same wages.

The children of the dissipated are very ill clothed ; many have scarcely enough to cover them: girls go about with apparently only a frock, often so torn as to disclose their naked limbs, and without shoes or stockings.

The moral condition of the collier population is on the whole very bad. A large proportion of the colliers is remarkable for ignorance, prejudice, and apathy in respect to almost everything, except whiskey, cockfighting, and the like. The minds of many colliers can scarcely be said to be exercised ; they seldom reason more than some of the lower animals ; they judge very precipitately and very erroneously, and they act upon the first impulse however violent.

Many may be said to vegetate, or, like aquatic plants, chiefly to imbibe, for they are excited by nothing ; they are alive to no considerations such as engage and sustain the attention of other men. They work only because they find it necessary. The chief occasions on which they are roused from their sottish and apathetic condition are riotous dances, lasting, perhaps, with little intermission. for several days, raffles, shooting-matches, cock-fights, and scuffles amongst themselves.

Political, social, religious, and all great and national questions are totally uninteresting to the majority of these degraded men. I have seldom seen them alive to any general question.

But there are, I am glad to say, many colliers who form

striking and interesting contrasts to the above picture. Those belonging to Pencaitland Colliery hold a character for sobriety, industry, and superior tone of mind which forms a marked contrast to the condition of the men in all the other collieries of which I had the medical charge. In that colliery there were men possessing sound hearts and heads. Some of them had more general intelligence than I have observed in persons holding much higher stations; their conduct and conversation were much qualified by religious sentiments, and I believe that they were truly good men. This marked superiority of these men is to be attributed, I think, in a great degree, to a very wise and praiseworthy regulation, made by the lessee, Mr. Andrew Cuthbertson, for the prohibition of the sale of whiskey in the village, which I believe is strictly adhered to. There are likewise good and pious men in the other collieries, but they are unfortunately not numerous.

The chief occasion on which I observed the colliers to be excited by public events was during the attempt made about a year and a half ago to agitate the country and to obtain the Charter. The feelings of several of the men were then highly excited with discontent and a hatred against those placed above them; and I am prepared to say, that if the banner of Chartism had been raised in Scotland it would have gained no inconsiderable proportion of its followers from the coal districts. I conversed with several of the Chartist colliers on that occasion. They told me that they paid contributions regularly, and I was shocked to find the vindictive, and I might almost add, the sanguinary, feelings with which they burned to commence the contest and to spoliate the more affluent.

I remember one man who spoke of violence being resorted to. I reminded him that there were other people besides the Chartists in the country, and that there was a sufficient army to protect the public. He replied that in a few weeks we should see that the Chartists would be more than able to meet all opposition. A considerable proportion of the colliers belonging to one of the collieries was attached to that class, and I have reason to believe these men formed part of a widely spread organized body. The colliery to which these men belonged was one of the most liberal in its payments.

Many collier-people never enter a place of worship, and many seldom hear the voice of a clergyman.

A great many assaults take place among them, but I have seldom heard of premeditated violence. However, I fear infanticide is common. I have examined the bodies of several infants supposed to have been murdered. Desertion of wives by their husbands is common.

Drunkenness is the prevailing vice. It reduces persons in the receipt of high wages to the abject and squalid condition of the most destitute paupers. It is generally supposed that many un-

married females are particularly loose. I was once asked by a man for medicine to produce abortion, and I suspect it was intended for a woman who was shortly afterwards tried for concealment of pregnancy, and was found guilty. Her child was found dead. It was suspected that she had been intimate with her sister's husband.

Colliers in general marry when very young. Many do not provide more funds for this occasion than will cover the fees and afford some whiskey. Their houses in general are furnished on credit. They generally marry among themselves; young women belonging to the other classes seldom intermarry with the colliers. I have known unmarried people live together and have large families.

The colliers are in general employed only four or five days in the week. On these days they work hard sometimes for twelve and eighteen hours together. Monday and Tuesday are generally idle days, and are consumed in drinking, lounging, and sleeping. This idleness at the beginning of the week is not in consequence of want of demand for their labour; on the contrary it is the wish of their employers that they should work regularly. It is a source of inconvenience and also of loss to the coalmasters; and it somesomes happens that they are dismissed for non-appearance at the collieries. When I have heard a collier say on a Monday that he had been working on that day, I used to be surprised, and I concluded he was accumulating money.

Many of the colliers are extremely lazy. Some will not work above a day or two in the week. This happens chiefly when they enjoy pensions, when they draw their rents, and when they have a considerable sum of money coming in by the labour of their wives and children. I have reason to believe many feign sickness in order to obtain the allowance of a few shillings which is obtained from benefit societies, and to indulge in idleness. I have been asked for certificates of sickness, where I could not grant them. I have known these people to spend days in search of charity less in amount than they could have made by labour in one day.

Some colliers are very cruel to their children. Chastisement is given in the most intemperate manner. Young children who refuse to work in the collieries are severely punished. I once saw a girl about ten years of age in a state of dreadful terror lest her mother would get hold of her. She had gone to school instead of to the colliery. The mother was at the school-door waiting for her child. I was told by the child that her mother beat her, and would not let her go into the house when she went home from school, and that she had spent several nights in an unfinished house consisting of the stone walls only. This was not denied by the mother, who pleaded in defence that the girl went to the school instead of the colliery.

Wives are sadly maltreated. Women even in advanced pregnancy are kicked and abused. I remember I attended a pregnant woman who was kicked in the abdomen by her husband. There was reason to fear premature labour would follow.

I attended a young married collier under disease produced by debauchery. He was not very able to work, but I have seen old men much worse than he was working laboriously. I do not think he worked at all for a year or two. The wife of this person was a remarkably strong, active, and cleanly person. She worked for her husband, who remained at home or sauntered about. She was, I am sure, more industrious than any man in the colliery, and I have heard the superintendent say she was a most valuable servant. I have known this noble woman, after a day's hard toil, to be grossly assaulted by her emaciated but savage husband, whom she was the sole means of maintaining.

A woman in a state of advanced pregnancy received a blow from something falling down the pit. The body struck her on the crown of the head. A compound fracture was produced, and a portion of the skull was so considerably depressed that I could put my thumb into the wound. The skull was trepanned; labour came on in a few days, and so apprehensive was I for her safety, that I did not leave her for a moment till she was delivered. She ultimately recovered; but this woman went down to the colliery again, and I heard afterwards that she was frequently maltreated by her dissipated and worthless husband. She holds her life by a peculiarly precarious tenure, and I strongly enforced this upon the husband.

The population above described is chiefly Scotch. The hinds are exclusively Scotch, and in general belong to the lowlands.

The day-labourers are also chiefly Scotch, but there are likewise a good many Irish, and perhaps a few English; their condition, however, is much alike.

The colliers are chiefly Scotch, but there are likewise many north-country Englishmen. The Englishmen connected with the collieries form a marked contrast to the Scotch. They are much cleaner in their persons, more sober, more intelligent, more religious, more polite, and better informed. The houses of the Englishmen are remarkably clean and orderly.

With the mass, neither the pressing examples of wretched destitution in old age, nor of decrepitude from accident, or helplessness during sickness, or miserable mendicancy, in widowhood, or the frightful condition of destitute orphanage, has any effect in producing frugality or forethought. I have attended men dying under severe accidents, and on those occasions I have seen their wives in a state of intoxication. When the man has died, it has been the occasion of increased intoxication, with the certainty of impending destitution and severe suffering. I have had cases where the wife has injured the wounded husband by falling over him on

the bed when she has come in, in a state of intoxication. Where there has been forethought, it is my conviction that it has not arisen from any such warning, which, though abundant, is evidently lost upon the great mass, but it has been from early good training or education, such as is derived from respectable parentage. Where there has been respectability of conduct, there has generally been also respectable parentage. I have observed instances of very respectable men having superior minds, who have arisen out of bad families, but the contrary is the general rule. Neither religious instruction, as at present generally dispensed, nor school education alone will effectually remove, though they may diminish improvidence: it is early training and religious instruction carried home to the hearts of the population, that will eradicate vice. There is much book education amongst the children. Some of the collier children get a little instruction, but it is almost of no avail. All the instruction they get is neutralized when they return home; they see their parents tipple, and they, in a very short time, learn to tipple too; they see their parents quarrel furiously; they perhaps see their father beating the mother, and she, as is commonly the case, throwing things at him in return: they see all this, and in their turn the brothers and sisters practise the same.

With respect to Tranent, and indeed all the collier villages, saving Huntlaw and some parts of Prestonpans, I can speak with precision, having for about seven years been familiar with the condition of almost every family in these villages.

Anterior to the period of my settling in Tranent, I had, for some years, been in the habit of attending among the sick of the poor population of Edinburgh, and had thus opportunities of observing the destitution of that town. In giving an account, therefore, of Tranent, I have the advantage of having seen destitution elsewhere.

A very great amount of destitution of the proper means of subsistence exists in and around Tranent, amongst the collier and day-labouring population. I am prepared to say that I have seen destitution in as aggravated forms as I ever witnessed in the metropolis; and I am pretty sure that the proportion of those families suffering greater or less destitution, to those enjoying comfort and plenty, in Tranent, is ten times greater than the proportion of the poor to the rich in Edinburgh. A glance at the town bespeaks the misery of the majority of the inhabitants. The eye of the passing traveller is arrested by the squalid wretchedness of the place, and even daily observation does not altogether remove the painful impressions. The eye even of those who live in the village, and are familiarised with the aspect of filthy streets, impure precincts, drunken men, squalid women and children, seeks with delight the open fields still untainted by human wretchedness.

Those who experience the privations of destitution form a varied

body. Some are reduced by dissipation, some by laziness, some by old age, some by accidents, which have maimed them; some by disease incident to their employment; some by the loss of natural protectors, as the widow and the orphan; and others by the desertion of husbands and of fathers.

There are many old men and women, the latter being far more numerous, who are unable to work at remunerating employment, whose only regular means of subsistence are derived from the parish. This relief is usually a shilling per week; sometimes it is increased to one shilling and sixpence, and sometimes to two shillings. This is the only legal provision which is made for these people, and they supply themselves with a home and with food, in the best way they can. Such persons would inevitably die of starvation, or perish through exposure, did not benevolent persons, to whom their case is known, and neighbours, generally working people, assist them with money and food. The neighbours generally send a little food, and with other casual aid of this nature, the struggle against premature death is still maintained.

The children of day-labourers are much wanting in a sense of filial duty. They are in general unwilling to support their parents; often leave them, go to a distance, and are not again heard of.

It is quite common for collier lads who are the sole support of helpless parents to leave them without any intimation. I remember an old, infirm, and dying collier, who was so left. His son deserted him during the night. The poor man was ordered out of the house, but death, within a few days, arrived to the relief of the sufferer, before the order could be enforced.

The old men who are so situated are chiefly decayed day-labourers and journeymen tradesmen, few colliers living to old age; nor am I aware that any frugal habits on their part could possibly enable them to avoid comparative want in their old age.

The old women are the widows of colliers, day-labourers, and journeymen, and even of master tradespeople, unmarried women, who have been unable to save any part of their earnings, and, by reason of old age, unable now to provide for their subsistence.

There are many able-bodied women in Tranent who have lost their husbands by disease and violence. These are expected to support themselves. If they have children at tender years, a small allowance is made for them, and they remain with their mother. The allowance is perhaps about one shilling and sixpence per week for each child. The mothers of these children in general go to work in the collieries, in order to earn money to maintain themselves and children, for the allowance made by the parish for the children will not suffice for their maintenance. They may earn perhaps 8*s*. or 10*s*. a-week. The children are left at home, the elder taking charge of the younger, for which task they are often quite inadequate. Accidents are constantly befalling children thus neglected; and I have been called to several who were

severely scalded, and to others who have been so severely burnt as to die shortly afterwards. These poor children are kept in the most disgraceful state of filth, and, in short, run quite wild. Cats and dogs belonging to respectable people are incomparably more cleanly in their habits, and look infinitely more respectable.

Many families experience great privations even of the necessaries of life, in the following manner:—The father of a family, while yet comparatively a young man, becomes unfit to follow his occupation as a collier, in consequence of various diseases induced by the very unwholesome nature of his occupation, which in a great many instances brings on premature decay, and carries him to an early grave: or in consequence of serious bodily injury, inflicted upon him by machinery, the rending of ropes, the falling in of the roof of the pit, and various other accidents, so that he is no longer enabled to maintain himself and family. Many men are thus reduced by disease and accident; but so slender are their means of subsistence, and so urgent their distress, that many of them, even in this frail state, go out to the colliery, and do a little work. Some who do this are fitter for a workhouse than for the violent occupation of a collier. I have known men so situated suffer serious injury in consequence. I have known several people so situated work occasionally until within a day or two of their death, and I have little doubt that the lives of many are shortened in consequence.

When a collier is thus reduced I do not think he gets any relief from the parish unless he is very ill indeed. His chief support is a small sum which he derives from a benefit society, and this is continued for a time only. During the first few weeks he gets four or five shillings; the sum is then reduced, and I think it ceases altogether at the end of the year, that is, at the end of December. To have the benefit of this society he would require to join again; but he is prevented doing this, as none are admitted as members who are in bad health. When the allowance is withdrawn, the family becomes destitute indeed, and the case having become thus urgent, his wife leaves her domestic duties, her husband is left alone in a sick bed, to minister to his wants himself, the children, if they have been still kept at school, are taken from it, and the family goes down into the collieries to assist in procuring that subsistence which can be procured in no other manner.

These poor men generally die at an early age, and leave families totally unprovided for, and the privations consequent upon this event may be readily conceived from what has been already stated.

In order to show the early age at which colliers in general die, I shall here mention one of the results of a statistical inquiry which I made into the duration of life and into the diseases of the colliers. This inquiry was made among the colliers of Pencaitland colliery, and illustrates, in a particular and striking manner, the unwholesome nature of their occupation.

The houses inhabited by these colliers are situated in a healthy part of the country, on soil comparatively dry and well open to ventilation. The parish of Pencaitland, in the statistical account of Scotland, is said to be remarkable for longevity. The men belonging to this colliery form an exception to the great and general body of colliers, for they are remarkable for sobriety, cleanliness, and for a superior tone of mind; and they are therefore exempt from many sources of disease to which other colliers are particularly exposed, hence the manifest shortness of life must be greatly owing to the unwholesome nature of their occupation. The aggregate age of the male heads of 35 colliers' families is 1192 years, which gives the very low amount of 34 years only for each male head of a family. The ages of these people were derived from themselves.

By the same inquiry it appears, that a great many of these male heads of families are in bad health, suffer from difficulty of breathing, cough, with expectoration of a black colour resembling ink, and are affected with greater or less emaciation.

There is still another result connected with this, which, as it readily permits the formation of some idea of the sufferings of that respectable body of people, I will add likewise. In the 35 families already referred to, and taken without selection, there are no less than ten widows or nearly one in every three families. In that society where it is usual for one-third of the young families to be deprived of their fathers, and where in 35 families there are ten widows, there must be great suffering, and it can require no effort to suggest to the mind how much occasion there must be for some liberal and permanent relief to mitigate the sufferings of that people.

But so abject is poverty elsewhere, so importunate are the destitute and depraved in other quarters, that those people who are not thought to be in distress, have no exertions made in their behalf, and receive little or no parish assistance. I do not think more than five shillings per week of parish money are spent upon the whole of these 35 families.

I have not inquired into the duration of life among the colliers of other places, but I doubt not that the results would be even worse; for superadded to the unwholesomeness of the occupation, which is common more or less to all, are all the sources of disease incident to a course of dissipation the most complete it is possible to conceive.

The aggregate age of 35 male heads of farmer families living in and around Tranent, and taken without selection, amounts to 1715 years. It was impossible to ascertain precisely the age of each, but there is no doubt that, on the whole, the computation is correct.

The average age of each male head of farmer families is thus 51 years and 10 months. This affords a striking contrast with the duration of the life of colliers. This calculation was made

strictly in the manner in which the calculation of collier life was got up.

Destitution of another kind is experienced, to a very great extent in Tranent and the several villages in that district. This is the destitution produced by drunkenness, which throws its victim into privations as great and as destructive to health as those produced by absolute and unprovoked poverty. Drunkenness causes its votary to be deprived of the usual comforts of a home, which are so essential to health. He is deprived of the advantages of good clothing, and, on many occasions, of food to supply his wants. But the want of food is not so much experienced by him as it is by his hungry and unsatisfied children, who suffer that actual amount of destitution of the means of subsistence which is generally thought to be incident to poverty alone.

Many of the heads of collier families, male and female, are most abandoned drunkards, suffering in themselves degradation and many forms of disease, and plunging their miserable offspring into abject and hopeless destitution. Many of them get drunk daily, and remain in that condition for days together. This continuous intoxication takes place at all times throughout the year, and stops only when the funds or credit are brought to a close. Saturday night usually begins the orgies, which continue uninterrupted throughout Sunday and Monday, and often for the two next days. But the ordinary drunkenness is greatly increased in the beginning of the year. Work is in general dropped for a fortnight, and the whole time is spent in riot and debauchery. Many people, who are not in the habit of getting often intoxicated, indulge in a constant practice of "tippling," or drinking whiskey in quantities sufficient to excite, but not to intoxicate, which drains the pocket of the working man, and undermines his health.

The practice of drinking whiskey is begun at a very early age. Many mothers give their children toddy,—a compound of whiskey, warm water and sugar,—as soon as they are born. Toddy is, with collier women, a specific for "gripes," and indeed, for the great majority of children's diseases and complaints. Nothing is done without whiskey. The infant's head, the moment it is born, is washed with whiskey;—as soon as it begins to cry, toddy is poured down its throat. At weddings, births, christenings, deaths, and funerals, whiskey is present and indispensable.

Boys and girls acquire a taste for this deleterious agent when very young, and I have known boys about the age of ten or twelve years, in the habit of getting intoxicated occasionally. On extraordinary occasions, such as the "new year," "fair-day," it is common for boys still younger to get intoxicated. The practice thus early begun is not unobserved in old age. Old women, scarcely able to walk, drink whiskey till they cannot speak; and it is a melancholy fact that several old women have fallen into the fire in a state of intoxication, have been very seriously injured, and

have presented sights of the most appalling nature. I have seen old women, whom I have sent for whiskey to be used medicinally in their families, return in a state of intoxication, having themselves consumed the liquor. Young women also in a state of intoxication meet with such accidents: several young women were burnt to death during my residence in Tranent.

I have seen an infant in convulsions from the exhibition of whiskey by its mother. I have seen a man so convulsed, after the excessive use of whiskey, that he could not be secured from injury by violence, though restrained by several men besides myself. I have seen apoplexy so produced: I was lately called to a lodging-house in Tranent, to see a man who was dead. He had jumped into a cart when intoxicated, and when the cart reached Tranent it was found that he was dead. During the time I lived there, several children lost their lives by being overlaid by their parents when in a state of gross intoxication. A great deal of acute disease is produced by whiskey in Tranent. Inflammation of stomach and liver, spasms of stomach, and a variety of organic diseases are produced by this dreadful practice; life is shortened in many instances, and families are left without a protector. By this course of dissipation, all the evils of bad example are communicated to the young; that training of the offspring which is so essential to its welfare, and which it is the duty of parents to bestow, is, in a vast number of families, totally neglected, and the consequences, as might be expected, are dirty irregular habits of the children, which no after treatment can ever obviate or remove. With age these habits become confirmed, and the same example is continued from generation to generation.

Many of the young men assemble together, become disorderly, get addicted to whiskey and cock-fighting, quarrel among themselves, violate every moral law, break the Sabbath, and generally become profane. The girls are little better; in many instances they early lose their innocence, and become the mothers of natural children. I have known girls of sixteen years of age to be the mothers of natural children.

I have now shown that a great deal of febrile disease prevails in and around Tranent. I have pointed out many circumstances connected with the habitations, the structure of the houses, their internal economy, the occupations, condition, and habits of the working population, which must be favourable to the invasion of disease. I have shown the presence of vitiated air or malaria, the range of destitution, provoked and unprovoked, and it now devolves upon me to say what are the forms of disease which are wont to be produced by these morbific agencies.

I think these unwholesome circumstances, for the most part, act thus. They assist the rise and progress of continued fever; they induce many acute diseases of the stomach, lungs, and liver; but the chief mode in which they operate, is by inducing a general bad state of health. Perhaps for every *one* that

suffers *acute* disease *two* have their general health impaired. The forms of impaired health, which most commonly arise in those who are exposed to the operation of these unwholesome agencies, are irritable habit of body, pulmonary consumption, fistula, indigestion, or dyspepsia, general debility, often connected with organic alterations of the lungs, liver, spleen, and kidneys, bad and strumous habit of body, leading to psoas and lumbar abscess and disease of mesenteric glands. I do not think that any or all of the unwholesome circumstances which have been pointed out, produce all, or nearly all, the febrile diseases mentioned in the beginning of this Report as being prevalent in Tranent.

The febrile diseases there mentioned are continued fever, small-pox, scarlet fever, and measles. I do not believe that the small-pox is commonly produced by these or by any other known external agents, contagion by contact being always excepted. I never saw above one case of small-pox so connected in its origin with an external cause, as to induce the belief that any external circumstance had produced it. The only case connected in such a manner with an external agent, with which I am acquainted, came under my own care, and was published in my work, 'On the Propagation of Contagious Poisons through the Atmosphere.' A gravedigger broke open a coffin unexpectedly, effluvia of a very offensive character arose, he became ill immediately, went home, and, in due course of time, an eruption made its appearance, having the characters of the pustules of small-pox. The body emitting the effluvia had not died of small-pox. The constitution of the man seemed to have been poisoned, for the pustules never ripened, were flattish, and of a blackish tinge. This man died. There had been no small-pox case in the house before, and I never heard that any one of the family was seized with that disease after his death. I never knew of scarlet fever and measles being produced by external circumstances, except contagion by contact, although I am aware that they, and likewise small-pox, are frequently influenced in their course and in their termination by external and unwholesome agencies.

These three diseases belong to the class of diseases termed exanthemata, which is distinguished from all others by certain well-known features. They arise under circumstances indicating no constant or uniform connexion with external agencies; they attack in general only once in a lifetime; they are marked with eruptions of specific and uniform characters, and they have, but more particularly scarlet fever and measles, their favourite periods of life for attack, more than those diseases which depend entirely on external causes. These diseases arise when they are not expected, when no external circumstances can explain their occurrence; and no measures on our part, such as go to prevent other diseases, have the least effect in warding off or preventing the occurrence of these disorders. The only means by which immunity can be obtained is by inoculation or vaccina-

tion. These diseases are therefore very different in their origin and nature from most other diseases. They seem to arise from sources inherent in the system, apparently little influenced by external circumstances, perhaps for some wise purpose in obedience to laws as cogent as that which regulates our growth or decay. Fever makes an approach to these diseases in some of these respects: it seldom attacks the same person more than once, and few instances are known of persons suffering many attacks of this disease in its regular forms; it produces on many occasions an eruption of a defined and uniform character, and its course is marked with greater uniformity as to periods and length of duration than exists in diseases dependent on external circumstances alone. These facts induced Hildenbrand, of Vienna, some time ago, and Dr. Roupell, of this town, more recently, to maintain that continued fever is an exanthema, like small-pox, measles, and scarlet fever.

I cannot at present go the length of stating my belief that fever, in all its forms, is an exanthema. I am inclined to think that the fever of this country, in some of its more common forms at least, is an exanthema, or something very near it; and my reasons for this opinion are founded on those characters above referred to and so closely resembling the most prominent and remarkable features of the species of that class of disease. This opinion, founded on these facts, is further strengthened by a circumstance of which I have fully satisfied myself, viz. that the circumstances under which fever arises do not in general indicate such a uniform connexion between the origin and extension of the disease and unwholesome external agencies, as is almost invariably found, in relation to those which are positively known to arise from exposure to external circumstances. I know of cases of fever arising where there are no external circumstances to account for their occurrence, and I doubt not such cases are familiar to most medical practitioners. But while I maintain the accuracy of the above great general principle, I must confess, on the other hand, that there are occasions when there exists a manifest connexion between the prevalence of fever and unwholesome external agents, such as malaria or vitiated air and destitution,—a connexion not less certain and obvious than that which exists between attacks of inflammation and exposure to cold.

Those forms and cases of fever arising when there exist no appreciable unwholesome external agencies adequate to their production, I would consider as exanthematous, or partaking of the nature of an exanthema. Those forms and cases of fever occurring under exposure to unwholesome external circumstances, such as malaria and destitution, and seeming to depend upon these, may be regarded in two different points of view. They may be regarded in the same light as those diseases which depend absolutely or entirely on external circumstances, such as catarrhs, rheumatism, and the like, in short as accidental diseases. Or

if we can suppose that an exanthema may sometimes be affected in its developement by external causes, we may regard these cases and forms of fever as still exanthematous likewise, and as being produced by these external unwholesome agencies, acting as exciting causes on bodies having a disposition to this exanthema. I am not at present prepared to say which of these views is the most just. I am satisfied at present to state my belief, that fever in some forms is really an exanthema, and regulated by laws, if not quite, nearly the same as govern the origin and course of small pox, measles, and scarlet fever, and to state my decided opinion, that some cases and forms of fever occurring in this country are so intimately connected with unwholesome external agencies, such as vitiated air, destitution, and its attendants, that these cases and forms of fever would not have occurred at all, had these and like unwholesome agents not been in operation.

It has been remarked here that no efforts on our part, no precautions in respect to external unwholesome agencies, have hitherto been successful in extinguishing the exanthematous diseases, or even in protecting persons from their invasion (if inoculation be excepted), and it does not appear that any sanitary enactments will be more successful in time to come. Possibly in the lapse of ages these diseases will decline; a period will doubtless arrive when they will have a termination as certainly as there was a time when they had a beginning, but it appears to be beyond the reach of human penetration to fix upon that epoch, which may not, in all probability, arrive until a great internal revolution has been accomplished in our systems, or until an essential change has taken place in the nature of those things in whose sphere we exist—two possible contingencies over which human means cannot exercise the slightest control.

It has been shown above that fever, in some of its forms, partakes largely of some of the peculiarities and characteristics of the exanthematous diseases; and a question of great moment and immense practical relations now arises, viz., Does fever in these forms resemble these diseases in another character, and depend upon some innate and hitherto unexplored disposition in the system, acting by some internal law or laws of the constitution, for whose operation it is not essentialy necessary, as in respect to most other diseases, that there should be present external circumstances of an unwholesome character?

In respect to fever in those forms in which it most closely resembles the exanthemata, I think analogy and several facts connected with the history of fever warrant the supposition that this character is possessed by it also. The almost constant presence of fever among mankind, and its occasional violence and general extension, so like, in these respects, the career of small-pox and measles for many ages past, would almost seem to indicate that it is inseparable from our present situation.

I fear that fever in some of its forms—its more exanthematous

forms—depends upon sources within the system, and independent of external circumstances, even the presence of contagion. I fear further that no human means, no sanitary enactments, will extinguish fever in these forms, which I believe will continue to prevail more or less, in time to come, even where a pure atmosphere and abundance of wholesome food are supplied.

But while I consider that human precautions, that sanitary enactments, will fail in extinguishing fever in these forms, I am aware of the great truth, that sanitary enactments and precautions in respect to wholesome air, to the supply of food and the necessaries of life, to the better construction of the habitations of the poor, and the like, will, if fully carried into operation, effectually check the career of fever in all its other forms, and finally extinguish it. It is proved beyond doubt, that fever in these forms, numerous and frequent in occurrence as they are, depend upon certain unwholesome external circumstances; and our daily experience teaches, that with the removal of causes their effects cease.

I am not prepared at present to specify the proportions in which these different forms of fever prevail. I will only state my belief that the fever which prevails in this country among the comfortable rural population, and among the better classes inhabiting comfortable houses and inhaling a wholesome atmosphere, is chiefly of the exanthematous form, while the fever which prevails in the densely-populated towns of this country, among the lower and destitute classes inhabiting tenements in alleys, closes, lanes, and the like, having little ventilation and surrounded by a vitiated atmosphere, is, on the other hand, chiefly of that form, of that accidental form, which results from the operation of external causes, and which is capable of being prevented.

The distinction which I hope I have established is important, and will doubtless be useful in enabling us to form an opinion as to the amount of good which sanitary enactments may achieve. It will show that there certainly exists a large amount of fever which may be overtaken by sanitary measures; and by showing that there is an amount of fever, I hope small in proportion, which there is reason to fear will continue in spite of our best endeavours for its suppression, it will prevent a feeling of disappointment arising, if, after sanitary enactments have been in active operation, fever continues to prevail.

Disappointment will certainly arise if it be confidently expected that means for the abatement of vitiated air, for the relief of destitution, and the like, will be followed by the total disappearance of fever; for, doubtless, if fever in some of its forms be an exanthema, and arising exclusively through the operation of laws within the system, that disease will continue to appear from time to time possibly for ages, and certainly till a great change has taken place within the human system.

Such disappointment is hurtful, as it shakes the opinion of

many, and puts a powerful weapon into the hands of those who are opposed to the establishment of measures for the promotion of public health, and should certainly be avoided in future, by expecting not the entire extinction, but only the diminution and abatement, of fever, which of itself is a sufficient inducement for exertions, and a very great and very desirable result of sanitary precautions.

I think that the febrile diseases are produced by contagion much less frequently than is generally believed. I think it is possible for measles, scarlet fever, and the exanthematous forms of continued fever to be produced by contactual contagion, *i. e.*, by contact with a body or bodies labouring under these diseases. It is known that small-pox is communicable in this way. But I do not think that very many of the ordinary cases of these diseases are so produced. I am likewise convinced, notwithstanding the almost universal belief to the contrary, and a mass of evidence on the other side, that these diseases never arise, under ordinary circumstances, from atmospheric contagion, understood as an atmosphere holding in solution the specific contagious poisons of these diseases, and distinct from mere vitiated air, or air tainted with mere impurities, which I am aware not only often exists, but favours the rise and progress of fever and many other diseases. I have shown in my work on the propagation of contagious poisons that the virus of these diseases is not diffused in the atmosphere, at least under ordinary circumstances.

In the production of these exanthematous diseases, there is, as I have already said, some peculiar or specific force in operation, in addition to mere external unwholesome agencies. In a few cases the specific force is contactual contagion, but in the great proportion of cases there is no sufficient evidence of the operation of that agent in its contactual or any other external form. I am so convinced that the virus of these diseases does not act externally except in comparatively few cases, that I will continue to maintain this opinion, although I am here opposed by very eminent members of the profession. Perhaps, as I have already suggested, this force is some law of the system by which these morbid processes are set up; or perhaps it is possible that the viri may be present in our systems even in the fœtal state, and that they act, develope themselves, produce their respective diseases, and propagate themselves, only when circumstances concur to favour their activity. Worms it is known swarm in the bodies of some people when their health is out of order—when, in short, the condition of the body favours the developement and growth of these parasites. These worms are peculiar to the animal machine: they are not earth-worms, neither do they live in vegetable structure: it would appear that neither these animals nor their ova are introduced into the system from without, but that they belong to it; and it is pretty clear that if they belong to it, their ova must have been present in our systems anterior to the period of

our birth; and if the ova of worms may be so present, it will appear perhaps possible that the virus or the minute germs of the viri of the exanthematous diseases may have been present there likewise. Scrofula, gout, consumption, mental derangement, peculiar dispositions of mind and body have descended from parent to offspring, and the seeds of these diseases and dispositions could only have been received anterior to birth. Without some such explanation as this, it is utterly impossible to account for the primary causes of the exanthematous diseases.

The most eminent physicians think that the ordinary range of contagion is very limited, not exceeding a few feet. How then can we explain the occurrence of these exanthemata at sea, thousands of miles from land, or in remote districts having little or no intercourse with other parts of the world? As evidence of the possibility of contagious virus remaing long dormant in the system, I shall here mention a very extraordinary case. A child, when about six months old, was repeatedly vaccinated, but in vain. When this person was about the age of five years, vaccine vesicles formed on the spot where he had been vaccinated. This case excited great interest in the part of the country where it happened; and many well informed people were satisfied of the vesicles being those of cow-pox. I have examined the arm of this person, and the cicatrices are very complete. Small-pox prevailed in the family lately, and he was almost the only member who escaped.

I could adduce much evidence in support of this opinion, but perhaps it would be out of place in a Report of this nature.

It has been shown above, that the excessive drunkenness which exists in Tranent and the neighbourhood, among the labouring population, is the frightful source of much immediate disease and of destitution, with its usual attendants. The abatement of this vice is therefore most desirable, and indeed so much is it connected with the origin of destitution, that there is great reason to fear, unless it can be checked, that every means which wisdom and philanthropy may suggest for the relief of destitution will prove almost useless, in a great many instances at least.

The abatement and suppression of this vice has, I regret to say, met with much less attention than its importance demands Comparatively little is done in and around Tranent for the abatement of the evil. It can scarcely be said to be generally discouraged, for many of the most abandoned of the population never come in contact with those who are qualified to reprove. They do not go to church, neither are they visited by respectable people. Even where there is an infraction of the peace, it frequently happens that no interference is made, and I have known tumults and assaults to take place among drunken people, both in and out of doors, and no cognizance of them has been taken by the authorities. Scenes of the most open and disgraceful drunkenness among persons of both sexes are of constant occur-

rence in Tranent, and I have frequently seen men and women fighting in the public streets, and desisting only after they had been completely worn out or had been severely wounded; and on these occasions no interference was made by persons in authority. Such scenes as these are common even on the sabbath.

There is a regular constable in Tranent, but he is quite inadequate for the maintenance of the peace. The present person is superior to those who preceded him, who, I believe, were frightened to be seen on those occasions, and avoided them. The colliers and others stand in no awe of the law. They engage with the utmost fury, totally regardless of the consequences, knowing them in general to be but trifling, in as far at least as punishment is concerned. I have seen some most extensive and dangerous wounds produced by striking with the fist, by kicking and by various instruments, even by knives, and many have not even been noticed by the constable. Wounds and blows are so common and general that the constable on many occasions is not informed of their occurrence. Husbands beat and kick their wives in the most brutal manner, to the great danger of their lives, and no information is conveyed to the constable. On some occasions, however, the constable is informed, and if the case seems to him sufficiently important, he reports it to the sheriff, who may or may not cause an investigation to be made. In many cases where serious wounds have been perpetrated, and where punishment would be both well-merited and likewise useful, no trial takes place, and no punishment is awarded. In proof of this I will add the following case, which I believe I myself reported to the authorities at Haddington. A very dissipated young man, a butcher, in a state of intoxication or excitement, pursued his brother with a butcher's knife in his hand, threatening to kill him. The result was a wound of the arm of the person pursued. The wound involved all the soft parts of the arm, integuments, muscles, arteries; in short everything down to the very bones. The person lost a great deal of blood, life was endangered, and it became a question whether or not amputation would be necessary. No investigation took place in this case, further than that made by the constable.

Women in a state of intoxication, which will scarcely permit of their standing, rail and scold for hours in the public streets, and no interference is made.

For many years it was the almost daily practice of a man in Tranent, in a state of gross intoxication, while standing at his door or sitting on the outside of the window-sill, to curse and blaspheme for hours together. He used to vociferate to his wife and daughters the most indecent and obscene language, such as might well shock even the most profligate. I never heard of any attempt being made to put down this nuisance.

It would be difficult to describe the scenes of drunkenness and violence which prevail in Tranent; but I will here mention that

were a person to walk round the town on Saturday night, or any time on Sunday, the probability is, that he would hear the sounds of discord, and the vociferations of persons struggling, proceeding from ten or twenty houses. In a table prepared by Mr. List, Superintendent of Police, and published in the Statistical Account of Scotland, there appear only three cases of conviction for drunkenness and riot, for the borough and county of Haddington, for one entire year, I believe 1836.

I think it is very desirable that the law should interfere and punish the more gross cases of drunkenness, perhaps by solitary confinement. It should, perhaps, be made punishable for persons to be seen drunk in the streets, so as to be a nuisance to the public, and severe chastisement should be devised for those savages who maltreat their wives and families. Until some steps of this kind are adopted, I fear drunkenness will continue to run riot in Tranent, more particularly among the older and more hardened offenders; destitution in its most squalid forms will meet the eye, and multiply disease around, even though more ample legal provision were made for the poor, though soup kitchens were erected in every house, and fever hospitals in every corner.

Many persons in and around Tranent think that the Temperance Societies are calculated to abate this evil, and many individuals have taken the pledge. I am not, however, sanguine in expectations of very great good from this source, for I have observed that those who stand in most need of this check are the last to avail themselves of it, and because many who do take it disjoin themselves from the society, being unable to resist temptation and longer. I think it is right, however, to mention that several most abandoned characters have been reclaimed by the abstinence scheme, and are now respectable members of society; and I may here express my disapprobation of the discouragements which the laudable endeavours of the humbler classes, in furtherance of sobriety, have met with, from those placed above them, and my sense of the injustice of persons in authority watching the movements of honest people, engaged in most laudable pursuits, as they would the manœuvres of designing and wicked characters bent on the violation of the law. The secession clergyman has taken a great interest in the Temperance Society of Tranent, as well as in other projects of an useful tendency.

The relief of destitution in and around Tranent, derived from several different sources, is very incomplete and inadequate. The chief source of relief is the parish, which supplies pecuniary aid to the most destitute of the poor. The funds made available are derived chiefly from two sources; viz., the assessment on the land and houses, and the voluntary contributions collected at the church doors on Sundays. The annual amount of relief given to the poor in the parish of Tranent is about 450*l.*, and of this 15*l.* are collected at the church doors; but the amount given to each person is generally only 1*s.* per week, sometimes as much as

1*s.* 6*d.*; and I rather think on some occasions the allowance is still greater, amounting to 2*s.*, or even a little more. I observe in the Report of the General Assembly on the Poor, that the lowest rate at Tranent is 1*l.* 6*s.* per annum. The number of poor to whom relief is given in Tranent amounts to between 100 and 110. These are chiefly old men and women, who are unable to provide for themselves, and helpless children, who have been deprived of their parents. There is, I believe, some difficulty for poor and deserving people to get their names upon the poor roll of Tranent. Applications for relief are considered only twice in the year, at Whitsunday and Martinmas. Great privation is sometimes experienced by deserving people before their applications can be attended to. Larger collections would be made at the church doors for the poor, did there not exist a general feeling that these go merely to diminish the expenses of the heritors.

The funds expended on the relief of the poor of Tranent and other parishes are not derived from the assessment of the heritors, or from the plates of the parish church only. They are likewise derived from the sale of the goods and furniture of the paupers, at their death. It sometimes happens that the sale brings more money to the parish than has been given by it to the deceased pauper. I understand an attempt is now making, or has been lately made, in the parish of Tranent, as well as elsewhere, to appropriate for parish purposes the collections at the extension church, given for the purpose of defraying the minister's stipend, &c.

Destitute children, who have lost their parents, or have been deserted, are placed by the parish with private persons. The allowance is very trifling; not more than will afford the child the scantiest sustenance. I have known several so placed. They were in general sickly, and looked withered as it were. I have good reason to believe that the children were in general ill attended to. The women usually entrusted with their care did not bear the best character for such a trust.

I do not think it is usual to provide education for all the children who are in destitute circumstances, or even for the orphans who are upon the parish list. I rather think that for the majority of such children no education whatever is provided. I perceive by the Report of the General Assembly that only three children are educated at the expense of the parish of Tranent. I have known many destitute children spend their days in begging from house to house, who might have been saved from ruin, and might have become respectable members of society, by means of proper and efficient education. I could give many instances in illustration of the above positions, but the following case will give some idea of the training and care bestowed upon orphans chargeable to the parish:

Some years ago, perhaps five or six, a collier of the name of

Banks or Boulks was poisoned by his wife: the wife was tried at Edinburgh, found guilty and hanged. Three children were thus orphanized—two girls and a boy. I do not remember their exact ages at the time, but I presume they ranged from eight to twelve or fourteen years. They were chargeable to the parish of Tranent, and were placed with their uncle, who kept a common lodging-house in that village, frequented by the very lowest of society. The two oldest children got employment in a colliery, and the youngest, a girl, spent her time as a common vagrant about Tranent and the neighbouring parts. In that lodging-house, scenes the most destructive to innocence were constantly to be witnessed; and I have constantly had occasion to see humanity in that house in its lowest and most horrid phases.

A pious lady tried to educate the youngest child, but it was in vain, as she preferred a roving life, not a little on account of her good success in begging; for it was common for her to return home. in the after part of the day, literally loaded with victuals, so much so, that she proved, no doubt, very useful to the household generally. If children so situated do not become vicious and abandoned, it will not be from the want of an atmosphere fitted for the growth of depravity. Vice in children so situated must be a sickly plant, indeed, that will not flourish in such a hotbed—a feeble root indeed, that will not strike in such a soil. When children so placed become vicious and commit crime, it occurs to me that they are themselves less to blame than those who possess the power to amend their condition, but neglect to exercise it.

At Martinmas, 1835, there were on the poor roll of Tranent 110 names. If we divide the sum of 450*l.* paid to the poor, we shall find that the average amount which falls to each name is 1*s.* 6¾*d.* per week. But the names do not represent single individuals only, but single individuals and families. It is to be presumed, from 57 of these persons being widows, that there were also children. In one case the name represents four orphans. When this is taken into consideration, it will appear that the sum of 450*l.* is divided not among 110 only, but among many more. I am unable, from want of data, to ascertain the exact average amount of relief given to each; but I dare say, including lunatics, &c., it does not exceed 9*d.* per week. It is probably much less.

In addition to the parochial aid which is afforded by the parish of Tranent, a great deal of private charity is dispensed. Almost all who are in comfortable circumstances, even the working people, afford some relief daily to the numerous beggars who crowd the doors. Assistance is given to those who are thought to be deserving rather than to others; but I have no doubt the assistance afforded daily to improper and worthless characters is very considerable. Money, or clothes, are the only forms of assistance the worthless desire. Bread or the like are often cast away or refused. Money is soon exchanged for whiskey. This assist-

ance by money and clothes in general does harm; intoxication and quarrelling are the common results.

There are very few families of wealth around Tranent. One wealthy family is very charitable to the poor. Numbers of poor people go to the house daily, and I believe few return without aid of some kind or other. Almost all people in Tranent who are in more than ordinary want seek assistance from that family. The head of this family is not the chief heritor in the parish, yet I am pretty sure the amount of charity dispensed by him is greater than that of the aggregate charities for the parish of all the other heritors. Several of the heritors are non-resident. The consequence is that a great deal more than his own proportion of the necessary assistance falls to be disbursed by one heritor, who, in short, dispenses aid which should be afforded by others. The family alluded to proves a great blessing to Tranent, and many of my patients have received wine, linen, butcher's meat, and money, which could not have been easily obtained elsewhere. I have recommended many to that family for assistance, and in no instance was aid withheld.

There are also several benevolent individuals, not heritors, in and around Tranent. These assist with money, food, and clothes where there is an assurance of the worthiness of the object.

For several winters past a soup kitchen has been established in Tranent for the relief of the poor, and has proved most beneficial, more especially when, in consequence of snow being upon the ground, many families were thrown out of employment.

This form of relief has in general been promoted by active and benevolent people in the village, and the expenses defrayed by contributions voluntarily made by the heritors, and by the better classes. On all occasions the door of the kitchen has been crowded with persons desiring to be supplied, and the allowance of soup has been uniformly received with great thankfulness.

A collection is made once a year at the church, for the purpose of purchasing a supply of coals for distribution among the poor. Almost all the members of the congregation assist, and I believe the heritors in general contribute for this purpose. The farmers in the neighbourhood cart the coals to the houses of the poor free of expense. The allowance to each family is about a ton.

There is in Tranent an institution called Steill's Hospital. It was endowed by a person of the name of Steill. He left property for this purpose amounting to 900*l.* per annum. The object of this charity was, I believe, to maintain and educate poor children belonging to the parish of Tranent. The number of inmates does not exceed ten; viz., eight boys and two girls. Connected with this institution is a day school, attended by about 140 children. Some of the inmates are the children of people in pretty good circumstances, and many of the day scholars are the children of respectable labourers and hinds: few collier children attend.

The account which I have just given of the means at present in use for the relief of destitution in Tranent parish includes everything of importance that occurs to me. In many parishes in East Lothian there is no assessment for the relief of the poor, and in some the allowance made to the poor is extremely small, so low as a few shillings in the quarter. In those parishes where there are few resident gentry and farmers, the privations of the poor are extreme. It generally happens that the clergyman endeavours to procure relief from the parish, but he seldom ventures to propose more than a shilling per week. The heritors would not listen, in general, to propositions for a larger sum.

By the account which I have given of the destitution among the labouring population, and more especially that great portion of it produced by contingencies incident to society at large, by casualties attendant upon their pursuits, and to diseases provoked by the unwholesome nature of their occupation, an opinion may be formed as to the necessary amount of relief. The amount of relief required may now be compared with the amount of relief given. The amount of relief given in the parish of Tranent is very great, and perhaps equals, on the whole, the amount which is required. But notwithstanding this, I maintain that the relief is neither so uniform nor so appropriated as to overtake all, or anything near all, that destitution which it is the duty of Christians to provide against.

The relief, being spread over an immense multitude, is given to persons totally undeserving. Being distributed, moreover, in such a casual and desultory manner, it proves a sufficient and uniform subsistence to none, while it affords to many just sufficient to make them less dependent on their own steady and persevering industry, and thus gives an opportunity of indulging in occasional fits of dissipation. The same amount of charity which is at present administered, and which fails to supply anything like that comfortable subsistence to which the old, the helpless, the diseased, and maimed are surely entitled, and much of which is lavished upon importunate, abandoned, and able-bodied vagrants, would, if collected and distributed upon proper principles, provide a comfortable home for the really deserving poor, and afford security against starvation at all times and at all seasons, such as should exist in a great and Christian land like Scotland. But it would be necessary to prevent the infamous from rioting, as they do at present, on the funds which should be appropriated for the purpose of relieving the truly destitute and deserving.

In order to make the relief, which is at present afforded partly by assessment and partly by voluntary aid, overtake the whole exigencies of the parish, it would be necessary, in the first place, to make the burden uniform and regular, and this would be best done, I presume, by an assessment. I cannot believe that the great body of the parishioners would be opposed to a plan which would provide comfortably for the poor at no more expense than

they are subject to at present. I am aware that an assessment for any purpose whatever, however excellent, would be most unpalatable to some people; to such for instance (and undoubtedly there are some) as afford no private relief, at present, under any circumstances. An assessment would not prove to them a substitution of one tax for another, as it would to the more charitable, but it would be an imposition of a tax where there was no tax before. Such people would, doubtless, oppose themselves to any imposition of burdens, but in a case like the present the urgent claims of many destitute and helpless beings should be listened to, rather than the interested opposition of avarice and illiberality.

In those parishes where no assessment is made at present, it becomes a question whether any such should be made. It is the opinion of the heritors of these parishes that no such assessment should be made, and I am aware that in this opinion they are joined by some of the clergymen of the parishes. But I do not think that the opinion of the heritors is entitled to exclusive consideration; they are interested parties, and I do not perceive why in this case persons should be the sole judges, or judges at all, where their own interest and funds are involved, and why the principle which provides against such a contingency should be departed from on this occasion. People at large are not permitted to fix the amount and number of the taxes they shall pay. These taxes are imposed for state purposes, and it would never answer to leave them to the impartiality and liberality of the community. The provision for the poor is, or assuredly ought to be, a state object, and as such ought to be provided for by the state, which, of course, is not subject to the petty influences and motives likely to actuate the heritors upon whom the burden directly falls. As British subjects the poor have had duties to perform to the state—they have paid directly and indirectly towards the maintenance of the state—they are liable to be called upon by the state to defend the country from invasion by foreign foes, to protect against internal aggression, to fill her armies, and to man her navies. He who refuses to serve his country when the call is made by the state, he who deserts her standard, is liable to punishment, and surely it is only right and proper that the state in return should see to his provision should destitution overtake him, and not leave that vital measure to the consideration of partial judges, and make his subsistence—his very life bread, dependent upon the uncertain liberality of those from whose pockets that provision is to be made.

I will here give two cases which will well illustrate the evil operation of the present system in these parishes, and prove at once the solicitude which some landlords entertain for the well-being of the labourers on their estates, and show how highly desirable it is that relief for a destitution which never ceases, should be made to rest upon something more uniform and constant than the good-will and liberality of landed proprietors.

In a parish in the east of Scotland where no assessment is levied for the relief of the poor, the exigencies became greater than the collections at the church could meet. The parish clerk, by order of the clergyman, wrote to one of the heritors, to request the contribution of 1*l.* sterling towards meeting the surplus destitution, mentioning that if this were acceded to, the clergyman would go on without requesting an assessment. The heritor wrote in answer that he was highly pleased to understand the clergyman proposed avoiding an assessment, and promised the contribution of 1*l.*, specifying, however, that it was not to be considered an annual donation. This was about two years ago, and although applied to again for this pittance, the 1*l.* had not been received by the parish authorities three weeks ago. This heritor draws large sums annually from the parish in question, and is non-resident.

In another parish in the east of Scotland, likewise, the same circumstances occurred. The clergyman himself wrote to the heritors requesting a contribution, and among others to a very wealthy individual. This person made no reply. Another letter was despatched requesting a contribution: no answer was granted. The other heritors who approved of the minister's request, and were willing to grant the desired contribution, were displeased with this inattention. A meeting of the heritors was summoned for the purpose of assessing, but the heritor who had not found it convenient to answer the letters respecting the contribution, made it convenient to attend the meeting in order to oppose an assessment. He offered the contribution which had been solicited, but the other heritors were so offended with his conduct, that they opposed his wishes, and actually levied an assessment. It is, however, only just to state, that the heritors of Scotland, as a body, are much interested in the poor.

Besides the open destitution which readily meets the eye, there is another form of privation which is less obtrusive, and is borne in silence by a most deserving and respectable class of individuals. These people have in general been well doing and industrious farm servants. They have sufficient pride left to make them reluctant to seek, perhaps in vain, the miserable pittance allowed by the parish, to make them unwilling to undergo the scrutiny of the parish clerk, perchance to be thought and treated as impostors, and all for the chance of getting 1*s.* per week.

I would regard it as one of the greatest blessings which could be conferred on Scotland, could a system of better regulated, more uniform, and more liberal parochial relief be adopted. Could some such system as exists in England be adopted, I am sure a world of destitution would be relieved, many respectable old people, at present in the deptn of privation, would pass the remainder of their days in comparative comfort, and children, instead of becoming vicious, and totally abandoned as at present, would be likely to turn out well, and to become respectable and

useful members of society. Such a system would put down vagrancy and public begging, by which thousands of infamous and profligate characters riot in dissipation and actual extravagance, upon the means which would go a great way to bless the country with the happy results of a sufficient and well-regulated legal provision for the poor.

I am not prepared to say precisely on what principle this legal provision should be made, but I shall here state, that if the same amount of comfort and comparative plenty as exists among the labouring population of England could be afforded—if as great a freedom from open wretchedness in the public streets of the great towns could be secured—if asylums could be formed for the aged, the sick, the destitute, the insane, as throughout England—if a check could be put, as in England, to public begging, an evil which multiplies with exertions for its relief—if all or most of these great ends could be obtained in Scotland by the introduction of a system of poor-laws, such as exists in England, it is highly desirable that some such system be soon introduced into Scotland, to be added to the number of those noble institutions of that land whose boast and glory it is that she possesses a legal provision for the education and religious instruction of her children—of that land which does not leave to voluntary exertions the education of her children, and the maintenance of her church. Let it soon be her boast, likewise, to have a legal provision for her poor, and let her no longer trust to voluntary exertions for the subsistence of the destitute portion of her population.

There are six classes of persons for whom it is desirable to provide charitable assistance, and for whose comfortable maintenance and well-being the present means in use are totally inadequate. These classes are :—

1st. Children at tender years, who by reason of the gross and abandoned drunkenness of their parents, are almost totally neglected and denied the proper and regular means of subsistence.

2nd. Children who have lost their fathers, and for whose subsistence the mothers are compelled to work out of doors, and to neglect their families.

3rd. Children who have lost both father and mother, and who are yet unable to earn a subsistence.

4th. Those comparatively young men and women, who by reason of disease and accidents incident to their occupation, &c., are unable to follow their usual employment.

5th. Old persons, who by reason of old age and its attendant infirmities, are unable to earn a subsistence.

6th. Maniacs, and idiots for whose provision relatives are unable to provide.

With respect to the treatment of persons comprised in the 1st class, I shall make a few remarks. These unfortunate persons under the present system are not regarded as objects of destitution. But this is a great mistake; for the poor creatures, although

living with their parents, suffer the most complete destitution that can possibly exist. They suffer destitution, not merely of domestic comfort—not merely of the proper means of subsistence, but what is worse, they are exposed to destitution of all moral and religious instruction, and are placed in an atmosphere calculated to poison every good principle that nature in her unassisted efforts may put forth. Their unfortunate position calls loudly for some interference, in order to remove them beyond the range of influences of the most noxious character. It is unreasonable to expect that children, who are inured to the want of comforts readily granted to the horses and dogs of the better classes, will grow up with a taste for cleanliness and order; it is unreasonable to expect that children who see their parents oftener drunk than sober, will cherish a taste for sobriety. Or is it to be expected that children, who see their parents pilfer, will respect the property of others? that hearing their parents curse and blaspheme, they will not also become profane? that seeing their parents pursue their wicked courses, altogether regardless of consequences to health and future comfort, they will cherish wholesome and provident habits? that children, in short, who see their parents openly violating the laws of God and man, can possibly become good members of society, good husbands, good wives, and good parents? To expect such results in such situations, would be vain. It would be to disregard the experience of all times and all nations. Degradation, vice, and crime are as surely the results of exposure to such influences, as the melting of gold and silver is the result of placing these metals in the furnace.

Some of these children never get any kind of education. Three children are educated at the expense of the parish of Tranent. Some it is true are sent to school, but the system of education pursued there is altogether inadequate to secure the growth of good principles. They may acquire a knowledge of the alphabet, and perhaps learn to read; but they return home in the after part of the day, and have set before them lessons of immorality, drunkenness, and brutality—such as are well calculated to make an impression on the mind, coming before their eyes, as they do, in a practical form, and almost inculcated by those whose example they are wont on all occasions to follow. There is little encouragement to expect that the sands of the shore, which have become dry by the receding of the tide, will remain dry when the sea shall have again washed over them; and there is as little encouragement to expect that the few and faint wholesome impressions made upon the minds of children every day at school will be continued, and influence their minds and conduct, when they, like the sands of the shore, shall have become again immersed in the tide, not indeed of water, but of that profligacy at home which is sure to ingulf them.

I would earnestly recommend the consideration of a scheme by which these children should be taken from the unnatural parents,

and removed to a situation where their education might be conducted, so as to become a permanent blessing, rather than an useless mockery, as it is in many cases at present. Some such scheme would, doubtless, save from perdition thousands of human beings, would greatly diminish crime, poverty, destitution, disease, and even death itself.

With respect to individuals of the second class, I would recommend, where the mother is a respectable and sober person, that the child should be left in her charge; that a sufficient allowance should be made to support the child, and that the mother should be provided with some employment at home, by which she might be enabled to provide, either in whole or in part, for her maintenance. But where the mother is drunken, children so situated should be put under other management, perhaps in a workhouse.

Children belonging to the third class, including those already mentioned as being ill attended to, should be put under judicious management, either in private houses or in workhouses.

Persons who by reason of old age are in destitute circumstances, might be treated in two different ways. They might be allowed a proper and reasonable sum for their maintenance in their own houses; but this sum would require to be very considerably greater than is given at present. This plan would suit respectable people, who would not disabuse their liberty or their means, and it would be more agreeable to them in general. But for the dissipated and worthless, a workhouse should be provided, and likewise for those who have no friends to take care of them.

For persons belonging to the fifth class, some provision is certainly due: they have claims for relief sanctioned by the Bible. They have become disabled in employments essential to the existence and comfort of their countrymen; and surely those persons who suffer bodily injury in providing essential comforts for their countrymen, are not less deserving of assistance than the soldier who gets wounded in fighting the battles of his country. A great number of persons in and around Tranent are unfit to follow their usual occupation on account of bodily injuries by accidents, and of disease caused by their occupation.

These might be placed in a workhouse, and made to work at some light and easy occupation. Although unable to follow their original avocation, many of them are able for some more gentle and easy employment; and in this way they might defray all, or nearly all, the expense of their maintenance. Where workhouses cannot be established, and where there is a great reluctance to enter them, perhaps a moderate allowance of money might be made, in order to assist the pauper's efforts for subsistence.

In and around Tranent there are many insane persons. There are about twenty idiots in the parish of Tranent. The relatives of many of these are very unable to provide for their subsistence. I

do not think that any assistance is given by the parish towards their maintenance.

Deranged persons, who are dangerous to themselves and others, should be provided for, and put under restraint. Two individuals are thus provided for by the parish of Tranent. But I know of one person who is not thus provided for: she is a young woman; she lives with her mother, an old widow. She is very furious; is confined in a dark closet; I believe she is completely naked; has no bed, save a little straw, and has no bed clothes. She roars like a wild beast; I have heard her; she tears everything that comes in her way. She tore with her teeth a strait-waistcoat in which she was once restrained. She lives like a hog; and her dark closet is cleaned out during the night that the neighbours may not be horrified by the sight. The parish authorities have failed to send this person to an asylum, although solicited by the mother, a poor but most respectable person. The heritors, I believe, allow 2*s.* 6*d.* per week for the maintenance of this object.

The result of the education in the parish of Tranent proves that the present system is very inadequate for the purposes of education, viz., the enabling man the better to discharge those duties which are the chief end of his creation, and while in his mortal situation, to discharge his duties to his neighbour and himself.

An attentive consideration of the situation of the population of Tranent and many other places similarly situated, has led to the conviction on my part that the improvement of the intellect and the acquisition of worldly knowledge are of themselves inadequate to achieve the ends of education, and that for these objects to be useful to any very considerable extent, there must be conjoined some tuition of the heart,—some effort to impress on the juvenile mind a deep and ever actuating obligation to serve God. Examples of the failure of mere literary education, such as is given in the schools of Tranent, are not wanting. The experience of one of the principal institutions in Edinburgh attests this statement. The best education of the kind was given in that institution, but it nevertheless appeared that many, nay a large proportion, of the young men who left did not do well. On the contrary, I have heard it said by persons qualified to judge on the question, that they would have made better members of society had they been brought up under the superintendence of their honest though poor parents. In this school exclusive attention was directed to the cultivation of the intellect, and the consequence was, that the boys, from a want of general training and cultivation of the heart, were remarkable for rudeness, insolence, want of respect, and of that forbearance which is so essential to our happy intercourse with the world.

A reformation has taken place in this school. More attention has been paid to training, &c., and the youths now become better

apprentices, and more respectable and more flourishing members of the community.

I have examined some of the schools around London for the education and training of pauper children, and I confess it to be my opinion that the system pursued in these schools must give a child advantages of the last importance, which are not at all obtained in the schools of Tranent, and that they are much more likely to form good habits from the latter. I have examined the School of Industry at Norwood for pauper children, and likewise the school at Little Chelsea in connexion with the workhouse of St. George's Hanover Square, and I consider them to be most admirable institutions. The children at these schools were on the whole much cleaner than the children in the parish-schools of Tranent. The girls particularly struck my attention. Their clothes were clean, in good repair, their heads in good order, no vermin, and no skin diseases so common in Scotland. They are taught to be industrious and useful. I saw them reading aloud religious books, washing, ironing, and engaged in various useful pursuits. At Little Chelsea, the boys were under very correct but not oppressive discipline; they were acquainted with their Bibles in a remarkable degree; they knew their catechism most correctly. I heard them sing in good time several sacred tunes in which their hearts appeared to sympathise. They were respectful and attentive to a degree I never saw approached in any of the schools in or around Tranent.

Such schools as these would prove decided blessings to a population such as that of Tranent. Were they in operation there, I feel assured there would be less drunkenness, wretchedness, and suffering. I think they would entirely change the face of society.

If such schools could not be established in situations like Tranent, it would perhaps be advisable to graft upon the present establishments the general training and other features of the schools I have examined here.

On account of the closeness, filth, and many other obvious circumstances connected with the habitations of the poor, and on account of the want of proper attendance and many necessaries, it would be very desirable to establish hospitals in East Lothian for fever and small-pox cases, &c. The extension of these diseases seems, on many occasions, to be much favoured by those in health living and sleeping with those ill of these complaints, and on this account likewise such hospitals would be very useful. There might be separate wards for the two different diseases. I have seen the greatest inconvenience arise from the want of an hospital for the reception of such cases. Persons so afflicted have been deserted by their relatives, and left to struggle with disease and with want; and notwithstanding great exertions on my part to procure attendance, none has been obtained.

I think a small hospital might be provided in Tranent at very little expense, and if properly conducted, I have no doubt persons

afflicted with fevers and small-pox would readily avail themselves of it.

There existed great objections to entering the hospital at Tranent, which was established for the reception of cholera patients; but I have heard enough of the management of that institution, both by the nurses and others, to account for that; and I have no doubt whatever, if incompetent medical men and unqualified nurses are placed in charge of any fever hospital which may be established, that like objections will again arise, and interfere with its beneficial operation. If such an hospital be established, and most sincerely do I hope that this may be the case, I would respectfully submit that Dr. Young, my successor, is well qualified for its medical charge.

I think it would likewise be well to establish a fever hospital in Haddington and Dunbar.

It would be very desirable to establish a system of thorough cleansing and whitewashing the habitations of the poor. These processes should be performed at least once in the half-year; and as the poor themselves are in general too indifferent to attend to this matter, the cleansing and whitewashing should be done by persons authorized for the purpose, or to the satisfaction of competent judges.

A great step towards improving the physical condition of the working classes, towards improving their habits and health, would be attained by a sufficient supply of pure water being secured in the different villages around Tranent. Water should be supplied in the villages for the use of the inhabitants wherever that is practicable.

The health of Tranent and the neighbouring villages would be much promoted by the establishment of an efficient body of scavengers. Their services would be much prized by all the better classes.

Lodging-houses for vagrants and trampers should be placed under some regulations, in order to prevent the undue crowding of many persons together, and to secure cleanliness as far as that is practicable.

Drains should be made in all the villages of East Lothian, and covered in such a manner as to confine effluvia. Water-courses, where they exist, should be improved; and where none exist, they should be formed.

In addition to such regulations as those to which I have above alluded, I am of opinion that there exist many circumstances and practices in connexion with the labouring population of Tranent and the neighbouring country, which, though they cannot be said to be productive of febrile disease, yet as leading to vice and destitution—as leading to bodily sufferings, to disease, and the loss of life, are fitting subjects for remark in a report of this nature.

There exist in Tranent parish many public-houses, forty in number, to which great numbers of the dissipated of both sexes resort, at almost all hours. Some of these houses are very dis-

orderly, and admit boys of comparatively tender years. There are twenty-six public-houses in the village of Tranent, and I do not think there are more than six bakers' shops. People are encouraged to frequent these houses; and it was not unusual, when no money could be obtained by the keepers of these public-houses from their customers, for him to receive clothes and furniture in payment. For practices of this nature it appears desirable that some remedy should be devised. I have heard that the value of the whiskey supplied every week to the parish of Tranent by one distillery in the neighbourhood, is about 100*l.* sterling.

There exists in many collieries foul air, in greater or lesser quantity, which proves the source of considerable danger to life, and of disease among the colliers. This is chiefly carbonic acid gas, which will not support respiration. On one occasion, about four years ago, several men were nearly suffocated in Penston colliery; and during the past spring, so great was the amount of noxious gas in another colliery, that a considerable proportion of the men applied to me for the relief of disease produced by that agent. They complained of pain of chest, difficulty of breathing and cough, and in some instances partial inflammation supervened. I think these ailments on the whole are very much calculated to shorten life. The colliers informed me at the time that a candle would sometimes not burn where and when they were working; and they thought it possible that some means might be devised in the way of more thorough ventilation for the abatement of the evil. The employer of these people is a most kind and liberal gentleman, and is most desirous of promoting the welfare of his workmen.

Perhaps it would be possible to devise some measures for the abatement of this evil.

It would be very desirable that some provision were made for excluding stone and coal dust from the lungs of miners. I think such a provision might be obtained. Were that object effected much health and many lives would be preserved.

Accidents happening among the workpeople in collieries around Tranent are a fruitful source of distress and privation in that neighbourhood. A week seldom passes without some serious accident occurring in one or other of the collieries, and several persons are killed or die in consequence of accidents every year. These accidents arise from the falling in of the roof, the sudden and unexpected fall of coal before the collier has time to draw back, and the rending of ropes. I feel this to be an important subject, but one on which I will not at present say much.

I think all serious accidents occurring in collieries and other great works should be inquired into. Where life is lost, a thorough investigation should take place, and when parties are in fault they should be exposed and punished according to the magnitude of the offence, or carelessness, or inefficiency of apparatus.

There are no coroners in Scotland, but there ought to be, as in England and Ireland, to inquire into all cases of violent death.

Besides this, I think it would be well, and only what is due to the protection of the people engaged in such works, that all collieries should be inspected occasionally by persons appointed by Government, and their condition as to efficiency and other respects duly reported. I am pretty sure that not less than fifty people under my care, and connected with collieries, lost their lives in consequence of accidents occurring in these works around Tranent, and I do not remember that an investigation was made by the sheriff in more than one instance.

There exists a common practice of employing children at tender years in the collieries around Tranent. They are sent down the pit as soon as they are able for any considerable exertion. Many are employed at the age of seven and eight, and I dare say there are some younger. They, for the most part, assist the parents: sometimes they are hired by strangers, who, of course, will make the most of them. They are employed for carrying the coals which the adult hews out. In that instance, I believe, they are called "bearers." They likewise shove the waggon loaded with coal from the place where the adult is working to the bottom of the shaft, and return it when emptied; and are then called "putters." These children work, I believe, for ten and twelve hours at a time. Some work during day, some at night, according as they belong to the day or the night "shift."

The education of these children is sadly neglected. Their growth and health are much injured, and many die in consequence before arriving at manhood.

Children to a collier, when above the years of infancy, prove no burden: they are, on the contrary, the source of profit. It often happens that a few young children support their parents, who are too dissipated and lazy to work; and it is quite common for them, by their exertions, to prove the sole support of parents who are unable to work, in consequence of disease and bodily injuries; and thus it appears that these poor and unfortunate children, by dint of exertions beyond their strength, and which send them to an early grave, afford that relief which should be granted by the powerful and affluent of the land, and administer that succour which the rich withhold.

These poor children present little of the boyancy of youth, seem even comparatively care-worn, and are often so little and so stunted as to appear younger than they are.

This system should be put down. It fosters a race of beings, who, by reason of their almost total want of education, early familiarity with vice, and precocious adoption of the habits of men, are little gifted with the better qualities of the species. Vice, destitution, insensibility to comfort, and almost a savage state, are the results of this pernicious system. When arrived at manhood, many of these persons are most abandoned.

Mothers work in the collieries and neglect their offspring. Even infants are left at home in charge of girls, perhaps only five

or six years old, hired for the purpose. This practice should be discouraged for obvious reasons.

There are very few parishes in Scotland where a fixed sum is given for medical attendance on the poor. The poor in general seek assistance where they can get it, and on many occasions go without it altogether. When a case of urgent distress occurs, the minister of the parish sometimes requests a medical gentleman to see it, and payment is made from the parish funds. This is a very inefficient way of providing medical assistance. People who are very ill sometimes die without assistance. Some clergymen treat cases themselves, and the consequences may be readily conceived. Moreover, when assistance is procured, it frequently happens that it comes too late to be of any use. The minister may be from home, or engaged, and may not at the time consider the matter of such importance as to require immediate attention. Some clergymen are very attentive to the poor. A great deal of this evil would be prevented were parish surgeons appointed throughout Scotland. I would strongly recommend the immediate adoption of this step; it would save the lives of many persons, and relieve the sufferings of thousands.

During the time I lived at Tranent, I received a small annual salary for attendance on the poor of the parish. But I am not aware that there are many parishes so liberal as to afford the poor the right of medical advice.

It is highly desirable that some enactments should be made, in order to permit persons in authority, such as sheriffs or surveyors of roads, to take cognizance of the accommodations of the working classes. Houses which are at present unfit for the habitation of human beings should be altered, or put into proper repair. Houses which may be built in future should be so constructed as not to injure the health of those who may inhabit them, and should not be so crowded together so as to prevent due ventilation. It may, perhaps, be difficult to compel people to inhabit good houses, but it is quite possible to prevent coalmasters putting their workpeople into apartments unfit for human habitations. It is the practice for persons who rent collieries to supply houses for their workpeople. In general these houses are very bad indeed; some are most wretched and uncomfortable. In some collieries they are worse than in others. The worst houses of the kind, I think, are at Westpans—a village in the parish of Inveresk. The houses are inhabited by the colliers of Preston-grange colliery. Some of them are pretty fair, but some are most miserable, and, as a medical man, I say unfit for human habitations. Some of the apartments inhabited by collier families are almost altogether below the level of the ground outside. I am sure the roof of some of these apartments is not much above the level of the ground outside. I rather think these apartments were originally cellars, or some such offices. A few steps lead down to one of these apartments, and of course the rain finds its way down also. There

is one near the sea, the entrance to which has been made by removing the earth, and forms an inclined plane. These apartments are, of course, ill adapted for light and ventilation. The houses of Penston colliery have lately undergone considerable improvements. The houses belonging to Tranent colliery are in general superior. The manager of this work is a liberal-minded man, and has done a great deal to improve the condition of his working people. But it would be well to investigate the accommodation made for the working people, and to make some provision for securing their comfort.

There are several tenements in Tranent which are in ruins; partial falls of the roofs and walls take place occasionally, greatly to the danger of the inhabitants who may be passing. Near one of the main streets in Tranent there stands a gable end of a house; it is called the "pudding tower." It threatens to fall, which it will certainly do some day when time has worked a little longer. These tenements belong to persons who, by reason of indifference, poverty, or otherwise, will neither repair them nor pull them down. Round the "pudding tower" is about an acre of ground lying waste, which might by cultivation produce many bolls of potatoes for the poor of the parish. People in Tranent, for the most part, do with their houses as they please, totally regardless of public weal or the comfort of their neighbours. Houses are built in the most irregular manner; some seem as if dropped in the middle of the street, or left there by chance or accident. It is highly desirable, for the health and comfort of the inhabitants, that such grievances should be prevented for the future.

The system of paying wages admits, I believe, of great improvement. In extensive works much good would accrue from paying work-people singly, and not in numbers, as is generally practised, and likewise, where practicable, at a distance from public houses.

I have the honour to be, Gentlemen,

Your most obedient servant,

To the Poor Law Commissioners. S. Scott Alison, M.D.

Note.—Since some copies of this Report were circulated, several clergymen and others have expressed in writing the great satisfaction with which they have perused its contents. The Rev. William Cousins, minister of the Extension Church at Dunse, who formerly acted as missionary in Tranent, has written to me to express the interest with which he has read my Report. He says,—"It presents a striking picture, but too sadly true, of the squalid poverty and wretchedness resulting from the widespread prevalence of irreligion and intemperance." I have likewise received communications from medical gentlemen; one from that illustrious philanthropist, Dr. Alison, of Edinburgh, who thought so "very highly of it," that he did me the honour to request my permission to read some extracts from it to the British Association at Glasgow.

Feb. 6, 1841.

S. Scott Alison.

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ON THE SANITARY CONDITION AMD GENERAL ECONOMY OF THE TOWN OF MUSSELBURGH AND PARISH OF INVERESK, IN THE COUNTY OF MID-LOTHIAN.

By William Stevenson, Esq., *Surgeon*.

Gentlemen,—I have endeavoured to give you, in the following Report, a correct and impartial statement of the sanitary condition and general economy of the labouring population in the town of Musselburgh and adjoining places, in the parish of Inveresk. I hope that the information I have been enabled to impart to you on that subject will enable those in authority to form some measures for the amending the condition of the labouring classes, not only in that parish, but throughout the whole of Scotland.

The parish of Inveresk, situated in the county of Mid-Lothian, or Edinburghshire, is bounded on the north by the Firth of Forth, on the east by Tranent and Prestonpans, on the south by Dalkeith, and on the west by Portobello and Duddingstone.

There are, besides Musselburgh and Fisherrow, two or three villages in the parish inhabited almost entirely by colliers.

The town of Musselburgh is situated on the south-east bank of the river Esk, which runs nearly north and south at this part, and the town about north-west and south-east: it consists of one principal street, running as described, about half a mile in length, with several narrow lanes or closes branching off on either side. The whole of the principal street is broad and well ventilated; the houses are in general good, and inhabited by the principal merchants and others; the lanes or closes are chiefly inhabited by the labouring population, such as artisans, &c., of different descriptions. About the middle of this street there is another runs off to the south, called Newbigging; this is principally inhabited by labourers of one description and another, although there are some good houses in it. It leads again to Inveresk, which is situated on a rising ground or brae, as it is here called. This place consists principally of detached houses situated within gardens, and in some cases extensive pleasure-grounds, and occupied by gentlemen of property. This is considered as a very healthy and salubrious situation, so much so, that it is often called the Montpelier of Scotland. In what this particular healthiness consists, unless it be the free circulation of air, and the raised situation of the place, above the damps from the sea, to which Musselburgh and the lower parts are so much exposed, I do not know. At the east end of Musselburgh is Pinkie House, belonging to Sir John Hope, by whom the most of the coals in the

neighbourhood are worked. Between the end of the town and the sea are very fine links, on which there is a race-course, and races are held annually. At the back of the town, next the river, are extensive tanneries; there also used to be a spinning-mill, but which has not been working for about a year; there is also a hair-cloth manufactory in the town, at which, I believe, about 40 hands are employed: their wages are according to their work, I believe.

At the west end of the town is a stone bridge across the river, connecting Musselburgh with Fisherrow. The first street that you come into in Fisherrow is Bridge-street; it is built mostly only on the north-east side, and is inhabited entirely by respectable people. It runs into Fisherrow (properly called) about the middle, the same as Newbigging into Musselburgh. Fisherrow consists of one principal street, running nearly parallel to the principal street of Musselburgh, and is continued down to the bank of the river. There is again, on the north back of this, another narrow street, called the back of Fisherrow; and between the two are a great many lanes or closes, running from one street to the other. On the south back of the main street are two or three other streets, in general very dirty and narrow, inhabited chiefly by colliers and labouring people. Fisherrow itself, or what is called the High-street of Fisherrow, is composed principally of shops of different descriptions, for the convenience of the inhabitants of the other parts. The lanes or closes are almost entirely inhabited by the fishers, and the back of Fisherrow by fishers, sawyers, and a few labourers. The population of the parish is 8,961,* of which I should suppose 7,000 will be located in Musselburgh, Inveresk, and Fisherrow. There is a harbour at the west end of Fisherrow, but very few except vessels with timber ever come to it. Musselburgh is 6 miles from Edinburgh; the road from thence to London runs through both Fisherrow and Musselburgh. About half a mile from the town is the village of New Craighall, inhabited entirely by colliers, of whom I should suppose there would be about 400 in the parish. There is another village about a mile from the town, Craighall, also inhabited entirely by them. There may, perhaps, be 40 or 50 families in the first, and double the number in the latter. There is 1 public-house in the first, and 2 in the latter. I should consider the whole of Musselburgh and Fisherrow (with the exception of Inveresk) as a very unhealthy situation: on the bank of a river, and entirely exposed to the thick mists that usually come up the Firth with any east wind (which I believe is the prevailing wind there), it must be very damp; that, connected with the closeness of almost all the parts inhabited by the labouring classes, I would certainly consider as predisposing causes to fever.

* Population at last census, 8,961; males 4,257, females 4,704. The increase in the population is very considerable since then.

The extent of the parish of Inveresk is 3 miles by 2½. The rental is 16,123*l*. The quantity of coal raised per annum, 54,000 tons, value about 15,000*l*.

So far as I have been enabled to judge of the prevalence of disease, and especially the different forms of continued and other fevers in Musselburgh, I am disposed to think that in most respects it very nearly resembles the neighbouring city (Edinburgh), and that all epidemics which affect Edinburgh generally make their appearance in Musselburgh soon after. Typhus fever, although frequently prevalent in Musselburgh, is seldom characterized by the violence with which it visits Edinburgh; and although for the two years past it has shown itself occasionally here, it has never created the havoc which it has done among the lower classes in Edinburgh. No part of the town can be said to have been exempt from occasional visitations of fever; but there is no doubt that the closes and lanes, from their confined atmosphere, and the effluvia arising from the filth thrown out, are the parts most subject to it. It will be found to prevail among all classes,—those in a state of destitution, and those enjoying the most ample domestic comforts; but with this difference, that among the former it for the most part shows a much greater degree of severity.

All the eruptive fevers, as small-pox, scarlet fever, and measles, occasionally visit Musselburgh, but never evince any symptoms which are not observable wherever they show themselves. Measles was very prevalent among the children of the colliers at New Craighall last spring; but, upon the whole, was mild. Small-pox has been prevalent during the commencement of this winter in Musselburgh and Fisherrow: it was mostly of the kind called confluent: it was almost entirely confined to the lower classes, and, I believe, was rather fatal, but I do not know the proportion of deaths.

As to the localities in which fever and all contagious diseases prevail most (as might be expected), they are those where the population is most crowded and most wretched. The closes and wynds in Newbigging and adjoining the high street of Fisherrow, I should point to as the most infected with disease of all kinds. The fisher population are more exempt from fever than might be expected from their habits,—probably from the nature of their occupation obliging them to be much in the open air.

Since the very severe visitation of cholera in 1832, Musselburgh and Fisherrow have been considered by some as being more than usually unhealthy; but I should think that, in proportion to the extent of population and of destitution, disease is not more common than in other towns. It is generally supposed that *phthisis* is less frequent in Musselburgh than in any other part of Scotland.

Most unquestionably destitution (by whatever means produced) is the great source of disease among us; and there is no doubt

that if efficient means can be had for checking and suppressing it, disease, in a great measure, will also be checked, the persons most affected being those who, from poverty or dissipation, do not receive even the necessaries of life. This is pretty evident, from the great proportion of the cases of fever and other diseases occurring in the depth of winter, when the poorer classes are unable, from various causes, to obtain the proper means of support. We cannot certainly go so far as to say that fever occurs among the destitute only, or that it always breaks out where there is destitution, and becomes less prevalent when that destitution is alleviated by the distribution of food and money; but it certainly may have been seen by many that when fever is prevalent it will often pass by those who are in the habit of being well fed, well clothed, and particularly if they are cleanly in their habits. I think the latter quite as essential to the preservation of good health as any of the former.

The houses inhabited by the poorer classes of people in Musselburgh and Fisherrow are, generally speaking, situated in narrow lanes or closes which vary in breadth from about 5 to 7 feet, and are perhaps generally about 150 to 200 feet in length. The houses are, almost without exception, of 2 stories, consisting of two rooms each, which may be occupied by 1 family to each room, or in some cases 2. The lower flat enters by a door, underneath the outside stair, which leads to the upper flat, and this being built in on all sides but the front, something in the manner of a portico, excludes any air from entering except at the front. The floors of the lower flat are generally below the level of the outside, perhaps half a foot or even more, and are in most cases composed of clay or earth beat down; and, in consequence of being below the level of the surrounding parts, in anything like wet weather the water runs into the houses, where I have seen it forming pools of some size in the floor, of course rendering the house damp and unhealthy. In very few of these places are there any receptacles for filth, consequently it is just thrown out at the door, and allowed to remain there or not, as chance may. In Fisherrow, these closes or lanes being chiefly inhabited by fishermen, the refuse of their fish and bait is just thrown out at the door along with other filth, and allowed to remain there, often till decomposition takes place, when the smell produced is very offensive to the passer by. There are, running through all these lanes or closes, what are called gutters, which carry off any part of the nuisance which can be carried by water running down them; but of course this is insufficient to clear them of the solid parts of the filth. I am not aware that there are any covered drains or sewers in these places, but should think not. There is a regular appointment of scavengers in the town; but it would be an absolute impossibility for them to keep these parts clean, even should there be one to almost every close. The people connected with the fishing trade, in most instances, are very ob-

stinate, and it is a very difficult thing to persuade them that what they are accustomed to is not right and proper. The houses inhabited by the colliers (of whom there are a good number in the immediate vicinity of Musselburgh) are almost all of the most wretched description: earthen floors, tiles as the roof, exposed without any sort of protection from the weather,—in many instances, spaces between each, through which the light makes its way, as it can hardly penetrate through the place intended for a window, which is likely filled up with old rags instead of its natural glass, or may be, as open as the roof to admit the air, cold wind, and rain. The most of the houses occupied by colliers are provided with a small piece of ground, either before or behind, as a garden, but in too many instances used rather as a receptacle for all kinds of filth. I have often seen dung and filth, of one description and another, piled some feet high in the pathway leading to the door, obliging the passenger to go some feet round to avoid it. In the village of Craighall, entirely inhabited by colliers, there is a square formed by the houses, the fronts of which look inwards, and the centre divided out into small plots for growing vegetables or the like,—but in most instances the pieces allotted to each are either a barren waste or covered with all the filth and refuse that they could collect, which I believe, after they have got a certain quantity, they sell for manure; if, in place of which, these plots were planted with vegetables, as intended, they would not only add to the health and comfort of the owner, but also improve the appearance of the place. The foot-path, also, which of course runs in front of the doors, and between them and the ground alluded to, is in the most wretched state, full of holes and pools of stagnant water, thrown from the door and allowed to remain there till absorbed by the earth, rendering walking along it disagreeable in the day time, and absolutely dangerous in the dark. There are, no doubt, instances where these plots of ground, and the exterior of the dwellings, are kept in a very different state, but they are but few and far between, and not followed as a good example ought to be. Of course in these places there are no drains or scavengers to clear away the filth generated by the habits of the people. But, were it possible to change the habits of the colliers entirely, we might see different scenes from what are now enacted amongst them; for few people, in a line of life requiring manual labour, have better opportunities, as far as good wages can go, than they have to keep themselves and their families comfortable. Of course I need hardly mention that the houses situated in the closes in Fisherrow and Musselburgh, from their being so narrow, are but very imperfectly ventilated. The supply of water in Musselburgh and Fisherrow I should consider as good; the river, running between the two places, affords a constant supply to those who are able and willing to carry it; besides which, there are a good many public wells, from which they have only to carry it. I do not

suppose that there will be water in any but the houses of the better classes. There are either one or two wells in the villages occupied by the colliers in the immediate vicinity of Musselburgh. With regard to the means of ventilation, they are very bad; the houses are either disagreeably close, or else very much the reverse. Very often I have gone into some of the houses, and the smoke has been so dense, from not getting proper vent up the chimney, that for some minutes I was unable to distinguish the individuals in it. The houses of the colliers are generally well enough ventilated, as the air blows through them. I have often, when sitting in some of them at night, although a great coat on and a large fire, found it impossible to keep myself warm.

Some large tenements are so subdivided that each family occupies only a single apartment, often of very small dimensions. Families consisting of from 4 to 7 individuals are frequently found in a room not exceeding 9 or 10 feet square, their dirty and uncomfortable beds of straw, very scantily furnished with bed-clothes, spread on the damp clay floor. Sometimes large stones supply the place of chairs. I have found persons without either bed or bed-clothes. Owing to the small size of the dwellings of many of the poor, and their own filthy habits, the atmosphere becomes intolerably vitiated during the time of sickness. I have seen in one small apartment a family of 7 all in fever, with no bed. The Rev. Mr. Beveridge, minister of Inveresk, tells me, having once to call at night for a poor person he had been in the habit of visiting, found that the man had shortly before expired; his children were asleep on the clay floor, their pillow the straw on which lay the dead body of their father. In this instance the man was not on the poor's roll. Some of those who receive parish relief occupy tolerably clean and comfortable dwellings. I have often seen among the colliers a small room occupied by a family of 6 or 8, with 2 large press sort of beds, closed on all sides but the front, and of course, in case of fever, adding much from their closeness to the heat of the patient, besides occupying by far the greater portion of the room.

There are several lodging-houses in the town of Musselburgh in which vagrants assemble in considerable numbers. Beds are placed in rows along the walls; each person paying 3*d.* for a night's accommodation. I have been in such houses only during the day, when of course very few of those resorting to them were present, but I have little doubt that there is but too much reason to credit what is said concerning them, that they are the haunts of profligacy and licentiousness. There are also some houses in which colliers, and other working-men who are unmarried, lodge, which are, generally speaking, much the same as the other houses described, only not so crowded; but very few of them consist of more than one room. These inferior lodging-houses inhabited by vagrants are in the most filthy condition, and from the abominably dirty habits of the people who frequent them, the smell on entering

one of them is intolerable. But I do not think that they are more subject to disease than the colliers: the children are almost invariably affected with some disease of the skin, and very much subject to some variety of the disease commonly called "scald-head." These people go about begging during the day, and may be will go over a considerable quantity of ground between the time of going out and their return; they also are generally well provided with food, notwithstanding their wretchedness. I consider that their constant exercise in the open air, along with their seldom being scant of food, is one great cause of their not being more subject to contagious diseases than they are. I speak of those who are regular beggars by profession, if I may so express myself. They will generally assist one another as far as in their power, if from sickness or any other cause one of their number is unable to go out. Habits of gross uncleanliness, both in the persons and dwellings of the poor, generally prevail. Those who have been reduced from better circumstances get broken spirited and indifferent about the appearance of their houses, themselves, and their children; and although they may sink into the lowest depths of squalid filthiness, there are still plenty to keep them in countenance. Many have never known what cleanliness is, habits of detestable nastiness continuing from generation to generation. In a Sunday-school attended by the children of the poor it is remarkable how many of the boys require to sit with their caps on, in consequence of what is called "scald-head." Dung is frequently collected from the streets, and stored in the houses of the poor for sale. In the houses of the colliers you will often see the ashes and cinders collected in a heap in a corner, with other impurities; and this more from laziness and filthy habits than any other cause, as the colliers in general earn high wages, of from 20 to 30 shillings, and if they would work 6 days in the week, instead of spending Monday and Tuesday in drinking, they might earn much more. In cases of sickness, especially fevers of any description, the state of these houses is truly disgusting, from the natural closeness of an apartment in which fever is, combined with the effluvia arising from various collections of filthiness. I have sometimes found the smell insupportable, and yet these poor creatures will live as contentedly amidst all this dirt, as they would do in the cleanest place you might put them in. The internal economy of the houses of the day-labourers is generally of a better order than that of the colliers, although you may find many instances among them also where as little attention is paid to cleanliness and order as in the other case. Those who are sober and well doing are often remarkably clean and neat, both in their houses and persons. There are no doubt exceptions among the colliers also; I have generally found that they are at either of the extremes; either (and in the majority of cases) wretchedly dirty, or else particularly cleanly. I know of two instances in the neighbourhood of Musselburgh, of colliers who

came from Fife, men who were excessively cleanly and neat in their habits, kept their houses and families clean and comfortable, made the small spot of ground attached to their cottages of use, and an ornament to the place, and tried what lay in their power to induce others to follow their example, but unfortunately with but small success. These men improved themselves so much that they ultimately took a small tack of coal from the proprietor, which they worked at their own risk. The condition, both external and internal, of the hinds' cottages, with but few exceptions, is far superior to that of either the collier or the day-labourer; but we must take into consideration that the most of the cottages occupied by hinds are of themselves comfortably roofed, floored, and whitewashed, which no doubt must conduce much to their cleanliness and neat appearance; I know of no reason why the houses of the colliers should not be as well finished as those of the hinds, unless it be that they being naturally of a destructive disposition, the proprietor would not wish to lay out much on people who may be here to-day and away to-morrow, and possibly leave his property in such a state as to require repair before it could be inhabited by another. I have frequently, when attending them, called one day and found my patient, by his own account at least, very bad, and on returning, they were gone no one knew whither; so migratory are their habits, and so portable their stock of furniture. With the colliers, also, everything is allowed to take its own course: if a pane in the window is broken, it is either left as it is, or else stuffed up with old rags; if the floor (should there happen to be any but the earth) get worn, or in any way broken, it is just left to rot on. On the contrary, the cottages of the hinds are beautiful to look at; no broken panes, or their places supplied with old rags; the walls are generally white-washed once or twice a-year, and the deal floor is beautifully clean and in good repair; the earthenware is as clean as hands can make it, and arranged round the walls, serving as an ornament to the apartment, and in general a true criterion of the sobriety and steadiness of the head of the family. The metal spoons, candlesticks, and pitchers for holding water or milk, are bright enough to serve as mirrors. A bright fire and clean swept hearth also mark this class of people, with the cheerful hum of the always filled kettle on the hob. They are generally remarkable for their pure and sincere sentiments of religion: on the Sunday, the father leads his family to the church, at which they are regular in attendance, and he closes the day with a portion from the word of God, and may be an exhortation to his growing-up children to follow in the steps of sobriety, honesty, and true religion. How different, on the other hand, is that day of peace and rest spent by the wretched victim of intemperance! perhaps he has not crossed the threshold of the church since he has arrived at the years of discretion; it may happen that he knows not the inside of a place of worship; and instead of there

listening to the expounding of the word of God by his minister, he and his companions are "drowning care" (as they call it) in intoxication, and all sorts of profanation: and what does this lead to often at the time?—brawls, inability to commence his usual avocations with the commencement of a new week; and hence he takes more to drive away the effects of what had been drunk on that day when he should have rested from all toil, and with a fresh week commenced as a new and invigorated man. You will perhaps be told by these people that they are unable to attend church from the want of proper wearing apparel; but surely where they mostly earn from 20*s*. to 30*s*. of wages per week, exclusive of what may be earned by their wives and grown-up children, who almost all work, they might spare enough to provide themselves with decent habiliments; but the whole that is to spare, and often more, goes for the bane of the poor man's existence, "whiskey."

I do not think that the habit of keeping pigs *in* the houses of the poor is prevalent in Musselburgh or the neighbourhood, but they are often quartered close to the doors; but this I would consider a slight nuisance compared with many others, the odour arising from them being I should think delightful, compared with that of many of the nuisances to be found in the neighbourhood of their doors, and certainly I would think not unconducive to health. I have often seen fowls roosting on the rafters of the colliers' and other houses; and in general they are supplied with dogs in abundance; but even these I would consider pleasant companions, compared with some to be found in most of their houses, in the shape of bugs and fleas, with which the beds are often swarming. There was a woman who, from a compound fracture of her leg, had a large ulcer on it, from the dressings of which the medical attendant had literally to get a person to pick the bugs before he could touch it. The heads of children are generally swarming with lice; I once suffered from this by lying down on one of their beds to rest during my attendance on a woman.

The offer to remove fever patients to the hospital (likely from the distance) is far too seldom made; when the case is urgent, there is seldom any objection made but what may be got over by a little persuasion. There is not the least doubt that by timely removal many cases have been saved, and the spread of the contagion prevented; whereas in the other case, from neglecting such means, many have successively fallen victims, and the disease spread itself. There is no doubt a feeling amongst the poorer classes against the hospitals, but I think it arises as much from the distance (6 miles) that they will be placed from their friends and relatives, than from any other cause; and in many instances this may be got over by representing strongly the necessity of the case.

The cottages of the hinds are almost always in the immediate

neighbourhood of the farm steadings; they receive them from the farmer in lieu of a certain number of days' work at the harvest-time either by their wife or a grown-up daughter, if they have one. Their wages I believe average about 25*l.* per annum. They generally live on from generation to generation on the same farm; they are in fact as opposite to the colliers in that as well as in other respects as it is possible to be. Their furniture is substantial, sometimes even handsome, and invariably beautifully clean. Their food is always well dressed, of good quality, comfortably put down, and always partaken of with a blessing from the head of the house; tea is now a common beverage among them. When the father is too old for the usual occupations of the hind, he is employed about some trifling avocations connected with the farm-yard, such as throwing straw rope, or rapes as they are called; and the son, if there is one, considers it a duty to share his cottage with his aged parent; so true is it that they are endowed with the true Christian spirit; quarrelling or brawling is a thing unknown to them. They are almost invariably exceedingly honest and sober, and I have often seen farmers trust large sums with them, either for the purchase of grain, or for payment of accounts, when they themselves could not get to the market. I am not aware that any of them are withheld from drinking by a pledge, such as the "total abstinence," or other; for I have heard them say, that a man was not worthy the name if he could not keep himself sober without taking an oath, and giving a pledge on the subject. I have always found them honest and honourable in all their dealings, their accounts invariably asked for at each term, and cheerfully paid, instead of having to press for the money till one gets tired and disgusted. The dress, both that of the men and women, is also clean, neat, and appropriate to their condition; the children also are always respectable in appearance, and appear to have an innate cleanliness about them, which is so much wanting in those of the colliers and day-labourers.

I should think that there was very little destitution among the hinds; for from their frugal and industrious habits, accompanied by their sobriety, they generally manage to lay by some small provision for the future; besides, as before mentioned, the son considers it a duty to give assistance to his parents when they are unable, either by age or sickness, to follow their usual avocations; and in this manner I should suppose applications for parish relief are very rare among the hind population. There are likewise different benefit societies to which they often belong, and from which they receive assistance when they are attacked by sickness. I rather think the hinds take a pride in being able to do without parish relief in old age or sickness.

The fishermen form a considerable proportion of the population of Fisherrow. They are in general filthy in their habits, both in their dwellings, persons, and families. They are much addicted

to dissipation and drunkenness, are very improvident,—so much so, that although making very large sums occasionally, they never have anything laid past for sickness or times of distress. They are no doubt exposed to many casualties at their trade, from their loss of boats by upsetting, &c.; but still, from the large sums they often make, were they at all provident, they might lay by what would assist their widows and children in cases of such a nature. Both men and women are generally drunken, and what should be laid by for times of distress or want of employment, from bad weather or other cause, is spent in whiskey. There are frequent brawls among them arising from this constant habit of intemperance. It was but the other day that a man connected with the fish-curing department was tried before the Court of Justiciary in Edinburgh for stabbing another man in several places to the imminent danger of his life; this I believe originated in some drinking bout.

The women and children are most abominably dirty in their habits; some few of the women who attend the market in Edinburgh are more cleanly, but in general they are beastly. The men seem to have no honourable ideas; it is almost impossible in most cases to get payment of an account from these people; they will not only refuse payment, but perhaps shower all the abuse on the party who asks it that they can think of. They are a set of people who keep themselves entirely distinct from all others. I believe they invariably intermarry among one another, and consequently you find, in a place inhabited by them, few who are not related to one another by marriage at least. There is another set of men, a good many of whom are inhabitants of this place,—I mean the sawyers; they are also a most dissipated set of men, seldom working, I believe, more than four days in the week; in fact they are men who will do almost anything for a dram of whiskey. These men also of course are very improvident; and from the nature of their work are very much exposed to serious accidents, in which case, or in sickness (to which we are all exposed, and of course they more so from their dissipated habits), they have no provision laid by. These men also, I believe, earn good wages,—from 20*s.* to 25*s.* per week. Their houses and families are in general cleaner than those of the fishers or colliers, but still are inferior to the general run of the hinds. The houses they inhabit are mostly in the more open part of the place; whereas those inhabited by the fishermen are generally in the narrow lanes or closes formerly described.

On this subject I think I could not add anything to the statements in Dr. S. S. Alison's very able report on the parish of Tranent, as the condition of the colliers is, I believe, very much the same in all respects in every part of the country; those with whom I came into connexion I found just what he states them to be,—a dissipated, drunken, improvident, and dirty set of people, with

little or no notion of anything but drunkenness and rioting, laying by no provision for the future, although in receipt of large wages, which might be considerably larger if they would abandon their dissipated habits, and work, instead of only 4 days in the week, the whole 6,—although I must also add my testimony to his, that there are many who are quite the opposite to this; in fact I have found some of them better informed on many subjects than persons who had received a liberal education, cleanly and neat in their persons and houses, and sober and industrious in their habits. Many of the colliers abuse their wives and children in a shameful manner, striking and kicking them for no cause whatever; but we will find that this is the case with most men who give themselves up to drunkenness and dissipation in the way that they do. Their wives also in many instances are very drunken; and I have seen the young children, may be of not more than 8 or 10 years of age, take a glass of whiskey just as readily as their parents. The wives of many of the labourers and artisans in Musselburgh are very much given to drunken habits. There are schools in both the collier villages mentioned, but I rather think that, when the children are at all able to work, they are not allowed to attend them, and in many cases where there are very young children, the older ones are kept at home to take charge of them while the mother goes to the colliery to work; this often leads to accidents from fire, &c.

When any accidents happen, or when, through their own intemperate habits, they are laid on a bed of sickness, instead of being a warning to them, it is almost made an excuse for drinking, for the neighbours usually congregate in numbers in the house of the sick man, when the whiskey bottle is produced; and although it perhaps may not follow that they get intoxicated in that house, still it being a beginning, leads them on either to adjourn to the public-house, and there keep up a constant drinking for two or three days, or else they go to one another's houses, and getting a dram at each, finish the day, begun in the house of sickness (which should have been a warning to them of the effects of intoxication,) in a state of beastly inebriety; the same is often the case even when their comrade may be lying a corpse. There are few of the colliers but what have had a little school education in their younger days, and we can well judge from these what may be the effects of such education. I think it proves pretty clearly, that it is not such education alone that will improve the moral condition of the people; we must go further back; we must endow them through their parents, both by example and precept, from their youngest years, with sound moral and religious principles; in fact we must entirely change their present natures, and then we may hope to see sober, industrious, and provident habits take the place of the present drunken, idle, and improvident ones. Of what use is it giving a child the most excellent education at school, if, when he

returns home, he finds his parents in a state of beastly intoxication, cursing and swearing, and perhaps even come the length of striking one another. We may depend upon it children are far more apt to reason in their way, than is generally supposed; a child is taught at school to avoid drinking, swearing, and quarrelling; he comes home and finds his parents (whom he has also been taught to look up to, respect, and take as example) doing the very things he has been taught to avoid; and yet he is taught that he must look to these people as an example: I will be bound to say that he thinks both cannot be done; that he cannot avoid these habits, and at the same time follow the example of his parents; therefore he naturally considers the first as a useless lesson, and follows the example set by his parents as requiring no firmness, no resolution, whereas there is no doubt the other does. There are no doubt exceptions to this rule, but they are very few, and in general to be traced to some moral influence which has come into exertion in some manner in their youth. I am convinced that nothing but early moral and religious instruction and training will effect a cure of these radical evils; for we see that neither the destitution in old age, the sickness and disease, the miserable state of widows and orphans, nor any other examples of wretchedness produced by their intemperance, act as a warning, but they just go on in the old course, and, like all drunkards when once started, they continue madly on until they fall.

During recent winters there has been a great number of families in extreme destitution. It is wonderful, considering their means of support, how they preserved life. They subsist principally on potatoes and herrings, and on what are called "sowens,"* and they occasionally receive supplies of soup from the charitable. Pawning their clothes, both in order to obtain subsistence and also to procure the means of intoxication, is not uncommon; the proximity of the town to Edinburgh affords an unhappy facility to such transactions. The minister of the parish tells me he has occasionally been asked to advance money in order to redeem pledges; of course repayment of such loans was as little intended on the part of borrowers as expected by him. There can be little doubt that in winter, when work is scarce, the food of the labouring poor is extremely scanty. It is common to see many families not at all sufficiently fed. The children are puny, thin, pale, and often affected with cutaneous diseases. These effects of their poor diet and their tattered clothing render them objects of pitiable wretchedness. There can be little doubt that insufficient food is the cause of much disease.

Intemperance is the chief cause of reducing the labouring poor to a state of destitution, and the most deplorable evils are inflicted

* Sowens—Water poured upon oatmeal and allowed to stand till sour; the thick part is then washed (till quite white) with cold water, and when boiled, eaten or supped with milk.

upon many miserable and helpless families by the intemperate habits of the parents. Temptations to drunkenness are far too frequent through the culpable remissness of landlords in letting their houses to persons who convert them into places for the sale of spirituous liquors, and not a little also through the unaccountable inattention of justices of the peace in granting spirit licences. The extent to which these evils are inflicted on the inhabitants of this parish, may be inferred from the fact, that in a population of 8,961, there are no fewer than 85 houses licensed for the sale of ardent spirits; thus giving one house to about every 105 persons, including children. At the same time there is little doubt that intemperance is in a great many instances the *consequence* of extreme destitution. The miserable wretch, in the desperation of utter want, snatches eagerly a temporary relief from his sufferings in intoxication, although conscious that he is plunging himself deeper in distress, and even hastening his own death. Intemperate habits prevail to a deplorable extent among the wives of labourers and artisans. There is much destitution among persons who receive no parochial aid. Many of those who do receive such aid, receive it to an amount so inconsiderable, as to diminish but little, if at all, the hardships under which they labour. The increased number of applications observable everywhere of late years to public charities, is in a great measure owing to the increase of destitution: this again has been augmented by many causes, amongst others by the commercial character which this country has assumed. The population has rapidly increased: habits both of extravagance and improvidence have been formed; and where temporary stagnations of trade throw numbers out of employment, having made no provision for such an event, they are in total want. It must at the same time be kept in view, that the increased number of applications for parochial relief is unquestionably owing to this, that far less reluctance is felt on the part of the poor, than formerly, to apply for aid. The number of colliers on the poor's roll in the parish of Inveresk is small. The reasons are, that relief is often given to old people, especially after accidents, by the coal proprietors: and secondly, that there are fewer old persons amongst them than in other classes; their habits and the nature of their employment tend to shorten life.

Dr. Alison, in his report on the parish of Tranent, has so well shown the habits and natures of the colliers, and which are the same in almost every respect as in the parish of Inveresk, that I think it would be useless for me to attempt to add anything more on that subject.

I have endeavoured in the foregoing pages to show the different forms of febrile disease which exists to a great extent in the parish of Inveresk. I have also shown the general nature of the houses inhabited by the poorer classes, their situations, state of cleanliness, and means of ventilation, their internal economy and habits

of the working population, many of which it will readily be seen must be conducive to the production and favourable to the invasion of disease. I have also shown the range of destitution, whether produced by intoxication or otherwise, and have now to point out what forms of disease are most likely to be favoured in their production by these agents. I do not think that the circumstances, either taken in the mass or separately, will produce all the forms of febrile disease mentioned in the commencement of this report as prevailing in Musselburgh and Fisherrow; but I think they will almot invariably act as predisposing causes; for when fever of any description attacks any of the individuals of a family situated as I have shown the most of the labouring population are, it generally runs its course through the whole of them; whereas if it enters a family who are well fed, well clothed, cleanly and temperate, we rarely see it diffuse itself so completely throughout them. But there are other diseases over which the circumstances mentioned exert an influence, such as many of the acute diseases of the lungs, heart, stomach, and liver, more especially indigestion and dyspepsia; these latter are very common amongst those colliers who drink much; almost every one is affected more or less with dyspepsia; they are also very subject to diseases of the lungs;* but the nature of their work I should consider as often producing these, more especially as they frequently are accompanied by a kind of spit, only known I believe among colliers,—I mean what is called the black spit, produced I should suppose by their inhaling small particles of coal along with the air in the pits. I was at the dissection of a young man, a collier, last winter, who died of enlargement of the heart, and in examining the lungs we found them completely gorged with fluid, which, when squeezed out with the hand, had just the appearance of ink; this young man had not been at the pit for some weeks previous to his death. Those of the colliers who work below ground are in general free from cutaneous diseases, the reason of which I should attribute to the necessary ablutions they undergo when they return home from their work; but the young children have almost invariably some form of cutaneous disease on their bodies or heads.

Small-pox, measles, and scarlet fever, although not produced by any known external agents except contagion by contact, are certainly very much influenced in their course and termination by the external and unwholesome agencies formerly mentioned. They are distinguished from all the other kinds of fever by their specific eruptions (generally uniform and well marked in their characters), by their seldom attacking more than once in a lifetime, but almost all being subject, independent of external circumstances, to the attack of at least the two latter, that once, and also these two having their favourite time of attack,—in general in childhood. No means, on our part, can ward off the attacks of these diseases,

* I would say that 1 in 3 are affected with asthma.

except the immunity which can be gained by inoculation or vaccination. They are doubtless governed by some laws similar to those which govern our growth or decay. Fever, in one particular, approaches to these: viz., that it rarely attacks a person twice in a lifetime; but then I consider it as almost invariably dependent on external circumstances of some nature or another. In many cases, or at least those which are taken at the beginning, it is quite possible to check the progress of fever. I have met with many cases of fever which could not be traced to any external causes; but I would rather consider these cases as modifications of the exanthema, more especially as we often find them terminating in an eruption of a defined and uniform character. If, as is supposed by many, fever in this form and eruptive fevers depend entirely, or almost entirely, upon some innate disposition in the system, regulated by the laws of the constitution, not requiring the influence of any external circumstances to bring it into action, it may be thought, and perhaps truly, that any sanitary enactments can have no influence in extinguishing any of these diseases; still it will be admitted that the progress and termination of these diseases is influenced by external circumstances; therefore, although sanitary enactments may not extinguish these diseases, they must exert a great influence in preventing the fatal terminations at which they often arrive. To expect sanitary measures entirely to put a stop to the existence of fever in any form, I consider as a very erroneous notion; for, do we not now constantly see cases of fever occurring in families where all the sanitary precautions are used that are possible to be put in force? It is possible these cases may be entirely of the exanthematous form; but then the difference between the nature of a fever produced entirely by external agencies, and that which may arise from certain principles in the system, of which we know nothing, is not known to every individual; and it would only give a powerful weapon into the hands of those who are entirely opposed to all sanitary measures, were we to start with saying that our sanitary measures are calculated to put a stop to all forms of fever.

No one who has attended to this subject will deny the influence of contagion; but I think that too much has been attributed to it, too little to the previous state of the constitution, common causes of fever, and internal irritation. Some draw their arguments in favour of contagion from the well-known fact of fevers spreading not only from one to another in a family, but also in the same tenement; but the similar circumstances generally with regard to external and other causes, in which they are all likely placed, should not be forgotten.* I consider that the contagion of fever, to

* An interesting question may here arise—What length of time does the contagion remain latent in the body before it shows its effects? This is an intricate question, and one which I do not think has ever been properly investigated. Some say only a few days or weeks, while others as confidently state it to be as many months. I do not believe that contagion will produce fever, applied a thousand times to a per-

produce its effect, must be applied to a person ill fed or clothed, or whose health is in some way not good, in order to produce a predisposing cause. Mental depression will also act in the same manner. Vitiated air, and the effluvia which proceed from the bodies of individuals crowded together in gaols, hospitals, and ships, have always been abundant sources of fever. History affords many melancholy examples of the baneful effects of vitiated air and human effluvia, and the speed with which they destroy animal life.*

We now come to a subject of great importance towards improving the condition of the poorer classes, especially those who are addicted to drunkenness and dissipation, leading to brawls and such like consequences: I allude to the state of the local police. Formerly, Musselburgh had a constable, and a gaoler who I believe also acted in the capacity of a constable, if necessary; and I think the public peace was as well enforced as it was possible to be with such a force, in a place in which I have shown that there are so many opportunities for drinking in the number of public houses, many of which are no doubt of a very indifferent character. But it is not so much to these houses that I would direct the attention of the police; there are frequent brawls in the houses of the lower orders, between the members of their own families, between husband and wife, and, following their example, between the children themselves, often leading to very serious consequences: these seldom come under the surveillance of the police. The colliers, in particular, stand in little or no awe of the law as at present administered; they see that when persons are taken up for fighting, or anything of that kind, the punishments are so slight that they are totally regardless of them. Since the New Police Act for the counties has come into force, Musselburgh has got an addition of either 1 or 2 policemen; but I am afraid that if the district is as extensive as in some other parts of the county, where they have three or four parishes under their charge, they cannot be of very efficient service. The police, besides the purposes for which they are now employed, should have it in their power to prevent the accumulation of filth in the neighbourhood of houses, by punishing those who would not take it to proper receptacles, which should be attached to every village and town. The more gross cases of drunkenness, especially where they form a public nuisance by appearing in the streets, should be very severely punished; and in the event of fighting, the fact of the parties being drunk should materially add to their punishment, more

son, if he be in a good state of body and mind. In this I am supported by the opinions of the late Drs. Gregory and M'Intosh of Edinburgh, both well known in the medical world.

* The best example is to be found in the occurrence which took place last century in the Black Hole in Calcutta. 146 unhappy individuals were forced into a dungeon, about 18 feet square, at 8 o'clock at night, and at 6 next morning, when released, only 23 came out alive; *most of these were in a high putrid fever, and subsequently died.*

particularly where it may have been an instance of a husband maltreating his wife or children. Temperance societies should be encouraged, more especially by those who have any number of men under their command, as I conceive the example shown by the employer often materially affects the conduct of the employed. Masters should always punish any of their men whom they find in the habit of getting intoxicated, and if they find a slight punishment in the form perhaps of an extra quantity of work for their usual wages useless, they should then dismiss them from their employment. I have little doubt that if drunkenness was thus treated as a crime, and the good example shown by those who have any opportunities, connected with a proper moral and religious education when young, we would find that sobriety and honesty would increase and prosper more and more every succeeding generation. We have only to look to our countrymen in Ireland to see what example and perseverance will do; where could have been found a more drunken set than the lower classes of Irish in general were? and now in what a short time, and by the exertions of one man only, we may see how many thousands have been turned away from this detestable vice to the paths of sobriety. I would not in a different state of affairs go the length of those who are called "total-abstinence people," as I consider that there may often be times when a moderate quantity of spirits are both useful and necessary, more especially to the labouring man: but unfortunately all those who are addicted to the use of ardent spirits have not sufficient command over themselves to resist the temptation, and cannot content themselves with a moderate quantity; and therefore I think measures should be taken for the punishment of drunkenness, as perhaps the best means of checking its course in those who are unable to keep themselves from the "whiskey" bottle. There is another subject connected with this: I allude to what I before mentioned, the culpable remissness of landlords in letting their houses to persons who convert them into places for the sale of spirituous liquors; over this perhaps no check could be placed, unless by justices of peace paying more attention to the granting of licences, especially by fully investigating the characters of those to whom they grant them, and invariably withdrawing or not renewing such, unless upon a report by the police that the house is one in which good hours and quietness are observed. When habits of temperance are once rooted in the hearts of the people, there is but little doubt but that they will flourish; and all the consequences, as cleanliness, more provident habits, and a decrease of disease, will soon follow, and among other results will be of themselves a diminution of the number of public-houses. I am glad that the giving up within the last few years of some, and diminution of work in other, of the distilleries both in Scotland and Ireland, shows that intemperance is on the decrease and sobriety on the increase.

In the first place I may state that there are *none* on the poor's roll who are entitled to relief from other parishes, each case being thoroughly investigated before the individual is admitted upon the roll; but a considerable number of the regular paupers are persons who have immigrated into the town, and acquired a legal claim to relief by three years' residence. In justice to such parishes as Musselburgh, and to equalize the burden of supporting the poor, the period of residence entitling a party to claim relief should, I think, be considerably lengthened.

The assessment for the support of the poor in this parish has for some years been decreasing. This, however, arises not from any diminution of the destitution. The severe visitation of cholera in 1832 raised the assessment unusually high, and as the parish has been gradually relieved of the burden of those widows and orphans who then became chargeable on the poor's fund, the assessment has in proportion fallen. Since the period above mentioned, a fund amounting to 90*l.* per annum has also come into operation. The number of paupers at present on the roll is 320. The highest allowance is 3*s.* 6*d.*, the lowest 6*d.* per week. The amount distributed yearly is 624*l.*: deducting from this the 90*l.* before mentioned, and also the sum collected at the church-door, of which I am not quite sure the amount, but say 20*l.*, leaves as the amount of assessment at present in the parish 514*l.*: 624*l.*, distributed among 320 persons, gives an average of 9*d.* per week, or 1*l.* 19*s.* per annum to each, an allowance certainly far from extravagant.

I believe that there is a great deal of private charity in Musselburgh. Many families have their regular pensioners, who receive a certain allowance every week. Money or clothes should never be given at the door to beggars, at least to any extent, as they are generally converted into whiskey by the worthless. There is, I believe, a soup kitchen usually got up by voluntary contributions by the better classes, which proves a great source of relief to the poor, especially in severe winters. There is also a certain quantity of coals distributed among the poor, the expense of which is defrayed by the heritors and others generally.

I think I have mentioned all the known means in Musselburgh for the relief of destitution. The amount of private relief given it is impossible to ascertain; but I have no doubt that it is very great, as there are many families of wealth and known charity in the immediate neighbourhood. I have no doubt that the amount of relief in Musselburgh is adequate to the amount of destitution; but it will be seen that, if it is so, it must be principally from private sources, and no doubt is often given to persons totally undeserving; and no person would surely say that the relief shown to be given to those on the pauper roll, from the assessment, &c., will prove a sufficient and adequate subsistence to any, while there is little doubt that it affords to many an opportunity of

indulging in occasional fits of intemperance. The same amount of charity, if properly distributed upon proper principles, would provide a comfortable home for those really deserving, and afford security against privation at all times and all seasons, instead of assisting the drunken to riot on the funds which should be appropriated to the deserving and truly destitute. For this purpose a uniform and regular assessment would be necessary, and an appointment of proper officers to inquire into the circumstances of each case and determine the amount of aid necessary. I am aware that the heritors of those parishes where no assessment is at present made, are opposed to such being done; but surely in this case the opinion of the interested few should not be allowed to bear on the subject. The poor classes have almost invariably assisted to support the state in one way or another,—are liable to be called on to protect their country, and serve her in every way; therefore the state should take into their own hands the means of providing for them, and no private interests should be allowed to interfere with a general assessment for the poor, any more than with any other taxation to which we are subject. I would consider that, among other legal provisions for the poor, asylums should be formed for the aged, the sick, the destitute, the insane, and more especially those reduced to destitution by accidents in collieries or any other public works. Public begging should be checked, giving the able-bodied mendicant the option of the workhouse.

I entirely agree with Dr. S. S. Alison* on his division of the classes for whom legal provision should be made, and for whom the present system offers no relief, and shall consequently not go over this part of the subject, or say anything on it, except that I think the *first class* especially should be provided for in such a manner as to withdraw them entirely from the presence of such parents. As I consider that much more will be done towards improving the condition of the poor in every way, by bringing up the rising generation as far as possible in proper moral and religious habits, how can it be expected (as I before remarked) that children who see all the laws of God and man violated by their parents, will grow up anything more than copies of these, and never form good husbands, wives, or parents.

"There is not in the present day a nicer problem in political science than how best to improve the condition of the poor. That pauperism cannot be checked by a system of starvation, the experience of the Scottish people has clearly shown. That the seeds of piety and sound education cannot flourish on the soil of want and wretchedness requires little demonstration; so that if the partisans of opposing systems would reflect that the existence of the poor in society is an institution of God, and that all that can be done is to ameliorate their condition, perhaps the one class would be induced to grant a more liberal allowance, and the other might

* See Dr. Alison's Report on Tranent.

perceive that no education can be permanently beneficial to the poor, unless based upon and leavened with religion; and thus, by a conjunction of two systems, the character of the poor might be materially improved, their privations lessened, and both their temporal and eternal welfare promoted." I give the above as the opinion of the Rev. J. G. Beveridge, minister of the parish of Inveresk, and in which I completely concur. I may also here be allowed to acknowledge the assistance that I have received from him in drawing up this report, given in a most ready and willing manner. There are a few other subjects that I must touch upon before I conclude; and first, with regard to the establishment of hospitals, and the appointment of medical attendants on the poor in *each* parish. There is no doubt that the establishing of hospitals for the reception of those afflicted with fever and other contagious disease would materially improve the sanitary condition of the poor; and, as I have before said, I do not think that the prejudice against hospitals among the poor is nearly so great as many suppose. If there was an hospital in the same town, or even within a moderate distance of the patient's relations, I am certain that few would object to be removed to it. They would not only prevent the spread of contagion, but, I have no doubt, diminish the mortality; for every medical practitioner must know how much more certainly patients can be treated in a clean, well ventilated hospital, than in the filthy, close habitations of the lower classes; besides, many things that are requisite are obtainable in an hospital that it is impossible to get in their own houses. You can also, with proper nurses, depend upon attention being paid, instead of perhaps the attendants doing nothing but their best to get drunk. I think that at least one hospital should be provided for every 3 or 4 parishes, and where there may be many large towns or villages, more. An hospital in Musselburgh would be of great service; for, from its proximity to Prestonpans and Dalkeith, there would be plenty who would readily avail themselves of it. There should also be medical men appointed to attend the poor.* Of course, in many country parishes, where the number of poor is small, one might have 2 or 3 parishes under his charge; but in such a place as Musselburgh, where I have shown that there are a great proportion of poor, it would be requisite to have one for itself. There is, I believe, a medical gentleman in that

* If hospitals were established, perhaps a better plan than appointing medical men to attend the poor in the towns, would be to connect a dispensary with the hospital, which could be attended by 2 or 3 medical gentlemen, according to the size of the town. The town, also, might be divided into districts, and one of these medical gentlemen appointed to each. No person should be eligible for relief unless they produce a certificate or recommendation from their minister or elder. These dispensaries might be supported by grants from Government to them in connexion with the hospital, and partly by private contributions. I may refer to the town of Montrose, where such an arrangement exists, and I have no doubt that any of the surgeons connected with the hospital and dispensary there would willingly furnish any information required.

town who is paid a yearly salary for attending the poor, but whether the whole of them or not I do not know. There should be persons appointed for the purpose of inspecting the habitations of the poor, and having them cleansed and whitewashed, also any alterations with regard to ventilation which competent judges may think fit. There should be covered drains laid down wherever they are not at present, and where they are should be inspected, in order to see that they are in a proper condition. All persons who, by throwing out filth, form collections of rubbish in the streets or closes, should be punished. The establishment of scavengers at present existing should be inquired into, and more added if necessary, and placed under a proper person to look after them. The houses described as inhabited as lodging-houses for vagrants and others should also be made amenable to some inspection, to prevent undue crowding and to enforce cleanliness. These inspections should take place quarterly, but it should be at the option of the proper authorities to demand an inspection at any time that they think proper. Would it not be possible to devise some means for improving the condition of the air in collieries? It tends much, from its deleterious effects, to shorten the lives of the men, and consequently to throw young families into a state of destitution. If respirators were employed, something upon the principle of those now in use for persons affected with delicate lungs or coughs, they might be of some service. When any of the numerous accidents occurring in collieries can be traced to negligence on the part of any others, the parties should be severely punished. I do not see why the practice of children (perhaps of 7 or 8 years old) being employed in collieries, and may be working 8 or 10 hours at a time, should not be inquired into in the same manner as that of children working in the spinning-mills and cotton factories. There no child below 9 can be admitted, and none below 13 without a certificate from the medical person appointed by Government; and the mills are visited by an inspector at least twice in the year. Surely the practice of such young children working below ground in unwholesome air must be far more injurious than in a well-aired factory. The coal-proprietors should also discourage the practice of women working where they have a young family to attend to at home. The houses of colliers should be subject to inspection also. Some of them are hardly fit for beasts to inhabit, far less human beings. It would be difficult, if not impossible, to alter the present state of many of the closes and wynds in Musselburgh and Fisherrow; but in the event of any new houses being built, certain regulations should be enforced with regard to due ventilation, not crowding them together, and providing proper flooring above the level of the surrounding ground. Water should be supplied by means of public wells wherever it is practicable.

It will be seen, from the foregoing pages, that there is great

need for alteration and improvement in the parish of Inveresk; and there is no doubt but many others might be found in as bad, if not a worse, condition. The state of the poor in Scotland cries loudly for some amendment; but I beg leave again to remark, that whatever that amendment may be, it will be worse than useless to expect a radical cure unless the education of the rising poor be based upon a system of moral and religious instruction. When once the heart is fairly and properly endowed with a true feeling of pure religion and morality, then, and not till then, we may look for sobriety, cleanliness, and prudent habits being familiar to all.

I have the honour to subscribe myself, Gentlemen,
Your very obedient servant,

WILLIAM STEVENSON, *Surgeon.*

To
The Poor Law Commissioners.

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ON THE SANITARY CONDITION OF THE OLD TOWN OF EDINBURGH.

By William Chambers, Esq.

Sir,—Agreeable to your request that I should furnish you, for the use of the Poor Law Commissioners, with any information I possessed respecting the cause of insalubrity in Edinburgh, I beg to hand you the following notes which I have drawn up on the subject:—

After a pretty extensive observation of the condition of towns both on the continent and in Great Britain, I am of opinion that this city is at present one of the most uncleanly and badly ventilated in this or any adjacent country. Nature has furnished it with a singularly salubrious situation, but circumstances and bad taste have gone far to neutralize the benefits that might be expected to arise from its excellent position. The Old Town, as you are aware, was originally built in a compact manner within walls; story was piled on story, with the view of saving room, and so closely were jammed the numerous closes or alleys diverging from the main thoroughfare, that in many cases a person might step from the window of one house to the window of the house opposite. What was begun from necessity has continued from mere usage. In the newer parts of the town where there is plenty of space, it is still customary to build houses of too great a height, and to cluster in one building as many as six or eight, or even more, families.*

The construction of the town, therefore, is radically unfavourable to health; but as this is now beyond a remedy, it is needless to insist upon it, and I proceed to mention those circumstances which come immediately within the means of improvement. Throughout the whole of the older portions of the town there cannot, generally speaking, be said to be any water-closets in the dwellings, and there are no kind of back courts (as in English towns) in which other conveniences are placed. In a word, the excrementitious matter of some forty or fifty thousand individuals is thrown daily into the gutters, at certain hours appointed by the police, or poured into carts which are sent about the principal streets. In all the narrow and worse ventilated closes, this practice of throwing out every kind of liquid refuse into the gutters is universally prevalent. Scavengers are appointed by the police to sweep the streets and lanes daily, and clear away all that appears offensive; but this may be pronounced an impossible task. The evil is too monstrous for cure by any such superficial means. In spite of vigorous regu-

* In Jamaica-street, in the New Town, there is a house which a few years ago contained, and probably still contains, 150 persons,

lations to the contrary, the closes which are inhabited by the poorer classes continue in a most filthy condition both night and day; and there is an incessant exhalation of fœtid substances, which I should consider highly injurious to health. Independently, however, of the insalubrity from this cause, I feel convinced that there is as great a moral evil. The eyes of the people, old and young, become familiarized with the spectacle of filth, and thus habits of uncleanliness and debased ideas of propriety and decency are ingrafted.

Within these few years, the practice of introducing water-closets into houses has become pretty general, wherever it is practicable; but in the greater part of the Old Town nothing of the kind can be accomplished from the want of drains. There are drains in the leading thoroughfares, but few closes possess these conveniences, and water is also sparingly introduced into these confined situations. You will therefore understand that *a want of tributary drains and water* is a fundamental cause of the uncleanly condition of the town. Of water of the finest kind there is indeed a plenteous supply, but unfortunately this is a monopoly in the hands of a joint-stock company, and, excepting at two or three wells, all the water introduced into the town has to be specially paid for, in the form of a tax upon the rental, by those who use it.

It is clear that the existing institutions and police regulations in Edinburgh are incompetent to cleanse the town of its impurities. The police bye-laws have done much, but they utterly fail to cure the evil at its root. If I were permitted to suggest a means of remedy, I should mention the following:—

1. A common covered sewer or drain to be made in every close, court, and street, in connexion with a main drain. Each of these drains to have one or more openings with swing-doors to admit the in-pourings of all liquid refuse, but to prevent the escape of effluvia.

2. A much more plenteous distribution of common wells.

3. The erection of several public necessaries.

4. All overhanging parts of old buildings to be removed, so as to admit the action of the sun on the ground, and assist ventilation. Any old buildings, valued at a limited price, likewise to be removed, where they evidently intercept a current of fresh air.

5. Powers to be given to the Commissioners of Police to carry these arrangements into effect at the public expense, providing that the outlay was not above say 3000*l.* or 4000*l.* annually.

These arrangements fall short of what would be desirable, but I fear that anything more would not be practicable in the present posture of affairs. I am not disposed to undervalue the advantages of a prevention of the odious foul water irrigation in the neighbourhood of Edinburgh; but I think that much more mischief is done by the foul irrigation *within* than *without* the town, and is more within the power of the inhabitants to remove. With respect

to measures of medical police, in the strict sense of the term, I do not require to say anything. All who know the private condition of the town are well acquainted with the fact of there being an immense amount of destitution and misery. Society, in the densely peopled closes which I have alluded to, has sunk to something indescribably vile and abject. Human beings are living in a state worse than brutes. They have gravitated to a point of wretchedness from which no effort of the pulpit, the press, or the schoolmaster, can raise them. Were we to plant a clergyman in every alley, and scatter the most elevating products of literature gratuitously into every dwelling, the benefits would, I verily believe, be imperceptible. The class of whom I speak are too deeply sunk in physical distress, and far too obtuse in their moral perceptions, to derive advantage from any such means of melioration.

At the present moment, the poor of Edinburgh may be said to be deserted by almost everybody but the surgeon or physician. The service performed by the medical profession generally in relieving the acute ailments of the impoverished orders is much beyond my power of estimating, and reflects upon them the highest honour. With the view of throwing light on the sanitary condition of the town, I lately applied to a medical gentleman, Alexander Miller, Esq., surgeon, whom I believed to be well acquainted with the subject, and he kindly afforded me the following answers to certain queries which I proposed; this evidence I willingly subjoin for your perusal.

I am, sir,
Yours respectfully,
WILLIAM CHAMBERS.

To Edwin Chadwick, Esq.
Secretary to the Poor Law Commissioners.

Answers by Alexander Miller, Esq. Surgeon, Edinburgh, to Queries proposed by W. Chambers.

How long have you been employed in the medical profession in Edinburgh?—With the exception of the year 1829, which I spent in Paris, I have been engaged in medical practice, in Edinburgh, for the last sixteen years; first, in the capacity of apprentice to the late Mr. George Bell, and secondly, as general practitioner on my own account. Mr. Bell was in the habit of having his apprentices constantly engaged in attending upon the poor, and I am certain that the amount of relief thus afforded would equal what any of the dispensaries now can accomplish.

What opportunities have you had of examining the houses of the poorer classes in the town?—I have had ample opportunities of observing the condition of the poor in Edinburgh, and of witnessing the state of their houses.

I acted as assistant for two years, to a lecturer on midwifery

here, and in that capacity superintended a very extensive practice among poor women confined at their own houses.

I have officiated as a medical officer of the Royal Dispensary here for nine years. The patients who apply to such an institution comprise every grade of the poor.

But perhaps the most instructive opportunity yet afforded me of seeing disease and destitution combined, was during the prevalence of the malignant cholera here, when I acted as one of the district surgeons.

What have you observed to be the general condition of the dwellings of the poorer classes?—The dwellings of the poor are generally very filthy in their interior, and in many cases seem never to be subjected to any kind of cleaning whatever. Those of the lowest grade often consist only of one small apartment, always ill ventilated, both from the nature of its construction and from the densely peopled and confined locality in which it is situated. Many of them, besides, are damp and partly underground. But perhaps the most remarkable feature of such dwellings is the miserable scantiness of furniture, or rather in many cases, the total want of any kind of it. A few of the lowest poor have a bedstead, but by far the larger portion have none; these make up a kind of bed on the floor with straw, on which a whole family are huddled together, some naked and the others in the same clothes they have worn during the day.

In almost no instance is there a supply of water, nor is there any provision for carrying off filth; the effluvia accumulated from these causes are most offensive, especially when disease is prevailing in such dwellings.

It may be mentioned that some of the houses of the poor are furnished with a small closet, which becomes a nuisance to the rest of the dwelling, in consequence of being used as a depository for all sorts of filth.

Is there much destitution within your knowledge?—I am convinced that a fearful amount of destitution prevails in Edinburgh, very many cases of which private benevolence never reaches, and they are unrelieved by public charity, in as far as the allowances thence derived are totally inadequate.

As respects cases of midwifery in particular, is there much destitution?—During the time I acted as assistant to the lecturer on midwifery, it was my duty to attend upon the poorest classes, during their confinement, in such places as Blackfriars' Wynd, Grass Market, West Port, Causewayside, &c. I have on numerous occasions been compelled to deliver the patient destitute of a bed, and with nothing to rest upon but a quantity of straw, often upon a damp floor, with an old carpet for a covering; and even where there was an apology for a bedstead, I have often seen a single tattered blanket to constitute the whole stock of bed-clothes. In many instances, I have found it impossible to procure clothes suffi-

cient to cover the infant, and although the neighbours in general are very attentive, I have had on more than one occasion to perform the duties which should have devolved upon a female attendant.

Does fever prevail to a serious extent in Edinburgh at particular times? and if so, mention in what places.—Isolated cases of continued fever are never totally absent from the dwellings of the poor. When epidemic, I have observed that it prevails with the greatest intensity, and is diffused most rapidly, where large numbers of human beings are crowded together, inadequately supplied with the necessaries of life and totally regardless of habits of cleanliness, both in their persons and houses. As instances of such localities, I would mention the closes of the High Street and Canongate, the Pleasance, West Port, Grass Market, St. Leonard's Street, the Cross-causeway and some parts of the Causewayside.

It is a matter of the greatest difficulty to arrest the progress of fever in these situations, even by the most active measures, and I have observed that the attendants on fever cases under such circumstances rarely escape being infected, while at the same time it is melancholy to reflect how many of them have been cut off. During the last three years, four young men, two of them apprentices of mine, and the others my pupils at the dispensary, were attacked with fever when attending poor cases in some of the localities I have mentioned above; two out of the four died.

It is well known, on the contrary, that when proper precautions are adopted, fever may in a great measure be prevented from spreading among the dwellings of the rich, and that there the medical attendant has little dread of infection.

Do you imagine that the filthy condition of the places you mention influences the state of health?—I am of opinion that filth and bad ventilation in any locality tend to propagate fever when once originated there, but I do not consider them adequate to its production. I agree with Dr. Alison and many other physicians, in thinking that "deficient nourishment, want of employment, and privations of all kinds, and the consequent mental depression," if not of themselves adequate to produce the continued fever of Edinburgh, are much more powerful than "any cause external to the human body itself" in diffusing it.

What do you propose as a remedy?—The only effectual, and I should think, at the same time, practicable means, would be to better the state of the poor in respect of nourishment and clothing, to improve the state of their houses by ventilating the localities in which they are situated, and repairing the houses themselves, supplying them with abundance of water, and providing them with water-closets, and by the discontinuance of fœtid irrigations and any other nuisance generating malaria either in the town or its neighbourhood.

I subjoin a few notes of two cases of destitution, which have come to my knowledge within the last few days,—

1st, W. B., aged 76, residing in the Lawn Market, has lived twenty years in and about chiefly in the Greyfriars' parish. For the last twelve years he has supported himself by selling fruit about the streets. He had an attack of palsy in the beginning of this year, when a patient in the Royal Infirmary. Since February, when he left the institution in a very shattered state of health, he has occasionally attempted to resume his former means of support, but the want of money has precluded him from making any purchases but those of the most trifling kind. In order to raise money he some weeks ago pawned a coat (his Sunday one for nine years) for 2*s*. but he has not been able to redeem it.

This man has an allowance of 5*s*. in six weeks from the parish, but he has yet only received one payment. The rent of his house is 2*l*. per annum, so that the parish allowance will be absorbed in paying that sum. He has been confined to bed for the last fortnight, with chronic diarrhœa, and is so weak from this cause, and the remains of his paralytic attack, that having occasion to leave his bed some days since, he was unable to return, but fell upon the floor and lay there until his daughter arrived some hours after to his assistance. The account which he gives of his poverty is truly heart-rending. During the eight days preceding last Saturday, he had not the slightest means of supporting life, and had it not been for the kindness of some poor neighbours he must have died of starvation. He informed the narrator of this case, that on one day the whole sustenance he could procure was a halfpenny worth of bread. The same individual, when calling on Saturday last, about one o'clock P.M., found that this man had not tasted bread that day, and the first supply expected was from the Destitute Sick Society, to whom application had been made. It may be mentioned that the visitor from the society called in the afternoon, and left 1*s*. 6*d*., but assured the old man that no further supply could be granted.

Case 2.—C. and his wife, both aged about 67, residing in Canongate, have lived about 40 years in Edinburgh. The man has had very little employment for the last two years, his branch of trade having been almost entirely superseded by a *cheap* improvement. He left the infirmary in February last, where he had been confined two months by disease. Since that time to the present (15th October, 1840,) his whole earnings do not amount to 20*s*.

He has received 1*s*. a-week from the parish, since November last, and with this sum he has to support himself, his wife, and a grown-up daughter, who was at one time a servant, but having had an attack of brain fever, has been somewhat silly ever since. This destitute couple have from time to time, as necessity compelled them, pawned different articles of clothing, until they have hardly a sufficiency to cover themselves with; in fact, the old woman has not even this: every available article of furniture has gone to the

pawnshop, and many of these are already unredeemable, as no doubt the others will become. The only article in the house in the shape of bed-clothes is a solitary blanket.

The only kind of food which their slender means can command is *small* potatoes, and occasionally a pound of meal, and these are at present *eked* out by potatoes, which the daughter gathers in fields that have been cleared. The old woman declared to me that she and her family are often compelled to fast for twenty-four hours together; and sometimes for a whole week, during last winter, she could not get more than a single meal a-day, and that of the most meagre kind.

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ON THE GENERAL AND SANITARY CONDITION OF THE WORKING CLASSES AND THE POOR IN THE CITY OF GLASGOW.

By Charles R. Baird, Esq.

Although I have long taken a deep interest in the condition of the working classes, and of the poor in the city of Glasgow, and also, especially since 1836, had some knowledge of them, it was not without considerable hesitation that I undertook to prepare the following Report.

The great extent of the field of inquiry, the difficulty of procuring accurate information, particularly of a statistical nature, and my other necessary avocations, deterred me from entering on the task: at the same time I felt it was necessary that some one should do so; I knew no one who would willingly undertake it; and as I was most anxious that the condition of these classes should be inquired into, so as to be improved, I agreed to report on the subject.

Of the manner in which the task is accomplished others will judge: those who have entered on statistical inquiries, or who have been called upon to prepare similar reports, will (from the many difficulties themselves have encountered) readily excuse any deficiency.

I take this opportunity of acknowledging with gratitude the information I received from my friends Dr. Cowan, Mr. Alexander Watt (the author of our Mortality Bills), many of the gentlemen connected with our city missions, Mr. Smart, superintendent of police in Calton, Mr. Wilson, of Anderston, and Mr. Richardson of Gorbals, as well as numerous other parties who cheerfully gave me any information I required of them.

C. R. B.

Glasgow, March 26th, 1841.

1. *General Remarks, Situation, Climate, and Population.*—The city of Glasgow, situated in latitude 55° 51′ 32″ north, and longitude 4° 17′ 54″ west of Greenwich, with its ancient seat of learning, its many religious and charitable institutions, its numerous commercial and manufacturing establishments, and its large and rapidly increasing port, combines all the characteristics of a great city.

The climate is temperate, but moist and variable. The late Dr. Couper, professor of astronomy in the University of Glasgow, found that the yearly average of rain which fell during 30 years was 22·328 inches. The least quantity in any one year was 14·468 inches, in 1803; and the greatest, 28·554 inches, in 1828. The mean heat of Glasgow was determined by Dr. Thomson, professor of chemistry, to be 47° 57′ of Fahrenheit.

According to the census of 1831, the population of Glasgow and suburbs was of males 93,724, females 108,702, total 202,426. Of these there were of the following :—

AGES.	Males.	Females.	Total.
Under 5	15,422	14,855	30,277
From 5 to 10 . . .	13,127	12,580	25,707
,, 10 ,, 15 . . .	10,491	10,720	21,211
,, 15 ,, 20 . . .	8,489	12,256	20,745
,, 20 ,, 30 . . .	15,177	23,008	38,185
,, 30 ,, 40 . . .	12,179	14,240	26,419
,, 40 ,, 50 . . .	8,685	9,329	18,014
,, 50 ,, 60 . . .	5,549	6,099	11,648
,, 60 ,, 70 . . .	3,228	3,692	6,920
,, 70 ,, 80 . . .	1,090	1,502	2,592
,, 80 ,, 90 . . .	260	385	645
,, 90 ,, 100 . . .	26	32	58
,,100 and upwards . .	1	4	5
Total . .	93,724	108,702	202,426

Of the following countries, viz. :

Scotland.	Ireland.	England.	Foreign Countries.	Total.
163,600	35,554	2,919	353	202,426

And of the following descriptions, viz. :—

Married Men, 30,032; Widowers, 1,790; Bachelors, 1,437; Male Householders, 33,259; Widows, 6,824; Spinsters, 1,882; Female Householders, 8,706; —Total Families, 41,965.

In the Abstract of the Glasgow Mortality Bill for 1840, published 21st January last, the population is estimated at 282,000. Assuming that estimate to be correct (although, for several reasons,—*ex. gr.*, I conceive that the rate of mortality must have checked the progress of the population,—I am inclined to think it is too high), and that the number of males and females, of the different ages, of the countries, and of the descriptions stated bear

the same proportion to each other that they did in 1831, there would now be of—

Males, 130,567; Females, 151,433; Total, 282,000.

Of the following ages, viz. :—

AGES.	Males.	Females.	Total.
Under 5	21,485	20,694	42,179
From 5 to 10 . . .	18,287	17,525	35,812
,, 10 ,, 15 . . .	14,615	14,934	29,549
,, 15 ,, 20 . . .	11,826	17,074	28,900
,, 20 ,, 30 . . .	21,143	32,053	53,196
,, 30 ,, 40 . . .	16,967	19,837	36,804
,, 40 ,, 50 . . .	12,099	12,996	25,095
,, 50 ,, 60 . . .	7,730	8,497	16,227
,, 60 ,, 70 . . .	4,497	5,143	9,640
,, 70 ,, 80 . . .	1,519	2,092	3,611
,, 80 ,, 90 . . .	362	537	899
,, 90 ,, 100 . . .	36	45	81
,,100 and upwards . .	1	6	7
Total . .	130,567	151,433	282,000

Of the following countries, viz. :—

Scotland.	Ireland.	England.	Foreign Countries.	Total.
227,912*	49,531†	4,066†	491†	282,00 0

And of the following descriptions, viz. :—

Married Men, 41,837; Widowers, 2,493; Bachelors, 1,507; Male Householders, 46,333; Widows, 9,506; Spinsters, 2,621; Female Householders, 12,128. —And the Total Number of Families, 58,461.

2. *Of the Working Classes.*—At the last census the occupations of only 103,000 of the population were given, and of these 29,287 were connected directly or indirectly with the manufacture of cotton goods. The occupations of the others stated were recorded so loosely that it would serve little purpose to state them here. I trust that by the next census, now so near at hand, distinct information will be given of the occupations of our myriad population. In the meantime, I can merely state that in the beginning of 1839 (and the number of persons engaged in the factories I am about to mention have been almost stationary since that time) the number of persons employed were—

* Of these, about 39,000 are from the Highlands and Islands. By a census taken in 1836, the number was 22,509; but the proportion of the sexes was not ascertained. (*Vide* the Rev. Dr. M'Leod and C. R. Baird's evidence before Select Committee of House of Commons on Scotch emigration.)

† From Glasgow being a great resort not only for the labouring classes, but also for those of higher grades following mercantile or manufacturing pursuits, I believe the numbers of Irish, of English, and foreigners, given above, is under the actual numbers.

Description of Factory.	Males.	Females.	Total.
In Cotton Factories in Glasgow and suburbs .	5,171	12,050	17,221
In Woollen ditto ditto ditto . .	300	275	575
In Flax ditto ditto ditto . .	73	181	254
In Silk ditto ditto ditto . .	41	141	182
Total in Cotton, Silk, and Flax, and Woollen Factories	5,585	12,647	18,232

That the number now employed in the power-loom cloth factories is of males 1,500, and females 11,000, total 12,500. That the number of labourers is supposed to exceed 10,000; and that the number of masons is estimated at 2,000; of joiners and house carpenters, including apprentices, at 2,400; and of mechanics, smiths, moulders, pattern-makers, &c., at engine and machine shops and foundries, 5,200.

When, in addition to these statements, the number of parties employed as operatives at other trades or occupations is taken into consideration, the conclusion will readily be arrived at that at least four-fifths of the population of the city of Glasgow and suburbs consist of the working classes and their families.* This might also be inferred from the simple fact that only about 11,000 names are thought worthy of a place in the Glasgow Post-office Directory, and of these many are entered twice, first as members of firms, or copartneries, and secondly as private residents.

Of the general conduct of the working classes in Glasgow (with the exception of their addiction to the use of ardent spirits, to which I will afterwards refer more particularly) I am inclined, notwithstanding of all that has been written and said to the contrary, to form a favourable opinion. I have had many opportunities of judging of them. The majority of my near relatives are owners or masters of public works. Having repeatedly, especially during the "strikes" and combinations in 1833-4-5, been retained as legal adviser for different associations of employers, I was thereby thrown into close contact with, though chiefly in opposition to, the views of the operatives. I have acted as secretary to the Glasgow Relief Committee since March, 1837; and I have had, in various other capacities, occasion to know the working classes; and I repeat I have formed a favourable opinion of them. They are in general civil and industrious, and in point of moral and mental worth at least equal to the same classes in any other city or town I have visited. It may with justice be said of them, what Mr. J. C. Symons has stated of the Scottish artisans in general, that "their intelligence has been nowise overrated."

* According to the abstract of the returns for 1831, the number of capitalists, bankers, professional and other educated men, was only 2,723; and Dr. Cowan states "that the relative proportion of the middle and wealthier classes to the labouring class must have been yearly diminishing." (*Vital Statistics*, p. 5.)

Of the different classes or descriptions of operatives in Glasgow, the letter-press printers, as might indeed be expected from their better education and comparatively intellectual employment, are the most intelligent, and are in general very well behaved, but the whole number of them does not exceed 1,000. There are also many most respectable and well educated men in the engineer and mechanics' shops. Of the other descriptions, the masons and house carpenters or joiners justly hold a high character; while, on the other hand, I have heard many complaints of the tailors, and of the boot and shoe makers, as being very irregular in attending to their work and in their habits of living—the workmen who can make the highest wages being frequently the worst behaved. More than one of the master boot and shoe makers have attributed the irregularity of conduct of the operatives employed by them to the fact that, from their chiefly working in their own houses, their time is in their own hands or at their own disposal, and they do not regulate it as it would be were they attending during stated hours in their masters' or employers' workshops: on the contrary, many of them are in a state of intoxication during the first two days of the week, and then are obliged to make up lost time during the remaining days.

Judging from the conduct of the cotton-spinners in 1836-7, and from the evidence given before the Select Committee of the House of Commons on combinations of workmen (ordered to be printed 14th June, 1838), no favourable opinion can be formed of them; but it should be kept in view that only the male operatives of that class, and of these, I think but a few—who, however, kept the others in subjection and terror—are there referred to; and I rejoice to be able to state, on the authority of two very extensive master cotton-spinners, that the conduct of their servants is now by no means reprehensible. I have also a letter before me from a gentleman, who is perhaps best informed regarding the conduct of the workers in the power-loom cloth factories, in which he states that "the females are of good character and conduct; wonderfully so, when we take into account that so many of them are congregated together."

The poor hand-loom weavers (well indeed may they be called so, when their hard lot—their long hours and miserable wages—are taken into account) are, upon the whole, a very intelligent, quiet, and orderly class. Their religious, moral, and intellectual condition was long of a very high grade; even yet, notwithstanding the demoralizing effects of poverty, the elder portion rank higher in these respects than many of the other classes of tradesmen. But as poverty prevents many of them from attending to religious observances, and from educating their children, I fear their character is fast deteriorating.

In order to give information regarding the physical condition of the working classes in Glasgow (and it is of their physical con-

dition that I suppose I should specially report) I have prepared the following—

TABLE of the Average Rates of Wages in Glasgow during the Years 1836, 1837 1838, 1839, and 1840.

Trades or Occupations.	Periods of Labour.	1836. Per week.	1837. Per week.	1838. Per week.	1839. Per week.	1840. Per week.
		s. d.	*s. d*	*s. d.*	*s. d.*	*s.*
Blacksmiths at Engineers . . .	10 hours.	25 0	25 0	26 0	26 0	25 0
Ditto, general smiths' work . .	Ditto.	19 0	19 0	19 0	19 0	19 0
Bootmakers	Per piece.	21 0	21 0	21 0	21 0	21 0
Bricklayers*	10 hours.	18 0	18 0	18 0	21 0	21 0
Cabinet Makers	Ditto.	16 0	16 0	16 0	16 0	16 0
Calenderers	12 hours.	16 0	16 0	16 0	16 0	16 0
Carvers	10 hours.	20 0	20 0	23 0	23 0	23 0
Coopers.	Ditto	18 0	18 0	18 0	18 0	18 0
Gilders	Ditto	18 0	18 0	20 0	20 0	20 0
Joiners and House Carpenters. .	Ditto	20 0	20 0	20 0	20 0	20 0
Labourers	Ditto	12 0	12 0	12 0	12 0	12 0
Letter-Press Printers in Book Printing Offices average . .	per piece.	20 0	20 0	20 0	20 0	20 0
Ditto ditto in Newspaper and Job offices	11 hours.	25 0	25 0	25 0	25 0	25 0
Masons† (when full time) . . .	10 hours.	22 0	22 0	22 0	22 0	22 0
Millwrights at Public Works . .	Ditto.	21 0	23 0	23 0	23 0	22 0
Moulders	Ditto.	24 0	25 0	25 0	24 0	25 0
Painters	..	17 0	17 0	18 6	19 0	19 0
Plasterers‡	10 hours.	17 0	18 0	18 0	19 0	19 0
Plumbers	Ditto.	21 0	21 0	21 0	21 0	21 0
Porters in Shops and Warehouses .	..	14 0	14 0	14 0	14 0	14 0
Sawyers	Per piece.	23 0	23 0	23 0	23 0	23 0
Shoemakers in their own houses .	Ditto.	15 0	15 0	15 0	15 0	15 0
Slaters†	10 hours.	20 0	20 0	20 0	20 0	20 0
Tailors—in Summer 12, in Winter.	Ditto.	18 0	18 0	18 0	18 0	18 0
Turners and Finishers at Engine Making	Ditto.	25 0	25 0	25 0	24 0	24 6
Warpers generally	11 hours.	15 0	15 0	15 0	14 0	14 0‡

From the different kinds of operatives employed in the cotton spinning and weaving factories, and the various kinds of weavers, and wages paid them, it is not easy to make up such a table of their wages, but the following information may be relied upon:—

Cotton-spinners average 25*s.* per week; others, workers in mills, from 2*s.* 6*d.* to 10*s.* per week.

In weaving factories—weavers from 6*s.* to 11*s.* per week; dressers from 25*s.* to 30*s.*; tenters from 22*s.* to 25*s.*

Hand-loom weavers—plain muslin, 1st class, 6*s.* to 8*s.* 6*d.*, 2nd class, 4*s.* 6*d.* to 6*s.* 6*d.* per week, net. Pullicate, gingham, lappetts, &c., 1st class, 5*s.* 6*d.* to 8*s.*; 2nd class, 4*s.* to 6*s.*, net. Harness work, gauzes, zebras, dresses, &c., 1st class, 7*s.* to 10*s.* 6*d.*, net; 2nd class, 5*s.* to 7*s.*, net.

* The bricklayers have a good deal of broken time, and the wages vary very much. Wages higher last two years, owing to the railways.

† Masons, plasterers, and slaters have also a great deal of broken time, owing to the weather, &c. This year they were about 6 weeks idle. Perhaps the masons do not earn more than 17*s.* per week throughout the year.

‡ The above Table of wages was prepared not merely from information received from employers—many of whom exhibited their pay-sheets to me—but also from statements of operatives. In every instance I had the wages stated checked by at least three parties.

I also submit the following statement or—

TABLE of the Average Price of Provisions (undermentioned) in Glasgow during the same Years 1836-7-8-9 and 40.

Articles.	Weight or Measure.	1836.	1837.	1838.	1839.	1840.
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Oatmeal	Per Imp. stone	1 10	1 9	1 10	2 2	1 8
Potatoes	Ditto.	0 4	0 5	0 6½	0 5½	0 4½
Beef, 1st quality	Per lb. of 16 oz.	0 7	0 7	0 7	0 7	0 7
Ditto 2nd quality	Ditto.	0 6	0 6	0 6	0 6	0 6
Ditto 3rd quality	Ditto.	0 5	0 5	0 5	0 5	0 5
Pork	Ditto.	0 6	0 6	0 6	0 6	0 6
Bacon	Ditto.	0 6½	0 6½	0 6½	0 6½	0 6½
Bread, fine	4 lb. loaf.	0 8	0 8½	0 9½	0 10	0 9½
Ditto	Ditto.	0 7	0 7½	0 8½	0 9	0 8½
Sweet Milk	Per ¼ gallon.	0 6	0 6	0 6	0 6	0 6
Buttermilk	Pr. Scotch pint	0 1	0 1	0 1	0 1	0 1
Scotch Cheese, average	Per lb.	0 7	0 7	0 7	0 7	0 7
Fresh Butter	Ditto.	0 11½	1 0	1 0	1 0½	1 1
Salt ditto	Ditto.	0 10	0 10	0 9½	0 10	0 10½
Black Tea	Ditto.	4 8	4 8	5 0	4 8	5 4
Brown Sugar	Ditto.	0 7	0 7	0 8	0 8¼	0 9
Ditto Soap	Ditto.	0 5½	0 5½	0 5½	0 6	0 5½
Black ditto	Ditto.	0 4	0 4	0 5	0 4	0 4

Coals in retail from 1*s.* to 1*s.* 3*d.* per cwt.*

With the view before expressed, namely, to throw additional light upon the condition of the working classes in Glasgow, I have also endeavoured to make up a statement or Table showing the average rents of the houses or dwellings occupied by these classes; but this I have not been able to do even to my own satisfaction, in consequence of the endless variety in size, condition, situation, &c. &c. &c., of the houses: I must, therefore, content myself with stating that a single room in the north, west, or south suburbs of Glasgow will readily let at from 3*l.* 10*s.* to 4*l.* 4*s.* per annum; a house of two rooms (or a kitchen and bed-room) at from 6*l.* 10*s.* to 7*l.* 10*s.*; and a house of three rooms at from 8*l.* 10*s.* to 12*l.* 12*s.*; while in the old parts of the city and at the east end, where the houses are not in general so good, the rents are a shade lower. There are many houses, or rather mere cellars or garrets at lower rents, but these are, with few exceptions, not occupied by what can properly be called the working classes, but by the poor, who have no regular employment, or sufficient means of subsistence.

That many of the operatives in Glasgow live in comfort and are able to clothe themselves and families, and to educate their children, is well known to all who know anything of them, and must be evident even to the passing stranger who sees the thousands pouring along the streets on the sabbath-day, apparently well fed and well clad, to their respective places of worship. I rejoice to be able to add, that numbers of them can do more—they give

* The above Table was prepared from information received from at least three persons dealing in each of the articles stated, and checked with the prices current in the newspapers for the years specified.

their quota of charity (far more in proportion than the higher classes do)—they assist in supporting their clergymen, as witness the payments for church-seats, and the donations, especially at the dissenting churches, and not a few of them save money. In proof of this last fact I call attention to our savings banks, and to the class of depositors therein. By the last Report (dated 2nd January, 1841) of the National Security Savings Bank of Glasgow, I find that, out of 20,076 individual depositors, there were—

Mechanics, artificers, and their wives . . .	6,736
Factory operatives	1,574
Labourers, carters, and their wives	867
In all, of these descriptions	9,177

And it is proper to mention, that there are nearly 2,000 other depositors, whose "descriptions are not stated."

While, however, many of the working classes in Glasgow are able to live in comfort, and a number of them, by proper economy and prudence, to save money, it must be kept in view that they are subject to many causes by which even the most prudent and economical may be reduced to penury, such, for instance, as the want of employment: it may be from the inclemency of the weather, which almost every winter (and peculiarly during the last winter) interrupts the masons, slaters, and out-door labourers; the sudden convulsions and fluctuations of trade, by which the means of subsistence are frequently withdrawn from large masses; the high price of provisions; and, above all, their liability to diseases, especially those of an epidemic nature.

Like the population of every other manufacturing city or town, the working classes of Glasgow have frequently suffered very severely from sudden depressions and fluctuations of trade, and the consequent want of employment. In 1816-17 the distress was such that it was found necessary to raise a large sum by voluntary subscription. At that time 9,653*l.* 6*s.* 2*d.* was distributed among 23,130 persons. In 1819-20 large distributions of clothing, meal, and fuel were made to persons who could find no employment. Upwards of 600 men were employed in breaking stones for the roads, and 340 weavers at spade-work in the public green. From April, 1826, till October, 1827, was another period of great mercantile distress, and about 9,000*l.* was laid out for the amelioration of the working classes. In 1829, 2,950*l.* for the like purpose. In 1832, the memorable cholera year, the condition of these classes was most lamentable. About 10,000*l.* was then raised by voluntary subscription, and 8,000*l.* under the Cholera Assessment Act, and (with the exception of 1, 854*l.*) was expended in feeding and clothing the destitute, washing the houses, attending to the sick, and providing coffins, &c. &c. Down till 1837 there was no other period of great distress; but in the spring of that year, owing to

the depressed state of trade, the want of employment, and the high price of provisions, a large number of the working classes in Glasgow were reduced to very necessitous circumstances: 5,200*l.* was raised by voluntary subscription, with which, and 3,000*l.* handed over by a former relief committee, 3,072 adults were employed at out door work, as preparing road-metal, or at weaving, and 3,800 adults, besides children, in all about 18,500 persons, were daily supplied with food at the soup-kitchens then established; besides which considerable sums were expended in providing fuel, and in redeeming bedding and clothes from pawn. Even during last winter, although it was generally admitted that there was no great scarcity of employment, and that the operatives were in a much better condition than they had been at previous times, owing to the great severity of the weather the relief committee thought it was necessary to give extraordinary aid; and accordingly, in the city and suburbs, upwards of 3,000 persons were assisted in various ways, particularly with food, during the months of January and February last.

Much, however, as the working classes in Glasgow have suffered from the depressions or fluctuations of trade, the want of employment, and the high prices of provisions, I conceive that their sufferings from these causes have been trifling indeed when compared to what they have annually suffered from disease, especially of an epidemic nature.

From deductions made on an extensive scale by our most eminent statists, it may be said to be established that "when 1 person in 100 dies annually, 2 are constantly sick."* Let this axiom be applied to Glasgow, in which, last year, the deaths were as 1 to 31·969, or 3·128 per cent. (and the mean annual mortality for the last 5 years 1 in 31·738.) Let it be taken into account that the deaths from fever alone, in 1840, were 1229, being 1 to 7·177, or 13·921 per cent. of the whole deaths. Let it be also considered that fever here, as elsewhere, chooses its victims in the prime of life, and consequently most frequently the parents of large young families; and let it be recollected that, as above stated, at least four-fifths of the population of Glasgow and suburbs consist of the working classes, or their families: so that if, as is too often the case, the father is laid on a bed of sickness or cut off by death, there is *no* provision for the other members of the family. I say let these considerations be duly weighed, and even a passing thought given to the sufferings, the watching, want and wretchedness which accompanies sickness and death, especially in the poor man's house, and any right-constituted mind will contemplate with horror the amount of misery which must have been the lot of countless thousands of our working classes.

* Vide M'Culloch's Vital Statistics, in Statistics of British Empire, vol. ii. p. 567, and authorities there quoted.

Instead of dwelling longer here upon the vast amount of suffering incident to these classes from the fearful extent of disease and mortality which has afflicted our city for many years past, I shall now proceed to the next head of my report, viz., on the sanitary state of Glasgow, and there give tables, or data, from which any person interested in the condition of the working and poorer classes may draw deductions; and I may here mention that I make a separate chapter, and place it in the position I do, as the tables and statements in it illustrate the condition of both the working classes and the poor, and also show the great extent of destitution which must exist in the city of Glasgow. With these characteristics, the chapter on the sanitary condition of our city will form an intermediate and proper connecting link in my report.

III. *Sanitary Condition of Glasgow.*—Several years ago my friend Dr. Cowan called special attention to the high rate of mortality in Glasgow (arising chiefly from epidemic diseases), with the view of getting preventive or remedial measures adopted. In a paper published early in 1838, he stated that "the rate of mortality had for the present reached its maximum;" but "that in the course of a few—a very few years—the same cycle of disease would again revolve, and again would pestilence revisit the city." That he was correct in both statements, an examination of the elaborate and distinct mortality bills, prepared by Mr. Alexander Watt, too clearly proves; and I regret to add, prove also the assertion of Mr. Symons (in his Report published 27th March, 1839, *vide* p. 52), "that disease culminates in Glasgow to a pitch unparalleled in Great Britain."

From these mortality tables, aided by the tables prepared by Dr. Cowan, and published in his "Vital Statistics of Glasgow," and by notes furnished by Mr. Watt, I have prepared and now present the following, viz.:—

I.—Table exhibiting the estimated Population, and the Rate of Mortality in Glasgow during the last five Years.

Years.	Population.	Deaths.	Rate of Mortality.
1836	244,000	8,441	1 in 28·906
1837	253,000	10,270	,, 24·634
1838	263,000	6,932	,, 37·939
1839	272,000	7,525	,, 36·146
1840	282,000	8,821	,, 31,969

Mean Annual Mortality for these five Years, 1 in 31·738.

Note.—The number of the population was obtained by interpolating a series based on the Government enumerations of 1801, 1811, 1821, and 1831; and I find from the Mortality Bill of 1837, that 1835, 1836, and 1837, had been rated a little higher than the series warranted as being in all likelihood nearer the truth. (Mortality Bill, 1827—Table 25th.)

II.—Table of Deaths under 5 Years of Age, and their ratio to the Population.

Years.	Population.	Deaths under 5 Years.	Proportion of these to Population.
1836	244,000	3,889	1 in 62·74
1837	253,000	3,875	,, 65·29
1838	263,000	3,133	,, 83·94
1839	272,000	3,777	,, 72·01
1840	282,000	4,031	,, 69·95

The mean annual Mortality of persons under 5 for these five years being 1 in 70·78.

III.—Table of the Increase of Deaths of the respective Ages stated for said 5 Years.

Years.	AGES.											Total.
	Under 1 Year.	1-2	2-5	5-10	10-20	20-30	30-40	40-50	50-60	60-70	70 and upwards.	
1836	60	160	176	..	..	190	190	124	134	138	117	1,289
1837	1	34	..	..	129	252	397	399	299	240	197	1,948
1838	.	..	..	..	..	..	..	..	..	..	3	3
1839	232	226	186	135	49	..	..	..	..	26	24	878
1840	21	228	5	120	80	204	257	205	101	29	54	1,304
Total	314	648	367	255	258	646	844	728	534	433	395	5,422

IV.—Table of the Decrease of Deaths, with the Ages in these Years.

Years.	AGES.											Total.
	Under 1 Year.	1-2	2-5	5-10	10-20	20-30	30-40	40-50	50-60	60-70	70 and upwards.	
1836	..	..	..	15	31	..	..	..	..	..	..	46
1837	..	..	49	57	30	..	..	..	..	..	1	137
1838	272	393	77	64	186	397	511	393	419	345	284	3,341
1839	..	..	..	..	..	32	62	130	7	..	54	285
1840	..	..	..	..	..	..	..	..	..	..	3	3
Total	272	393	126	136	274	429	573	523	426	345	342	3,812

There was, during last year, an increase of deaths at all ages below 80, but a decrease of 3 between 80 and 90; and, to save making an additional column, I have inserted them as above.

Deducting the decrease from the increase during the years stated, there remains a total increase of 1610.

V.—Table showing the Number of Fever Patients treated in Hospital for the last 5 Years, and their ratio to the Population.

Years.	Population.	Fever Patients.	Ratio of Fever Patients treated in Hospital to Population.
1836	244,000	3,125	1 in 78·08
1837	253,000	5,387	,, 46·7
1838	263,000	2,047	,,128·48
1839	272,000	1,529	,,177·89
1840	282,000	3,535	,, 79·77

Here I may again remark how much Dr. Cowan's statement, in 1838, "that in the course of a few—a very few years—the same cycle of disease would again revolve, and *pestilence again revisit our city,*" has been verified.

VI.—Table of the Number of Cases of Fever treated by the District Surgeons of the City proper, during the Years 1836, 1837, 1838, 1839, and 1840, distinguishing those sent to the Infirmary, and those treated in their own Houses.

Years.	Number of Cases.	Sent to the Infirmary.	Treated at Home.
1836	1,359	643	716
1837	3,331	1,049	2,282
1838	1,327	456	871
1839	466	166	300
1840	1,202	455	747
Total .	7,685	2,769	4,916

This melancholy catalogue of fever cases, too, is only of those treated by the district surgeons in the city proper. Now I have learned from the Rev. Dr. Black,* of the barony, that, of the 949 cases treated by the district surgeons of his parish, 205 were fever cases. Of the 320 cases treated by the district surgeons of the Govan annexation district, 106 were fever ones. Of the 1755 cases under charge of the medical officers of the Gorbals' Dispensary, 428 were of fever; of those of the Anderston Dispensary 53; and I have learned from Dr. Macgregor (who takes charge of the Celtic Dispensary, and from whom I have received valuable information regarding the Highland population of Glasgow), that of the 261 cases treated by him, as surgeon of that Dispensary during last year, 35 were cases of typhus.

* I take this opportunity of bearing testimony to the willing and polite manner in which the Rev. Dr. Black answers any inquiries regarding his parish; still more might I speak of his unwearied zeal in attending to the numerous poor therein. Were it not for his business habits and knowledge, and constant assiduity, that enormous parish would, in all likelihood, be in a most miserable condition.

VII.—Table exhibiting the Deaths from Fever, as stated in the Bills of Mortality, including both the City and Suburbs, during the last five Years, and their proportion to the Population.

Years.	Deaths from Fever.	Proportion to whole Deaths.	Proportion to Population.
1836	841	being 1 to 10·036 of the deaths, and	1 to 290·130 of the population.
1837	2,180	,, 4·711 ,,	,, 116·055 ,,
1838	816	,, 8·495 ,,	,, 322·303 ,,
1839	539	,, 13·961 ,,	,, 504·638 ,,
1840	1,229	,, 7·177 ,,	,, 229·454 ,,

The total number of deaths from fever alone, *ascertained*, during the last 5 years, being 5605!

"Upon the assumption that the rate of mortality from fever was 1 in 12 of those attacked in 1836, 1 in 10 in 1837, 1 in 12 in 1838, 1 in 15 in 1839," (Dr. Cowan's Vital Statistics, p. 17,) and 1 in 10 in 1840, "which calculations will be found to be very correct," the number of individuals who have been affected with fever in Glasgow, during the last 5 years, will be as follows:—

In 1836 . . .	10,092
,, 1837 . . .	21,800
,, 1838 . . .	9,792
,, 1839 . . .	8,085
,, 1840 . . .	12,290
Total . . .	62,051

Truly, to use the words of Dr. Cowan, after making a similar statement, "the mind cannot contemplate, without horror, the amount of human misery which the above statement so forcibly exhibits."

As only an abstract of the Glasgow Mortality Bill has yet been published (it having been deemed desirable to postpone publishing the more extended tables till after the approaching census), I cannot give that minute information which I would wish to do regarding the diseases of children in Glasgow during the past year, but present the following:—

VIII.—Table of Deaths from Scarlet Fever, Small Pox, and Measles, during the five Years ending with 31st December, 1839; and the estimated Number of those attacked.

Diseases.	Deaths.			Estimated Number attacked.		
	Under 10 Years.	Above 10 Years.	Total.	Under 10 Years.	Above 10 Years.	Total.
Scarlet Fever.	1,020	36	1,056	12,240	432	12,672
Small Pox .	2,044	152	2,196	10,220	760	10,980
Measles . .	2,448	34	2,482	29,376	408	29,784
Total . .	5,512	222	5,734	51,836	1,600	53,436

These three diseases, it will be observed, pressed heavily upon the young, while fever, as above-mentioned, selected its victims from the productive portion of the community. The fearful ravages of small-pox calls loudly for some measure to enforce the practice of vaccination among the lower classes.

I might add much regarding the sanitary condition of Glasgow; but in order to keep this report as brief as possible, I prefer referring for further details to Mr. Watt's Mortality Bills, and to Dr. Cowan's "Vital Statistics;" and assuredly these, with the tables or statements I have given, will sufficiently illustrate the sanitary condition of our city, the miserable condition in which many thousands of our working and poorer classes must be, and that it is the bounden duty of all in authority, and of all the richer classes, to see that effective remedial measures be instantly adopted.

IV. *Medical Charities of Glasgow.*—The reader of the last chapter, or he who has otherwise learned the sanitary state, the great unhealthiness I may say, of Glasgow, will naturally inquire regarding the extent and conditions of the medical charities of our city, and what medical aid is given to the working and poorer classes, who cannot afford to pay for medical assistance. To meet such inquiry, I have prepared the following tabular view of the medical charities, viz.:—

TABULAR VIEW of the Medical Charities, Number of Patients treated at the Public Expense, Hospital Accommodation and Expenditure in Glasgow, in 1840.

Institutions.	Number of Patients.			No. of Beds.	Expenditure.		
	In-door.	Out-door.	Total.		£.	s.	d.
Royal Infirmary	2,596	..	2,596	231			
Ditto Fever Hospital	3,535	..	3,535	200	8,405	9	9½*
Ditto Dispensary	..	7,501	7,501	..			
Eye Infirmary	63	1,273	1,336	10	263	3	3
Lock Hospital	369	..	369	32	429	1	7
University Lying-in Hospital	136	410	546	14	156	10	0
Ditto Dispensary	..	2,708†	2,708	..	27	7	2
Glasgow Lying-in Hospital	104	90	194	18	99	0	0
Ditto Dispensary	..	750	750	..			
Lunatic Asylum, daily average number of city paupers	11	..	11	110	200	4	0
Ditto Barony	22	..	22		400	8	0
Towns Hospital, number of lunatics	43	..	43	56	228	16	2
District Surgeoncies of City (12)	..	4,504	4,504	..	252	0	0
Ditto Barony and medicines	..	949	949	..	120	9	1½
Ditto Govan Annexation	..	320	320	..	21	0	0
Anderston ditto	..	405	405	..	41	0	0
Gorbals Ditto	..	1,755	1,755	..	82	0	0
Celtic ditto	..	261	261	..	48	3	0
Medicines and cordials for city paupers	..	..	..	..	150	19	3
Total	6,879	20,926	27,805	671	10,922	11	4

* Including cost of new buildings, 1,180*l.*

† Of these 1,805 were males and 2,698 females. Of the total number, 1,054 were fever cases.

The above was prepared from the reports of the several institutions for last year, or, where these have not yet been published, from information received from the principal officers of the establishments.

It may occur to many who consider the above statement, and who compare it with statements of the hospital accommodation, &c., in other large cities or towns (and I am informed that Glasgow is not surpassed by any city in Great Britain or Ireland, excepting Dublin, for the extent of its hospital accommodation, or the freedom with which the people are allowed to avail themselves of it), that Glasgow is eminently well off in this respect; but such persons should keep in view the peculiar nature of the population of Glasgow, the great and increasing immigration of the very lowest classes into it, especially from Ireland and the Western Highlands, (and these parties are, as shown by Dr. Perry, Dr. Cowan, and others, peculiarly liable to contagious and infectious diseases,) the fact that Glasgow has, from many causes, been of late years most unhealthy, and also what has been above stated regarding the sanitary condition and high rate of mortality.

On the other hand, I must add that the statement given does not show all nor nearly all the medical aid given to the poor of our city, but merely such as is connected with public institutions. The charitable aid and advice given by our physicians and surgeons is, I am aware, very great. Indeed I do not know any class of the community who are so constant and unwearied in their exertions on behalf of the poor. When compared with their services, the large subscriptions or costly gifts of even our most benevolent merchants dwindle into insignificance.

V. *Of the Poor.*—Although I have, in a former part of this Report, treated of the working classes separately, and now give a distinct chapter to the poor, it must not be supposed that I draw, or attempt to draw, a marked line of demarcation between them: on the contrary, many of the working classes, especially the hand-loom weavers, may with perfect propriety be treated in the same category with the poor, and multitudes of the other classes are constantly, from the causes I have indicated, reduced to poverty, and become members of the great community of the poor of Glasgow. By "the poor," I now mean, not merely the actual and recognized "paupers" receiving parochial relief, of whom immediately, but also all who, from want of means, want of employment, or inability to work, are destitute of sufficient subsistence.

That there must have been, and that there now exists in Glasgow, a fearful amount of destitution and misery, might be held to be sufficiently established by the statements and tables given in the chapter on its sanitary condition. Those of fever alone would prove this: for, according to Dr. Alison, and assuredly no man's opinion on such a point is entitled to more weight, "These repeated and severe visitations of fever demand special 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 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 that it may be made in all."*

"Next to contagion," says Dr. Grattan, "I consider a *distressed state* of the general population of any particular district the most common and most extensive source of typhoid fever." And other authorities are quoted, and proofs given by Dr. Alison, that destitution is the great cause of disease. Therefore, from the low sanitary state of Glasgow, and the rate of mortality, we may safely infer that the great bulk of the population must have been, for many years past, and now are, in a very destitute condition.

The following Table of the burials at the public expense in the city proper alone speaks volumes, viz.:—

Years.	Men.	Women.	Children.	Total.
24th October, 1825, to 24th October, 1836	120	175	363	658
,, 1836, ,, 1837	254	330	513	31,097†
,, 1837, ,, 1838	169	258	453	880
,, 1838, ,, 1839	116	182	447	745
,, 1839, ,, 1840	187	201	568	956

And these besides the vast numbers buried at the public expense in the suburban districts.

Without going into details of former years, I find the following items in the states of—

	£.	*s.*	*d.*
The Barony parish poor-funds for last year for *coffins and graves*	152	15	6
Govan Annexation, ditto	45	3	2
Gorbals Proper, ditto	7	9	6

In short the people are so poor that they cannot even afford to bury their dead.

Were further proofs of the privations and intense sufferings of the poor in Glasgow required, I would refer to the records of the relief committees, of which I gave a very general sketch, when speaking of the evils which affect the working classes. Let it be recollected that in the spring of 1837 it was found necessary to support 18,500 persons; and that even during last winter, when it was admitted that there was no great scarcity of employment, and

* Dr. Alison on the Management of the Poor in Scotland, p. 10.

† 1837, it will be remembered, was the year in which 18,500 individuals were assisted by the Relief Committee.

that the operatives were in a much better condition than they had been at previous times, the Relief Committee felt themselves compelled to give extraordinary aid, and accordingly in the city proper, between 21st January and 24th February last, 1038 families or individuals received supplies in meal, and a few, who could be trusted, small sums of money. 20,138 rations of soup and bread, and 260 rations of bread only, were given by the committee through the manager of the night asylum for the houseless; while from the same fund 750 families or individuals were assisted in the Calton, 396 in Gorbals, 194 in Anderston, 154 in Bridgeton, and 200 in the other suburbs: in all about 8196 individuals. And after inspecting the houses of the parties relieved, it was found necessary to provide 230 beds, besides straw, &c., the parties getting these having had, even in the severity of winter, nothing but the bare damp floors of their dwellings, perhaps in some few instances a bundle of shavings or a scanty lot of straw to lie upon. All this aid too was found necessary at a time when the managers of the several poor funds were increasing their allowances to the parties who had legal claims upon them.

If still further evidence of the destitution in Glasgow be called for, I am grieved to say that it can too easily be given. I have now before me 16 special reports from (or answers to queries put by me to) city missionaries,* elders of different churches, whom I knew to be assiduous in their visits to the poor, and the superintendants of Police in the suburban districts, which demonstrate the fearful amount of destitution existing in Glasgow, and give much valuable information regarding the condition of the poorer classes. Instead of swelling this report by giving quotations here from these, I will subjoin copies of the queries, and an analysis of the answers in an Appendix A.

I have also now before me special returns of the names—ages —occupations—countries of nativity—earnings of selves and families—aid from other sources—relief given by committee—and general remarks on the condition of 1830 cases of the parties assisted last winter, which detail the lamentable state of the poor in our city and suburbs. A mere abstract of these Returns would itself occupy more space than I am allowed for this Report; but, as illustrative of the subject, and also to show the careful and excellent manner in which the distributors of the Committee's bounty performed the duty allotted to them, I give a few extracts in the Appendix C.

Of the intensity of the sufferings and privations of the poor in Glasgow it is almost impossible for me to give an overcharged

* There is not, I think, among all our institutions, one more catholic in its constitution, better managed, or more beneficial in its operations, than the City Mission. Nor do I know any class of men undergoing more labour, or discharging more important duties (yet for which they are paid most triflingly), than the City Missionaries. Their number should unquestionably be increased, and their services infinitely better rewarded.

statement. The observations in Mr. Symons's Report on the hand-loom weavers have been so frequently quoted, and are now so well known, that I will not do more than refer to them, and add that I fear he has too correctly stated that "penury and misery (as well as disease) culminate in Glasgow to a pitch unparalleled in Great Britain." Further information will be got in Captain Miller's "Papers on Crime, &c.;" and Dr. Cowan again and again speaks of "the extreme destitution existing here."

As the details of a few individual cases may convey more vivid impressions than any general statement, I will make no apology for inserting the following. The first is from a letter from one of the visitors of the "Society for Benevolent Visitation of the Destitute Sick," in which he writes, "I investigated the case of Mrs. ———, Calton: I found her in a wretched abode, no glass in the window, no furniture of any kind except an old chair, not a handful of straw to lie upon, and blanket or rug was out of the question. The family must have spent a miserable winter. Her husband had been a drunkard and enlisted; has sailed for the Indies, and left her and four children, the eldest a girl of nine years of age, the youngest an infant of about a year old, who is ill of inflammation of the lungs brought on by cold, and not likely to live long. They are so destitute of clothing that they can scarcely cross the threshold. Though mid-day, they had got no breakfast, and one of the neighbours told me they were whole days without food, but that she never knew children bear hunger so patiently. The mother is a weaver, but with a sick child can earn little. These are the facts of the case." The second I shall quote was communicated to me by Mr. James Scott, one of the most active members of the Glasgow Relief Committee, and I give it in the words stated to me. "Among the many distressing cases in Dempster Street I found Mrs. ——— and two other females occupying a small confined house, and the scene almost baffles description. They were all actually in a state of nudity, not having clothes sufficient to cover their nakedness. Before I could speak to them they were obliged to wrap themselves in something like old torn bed coverlets. The house was completely destitute of beds or other furniture—positively nothing. The inmates were starving, having no food whatever in the house, and it appears they had shut themselves up for the purpose of dying; their modesty having prevented them from making their circumstances known. After the most minute inquiry I could make, I found their characters irreproachable."* And the third is from a diary or book of visits kept by Mr. Wilson, Superintendent of Police for the burgh of Anderston. No. 64. Samuel M'Gee, formerly a weaver, now unable to work; 86 years of age, his wife 84, both of

* Mr. S., in one of his benevolent visits, found a woman and four children in a garret in the New Wynd without the slightest morsel of food or the least stitch of clothing, the mother having previously pawned everything to procure food.

them in bad health, and miserably clad: he had been confined to the house for three weeks. There was only a lot of shavings for a bed, and lying on a very damp floor—a perfect hovel. No furniture whatever, except part of an old chair; they were lodgers, and there was a small fire in a room, "but and ben." M'Gee always bore a good character; has only 4*s.* a month from the Barony parish, and no other means of living.*

Nor must it be supposed that these are isolated or rare cases. Would that they were so; but alas! my own experience has taught me, and the Returns and other documents on my table show, that hundreds, aye thousands of such cases are daily to be met with in our city and suburbs. Let our city missionaries, our clergymen and elders of different persuasions, who *do* devote themselves to the amelioration of the poor, and our active police officers, be examined, and facts will be elicited which will amply confirm what I have stated, and will prove that those who now plead for an inquiry into the condition of the poor with a view to its improvement, have much cause to be earnest in their entreaties.

A very large proportion of the poor in Glasgow are natives of other places; have immigrated to Glasgow, probably in search of work; but through want of employment, disease, or other cause, have been reduced to poverty and thrown a burden on our community. A number of old and infirm persons have, I learn, been brought here and supported for the requisite time, and then are made claimants on the poor's funds. I found in 1837 that of 3072 cases of persons supplied with work by the Relief Committee, which I then examined: only 1253 belonged to Glasgow, 667 to other parts of Scotland, 1103 were Irish, 39 English, and 10 foreigners. Dr. Cowan found that of 178 inmates of the Royal Infirmary in April, 1840, only 38 were natives of Glasgow, and 98 had not passed the prime of life there. Dr. Perry states that not more than 15 per cent. of the patients admitted into the Albion Street Hospital were natives, and 25 per cent. had not been three years resident; that 30 per cent. were from Ireland, and 40 per cent. from the Highlands and agricultural districts of Scotland. Of 9198 inmates of the Night Asylum for the Houseless (most distinct and excellent statistics of which have been prepared by M. Andrew Liddell), only 2446 belonged to Glasgow.† By

* Mr. Wilson's book contains many melancholy details, and also some very interesting ones; such as of poor people supporting orphan children, and others who at first applied for aid, but told whenever they got employment, and then withdrew their applications for charity.

† There were—

	Males.	Females.	Total.
From Glasgow and the parishes of Barony and Gorbals	949	1,497	2,446
From all other parts of Scotland . . .	2,518	2,196	4,714
From England and Ireland	1,162	876	2,038
Total	4,629	4,569	9,198

the Report of Mr. Thomson, the Inspector of Sessional Poor, to the Directors of the Towns Hospital, I find that at 1st August last, of 1220* session poor, there were 219 Irish, 17 English, and 4 foreigners. And I find from the analysis of 1830 cases of persons last assisted by the Relief Committee, 1228 were Scotch, 585 were Irish, and 17 of other countries. I also learn from Mr. Smart of Calton, that of 176 cases of persons (of which 162 were of fever, 2 of small-pox, and 12 of non-contagious disease) treated by the parish surgeon between 1st September and 24th February last, 4 were natives of England, 104 of Ireland, and 68 of Scotland; 86 had not been three years resident.

From these statements, imperfect as they are, it will be seen how many stranger poor there are in Glasgow.

VI. *Of the recognised Paupers.*—By the kindness of the gentlemen taking the principal charge of our different poor's funds, I have been furnished with abstract states of their income and expenditure for the last five years, and with other valuable information, from which I will now give an account of the number and the allowance made to the actual or legally recognised paupers in Glasgow and the suburban districts, for the last year, and will subjoin, in the Appendix C, a statement of the gross expenditure of the several funds for the five years.

City Proper.—I find from the account of the Towns Hospital of Glasgow for the year commencing 1st September, 1839, and ending 31st August, 1840, that

The inmates of the house were	406†
The number of out-door poor is not stated (although the allowance is, and to "have been to 720 families and individuals"), but I have been otherwise informed that there were, including children at nurse	1,092
The number of pauper lunatics in the Royal Asylum .	43
The number of sessional poor (one of the items in the Towns Hospital account is, "Amount granted to individual sessions with a view of preventing paupers becoming more burdensome to the hospital, 2,673*l.* 7*s.*"), I find from Mr. Thomson's Report, were, on 1st August last, (there was also 319*l.* 18*s.* 9*d.* paid for "temporary aid in money to casual poor," but the number is not stated). .	1,220
Total number of enrolled poor receiving aid from poor's rates in City proper	2,761

Barony Parish.—From the state of the poor's funds from 6th August, 1839, to 4th August, 1840, I find the total number on the roll at the latter date (including 26 paupers in Royal Lunatic Asylum, and 171 orphans and exposed children) was 1,357

* Of these it is not stated how many belonged to Glasgow and how many to other parts of Scotland.

† The maintenance of these 406 persons is stated at 2,160*l.* 7*s.* 7*d.*, or 5*l.* 6*s.* 5½*d.* each per annum.

And there was paid in "temporary aid to paupers not on roll, 340*l.* 19*s.* 9½*d.*," but their numbers are not stated.

Govan Annexation.—By the Superintendent's account, from 6th August, 1839, to 4th August, 1840, it appears there were of—

Enrolled poor	322	
Orphans and deserted children . .	85	
Lunatics	12	
	——	419

And the sum paid for unenrolled poor (whose number is not stated) was 228*l.* 18*s.* 10*d.*

Gorbals Proper.—I am informed on authority that the average annual number of *enrolled* poor for the last five years, was 115

But in addition to 192*l.* 5*s.* paid for or to these paupers, and 7*l.* 9*s.* 6*d.* for coffins, there was paid last year in "temporary relief, paupers in the country, and insane orphan, &c. &c., 126*l.* 10*s.* 11*d.*"

Total number of enrolled Poor . . . 4,652

being all the enrolled or legally recognised paupers in the city of Glasgow and suburbs. From there being no statement of the number of the barony paupers, who are of the landward parts of that parish, and therefore not included in the estimated population of 282,000, it is not in my power to state what proportion the paupers bear to the whole population.

It was my intention, in stating the provision or allowances to the legally recognised paupers, to have given it under distinct heads, but from the various ways in which the different poor funds' accounts are made up, I see that I could not do so satisfactorily. I must therefore content myself with simply stating the total expenditure, viz.:—

	£.	*s.*	*d.*	£.	*s.*	*d.*
City Proper, for the year commencing 1st September, 1839, and ending 31st August, 1840 . . .	11,830	2	2			
Deduct surplus income for the years 1839, 1840	148	8	7			
				11,681	13	7
Barony Parish, for the year from 6th August, 1839, to 4th August, 1840	6,175	7	0½			
Deduct balance in treasurer's hands	43	10	4			
				6,131	16	8½
Govan Annexation, for same period .	1,448	7	7			
Deduct balance on hand . .	0	18	0			
				1,447	9	7
Gorbals Proper, 1839, 1840				326	5	5
Total expenditure for paupers . . .				19,587	5	3½*

* In this is included not only the whole expense of collection and distribution, but also the sums paid as "temporary aid," or to the "unenrolled poor," whose number is not stated.

There is no information given of the trades, occupations, or conditions of the paupers, except in Mr. Thomson's Report, and in it I find that of the sessional poor, in all, on 1st August last, 1220, there were of the following:

Descriptions.	Males.	Females.	Total.
Clippers	..	22	22
Hawkers	3	75	78
House-work, or lodgings	..	132	132
Knitters of stockings	..	20	20
Labourers	44	..	44
Porters	20	3	23
Sewers	..	139	139
Tambourers	..	32	32
Unfit for work or of no occupation	4	118	122
Weavers	62	1	63
Washers	..	46	46
Winders of yarn	6	335	341
Of other occupations, in all	113	45	158
Total	252	968	1,220

The very great proportion of females may at first sight appear striking, but will not astonish any one acquainted with the poor in our large cities and towns, or with those of other countries: "Les femmes (says M. Leuret, in his 'Notice sur les Indigens de la Ville de Paris') "tombent dans la misère en plus grande proportion que les hommes."*

It is to be hoped, when an inquiry is made into the condition of our poor, and I trust there will soon be such an inquiry, that the trades and occupations of all in poverty, as well as every other matter in reference to their physical, intellectual, and moral condition, will be minutely inquired into, so that we may know the causes, or at least the principal causes which have led to a state of destitution, and be the better prepared to apply preventive or remedial measures. This remark naturally leads me to the next head of my Report, viz.,

VII. *Of the Causes of Destitution in Glasgow.*—After what I have stated in former parts of this Report regarding the evils to which the working and poorer classes are liable, as, the want of

* "On compte à Paris, sur une population de 770,286 individus, 62,539 indigens. C'est un peu plus du douzième. Dans ce nombre d'indigens ne sont pas compris à beaucoup près tous ceux qui auraient besoin de secours, mais seulement ceux qui en reçoivent de l'administration:

"Ce nombre de	62,539	se compose de
Hommes	14,499	
Garçons	10,862	
	25,361	
Femmes	25,748	
Filles	11,430	
	37,178	

"A Paris les hommes sont aux femmes comme 1 est à 1·057." ('Annales d'Hygiène Publique,' Janvier, 1836.

employment, the sudden convulsions and fluctuations of trade, the high price of provisions, and their liability to diseases, especially of an epidemic nature, I do not think it is necessary to say more on these heads, but request the reader to keep them in mind, and to refer to the answers given to the 15th query of Appendix A. from which some further information will be got. I proceed to specify what I conceive to be the other principal causes of destitution.

Intemperance, according to many, is the chief cause. Mr. Thomson, the Inspector of Sessional poor, and whose opinion is assuredly entitled to much weight, states so most decidedly. In his Report, of date 12th August, 1839, he wrote—

"Intemperance is indeed the most powerful and the most fruitful of all the causes operating towards an increase of pauperism, even not unfrequently when the victim is not individually addicted to that most degrading and destructive vice. Drunken husbands and drunken fathers inflict incalculable misery on innocent wives and families; and drunken children, wallowing in vicious indulgences, have nothing to spare for, and cease to regard, their helpless aged parents: while the drunkenness again of the parents serves as too good an apology for their being abandoned by their sober children, who feel themselves involved in their parents' degradation. The pauper drunkard, whatever place he may once have occupied in society, after neglecting religious duties, loses self-respect, and is soon subjected to all the miseries of nakedness, hunger, and disease, which follow in the train of the monster intemperance."

Mr. Thomson's opinion, it will be seen, is quite established by the answers to query 15, in the Appendix A, and Dr. Cowan states that "the recklessness and addiction to the use of ardent spirits is at once the cause and effect of destitution." As I will, in a subsequent part of my Report regarding the vices of the working and lower classes, have occasion to make some statements and observations regarding the extent of intoxication and the excessive use of ardent spirits in Glasgow, I will not dwell more on the subject here.

The state of the districts which the working and poorer classes inhabit, and their unwholesome, damp, and ill-ventilated dwellings, is another powerful cause of the disease and mortality among them, and consequently of their poverty and destitution. Here, again, I will take the liberty of quoting Mr. Thomson's Report (the more readily, that it is little known), in which he states:—

"That regular manufactories of pauperism exist in the damp and unventilated cellars and the ground-floors in the lanes and closes of the city is a fact of easy demonstration. In almost every helpless and hopeless case of rheumatism (and they were not a few), I could trace its origin to the person having lived on some damp ground-floor, in a close or lane, or in the sunk flat of some house in a more reputable

locality, and it has often happened that no sooner has one diseased tenant been driven out than another healthy person succeeds, to undergo the same disqualifying process, merely tempted by a few shillings of lower rent, or that he may be able to sell coals, or some commodity in the densely peopled vicinity. In some cases the occupation has been found to be tendered gratuitously, or for the discharge of some petty servile duty to the owner of the premises." And in a subsequent part of the Report, the writer proceeds, "I was induced to inquire and notice where the disease had been most deadly, and again and again have I observed that it was in closes or houses where no thorough ventilation existed, or could be made to operate, that this had happened: where a close was shut up on *three* sides, perhaps on *four*, with the exception of the passage of entry, which acted as a mere conducting force to carry the malaria or contagion to the inhabitants of the upper floors or houses. And I observed that particular houses, where the disease had been destructive, were situated close by the receptacles of impurity common to the neighbourhood, where fluid abominations were continually exhaling their noxious vapours."

These remarks by Mr. Thomson are strictly in regard to the city proper, but they may with as much justice be applied to the dense parts of the suburbs, especially to the lanes of Calton, the main street of Gorbals, and the closes leading therefrom, the passages leading from Cheapside, Piccadilly-street, &c., in Anderston, and some parts of Finnieston, such as Dixon's-land.

As I have in my former Report, "On the material legal Provisions available in Glasgow for the Prevention and Removal of Nuisances or things injuriously affecting the Public Health," &c., quoted the statements of Mr. Symous, Dr. Cowan, Captain Miller, and Dr. Easton, regarding some of the localities, and the dwellings in which the poor reside, I shall not repeat, but merely again call attention to the statements, but may venture a few remarks on the "lodging-houses," which are indeed great nuisances.

"The lodging-houses," said Dr. Cowan, "are the media through which the newly arrived immigrants find their way to the fever hospital; and it is remarkable how many of the inmates of that hospital, coming from lodging-houses, have not been six months in the city." He might have added, these lodging-houses are the great foci of poverty, vice, and crime, as well as of disease. These houses are generally of a very wretched description, in low, unwholesome situations, exceedingly dirty and ill-ventilated, and are frequently crowded to excess, it being no uncommon thing to find 8, 10, and 12 persons in one small apartment, as 9 feet by 8 or 11 by 8. Some of them also have no beds whatever in them, the inmates lying on the bare floor, or with a few shavings below them, with their clothes on. A more particular description of them will be got in Captain Miller's Papers on Crime in the City proper, Mr. Rutherglen's (one of the magistrates) on Calton, and Mr. Richardson on the Barony of Gorbals. It would appear from these

published documents, and from what I have been able to learn otherwise, that the lodging-houses in the city proper are decidedly of the worst description, but I am aware that the authorities are adopting means to have them in better order in future. In the Burgh of Anderston they have for some time been under the surveillance of the police; and a record is kept of all lodging-houses for the accommodation of casual visitors in Gorbals (by which it appears that there were lately 92—50 kept by males and 42 by females—only 25 of them entertaining the lowest class of poor), so that they may be properly regulated. It is only in Calton, however, that they are attended to with that strict care which is requisite, and fortunately the last Police Act for that burgh gives ample powers for the purpose. It provides, by section 20, "That no keeper of lodging-houses of an inferior description, for the accommodation of mendicant strangers and others, shall receive lodgers without the house having been inspected and approved of by the superintendent of police, and the superintendent is authorized to fix the number of lodgers who may be accommodated, and to order a ticket containing the number of lodgers for which each house is registered; and any rules or instructions of the commissioners of police regarding health, cleanliness, and ventilation, to be placed in a conspicuous part of each room in which lodgers are received. It also provides, that the keepers of such lodgings offending against these regulations shall be liable in penalties. Section 21 enacts, that in the event of any person in such houses becoming ill of fever or other disease, the keepers shall be bound to give intimation thereof to the superintendent of police or inspector, so that the disease may be inquired into and treated, and the magistrates are authorized to order such persons to be removed; and section 22 further enacts, that on any contagious or infectious disease occurring in any such lodging-houses, or in any house or apartment in any house, or apartment in any common tenement, &c., where there is reasonable apprehension of such diseases spreading, the magistrates may cause the remaining lodgers to be removed, and measures to be taken for the disinfecting and cleaning of the houses and apartments, and for the washing and purifying of the persons and clothes of the inhabitants. In addition to these excellent provisions, the magistrates of Calton, in virtue of the powers in their Police Acts, have issued the following rules and instructions, to be observed by all keepers of lodging-houses, viz.:—1st. The floors are to be washed at least twice in each week, viz., on Wednesday and Saturday. 2nd. The walls are to be whitewashed and the houses thoroughly cleaned on the first day of each of the months of June, August, November, and March, or on the following day if any of these days falls on Sunday; and 3rd. The blankets used in all lodging-houses are to be thoroughly cleaned and scoured on the eighth day of each of the months of June, August, November, and March, or

on the following day if any of these days falls on Sunday; and if any person or persons in such house shall be affected with fever or other infectious disease, the blankets and bed clothes used by such person or persons shall be thoroughly cleaned and scoured immediately after the removal of the diseased, and the bedding used by persons affected with contagious disease fumigated immediately after the removal of such person or persons. And where the bedding used is shavings or straw, the same shall be burned immediately after such removal.

These provisions and regulations have been very judiciously enforced by the magistrates of Calton and their superintendent of police, and have been productive of most beneficial results. In addition to what was formerly stated by Bailie Rutherglen, I have now before me a distinct statement, by Mr. Smart, regarding the lodging-houses and state of fever in Calton, which enables me to give the following information:—Between 1st of September, 1840, and 1st February last, 319 persons were brought before the magistrates of Calton for keeping unregistered lodging-houses. Of these, 216 were ordered to desist from keeping lodgers till houses registered, &c.; 91 were fined and ordained not to keep lodgers; 12 cases were dismissed. Of the 307 convicted for keeping unregistered lodging-houses, 90 got their houses inspected and registered, 30 removed from the burgh, and 187 gave over keeping lodgers and were refused registration—refused principally on account of the want of proper accommodation, and a few for harbouring disreputable characters. Mr. Smart also informs me that several hundreds of the worst houses of the poorer classes have been whitewashed with Irish lime, and the lodging-houses having been put under wholesome regulations, a marked improvement has taken place. In Whiskey-close, New-street, for several years past, as many as 30 cases of fever occurred annually. Since lime washed in September last, and the vagrants removed, only one case of fever has been known; and Mr. Smart concludes, "I believe there are 1000 fever cases less in Calton this day than there were on 1st September last." Why should not the same measures that have been so successfully enforced in Calton, be introduced into the City proper and the other suburban districts?

Early and improvident marriages are, unquestionably, causes of part of the destitution existing among our working and poorer classes. On referring to a paper which I prepared in 1837, entitled "Observations upon the Poorest Class of Operatives in Glasgow," (and which was published in the Journal of the Statistical Society of London,) I see that, of 3072 cases which I examined, the number of married men was 2273; of these 532 were under 30 years of age, (how much below 30 I could not distinctly ascertain,) 1199 between the ages of 30 and 50, (a large number of these, from the many children they had, must have been married at a

very early period of life,) and only 542 above 50. I had then occasion to remark the evils resulting from early and improvident marriages among the working classes, and have since been fully confirmed in my opinion. Dr. Cowan, a much higher authority, states, on this subject—

"While among the classes in easy circumstances the age of marriage is deferred from prudential motives, no such cause influences the labouring classes who marry early, and make no provision for their children; hence births and deaths follow each other in rapid succession, the death of one child, after existing for a few months, making way for the birth of another, each event increasing the poverty and recklessness of the parents, until at last they themselves either become the victims of epidemic fever, or swell the lists of applicants for relief from the poor's rates. The above is no fanciful picture, it is drawn from reality; and if the subject were investigated upon a large scale, it would be found, as the results of the improvident marriages of the labouring classes, that the number of children born to them has been very great, and the number reared has been very small. The contrast between the labouring classes and those in easy circumstances is in no particular so strongly marked as in the relative number of the births and deaths of their children."

It will be observed from the Appendix A., that several of the gentlemen who answered my query as to the causes of destitution, have stated ignorance—the want of education—as one of these. In this I quite concur. I know that there are many thousands in Glasgow in a state of utter ignorance; and I would hold it to be an insult to any man of understanding were I to set about a formal proof of the truth, that poverty and misery usually accompany ignorance; and that, till the mind of man is enlightened by education, he is almost totally blind to the duties he owes to himself and his family, to society, or to his Creator.

It will also be noticed that several of my informants specify "the great influx of the lower orders of Irish" into Glasgow as another cause of the destitution here. Doubtless the vast number of Irish immigrants must have affected the price of labour and rendered employment more scarce, and so have increased the amount of destitution in Glasgow, but not, I think, to so great an extent as is generally supposed; and it should be borne in mind that Glasgow otherwise has reaped immense advantage from the exercise of their lusty thews and sinews. When on this point, I may be allowed to remark that the poor Irish in Glasgow have completely verified the common adage, "Give a dog a bad name, &c." The bad name was many years ago fixed upon them, and it has adhered too closely. It is the more refreshing, therefore, to meet with testimony in their favour. Now Dr. Cowan stated that "from ample opportunities of observation, they appeared to him to exhibit much less of that squalid misery and habitual addiction to the use of ardent spirits than the Scotch of the same grade."

And in Dr. Burn's excellent pamphlet,* lately published, he writes, "It is a great mistake to imagine that of all the poor around us the Irish are the most dissolute and most difficult to be managed. I have always found them exceedingly grateful for a small favour, and the managers of the poor will, I have no doubt, say the same thing. If you wish to see the most revolting specimens of poverty and immorality, associated with absolute recklessness of character and feeling, you may stop short of the cabin of the poor Irishman." Such too is the opinion of others entitled to judge on the subject.

Several of the causes of destitution above enumerated, as the liability of the poor to disease, especially of an epidemic nature, intemperance, at least to some extent, the districts and dwellings which the lower classes inhabit, and ignorance, may also be mentioned as effects of destitution; they act and react on each other, and are indeed at the same time causes and effects. Who doubts for a moment that the want of proper and sufficient food, clothing, fuel, and habitations, induce disease, and render it more virulent? So too will it be found that poverty is a great cause of recklessness and intemperance. Poverty also compels the sad inheritor of it to seek a dwelling where it can be got at the easiest and cheapest rate; and how can it for a moment be supposed that the parent who cannot get food and raiment for himself and family—who cannot provide for their physical wants—will be able to give them the means of education?

I shall now proceed to make a few remarks on the state of education, and on the state of crime and vice in Glasgow, and then conclude with some brief observations or suggestions for remedial measures.

VIII. *State of Education in Glasgow.*—It has long been matter of deep regret to many parties in Glasgow, who take a deep interest in the cause of education, that there were no data by which to ascertain the educational state of our city and suburbs.

This is the more to be regretted, as now that we have very correct statistics of the state of crime and of pauperism in the city of Glasgow and suburbs, it would be well to know how far the want of education has been the cause of, or has increased, crime and poverty. I have not the slightest doubt that ignorance—the want of education—is a prevailing cause both of crime and destitution.

The following table, with the notes appended to it, which I have prepared from the Parliamentary Education Inquiry, printed 21st March, 1837, contain the only statistical information I am able to give on the subject.

* Plea for the Poor, 1841.

EDUCATIONAL STATISTICS of GLASGOW.—Parliamentary Education Inquiry, 1837.

No.	Names of Parishes.	Population stated.	Parochial schools.				Schools not Parochial.				Both kinds of Schools.	
			No. of Schools.	No. of Teachers.	From Michaelmas, 1833, till Lady-day, 1834.		No. of Schools.	No. of Teachers.	From Michaelmas, 1833, till Lady-day, 1834.		Total greatest No. of Scholars.	Total smallest No. of Scholars.
					Greatest No. of Scholars.	Smallest No. of Scholars.			Greatest No. of Scholars.	Smallest No. of Scholars.		
1	East, or Outer High . .	9,137	1	1	150	..	11	11	606	..	756	..
2	St. Enoch's	7,921	..	..	..	..	4	7	312	..	312	..
3	St. James'	8,217	2	6	530	500	3	3	160	160	690	660
4	St. John's	11,746	2	4	589	528	10	13	703	618	1292	1146
5	St. Andrew's.	5,923	1	1	200	..	8	8	395	..	595	..
6	North, or St. Mungo's . .	10,295	..	..	..	..	9	10	905	841	905	841
7	North-west Ramshorn, or St. David's.	6,268	1	2	..	250	23	23	..	1729	..	1979
8	South or Black Friars . .	7,569	1	1	110	95	1	1	74	70	184	165
9	South-west, or St. Mary's .	7,529	1	2	260	200	4	4	167	167	427	367
10	West, or St. George's . .	15,242	1	1	170	100	11	11	..	..	..	..
11	Barony parish:											
	1. Bridgeton Division .		..	..	..	..	12	12	862	453	862	453
	2. Calton ditto . . .		1	2	120	120	18	18	999	899	1119	1019
	3. Camlachie ditto . .	77,385	..	..	..	..	5	5	272	226	272	226
	4. Cowcaddens ditto .		..	..	..	..	12	14	938	793	938	793
	5. Maryhill ditto . .		1	2	80	70	7	9	349	243	429	313
	6. Shettleston ditto. .		2	3	200	175	9	9	538	427	738	602
12	Gorbals	40,000	..	..	..	..	39	44	2884	..	2884	..

From the blanks in the above, it will be seen that it would serve no purpose to add up the columns.

Extracts from Notes to Returns.—St. Enoch's Parish: "The number of children in the parish under 5 years of age is 999; from 5 to 15, 1382. Of the latter 354 cannot read; the adults who cannot read amount to 400; and the children who cannot write exceed 800."—Black Friars' Parish: "The following will show the melancholy want of education in this poor parish: The total number between 5 and 15 is 1691, of whom 382 cannot read, and are not learning; and 1291 cannot write, and are not learning."—St. Mary's Parish: "The number of children not taught nor learning to read, between the ages of 5 and 15, is 446; the number not taught nor learning to write is 1126; the number who cannot read, above the age of 15, is 184."—St. George's Parish: "Multitudes of poor children in this parish are living in absolute heathenism. It would require 1000*l.* to supply the wants of this extensive parish."—Barony Parish, Calton Division: "In one division, out of 200 children above 5 years of age, only 12 could read." Camlachie, &c.: "The inhabitants are chiefly weavers and day-labourers; most of them very poor; many of them wretchedly so. Two or three additional schools are much wanted." Gorcals: "Education in this parish appears to be on the decline. In 1825, when the population amounted to only 25,000, 2368 children were at school; now, when the population is supposed to be 40,000, only 2884 are under instruction. The number of adults in the parish who cannot read cannot be ascertained, but it is believed they are numerous." Which notes are subscribed by the respective clergymen making the returns.

In addition to the information (and very defective I must admit it to be) given by the preceding table and notes, I may add, that notwithstanding the great exertions of the different clergymen in Glasgow of various denominations, aided by many of the philanthropic and benevolent citizens, there is still a lamentable want of the means of education for the working and poorer classes, and it is matter of notoriety that there are thousands and tens of thousands in the city of Glasgow and suburbs who ought to be educated, but who are in a state of total and degrading ignorance.*

IX. *Of the state of Crime.*—Having dwelt longer than I had intended on some of the previous topics, and, I fear, already exceeded the limits prescribed, I will not enter at length on this head. Neither do I conceive it necessary to do so, after the papers and reports published by Mr. Miller, the superintendent of police, on the City proper; Mr. Rutherglen, on Calton; Mr. Richardson, on Gorbals; and Mr. Findlater, on Anderston. From these reports it will be seen not only that the statement of a gentleman, high in authority, has been somewhat overcharged, but more, that Glasgow and the suburban districts bear an enviable position in this respect when compared with the other chief cities and towns in the United Kingdom. In proof of this, I submit the following:—

* Since this report was sent to press, a very *minute* inquiry has been made regarding the educational state of the Tron parish, and by the kindness of my friend, Dr. Buchanan, I hope to be able to state the results in the Appendix.

Comparative View of the Number of Persons charged with Offences in London, Dublin, Liverpool, and Glasgow.

CITIES.	Years.	Estimated Population.	Number of Persons Charged with Offences.	Number of Offenders in Proportion to the Population.	Estimated Extent of Police Force.	Number of Inhabitants to each Police Officer.
London, within the Metropolitan Police District .	1839	1,600,000	65,965	1 in 24¼	4500	355
Dublin within the Metropolitan Police District . .	1839	300,000	45,682	1 in 7	1170	256
Liverpool and Suburbs . .	1838	265,000	16,689	1 in 16	600	442
Glasgow, within the City Police Bounds . . .	1839	175,000	7687	1 in 22¾	223	784
Suburban Districts :						
Calton	1839	28,210	2601	1 in 11	28	1000
Gorbals	1839	65,000	4009	1 in 16	41	1585
Anderston	1839	16,000	1600*	..	16	1000

Captain Miller remarks, that "The facilities for the commission of crime appear to be much greater than in London, Dublin, or Liverpool. In the latter cities nearly the whole of the houses and warehouses are self-contained; there are no common entries, no common stairs, and few, if any, sunk areas; while in Glasgow; the houses, with few exceptions, are divided into floors or smaller compartments, occupied by different tenants; there is to almost every tenement a common close or entrance, and a common stair to many of the tenements; there are sunk areas; and to nearly all there are back unprotected premises tenanted, or with a right of access, by different individuals. There is besides a much smaller police force in Glasgow in proportion to the population than in London, Dublin, and Liverpool." Which remarks apply with equal force to Glasgow proper, and the suburban districts of Calton, Gorbals, and Anderston.

The greater number of offences committed in Glasgow and the suburban districts, as may be seen from the Reports above referred to, were of a very light description. Robberies, thefts by house-breaking, and other crimes of a graver nature, are now, comparatively, of rare occurrence here. (*Papers on State of Crime in Glasgow*, p. 4.) The large items in all the returns is "drunk and disorderly," or "drunk on the streets;" but to what an amount of heinous crimes does this drunkenness lead! Captain Miller states (p. 6) that crime is on the decrease in Glasgow, and that "the cases now are of a much less aggravated nature than formerly." "The principal cause of the decrease," he thinks, "is

* Of these, 300 cases were "for having dirty closes," and ought not to have been included in the return. The number of officers (16) includes the superintendent and the night watchmen.

to be found in the influence exercised upon the labouring part of the people by temperance and total abstinence societies." From the returns for Calton, Gorbals, and Anderston, and other statements, and information on which I can rely, I am decidedly of opinion that crime, especially of an aggravated nature, is less in proportion to our population, than it was during some former years; and it should be kept in view, that by the better arrangement, and greater vigilance of our police forces, all offences are now more readily detected, and the offenders more certainly brought to punishment. I beg that those wishing to form a correct judgment on this subject will examine *all* the returns, and hear the different parties who have knowledge thereof; that they do not allow themselves to be carried away by general statements, or "round numbers," or even by statistical tables (or at least professing to be such), without first inquiring by whom and from what these were prepared.

10. *Of Vice.*—From what was mentioned under the head of intemperance in the chapter on the causes of destitution, it must have been gathered that intoxication from the excessive use of ardent spirits is the most prevalent vice of the working and poorer classes in Glasgow. It is not possible to state in precise terms the extent of the evil, or even to make a tolerably correct estimate of the quantity of spirits consumed here by these classes (for who can tell how much of what is entered is for home consumption, or the proportion of what is actually consumed here is by the better classes, and how much by the others?); but there is no doubt that the consumption is enormous, and that the evils arising therefrom are very great. Some idea of the trade in spirits here may be formed from the knowledge of the fact (which I have on the best authority), that last year the number of licensed publicans in the Royalty of Glasgow was 1,214, and in the suburbs 1,060, in all 2,274; and of the extent of intoxication, from the returns of the number of offenders brought before the magistrates in the police courts of the city from 1st January to 31st December, 1839, inclusive, by which it appears, that of 7,687 individuals, 1,013 were charged with being "drunk and disorderly," and 1,959 for "being drunk on the streets."* In the Calton returns it also appears that from 1st October, 1838, to 30th September, 1839, of 2,607 offenders, 1,394 were charged as having been "drunk and disorderly." And by Gorbals returns, of 4,009 persons charged, 2,252 were "drunk and disorderly," and 805 as having been found "drunk on the streets:" the two latter returns including females as well as males.

While, however, it will be seen from these and other authentic statements that the vice of intoxication is of fearful magnitude in

* A foot note is added, that "Drunken women found on the streets are detained till sober, and then dismissed, or given over to their relatives without cases being made of them in court."

Glasgow, it is but fair to state that the working and poorer classes have been somewhat misrepresented in this respect. In our learned and justly much-respected sheriff's evidence before the Committee of the House of Commons, "on combinations of workmen," (1st Report, p. 113,) he said, "I may mention one fact to the Committee, which will illustrate the extent to which the use of whiskey is carried. In London, the proportion of public-houses to other houses is as 1 to 56; in Glasgow it is as 1 to 10; every tenth house in Glasgow is a spirit shop; I should say, as far as my statistical researches have gone, that the proportion of whiskey drunk in Glasgow is twice or thrice as much as in any similar population upon the face of the globe." Now, with the greatest deference to Mr. Sheriff Alison, I cannot conceive upon what information he could state the proportion of public-houses in Glasgow as 1 to 10 of other houses. The only approximating statement I have ever met with is in the article on Glasgow, in the new statistical account of Scotland (p. 195), in which it is said that "that the number of persons licensed to retail spirituous liquors in the 10 parishes of the city being 1,393, and the number of families 19,467 (the year is not specified), gives one licensed person or public-house to $13\frac{97}{100}$ families!" But this, it will be marked, is of the City proper, where there is a large majority of publicans as compared with the whole city, the suburbs as well as the Royalty. Captain Miller, on the other hand, states the number of publicans in Glasgow, in 1839, to be in the Royalty 1,220, and in the suburbs 1,080; in all, 2,300: while last year, as before stated, there were only, in all, 2,274; and taking the estimated number of families (which cannot be far from the truth) 58,461, there was only one public-house for every $25\frac{40}{100}$ families. I also find some statements and observations on this subject in Mr. Alison's work, "On the Principles of Population," (vol. ii., p. 119, and Appendix A., p. 586,) with which I regret that I cannot agree, and which I think it would be but justice to our working classes to contradict. Instead of redarguing them at length, I merely call attention to the facts that in the grounds on which Mr. Alison founds his calculation of the quantity of spirits consumed by the working classes in Glasgow, there are several assumptions and errors which cannot be admitted: for instance, although the proportion of spirits consumed in all Scotland is stated at $2\frac{3}{4}$ gallons per head, he assumes, "from the high wages earned by the greater part of the skilled operatives in Glasgow, and from the well-known habits of intoxication which prevail in that city, that the quantity annually consumed there is at least double what it is over all Scotland. Six gallons a-head, therefore," he says, "may be taken as a reasonable average of the consumption by the population in Glasgow." He then specifies the price of each gallon sold in retail at 15*s.*! He further states, "There are within the Parliamentary limits of Glasgow 3,000

shopkeepers dealing in spirits," while I have ascertained that there are only 2,274. When these and other considerations are taken into account, it will be seen that the learned sheriff's statements are somewhat overcharged, and his estimate of the spirits consumed by the working classes much too high.

It must afford sincere gratification to all who are interested in the condition of our working and poorer classes, and to every lover of the human race, to know that the vice of intoxication is on the decrease in Glasgow. The number of publicans are, as has been shown, not increasing in proportion to the general population; and independent of what I have before quoted when writing of the state of crime, I have the concurring testimony of many gentlemen, entitled and capable of forming a sound opinion on the point, that the working and poorer classes are less addicted now to the excessive use of ardent spirits than they were in former years. The Total Abstinence Society is the great engine which has chiefly brought about this most desirable reformation. I learn from Mr. Kettle, the benevolent and unwearied chairman of that society, that it numbers at least 35,000 members, of whom about 11,000 are Roman Catholics, and the remaining members of various denominations. The office-bearers calculate that they have reformed nearly 1,000 drunkards. May the society continue to flourish, and our working population will be one of the most moral and prosperous, and crime and poverty will be nearly eradicated from our city.

I now come to a more delicate subject, but one on which I do not see that I could well avoid making a few remarks, when reporting on the poorer classes in Glasgow—I allude to prostitution. It will be seen, from Captain Miller's answers to queries put to him by the late Dr. Clelland, that the number of houses of bad fame in the city of Glasgow, as at 24th August last, was 204, and the total number of females living in or frequenting these houses, 1,475. Although there were, in 1835, 30 brothels in Calton, there is not *one* now. Mr. Richardson, superintendent of police in Gorbals, informs me that, although there are several suspicious houses within the bounds, there is only one established house of bad fame, with two females residing in it. And Mr. Wilson, of Anderston, has succeeded in getting the last keeper of a brothel driven from his district. The condition of the unfortunates in Glasgow is, I am assured, miserable in the extreme. "For the most part," says Captain Miller, "they live in a state of great personal filthiness; they have most wretched homes; they are scarcely ever in bed till far in the morning; they get no wholesome diet:" and, in short, are exposed to every evil in the worst forms. But it is not so much to their condition as to some of the causes which led to it, that I wish to call attention. There is no report on prostitution in Glasgow from which anything definite can be learned on this subject; but taking the neighbouring city

of Edinburgh, and looking to Dr. Tait's work on Magdalenism, I find that, among other causes, he specifies, "inadequate remuneration for needle and other female work," and "the want of employment." To use his own words, "That the want of employment is frequently a cause of prostitution is obvious from the fact, that whenever the least depression of trade takes place in any of the manufacturing towns, a number of girls come to Edinburgh, where they abandon themselves to a licentious course of conduct. Some of them feel so much pleasure in dissipation and idleness, that they do not manifest any great inclination to leave it; but in general they do so as soon as they hear that there is a prospect of again being employed in the vocation to which they had formerly been accustomed."* And I learn from police authorities here that the statement is quite correct. I also know, from a conversation with Mr. Troup, the superintendent of the Glasgow Lock Hospital (and who has been 20 years in charge of that institution), that such is his opinion. He thinks that at least one-half of the inmates were driven to their sad course of life from the want of honest employment and the means of subsistence. Well then may Dr. Tait ask (p. 112), "Are the guardians of the poor no way accountable for this lamentable evil? Is not the smallness of the sum which is allowed (he might have said, in most instances, the total want of provision) the cause of it? Is it not as desirable to cultivate morality as economy? And is it not much more agreeable to the dictates of humanity that such helpless individuals should be put beyond the necessity of adopting any such immoral practices for their support?" Dr. Tait also specifies "ignorance or defective education and want of religious instruction" as among the causes of prostitution; and are not the wealthier classes to blame in this respect, as well as in others, for the prevalence of this fearful vice? Averse as every moral man must be—and no immoral man is competent to the task—to enter on such a subject, I trust that no false delicacy will prevent some of our able philanthropists from getting it thoroughly probed, and the evil, if not entirely removed, at all events materially lessened.

XI. *Concluding Remarks on Remedial Measures.*—Our own experience, and the history of other nations, teaches us that unless the condition of the working classes—the life-blood of the community—and of the poor, be duly attended to, the vitality of the state is in danger. If I may be excused a figure of rhetoric, unless the base of our great social pyramid be firmly cemented, the column and the "Corinthian capitals" must soon crumble in the dust. It is our interest, therefore, as it is our duty, to attend to the condition and improvement of the masses. "The might

* M. Parent Duchatelet also specifies poverty as a cause of prostitution:—"De toutes les causes de la prostitution, particulièrement à Paris, probablement et dans les autres grandes villes, il n'en est pas de plus actives que le défaut de travail et la misère."—De la Prostitution dans la Ville de Paris, p. 66.

that slumbers in the peasant's arm" is as nought to the powers that lie dormant in the minds of many of our artisans. These must not be treated with indifference, but should be aroused and applied to legitimate purposes. The same high authority, which tells us "the poor shall never cease out of the land," immediately adds, "therefore I command thee, saying, thou shalt open thine hand wide unto thy brother, to thy poor, and to thy needy in the land."

It is only, I suspect, within my province, as I confess it is chiefly within the compass of my ability, to point out existing evils, and leave to others to suggest and apply the remedies. Such as I would wish applied will readily occur to any reader of the preceding Report. I may, however, briefly refer to them.

I. There can, I think, be little doubt that there ought to be a sanitary commission or board of health in our city, to inquire into the causes of disease and mortality, and to adopt all salutary and necessary measures for promoting the health, cleanliness, and comfort of the inhabitants; with power to remove all slaughter-houses, shambles, &c. producing noxious and offensive effluvia; to prevent interment in crowded burying-grounds in the immediate vicinity of inhabited houses; to open up ill-ventilated lanes, closes, or courts; to make sewers or drains where none exist, but are required, and to enlarge and improve those which are defective; to pull down houses unfit for the habitations of human beings; to regulate the construction of houses for the poorer classes, at least to see that their position and construction are not such as to injure the health of those inhabiting them; to see that these houses are kept clean; to erect public conveniences; to regulate lodging-houses for the poorer classes; to provide an ample supply of water, and generally to attend to and promote the public health.

II. Our poor-laws, and the mode of enforcing them, should, I think, be altered. The assessments should be made uniform and general; the relief to widows, orphans, the infirm, and the impotent should be raised; indigence from want of employment be declared to give a claim for relief; the term or period of residence entitling a party claiming relief should (in order to compel, as much as possible, each parish to support its own poor), I think, be greatly lengthened; and other alterations made, which, however, this is not a place to enter upon.

III. Every institution tending to teach the working classes economy and to improve their moral as well as their physical condition ought to be liberally supported. Savings' banks and friendly societies ought to be established in every parish and locality; temperance or total abstinence societies everywhere encouraged.

IV. Means and opportunities for the recreation and innocent amusements of the working and poorer classes ought to be provided. They should have their commons for healthy air and exercise; and

by museums or exhibitions of works of art and skill, and musical entertainments, innocent enjoyment increased, and their tastes elevated. Man was made to enjoy as well as to labour: and, unless guarded against the temptation to unlawful pleasures by having innocent ones, is always apt to resort to the former. How many drink to excess to shake off depression, or to allay the restless thirst for excitement; and might not these motives be excluded by cheerful amusements of an innocent nature?

V. Above all, there must be greatly increased means of education—of intellectual, moral, and religious education—without which it would be vain to expect a great and permanent amelioration of the condition of our working and poorer classes. Until the moral man be thoroughly improved, we cannot look for those sober, cleanly, and prudent habits we so much desire.

The attention of the citizens of Glasgow having been for some time past fully awake to the condition of the working and poorer classes, it it to be hoped that remedial measures, at least for many of the evils referred to, will be adopted; but it must be evident that to several of them no effective remedies can be applied without the interference and aid of the Legislature; and as Government, and many members, of different political sentiments, of both Houses of Parliament, have, especially of late, shown much solicitude regarding the condition of the masses (and who can regard them with contempt or indifference?), it is to be expected that measures will soon be carried into execution by which the peace, the comfort, the happiness, and the welfare of our vast community will be improved.

CHARLES R. BAIRD.

Glasgow, March 26th, 1841.

APPENDIX A.

Analysis of Reports (or Answers to Queries) made by City Missionaries, Elders, and others, to C. R. Baird.

Query 1.—Have you seen, during the last or recent winters, many persons and families in a very destitute state? Specify numbers if possible, and population of district.

General Answer, 15 out of 16.—A great many.

Special Answers.—No. 1. Blackquarry, &c. "About 20 families in extreme want."—No. 2. Dempster-street. "150 families, of whom this winter 50 could scarcely procure what would preserve life."—No. 3, Drygate, Rotten-row, and Kirk-street. "Population about 1000 families." 400 to 500 poor, of whom many are destitute."—No. 4. Duke-street and Upper High-street, east side. "A great many; and every succeeding winter seems to increase the number."—No. 5. High-street, west side. "A very great number in most wretched circumstances."—No. 6. High-street, east side, from 66 to Regent-street. "Population 1200, nine-tenths of whom are very poor; I have no doubt

some died during the late storm, in consequence of cold and hunger." —No. 7. South side of Gallowgate, from Cross to Kent-street. "The families in most destitute circumstances, amount to several hundreds." No. 8. South side of Prince's-street, and west side of Saltmarket. "380 of the very dregs of society."—No 9. East side of Stockwell-street, and west of Old Wynd. "Multiplied cases of destitution occur continually."—No. 11. Calton. "Population 28,000. Several hundred families are always in a destitute state. The commissioners of police of each ward, with the elders, parish surgeons, and others, inspected the district this winter, and found 500 families without fire or bedding, and all very poorly clothed."—No. 12. Bridgeton. "The supposed population is 14,000. The Feuar Court distributed coals and money to about 360 families, and still there are a good number who got nothing, and are in destitute circumstances."—Nos. 13 and 14. Gorbals. "Supposed population 60,000. A great number in very destitute circumstances, particularly during last three months."—Nos. 15 and 16. Anderston and Finnieston. "The population upwards of 18,000. During last winter a great many truly destitute. Partially relieved about 200 families; saw many more requiring aid."

Query 2.—Have you seen many whose furniture, bedding, and clothing had been pawned or sold for subsistence within the same period?

General Answer, 14 out of 16 affirmative.

Special Answers.—No. 1. "I have met with families who pawned part of their clothing for subsistence, who would have starved if they had not done so."—No. 2. "I do not think there are above 30 families in the district who have not dealt more or less with pawnbrokers or brokers, to procure. as they say, the means of subsistence." No. 4. "In a great many cases everything is pawned during winter upon which money can be raised."—No. 5. "I have seen several houses stripped of everything the pawnbroker would take. A particle of straw and an old broken stool being the only remnant of the wreck."—No. 6. "One half, I believe, of the families in my district were compelled to support themselves during the recent storm by pawning their furniture, bedding, and clothing."—No. 7. "The truth is, there is scarcely a family I visit that is not in the habit of frequently putting their apparel and other articles into the small pawns."—No. 9. "This is a frequent and almost daily occurrence."—No. 11. "Many of them have even pawned or sold the tickets they got from the pawnbroker, to raise a further supply."—No. 12. "A very great number of occupied houses in this district are almost empty of their furniture and bedding, which have gone to the pawnshops."

Query 3.—Have you seen many whose food you have reason to believe was scanty and precarious?

General Answers, by all.—Many.—No. 4. "I find this to be almost general with those who inhabit the low-rented houses in the district under my charge as elder."—No. 5. "I think the number may be reckoned at present 150; 100 at least."—No. 6. "Three-fourths (900) at least of the people among whom I labour, have but a scanty and precarious supply of food at all times, but especially in winter. Many have repeatedly assured me they were often destitute of food, and had no means of procuring it. I have known a family to subsist three

days on two scanty meals of potatoes."—No. 7. "I have been frequently astonished how these people could exist."—No. 9. "These I met with daily, and in some cases where they have been nearly two days without food, except when I gave them relief, which only afforded as much as gave them a meal, or at most two."

Query 4.—It being commonly believed that most of these destitute families are intemperate, have you seen a considerable number whom you had no reason to suppose had been peculiarly so?

General Answer, 14 out of 16.—Yes.

Special Answers.—No. 1. "In the case above referred to, from what I have seen, I have no reason to believe that they are intemperate. I find intemperance abounding more amongst those who are earning a good wage—say from 20*s.* to 30*s.*"—No. 2. "Intemperance is certainly a fertile source of destitution, but still there is much destitution prevailing traceable to no such cause."—No. 3. "The cases of real destitution which have come under my notice, and not arising from intemperance, have been comparatively few; I would say not above 10 in the 100."—No. 4. "I find many in the most miserable circumstances to whom no blame can be attached."—No. 5. "I have seen many cases of extreme destitution which were not produced by intemperance, but I believe that the most heart-rending and desperate cases are produced by intemperance."—No. 6. "Certainly the destitution which exists in my district is occasioned chiefly by intemperance; but there is a considerable number even of the most destitute who are sober, industrious, economical, and, in some instances, pious."—No. 7. Answers almost in the same words.—No. 8. "A goodly number, more than could at first sight be supposed, but a majority of the cases are the fruit of intemperance."—No. 9. "A great proportion are sober and industrious, and yet in great destitution."—No. 12. "We have every reason to believe that a considerable number is from intemperate habits, although a good many deserving and industrious families are in very destitute circumstances, from lowness of trade, trouble, and other unforeseen causes."—No. 16. "A majority of destitute cases I consider the result of intemperance, but I have also seen a great many families that do not belong to that class."

Query 5.—Does it consist with your knowledge that many labourers with families are out of work during some months of the year?

General Answer, 12 out of 16.—It does.

Special Answers.—Nos. 3, 4, 5, 6, 9, 11, 12, 14, state that out-door labourers are in general out of employment during part of winter, especially during frost and snow.

Query 6.—Is this the case also as to many artisans, and what are the poorest class of these, and their average wages?

General Answer.—Yes, especially regarding the hand-loom weavers, who are generally stated as the poorest class of artisans, their wages averaging from 5*s.* to 8*s.* per week.

Special Answers.—No. 7. "I have known a number of artisans out of employment, and that for a pretty long period, such as mechanics, tailors, brassfounders, and locksmiths."—No. 12. "It is the case with a great many artisans in the winter season."—No. 13. "Out-door workers generally, house carpenters and masons."

Query 7.—Also as to many single women, or widows with families?

General Answer, 15 out of 16.—Yes.

Special Answers.—No. 3. "Widows with families I have found to be the most destitute class both as to means and employment."—No. 7. "There have frequently come under my observation cases of this kind of the most distressing description. Widows with small families are very numerous; the distress which they suffer is often most extreme. In reference to young women, I seldom go over my district without finding some decent girls out of employment. They would be glad to do anything; to enter into service, or any other lawful employment, but could find none; hence they are frequently the victims of crime and prostitution."—No. 12. "There is to our knowledge a very great number of this class in this district, both of single women and widows, with and without families, and some of these in very poor circumstances.

Query 8.—Do you see many instances of several women or families associated together in single small rooms, in order to lessen rents?

General Answer.—15 out of 16 answer affirmatively; and one states, "Not very many in my district."

Special Answers.—No. 2. "Six to ten individuals in one apartment, and in many cases scarcely any bedding or covering but the clothes worn during the day."—No. 3. "This is very common; and if the house is not crowded with a large family, there is sure to be a host of single or married lodgers."—No. 5. "Two families are frequently found living together in one room. A house, or rather a small garret, which I lately visited, was made to hold four single women and two boys."—No. 6. "Cases of this description very numerous; persons keeping lodgers because unable, by their own efforts, to pay the rents of their houses."—No. 7. "I conceive this to be an alarming and increasing evil; three or four families found eating and sleeping in the same dwelling. It is from these that epidemic diseases, such as small-pox and fever, issue, and spread destruction and death throughout our city."—No. 11. "Above 1000 houses in Calton are occupied by more than one family, and all of the poorest kind. During the late frost I found as many as 14 persons, male and female, in one room, all huddled together without bedding."—No. 13. "There are many instances where a room and kitchen are let to several families, entering by one common door."—No. 16. "This is a very prevalent evil, both as regards families and young girls employed at factories, crowding together in lodgings where the rooms are small, the houses ill-aired, and the beds, if any, very indifferent."

Query 9.—What are the ordinary profits of employment for women of the lowest ranks when employed?

Special Answers.—No. 2. "2*s.* to 4*s.* per week, working 14 or 15 hours daily."—No. 3. "The lowest rank are winders for warehouses, whose income, when fully employed, which is seldom the case, does not exceed an average of 2*s.* 6*d.* weekly."—No. 4. "1*s.* to 3*s.* for indoor work."—No. 5. "Some, though working from morning to evening, and sometimes till midnight, cannot average 6*d.* per day."—No. 7. "Clipping tambouring 6*d.* per day; winding 1*s.* 6*d.* per week."—No. 10. "3*d.* to 8*d.* per day."—No. 11. "Winders of cotton weft 4*d.*,

worsted 5*d.*, warps 8*d.*, and veining 3*d.* per day."—No. 12. "2*s.* a-week, with close application."—No. 13. "On an average, 3*s.* 6*d.* per week."—No. 14. "From 1*s.* to 3*s.* per week, but work very scarce."—No 16. "Old women and widows winding yarns average 2*s.* per week."

Query 10.—Are their employments generally overstocked in Glasgow?

General Answer.—14 out of 16 answer in the affirmative.

Special Answers.—No. 9. "Every branch of employment appears to be overstocked, as the prices allowed for them are so reduced as to be incapable of affording the means of support though they were constantly engaged."—No. 16. "In Anderston and Finnieston this is lamentably the case."

Query 11.—Are many of these destitute families or persons in receipt of assistance from their parishes?

Special Answers.—No. 2. "Some receive from 3*s.* 6*d.* to 5*s.* monthly."—No. 3. "None, unless widows and old infirm people."—No. 4. "I have 13 paupers on my list who receive from 2*s.* 6*d.* to 5*s.* per month."—No. 5. "A great many are, but the allowance is so small that the assistance is scarcely felt."—No. 6. "Not very many; none have more than 5*s.* monthly, which will not pay house rent."—No. 7. "A considerable number; but the majority are not."—No. 8. "A good many aged or infirm persons, or widows with large families."—No. 9. "Of old people a goodly number, but even then they have little more than pays their rent."—No. 11. "Many single women and widows with families."—No. 14. "A considerable number."—No. 15. "A few, but the greater number are not."—No. 16. "A very limited number are so."

Query 12.—Are many who live in Glasgow entitled to assistance from other towns or country parishes, but not obtaining or claiming it?

General Answer.—10 out of 11 answer affirmatively.

Special Answers.—No. 4. "I have reason to believe there are a great many; these add much to the unprovided for misery and destitution in Glasgow."—No. 5. "I have met with a few of this description."—No. 6. "There are many aged, infirm, and very destitute persons in my district who are receiving no assistance, either from the parishes which they have left, or from those where they now reside."—No. 7. "I have known several cases of this description."—No. 8. "There are a few in my district."—No. 9. "I hardly know any that receive aid from country parishes."—No. 10. "A great number."—No. 14. "I have found many."—No. 16. "In this district there are a good many."

Query 13.—Are there many such individuals now chargeable in Glasgow, but who have only recently come from other parts?

General Answer.—8 out of 12 answer,—"A great many."

Special Answers.—No. 4. "A great many who have obtained a settlement on account of the short period of three years' residence, and who were fast verging to pauperism previous to their coming to Glasgow."—No. 6. "Many of the inhabitants of my district have recently come from Ireland, others from distant parts of Scotland; but I cannot say whether they are or are not entitled to support from the towns or country parishes from which they come."—No. 7. "There is a very

great proportion of them who belong to this class."—No. 8. "A very great proportion of our paupers are from other places; a few from England, many from the Highlands of Scotland, but very many from Ireland. I think that three-fifths are from other places, two-fifths from Ireland."—No. 9. "Many of the Irish and Highlanders are in great destitution."—No. 11. "A great number from Ireland."—No. 16. "There are a great many of this description in this district."

Query 14.—Are you aware of instances of very poor persons or widows with families who have been three years or more in Glasgow, but who have been unable to establish their claim to parochial assistance, from want of landlords' receipts, or any other causes?

General Answer.—12 out of 16 answers affirmatively.

Special Answers.—No. 6. "I would have no difficulty in finding many such cases, though I cannot at present name the individuals."—No. 7. "I have known several persons of this description, but the parties are either dead or removed from my district."—No. 8. "I have known a few of these; in such cases we endeavour to get them conveyed to their own parishes."—No. 9. "I have frequently heard of such cases, and that the application has been refused, through elders refusing to sign their petitions, or because the inspector has refused to recommend the case; and sometimes the landlords or factors declined signing the receipts."—No. 10. "I have found many such complaints."—No. 12. "We are well aware that there is a number of persons in this district who apply for parochial assistance who cannot establish their claim; they cannot produce landlords' receipts or other satisfactory documents."

Query 15.—What are, in your opinion, the principal causes of destitution in your district?

The causes specified are very various.

Nos. 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 15, specify "Intemperance."—Nos. 2, 4, 5, 6, 7, 12, 14, 15, and 16, "Want of employment."—Nos. 2, 3, 4, 6, 11, and 12, "Low rate of wages."—Nos. 3, 6, 7, 8, and 10, "Ignorance, or the want of education."—Nos. 2, 9, 11, and 15, "The prevalence and continuance of fever, and other diseases."—Nos. 8, 10, and 16, "Early and improvident marriages."—Nos. 10, 11, and 14, "The great influx of the lower orders of Irish."—Nos. 2, 4, and 7, "The high price of provisions;" and Nos. 6 and 12, "The want of economy."

Query 16.—What remedies do you propose?

The answers to this query are also very various.

Nos. 2, 3, 6, 7, 9, 11, 15, and 16, recommend "Increased parochial assistance, or alteration of the Poor Laws."—Nos. 2, 3, 5, 6, 7, 8, 10, and 13, "Increased means of education."—Nos. 2, 3, 5, 6, 7, 9, and 10, "The encouragement of temperance societies and other means to lessen drunkenness."—Nos. 3, 9, and 15, "More attention and interest on the part of the higher classes."—Nos. 2 and 7, "A repeal of the corn laws."—No. 2, "The establishment of workhouses."—No. 7, "Emigration."—No. 8, "The encouragement of savings' banks."—No. 11, "The establishment of a medical police, for the suppression of contagious diseases, and the regulation of houses occupied by the poor, and the removal of nuisances."

C. R. B.

Appendix B.

Abstract Statement of the Gross Expenditure of the City of Glasgow Proper, Barony Parish, Govan Annexation, and Gorbals Proper, Poor Funds for the Years 1836-7-8-9-40.

Parishes, &c.	1836			1837			1838			1839			1840			Total.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
City of Glasgow Proper .	10,147	1	8	12,624	17	5	13,793	7	3	11,827	19	5	11,681	13	7	60,074	19	4
Barony Parish	5,443	7	2	5,764	7	11	6,033	8	11	6,034	8	3	6,131	16	8½	29,407	8	11½
Govan Annexation . . .	943	0	0	1,034	3	5	1,366	6	0	1,300	6	8	1,447	9	7	6,091	5	8
Gorbals Proper	257	9	10	323	7	5	316	14	2	328	8	2	326	5	5	1,552	5	0
Total . .	16,790	18	8	19,746	16	2	21,509	16	4	19,491	2	6	19,587	5	3½	97,125	18	11½

APPEN-

EXTRACTS from RETURNS made to the GLASGOW RELIEF COMMITTEE,

	No.	Name.	Age.	Occupation.	Residence.	Married, Unmarried, or Widows.	Scotch.	Irish.	English.
City proper.	10	Mrs. M'Intyre . .	43	Veins a little	Old Wynd . .	Widow .	1	..	..
	20	Thomas M'Culloch .	23	Potter . .	Ditto	Married .	1	..	..
	30	Henry Wardrop . .	35	Tailor . .	Ditto	Ditto . .	..	1	..
	40	Archibald Napier. .	60	Labourer .	Ditto	Ditto . .	..	1	..
	50	Mrs. Gavin . . .	40	Veiner . .	Ditto , . . .	Widow .	1	..	..
	60	Sarah Kell . . .	42	None. . .	Ditto	Ditto . .	..	1	..
	70	Mrs. Wood. . . .	36	Sewer . .	Ditto	Ditto . .	1	..	..
Calton.	10	Thomas Patterson .	..	Weaver . .	Green Street. .	Married .	..	1	..
	20	Mary Graham. . .	..	Yarn-winder	Stevenson Street	Unmarried	1	..	..
	30	Robert Stewart . .	..	Weaver . .	Tobago Street .	Married .	1	..	..
	40	Dominic O'Donnel .	..	Ditto . . .	Stevenson Street	Ditto . .	..	1	..
	50	Angus Anderson . .	..	Ditto . . .	Ditto	Ditto . .	1	..	..
	60	Widow Gordon . .	..	None . .	Ditto	Widow .	1	..	..
	70	William Hunter . .	..	Weaver . .	Blair Street . .	Married .	1	..	.
	10	William Buchanan .	75	Ditto . . .	Brown Street .	Ditto . .	1	..	..
Bridgeton.	20	Widow Boyle . . .	..	Winder . .	Ditto	Widow .	..	1	..
	30	Widow Stones. . .	..	None. . .	John Street . .	Ditto . .	1	..	..
	40	William Latimer . .	..	Ditto. . .	Shaw's Court .	Married .	..	1	..
	50	Mrs. Dobre . . .	70	Weaver . .	Dale Street . .	Widow .	1	..	..
	60	Mrs. Burnside. . .	..	Ditto . .	Main Street . .	Ditto . .	1	..	..
	70	Mrs. Frazer . . .	60	None. . .	Ditto	Ditto . .	1	..	..
Gorbals.	10	Mr. Roger	68	Ditto . .	Thistle Street .	Ditto . .	1	..	..
	20	Mrs. Granger . . .	44	Winder . .	Rutherglen Loan	Ditto . .	1	..	.
	30	Mrs. Mackenzie . .	70	None . .	Main Street . .	Ditto . .	..	1	..
	40	Janet Gross . . .	34	Sewer . .	Ditto	Ditto . .	1	..	..
	50	Mrs. Murray . . .	30	Shoe-binder	Ditto	Ditto . .	1	..	..
	60	Widow Bradley . .	76	Picks cotton	Malta Street. .	Ditto . .	..	1	..
	70	Widow Montgomerie.	48	None . .	Oxford Street .	Ditto . .	1	..	..
Anderston.	10	Widow Steward , .	82	Yarn-winder	Bishop Street .	Ditto . .	1	..	..
	20	Ann Denniston . .	60	None. . .	Cheapside Street	Unmarried	1	..	..
	30	Andrew M'Dougall .	50	Ditto. . .	School Wynd .	Married .	1	..	..
	40	Henry M'Isaac . .	40	A piercer .	Hope Street . .	Ditto . .	1	..	..
	50	Mrs. M'Kay . . .	70	None . .	Main Street . .	Widow .	..	1	..
	60	Daniel M'Donald. .	..	Weaver . .	Ditto	..	1	..	..
		Mrs. Aitken . . .	68	Yarn-winder	Cheapside Street	Widow .	1	..	..

Note.—The above were not selected from the Returns; but the 10th, 20th, 30th, 40th, 50th, 60th, and be specified.

DIX C.

of PERSONS ASSISTED FROM THE FUND, in January, 1841.

Weekly Earnings of Self.	Weekly Earnings of Family.	Relief from other Sources.	From what Source.	Relief.				General Remarks. If very poor, infirm, without furniture, bedding, &c.
				Meal.	Coals.	Straw.	Money.	
s. d.	*s. d.*	*s. d.*					*s. d.*	
1 3	..	..	..	1 peck	..	1 bed	1 0	3 children, very poor.
..	..	..	..	1 ditto	..	..	1 0	1 child—no employment—wife just confined.
..	..	1 0 per month	Parish.	1 ditto	..	..	..	Unable to work—children in bed from want of clothes.
2 6	..	..	..	2 ditto	..	..	..	Long out of work—4 child.
..	..	..	..	1 ditto	..	..	..	A Lodger—very infirm.
..	..	..	..	1 ditto	..	..	1 0	Herself and 1 child in bad health.
2 0	..	..	..	1 ditto	..	..	0 6	In lodgings with 2 children and very poor.
5 0	..	..	..	..	6 cwt.	1 bundle	..	Has a wife and 2 young children.
2 6	..	..	..	..	6 ditto	..	..	Keeps an orphan boy for whom she gets nothing.
5 0	..	..	..	..	6 ditto			
5 0	..	..	..	..	6 ditto	1 bundle	..	In want of bedding.
5 6	..	..	..	..	6 ditto	..	..	Has a family all unable to work.
..	..	..	..	..	6 ditto			
5 0	..	..	..	..	6 ditto			
..	..	..	..	..	..	..	4 0	2 of a family—himself and wife old and very poor.
..	..	..	..	..	..			
..	..	..	..	..	..	..	2 0	2 young children.
..	6 0	..	..	..	..	..	3 0	Has 7 children—whole earnings 6*s.* per week.
..	..	..	..	..	..	..	2 6	8 children, all of whom have lately had fever.
..	..	..	..	..	..	..	4 0	4 of a family, daughter just delivered of twins.
..	..	..	..	..	..	..	5 0	7 children, 6 of them under 12 years of age.
..	..	..	..	..	..	..	2 0	Very poor.
..	4 6	2 6	Parish.	2 stone	..	..	..	Daughter just confined.
2 0	..	..	..	Ditto	..	..	..	1 child—a very poor case.
2 6	..	3 0	Parish.	Ditto				
..	..	3 0	Ditto	Ditto	..	..	..	A lodger.
..	..	..	..	3 ditto	..	..	..	A number of young children and very poor.
1 0	..	3 0	Parish.	2 ditto	..	..	..	Sometimes keeps lodgers.
..	4 6	..	..	2 ditto	..	..	..	Has one lodger, but is very poor.
..	..	..	..	..	..	..	3 0	Refused aid from Parish, because she had a son who could support her, but he did not do so.
..	..	4 0	Parish	..	..	..	3 0	Twelve years confined with a diseased spine.
..	..	10 0per mouth	Ditto	..	..	..	5 0	Belfast for three years with palsy.
..	1 6	..	..	..	..	..	4 0	4 children—none able to work.
2 0	..	..	..	3 pecks	..	..	..	Has a daughter who does not assist her.
..	..	..	..	3 ditto	..	..	..	Was three months idle.
1 0	..	3 0per week.		..	..	..	2 0	A native of Calton, only 4 years here.

70th cases of each district given as fair examples of the whole. Many much worse cases, however, could

LONDON:
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ON THE SANITARY CONDITION OF THE TOWN OF DUMFRIES.

In Answer to the Queries issued by the Poor Law Commissioners.

By Dr. R. D. M'Lellan.

1. Have diseases of the various forms of continued fever, and other contagious febrile diseases, been prevalent in any, and what, parts of your parish or district, and do such diseases recur at regular intervals, or are they rare and occasional only?

The various forms of continued fever have, every year, been more or less prevalent in Dumfries and its neighbourhood. As the manufactures, however, in this place are few and to a very limited extent, the town is less exposed, perhaps, to fever and other contagious febrile diseases which have been described as so constantly prevalent among the crowded population of Edinburgh and Glasgow, and in other manufacturing districts. At times, however, from whatever causes, diseases of this class have attacked the town very severely. In the winter and spring of 1838 there was a visitation of fever in Dumfries more severe and prolonged than had been experienced for several preceding years. It was chiefly confined to the poor, and to those inhabiting localities where the physical causes of fever were most numerous and active. The prominent characteristic of the weather was cold combined with dampness, though, while the malady prevailed, there were varied states and changes of the atmosphere. The provisions, more especially meal and potatoes, on which the poor had to depend, were, at the same time, high in price and of a bad quality. The privations to which many had to submit, with regard to food, were doubtless among the influential causes of the extension and long continuance of fever at that time in this place. Several instances occurred of great mortality in poor families living in villages or in isolated huts on the outskirts of the parish, where, remote from medical or other assistance, their condition was one of extreme distress. As a proof of the extent to which typhus and synochus then prevailed, I may mention that 23 cases existed in one close,* of no great size, which I myself attended. This close, like many others adjacent, was damp and ill ventilated, and contained some dunghills and other open nuisances. In most of the other localities, where the cases were numerous, a similar condition of things existed. During the winters of 1839 and 1840, fever did not prevail to such an extent as above described in the preceding year; but still many cases

* Close—a narrow alley from 4 to 8 feet wide.

were met with. During the summer last past only a few cases of fever occurred in the district of which I have the medical charge; but I may cite one as showing the connexion between the disease and those common and constantly acting sources of contagion which it is the object of sanitary regulations to abate. The patient's apartment, in the instance now alluded to, was in a confined back court into which its only window opened, and in which were two or three pigsties and dunghills, besides a pool in which varieties of liquid and other filth were deposited and left to stagnate. The corrupted atmosphere, from these accumulations, necessarily pervaded the surrounding tenements; yet, notwithstanding the obvious danger to the neighbourhood from the extension of disease under such circumstances, I believe, with the present imperfect powers lodged in the local authorities, it would be found almost impossible to carry into effect such measures of sanitary police as should suffice to overcome those sources of contagious disease.

In the spring of 1838, on witnessing the great prevalence of fever, and the difficulty of imposing a check to its progress, I published a letter in the Herald newspaper of this town, stating the need of a Fever Board, or of the adoption of some measure to protect the community from invasion of the disease. A copy of that letter, as conveying my impressions at the time, I herewith take the liberty to subjoin:—

"*Typhus Fever.*"—*Need of a Fever Board in Dumfries.*

"There is no disease more justly to be dreaded than typhus fever, and none which, in this country, inflicts such extensive calamity. Others there are which occasionally break forth, and produce a greater and more immediate panic; but their visitation is, in general, short, and recurring only at distant intervals. Typhus, however, is a common and a constant foe, lurking, sometimes hid, yet ever ready to be roused into action, and to start on its insidious and fatal march. The sum of mortality of which it is productive is infinitely greater than that arising from the most fatal epidemic maladies, not excluding even the malignant cholera. Any one to whom this statement may occasion surprise need only consult the official medical reports, and bills of mortality, for our larger cities; or turn to the pages of any traveller who has written on Ireland, and in the pictures of misery and death which they contain, he will find ample evidence to satisfy him of its truth. To a great portion of the public the statistical facts, regarding the prevalence and fatality of typhus, are but slightly known, and little apprehension or sympathy is excited, only because the magnitude of the evil has not come emphatically under their own observation. For the last twelve or fifteen months typhus fever has prevailed in many cities and towns of the kingdom to an unusual extent, and without almost any check from atmospheric vicissitudes, being nearly as severe in summer as in winter. In London, Edinburgh, Greenock, Inverness, and Glasgow, the ravages of the disease were particularly marked; and in the city last named, the infirmary was

unable to receive one-half of the cases that sought admission. To this list of places must be added Dumfries, in which, and its suburbs, fever has prevailed, with some partial abatements, to an extent unknown for many previous years. Within the period above referred to, we find that the number of fever patients treated in the Dumfries and Galloway infirmary has exceeded 200, while the average number for many preceding years has ranged from 13 to 30, showing thus an increase for the past year of more than ten fold. We have no sure means of ascertaining the whole number of cases which may have occurred in the town during the same period, but we may arrive at an approximation to it by taking as our ground the number of cases admitted to the infirmary. There are upwards of 200, and we may safely assume, from a knowledge of facts familiar to the profession, that they do not constitute more than a fifth (possibly much less) of the total number. We must hence infer that more than 1000 cases of typhus, or common continued fever, have existed in Dumfries during the last twelve or fourteen months. This fact is well calculated to strike the attention as one of an unprecedented nature, in regard to the statistics of fever as connected with Dumfries. It is one, too, it need scarcely be observed, of serious importance to the interests of the community, and calls, therefore, for some public exertion to counteract, as far as can be done, the evils it implies. Regarding it in this light, we would respectfully suggest to the civil authorities, or to private individuals of influence, as a means towards so desirable an end, the institution of a Fever Board, conducted on principles similar to those of the Board in Edinburgh, the benefits of which have been long so decidedly felt and acknowledged. The principal duties undertaken by the Board are, when a fever-case has been reported to it by the medical attendant, to send its appointed visitors, and get the patient conveyed in a proper manner to the infirmary; thereafter, to inspect the apartments, and, according as they may require, to clean, ventilate, and fumigate them. Attention is also given to the washing of clothes to which contagious matter may adhere, and which might prove a source of further infection.

"It is well established that cleanliness and ventilation are two of the surest means of destroying contagious effluvia, or rendering them innocuous, means which, unhappily, are much neglected by the poor. If, in the first instance of a case of fever, these measures were promptly and properly taken, the febrile miasm might be destroyed, and the extension of danger entirely prevented. When neglected, as they commonly are, the intensity of the typhoid poison is speedily augmented by the exhalations from various filth, and a stagnant atmosphere. One after another becomes affected, each generating a fresh supply of miasmic matter. In proportion as this spreads and impregnates a given space, the more severe does the disease become; and it is only stayed, perhaps, when there are no more individuals in the infected locality to assail. A distinguished practical writer has stated that 'the virulence of the febrile poison increases in power, not in a numerical, but in a sort of geometrical proportion to the numbers by which it is fed: so that if five patients produce a given ratio of pestilence, ten will produce, not as much again, but nearly a hundred times as much.' Thus in one single close in Dumfries there recently

occurred 23 cases of fever, and in several others the numbers have been high; but had preventive means been early adopted—had the closes been white-washed, and the dirt which polluted them been removed, there is reasonable ground to believe that the infection would not have spread to such a remarkable extent. Though typhus fever, from the force of its pre-disposing or auxiliary causes, is most prevalent among the poor, yet there is no order of the community secure from its invasion; and the more precisely is their danger, the more contagious miasm is abundant in the atmosphere around them. The fever, it may be remembered, which prevailed in Edinburgh in the spring of 1829, forsook unaccountably its usual localities, and was confined chiefly to the higher classes in the better parts of the New Town. The formation of such a board as we have ventured to suggest has another advantage to recommend it, viz., that while its operations are simple and well defined, they would be attended with little expense. It requires only to be managed with active humanity and discretion to ensure beneficial effects; and it would be able, we doubt not, to obtain the co-operation of the police, and to direct their attention to the removal of the filth which in many of our quarters is left to lodge and accumulate, corrupting the atmosphere, and acting deleteriously as a fomes to the specific febrile contagion.

"*Dumfries*, 16*th May*, 1838. R. D. M'Lellan, M.D."

With regard to other contagious febrile diseases, as small-pox, measles, scarlatina, &c., these occur in Dumfries and the surrounding district at irregular intervals. Scarlet fever has not been prevalent for some years past. From the commencement of last spring to near the end of summer an epidemic of measles prevailed which was fatal to many children; and it is worthy perhaps of being noticed that the great majority of cases occurred among the poor, and in those localities where other contagious disorders have usually their seat. With respect to another and still more alarming disease, small-pox, it may be proper here to state that the community in this town are less secure from its invasion than they might reasonably hope to be. This insecurity arises from the neglect of vaccination, to which neither the magistrates nor the medical men have adequate means of enforcing attention. It consists with my own knowledge that, either through negligence or prejudice, a large proportion of the children of the lower classes in Dumfries are allowed to remain unvaccinated. Small-pox cases of the worst kind have, at different times of late, occurred in the town and neighbourhood, and if the malady, as fortunately happened, did not widely spread, it could scarcely well be ascribed to the sanitary check of vaccination. It is, therefore, certainly desirable that some course should be tried to extend the vaccine protection among those who are disposed to neglect it. No instance has come under my notice or knowledge of inoculation having been performed from the natural disease, nor do I believe that it is ever attempted in this quarter of the country.

2. What are the seasons at which such diseases appear amidst any part of the population, and what are their characteristics?

Continued fever commonly appears in Juanary, when the weather becomes severe, and prevails more or less till the close of spring. Several cases of fever, however, have occurred during the two last past months of November and December, and threatened to increase. About the end of the latter month a change of weather took place, and a steady frost, with a calm atmosphere, has continued up to the present date (16th January), and during this interval the disease apparently has received a check; but whether from the atmospheric change alone (from the uncertain nature of fever) it would be difficult to say. The probability is, judging from past experience, that the alterations of weather common to our spring months, in conjunction with the privations of the poor, common also to the same season, may considerably favour the spread and continuance of fever, and other diseases formidable in infancy and the decline of life.

The prevailing characteristics of the season around Dumfries may, in general, be said to be mildness and humidity of atmosphere. The most frequent winds are from the south and south-west. Easterly winds prevail in spring, but are not so severely felt as on the north and east coasts of Scotland. The situation of the town is low, on the banks of the river Nith, in the lowest part of the valley known by the name of the Nith. To the south, the town is open to the breezes of the Solway Firth, and on all other sides, to the distance of five or eight miles, is surrounded by a range of low and sheltering hills. I have heard it stated by some individuals, who have resided in the south of England, that the climate of Dumfries resembles in many respects that of Devonshire.

In consequence of the humidity of the air, the streets, lanes, and closes, in winter, are in a very damp and dirty condition.

3. Did the cholera at the time of its general prevalence prevail to any, and what, extent within the district?

Dumfries was so long exempted from cholera, while it raged in many other parts of Scotland, that the inhabitants indulged the hope of being spared the visitation of that dreadful malady. A case however occurred on the 15th September, 1832, which was rapidly followed by others, and the fatality was such as to excite the greatest panic and alarm. A great number of people forsook the town, many of the shops were closed, and the markets were deserted. Scarcely any one from the country would enter the town. The cases reported were for two or three days so high as 70; and the mortality 40. The total number of cases, about the end of November, when the disease ceased, and in a population of about 10,000, was 840; and the number of deaths 420. In the small town of Maxwellton, on the opposite side of the river to Dumfries, with a population of between 3000 and 4000,

the total number of cases was 250; the deaths 125. It may therefore with truth be said that the cholera prevailed to a greater extent in Dumfries than in any other town in Scotland. Its ravages were greatest in the closes and other ill-aired places, though it would be difficult to specify any external distinction in many of the quarters where it prevailed. The disease attacked many individuals of the better class, and residing in what are considered the better parts of the town.

4. What is the *external* condition, in the following respects, of the residences of the population amidst which such diseases occur?—

a. As to the contiguity of vegetable or animal substances in a state of decomposition, stagnant pools or undrained marshes, accumulations of refuse, either thrown from houses or otherwise?—

b. As to the means adopted or the means available for the *removal* of such substances, or the prevention of the generation of malaria; whether there are sufficient drains or sewers, adequately well supplied with water to dilute, and sufficiently sloping to carry off all such refuse; whether such drains are sufficiently *closed* to confine noxious exhalations from them; whether there is any regularly appointed service of scavengers or otherwise for the removal of such substances; whether there is such ventilation around the residences of, as to dissipate the noxious vapours apparently irremovable?

A great number of the dwellings of the poor, and of the labouring classes, are situated in closes where the ventilation is imperfect, and where refuse of different kinds is thrown out and allowed to accumulate. In those closes are frequently to be found dunghills, pigsties, and open privies. Little or no provision has been made to carry off refuse from such places by means of sewers and a supply of water. There is a service of scavengers in Dumfries, but its operations are confined to the mere public streets and thoroughfares, while almost nothing is attempted for the removal of nuisances in the more obscured quarters of the town. The drains are neither so numerous nor well constructed as to carry off impurities to the desirable extent. One large and principal drain, running up High Street, has never been completed or supplied with any water, so that it remains in a useless state.

5. Describe the *internal structure and economy* of the residences of the population amidst which contagious febrile diseases arise,—

a. State whether they, as well as the surrounding land, are drained or undrained?

b. Whether they are properly supplied with water for the purposes of cleanliness of the houses, persons, and clothing?

c. Whether there are good means of ventilation with a due regard to warmth?

d. Whether there are proper receptacles for filth in connexion with the cottages?

Considerable improvement of late has taken place around Dumfries in the drainage of land, the system of tile-draining having been introduced and much employed. From several wells, and from the river Nith, an abundance of good water is obtainable for the purposes of cleanliness. This advantage, however, in the supply of water is much neglected, and many of the residences are consequently in a dirty and unwholesome state. There are no pipes to convey water into the houses. The introduction of water into the houses has been at times proposed, but there exists no prospect at present of this benefit being realised to the community.

The means of ventilation, with a due regard to warmth, are, in most instances, not good, and many are exposed to the injurious influence of cold. The small supplies of fuel which the indigent can procure are thus expended without producing the warmth which, by better arrangements, they might do. By means of stoves, which are in use in some continental countries where the winters are severe, a more equable heat might be maintained with a considerable saving in the expenditure of fuel. The poorer classes in Scotland are, in general, very inattentive to ventilation; and beneficial effects to health might result could a stricter observance be induced in reference to this particular. Receptacles for filth, in connexion with cottages in the country, or habitations in the town, may be said to be, in the great majority of instances, improperly situated. They are generally close to the houses, so that any deleterious influence they may have, must be more or less felt.

6. As to the internal economy of such residences, describe further,—

a. Whether they are unduly crowded, and several families or persons occupy the space which would properly suffice only for a less number?

b. Whether there are any inferior lodging-houses crowded by mendicants or vagrants?

c. Whether there is gross want of cleanliness in the persons or habitations of certain classes of the poor?

d. Whether there is a habit of keeping pigs, &c., in dwelling-houses, or close to doors or windows?

e. Whether there is an indisposition to be removed to the hospitals when infected with contagious disease?

The residences of the poorer classes in the town consist generally of one apartment only, so that in many instances it is necessarily overcrowded, and when any contagious sickness arises, facilitates much the propagation of disease. There are several poor lodging-houses to which vagrants resort, and where the beds and their occupants are crowded into a very small space. In these and many other habitations the neglect of cleanliness is very marked, together with a want of cleanliness of person. It is quite common

to find pigsties in close contiguity with the houses, and even instances have occurred of pigs being kept within the house.

When infected with contagious disease, there is often an indisposition to be removed to the hospital, though, perhaps, neither comforts nor attendance can be procured at home. I was called to see a girl very lately, and perceived she had got fever. As there were several other children in the family, and all of them occupying the same room, I recommended the mother to let the girl be removed to the hospital. This she declined doing, and in a few days afterwards two of the other children were attacked with fever, the mother also herself, and they are all now in the infirmary, the rest of the family being consequently left in a helpless and unprotected state. In other instances, on the other hand, the force of moral persuasion has sufficed to overcome the indisposition of the patient to be removed to the hospital.

7. Is the extension of the diseases described in question 1 ascribable in any or what proportion to want of any of the necessaries of life; or to other causes than those specified in questions 4, 5, and 6? If so, distinguish those other causes so far as you are able, and the extent of diseases resulting from them.

In addition to such causes as damp, impure air, insufficient ventilation, neglect of cleanliness, and over crowded apartments, the extension of contagious and other diseases must be ascribed, in many instances, to a want of the necessaries of life. An assessment was made in the year 1834, but the funds raised have proved quite inadequate for the relief of the existing destitution. The number on the poor's-roll for the last year is 260, and the average sum distributed is from 6*s*. to 8*s*. per month. Many, however, who cannot get admitted into the roll, and who are, from various causes, enduring different degrees of privation, have to trust alone to the capricious chances of voluntary relief. The collections raised at the church-doors, now very small, are distributed by the elders to the above class of persons, who are denominated the "occasional poor," and the average sum they receive is about 1*s*. per week. By the treasurer's report, submitted to inspection last week, the number of persons receiving such occasional assistance for the last year amounts to 400.

In winter, many of the labouring classes of both sexes are thrown out of employment, who, together with many widows and children, find a precarious and difficult subsistence. A considerable portion of the poor population of the town is composed of Irish, who are almost all labourers, and the majority of whom in winter have little or no work.

In connexion with the subject of pauperism, I may mention that legal announcements have been here very recently issued for the suppression of begging and vagrancy in this county, and the penalties of the law set forth; but I may, perhaps, be allowed to

remark that, while so little and unsure a provision has been made for the relief of the needy and destitute, the stringency of the law seems scarcely compatible with the dictates of humanity.

In the two last winters, the articles of food on which the poor so much depend were dear, and of an inferior quality; and much privation, in regard to diet, was the consequence. I have seen many diseases in children, particularly those affecting the bowels, induced, I have every reason to believe, by scanty and improper food.

8. What is the common cost of erection and average cost of repairing each description of the tenements or cottages inhabited by the labouring classes?

9. What are the rents paid by the labourers for each description of tenements or cottages?

10. What is the general proportion of the rent paid by the labourer to his total expenditure?

11. What is the common cost of the lodgings to persons of the labouring classes?

The cost of erection for such cottages and tenements, as are inhabited by labourers in the country parts of the parish, may be stated from 20*l.* to 50*l.*, and the rent paid for them from 4*l.* to 8*l.*; but in most cases, it is right to notice, two families live in the same cottage. The rent of rooms in town occupied by the same classes varies from 25*s.* to 3*l.* The cost of lodgings to the labourer is from 2*s.* to 4*s.* per week, and his wages are from 1*s.* 6*d.* to 2*s.* per day.

12. Are you of opinion that any, and what, legislative measures are desirable or available for remedy of any of the evils existing within your district?

For the prevention of contagious diseases, it is, doubtless, desirable that some powers should be obtained for removing or diminishing, as far as may be practicable, their more immediate and palpable causes. Whether those powers could, with best effect, be intrusted to the magistrates, commissioners of police, or to a local board of health composed of different individuals, I can scarcely undertake to say. There is great need, I think, of medical attendants being appointed for the poor, as in England, who, in the course of their duties, would have the earliest opportunities of discovering contagious disease, and of reporting such to the proper quarter, when the fitting steps might be taken to arrest the danger, and remove any of the obviously existing causes that engender disease. At present the medical provision made for the poor in Scotland is imperfect, and cannot be relied on; and it often happens, under the present system, that the poor are ill for days, of fever or other distempers, before making their case known, or being able to procure any medical relief. A dispensary has existed in

Dumfries for some years past, but it is not well supported, and no remuneration is given for the services of its medical officers. The annual average number of patients applying at the dispensary for advice is 1000, and the number of cases I have attended this last year, at their own homes, has been 300. The population of the dispensary district to which I attend, I should think, might amount to 1600 or 1800. But, of the above 300 cases, there were 25 of fever, 3 of small-pox, and 24 of measles.

The total number of in-patients treated in the Dumfries Infirmary during the past year has been 404, and of these the number of fever patients was 68; cases of synochus 12, of typhus 56.

The number of out-patients for the same period, or those receiving advice and medicine, as at the dispensary, was 750.

From the foregoing data it will be seen that between 2000 and 3000 individuals, chiefly residents of the town, are in circumstances requiring gratuitous medical relief.

There is another charitable institution which may be noticed in this place: it is called the Hospital, or Poor's House, and is intended for the reception and maintenance of aged persons and orphan children, and is capable of accommodating from 40 to 50 inmates of the above description. It is supported by legacies and donations, and, so far as its sphere goes, answers its benevolent end.

A soup-kitchen has been established in Dumfries for some years past, and continues open, in winter and spring, from two to three months, according to the inclemency of the weather and want of work. The distribution of soup has proved a timely aid and benefit to a large class of poor.

13. Have any, and what, voluntary exertions, been made to improve the external or internal economy of the residences of the labouring classes within your district, and if so, describe their nature and effects?

I am not aware that exertions to any appreciable extent have been made to improve the external or internal economy of the residences of the labouring population. I am disposed to think that landlords are in general indifferent about the due degree of comfort and repair in respect to such residences. The Highland Society of Scotland has instituted premiums for improvements in the cottages of the peasantry; and this encouragement, aided by other exertions, will in time be productive of beneficial results. At the general meeting of the society, recently held, it was stated that the interest excited by the cottage premiums continued to increase, and that, in terms of the regulations of the society, they would this year be in operation in 32 parishes.

During the prevalence of the cholera in Dumfries exertions were made to have the closes cleansed and fumigated, and the houses aired and whitewashed; but since that calamitous time few or no prophylactic measures have been attempted. Within

the last few weeks the magistrates have given notice of their intention to have dunghills and other nuisances removed if deposited, as heretofore, in certain public or exposed localities. This correction, however, of one particular evil will, in all probability, be to a very limited extent; and I may remark that, from indisposition on the part of the people, it is to be apprehended that endeavours to alter the economy of their dwellings or habitual modes of life will, at least in many instances, be attended with considerable difficulty and opposition. From all the facts, however, which have fallen under my own observation, and from what I have learned from the reports of others, it cannot, I think, be disputed that some system of sanitary measures is both necesary and desirable; and that, while benefiting the poor in particular, it would contribute to the welfare of the community at large.

R. D. M'Lellan, M.D.

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REPORT ON THE SANITARY CONDITION OF THE TOWN OF AYR.

By Dr. James Sym.

Ayr stands upon an extensive bay on the west coast of Scotland, where the Atlantic Ocean forms the commencement of the Frith of Clyde; and opposite to this bay, at the distance of about 15 miles, lies the mountainous island of Arran, the intervening channel being the ordinary course of navigation for the shipping of Glasgow and Greenock. The *water* of Ayr divides the royal burgh from the northern portion of the parliamentary burgh, and the *water* of Doon falls into the sea two miles south of the town. The banks of these two rivers are thickly planted with the pleasure grounds of some of the principal proprietors in the county, and they comprise the most interesting portions of the land of Burns. The heads of Ayr, which terminate the Brown-Carrick Hill on the west by a range of picturesque precipices having their bases washed by the sea, form the southern boundary of the bay; and betwixt these and the Dundonald hills, which approach the coast about six miles north of Ayr, there is a sandy plain of from one to three miles in breadth, rising very gradually as it recedes from the shore, till it becomes bounded on the east by considerable elevations of stiff clay land. The sandy subsoil of the plain is covered by a scanty layer of vegetable mould, which has been brought to a state of high cultivation by constant supplies of manure bestowed upon it by a skilful and enterprising race of farmers. The sand lies upon a stratum of new sandstone; this is quarried in the immediate vicinity of the town, and yields excellent materials for building. Beneath the sandstone there are valuable beds of coal, and the mining and exportation of the coal afford employment to a large portion of our labouring population, and constitute the staple trade of Ayr. The valleys of the Ayr and the Doon are richly wooded; but from the shallowness of the soil and exposure to the west winds, the plain at a distance from those valleys is generally deficient in trees. The ground upon which Ayr itself stands is very flat, its declivity towards the sea being scarcely perceptible, and that towards the river on either side not considerable.

The climate of Ayr is mild in respect of temperature, more so I believe than that of any other place on the mainland of Scotland. This arises from the circumstance that the winds for about two-thirds of the year are westerly and partake of the temperature of the ocean; whilst the north and east winds only prevail for short periods, and are somewhat, though imperfectly, intercepted by the hilly amphitheatre that bounds our plain. From comparing thermometrical tables kept at Ayr with those kept at Greenwich, I am satisfied that the average temperature of our

winters approaches, if it does not equal, that of the mildest districts of England; and it is certain that snow lies for a very short time in the immediate neighbourhood of Ayr. At Ayr the mean temperature of the month of December, 1840, at 10 A.M., was 37·8° Fahr.; the minimum at that hour being 26° (on the 24th), whereas at Greenwich the mean temperature of the same month at 9 A.M. was 31·3°, and the minimum 18° (on the 23rd). We must make a deduction for the difference of an hour in the times of observation, and for the observations in the one instance being made at Croom's hill and in the other nearly at the level of the sea, still a difference of 6·5° is much too great to be accounted for from these circumstances. Whilst the temperature is moderate, we cannot boast of the moderation of our winds; those from the west are often extremely tempestuous, although they are by no means cold. They are generally accompanied by heavy rains; indeed almost the whole of our rain falls during high westerly winds; and we are not infested with those fogs and drizzling showers which are so frequent and so unwholesome in the narrower parts of the Frith. On the contrary, our atmosphere is clear, pure, and elastic; which causes the natives of Ayr, when they visit inland towns, to complain much of the oppressive thickness of the air, so different from what they had been accustomed to inhale. The bed of sand on which the town is built renders the soil remarkably absorbent, so that immediately after the rains have subsided the principal streets of the town, and the beautiful walks in the neighbourhood, appear dry and clean. This feature strikes visitors, who have been accustomed to the wet and muddy streets of such towns as Glasgow and Kilmarnock. The same cause renders the houses, when constructed with ordinary care, free from damp; and notwithstanding the flatness of the streets and their great deficiency in drains, there is very little stagnant water to be seen, except when severe frosts congeal it before it has had time to be absorbed, and the sudden thaws which follow melt the surface, whilst it still remains hard beneath. The mildness of our winters and springs, the absence of drizzling rains and fogs, the purity of our atmosphere and the absorbent properties of our soil, conspire to render the climate of Ayr one of the most salubrious in Great Britain.

There are few wells of good water in Ayr. The water in general is strongly impregnated with lime, and the supply is defective. Strangers find it unpleasant, and I believe horses which have not been used with it are apt to suffer when it is given them to drink. This want is now about to be supplied, as a company has been formed for bringing water of the best quality and in sufficient abundance to the town. The operations for this important purpose have just been commenced, and I trust that after another year we shall have no cause to complain of want of wholesome water. The water of the river above the town is pure, and serves well for dyeing and other purposes for which soft water is necessary.

The proximity of the sea to the town, and the extensive beach of firm smooth sand afford excellent opportunities for sea bathing, which are justly appreciated and taken advantage of both by the natives of Ayr and by strangers who visit the town for that purpose. This is a very efficient mean for preserving the health of the lower orders. Indeed I know of nothing which conduces more than sea bathing to the prevention of disease amongst the working classes, who are not in the habit of cleansing their persons thoroughly in any other way. They cannot command leisure for indulging in this most salubrious luxury on their work-days, but on Sundays the whole shores both of Ayr and Newton are in life with the hundreds of people of humble rank of all ages, who are seen washing their dingy skins, and sporting amid the waves. Some fastidious moralists are scandalized at the indecency of such exhibitions, and many of our very pious citizens raise an outcry against the practice as a profanation of the sabbath. But as I can only contemplate its hygienic features, I must, as a professional man, give it my countenance, for if our poor townsmen do not bathe on the sabbath they will not bathe at all. I should rather like to see these ablutions decently regulated by our civic authorities, and adopted as religious observances in our Presbyterian discipline, than have them reprobated by persons of sensitive propriety, and subjected to the anathemas of ascetic sticklers for the sanctity of the sabbath. It is not merely the ablution of the person and the action of the salt water that conduce to the healthfulness of sea bathing; the free inhalation of the pure atmosphere of the ocean by the untrammelled chest, and the exposure of the skin to the genial rays of the sun, conspire in no small degree to the benefits resulting from this delightful indulgence. In addition to sea bathing, Ayr will soon enjoy the advantages of hot baths, which are now in course of erection upon the south shore. It is intended to afford them at such moderate charges that they will be more generally available than is usually the case in such establishments, the bath company being actuated entirely by a regard for the public good, and not by mercenary considerations.

Ayr is abundantly supplied with coal at a very reasonable cost and of excellent quality. 12 cwt. are laid down at the houses of the inhabitants for 5*s*. 6*d*. This is the kind of fuel universally used, and it is a great blessing to the community, that people in moderate circumstances can always afford to have a comfortable fire. Coal is retailed in small quantities to the poorer classes at coal yards, of which there are several in the town; and colliers are permitted to carry home from the pits a supply for their families.

Ayrshire has now become the greatest agricultural county in Scotland. The diversity of land in the different districts gives scope to husbandry in all its varieties. In some, grazing sheep both for the wool-merchant and the butcher, and rearing fat cattle, are chiefly pursued. In others, corn is more extensively cultivated, whilst due attention is also paid to the dairy; and in the

most fertile districts of the county large dairies and feeding off sheep upon turnip, are principally relied on by the tenantry for paying the high rents at which they hold their farms. Ayr is accordingly well supplied with agricultural produce of every description. Oatmeal is somewhat lower in price than in the central counties of Scotland, and its quality is excellent. It is extensively used in the forms of cakes and porridge by the labouring classes. Our wheaten bread is also of superior quality and free from adulterations; which we owe in a great measure to the circumstance, that our principal grain merchant and baker is a man of the strictest integrity and considerable wealth, and the quality of bread which he furnishes forms the standard for inferior tradesmen. There is a market for sheep and cattle every Tuesday, which is attended by dealers and butchers from every part of the county, as well as from Paisley and Glasgow, so that we are well supplied with butcher's meat, and our mutton in particular is excellent; the prices are lower than in Glasgow, and the butchers are in the habit of selling meat to the working classes at a considerable reduction: beef, for instance, for which an opulent customer will pay 7*d.* per lb., is readily purchased by a collier's wife at 5*d.* It is scarcely necessary to mention that in a county so much distinguished for its dairy as Ayrshire, the butter and cheese are of the best quality; and as there is a market held in Ayr twice a week, both for butter and eggs, the inhabitants have always an opportunity of purchasing those articles fresh. They are also abundantly supplied with butter-milk and with poultry. There are several market gardens in the neighbourhood of the town, and non-resident proprietors in the country are in the practice of letting their gardens during their absence, so that we are well provided with cheap roots, vegetables, and fruit: these are brought to the town in carts every morning, which are ranged along the High-street to the number of from one to two dozen; and around them are seen crowds of females procuring the daily supplies for their families. The farmers near the shore are in the habit of manuring their potatoe ground with sea-weed, which produces potatoes of large size, but inferior quality; they are apt to decay and become unwholesome when long kept. Of all our markets, the fish market is not only most remarkable for abundance and variety, but for cheapness: we have turbot, sole, skate, flounder, ling, cod, haddock, and whiting, as our ordinary stock; and we have plenty of herring, mackerel, and salmon in their seasons. If our fishermen were a little more industrious and enterprising, our supplies would be still greater, as the quantity of fine fish in our bay seems to be inexhaustible. Many of the labouring people who cannot afford to purchase butchers' meat, obtain a savoury breakfast, which is their luxurious meal, by adding a fried fish to their ordinary fare. The fishmongers sell a pound of whitings to the poor for a penny, whilst they charge three half-pence to their more wealthy customers—a mode of

levying a tax from the rich in favour of the poor which cannot be much blamed.

The parliamentary burgh of Ayr comprises the royal burgh on the south side of the river, and the urban portions of the parishes of Newton and Wallacetown on the north. They form one town, merely intersected by the river, across which the only communication by carriage is by the new bridge immediately above the harbour and continuous with the principal street of Newton. The old bridge is 150 yards higher up the river, continuous with the principal street of Wallacetown, and now only patent to foot passengers. The extreme length of the town from the head of Newton, to the south side of Wellington-square, is 1500 yards, and its greatest breadth, both on the north and south sides of the river, is about 1000 yards. Within its outline it contains a surface of about 180 acres.

By a census taken in 1836, it appears that the population of the royal burgh of Ayr within the toll-bars was 6240; that of the town of Newton 3768, and of Wallacetown 4277, amounting in all to 14,285, which I believe does not fall far short of the present population. It is thus obvious that Ayr is a very open town, having not more than 18 families, at four and a half individuals to each family, (which is found to be our rate,) upon the acre. The only place where the population is very dense, is that portion of the High-street which extends from the new bridge to Mill-street and Carrick Vennel, with about 200 yards of the same street where it forms the commencement of what is usually called Townhead. Here there is a compact mass of back premises in which each apartment generally contains a whole family; the rest of Townhead, as well as Mill-street and Carrick Vennel, is much less densely populated than the haunts of the poor in most other towns; not on account of fewer individuals being confined in one apartment, for they often amount to two families, but from the circumstances that the streets are widely apart from each other, and the houses only of one or two stories in height, with few back dwellings. The new part of the royal burgh in which the more opulent of the inhabitants reside, is altogether free from crowding; and the same may be said of Newton in general, and of Wallacetown, which are mostly occupied by the labouring classes. In Wallacetown, as in the Townhead of Ayr, the streets are far apart from each other, so that there are few families on an acre, although poverty drives too many under each roof; and in this sense the population may still be regarded as crowded.

The streets of Ayr are wide, and those in the new part of the royal burgh have generally houses only on one side; the circulation of the air, instead of being confined, is thus rather too free. In the High-street, where the under stories are occupied as retail shops, the houses are not only built on both sides of the street, but they are shut in behind by the back premises I have mentioned, from which the fresh air and the salutary rays of the sun

are equally excluded. Here the front houses are generally three or four stories high; and through these there is access to the back premises by a narrow passage of three or four feet in width by seven feet in height. The houses behind run at right angles with the line of the street to the distance of from 100 to 200 feet from the front rows. The little alleys are only from four to six feet wide, and there are sometimes houses on both sides, sometimes houses on one side only and a wall on the other. The Townhead has fewer of these back premises, and there are almost none of them in Wallacetown. In the main street of Newton, they are frequent, though not nearly to the same extent as in the High-street of Ayr. The streets of the royal burgh are well causewayed, and have sufficient slope towards the river; but in Wallacetown they are more level, and neither causewayed, nor in some places even properly gravelled. The inconvenience of these defects is in some measure lessened by the absorbent nature of the subsoil, and the want of thoroughfare through such parts of the town. Another defect in the structure of the streets where the poorer classes dwell is that, instead of having the surface of the street somewhat lower, it is generally several inches higher than the ground floors of the houses.

A good covered sewer traverses the principal streets of the new part of Ayr; but the old part of the burgh, and both Newton and Wallacetown have merely shallow open gutters along the sides of the causeway. These gutters receive all the liquid refuse from the closes and alleys which communicate with the street, and which are generally causewayed in such a way that one side is considerably higher than the other, so as to permit water to find its way to the opposite edge. This sort of drainage might suffice for all useful purposes in our dry sandy soil if we had an adequate establishment of scavengers; but the gutters in many of the streets, and in all the closes inhabited by the poor, are so much neglected, that they are never free from the stinking residuum of foul water. In Newton and Wallacetown the drainage is exceedingly imperfect; indeed in most streets of the latter it may be said scarcely to exist, and as the surface is very flat, almost the whole of the liquid putrescence and filth which are thrown out from the houses is allowed to filter through the sand or evaporate in the sun, leaving a most offensive paste at the sides of the streets and in the passages through the houses. This is the more to be regretted, that the beautiful state of cleanliness of the new part of Ayr shows with how little labour it might be obviated with the aid of our absorbent soil and free atmosphere. There are some streets, the main street of Newton in particular, which have such inequalities in the causewayed footpaths, and such want of escape by the gutters, that if is impossible to find one's way through them in a dark night, without many a plunge into the filth. There is everywhere sufficient slope toward the river to render drainage perfectly effectual if properly executed.

I think every part of the parliamentary burgh is sufficiently, and often more than sufficiently perflated by our westerly winds; with the exception of the back premises of the High-street, which are certainly too much defended from the winds in all directions. As many of the front houses have been recently rebuilt, and form a complete barrier to the access of the winds, these back premises are not likely ever to receive a supply of free air. It would be well for the community if they were razed to the ground, or allowed to fall to ruin.

The houses in which the labouring classes reside vary in different parts of the town. In the royal burgh they are generally old, and some of those which were originally occupied by single families in comfortable circumstances have now become the abodes of a distinct family, besides lodgers, in each apartment. These houses are sadly out of repair, and the rent of a single room is from 30*s.* to 2*l.* per annum. There are, I believe, no cellars occupied as dwelling-houses in Ayr, but as the ground floors are frequently depressed a few inches below the level of the street, and composed of clay full of inequalities, they are constantly dirty and generally wet; indeed, floors which neither admit of washing nor scrubbing cannot be otherwise. The upper flats and garrets are in a very ruinous condition, and almost all the poor houses are thatched with straw, and the roofs old and in bad repair. The windows in general are fixed, and most of the glass is so much broken, that its place is supplied with boards, rags, and old hats. The ceilings are low, and these, as well as the walls, without plaster. In the old part of Newton, many of the houses are similar to those I have described; but some parts of Newton, and almost the whole of Wallacetown, are provided with houses of a much better construction for the labouring classes. They are of one story, with garrets; and, except in the poorest districts, only four families, or, when there are loom-shops, only two families, generally reside under each roof. The wide street in front, and the extensive open spaces behind, are such advantages, that if a very little care were bestowed on the mode of making the floors, I would consider these houses extremely well adapted for labouring people. In respect of furniture, I believe the houses both in Townhead and Wallacetown, which contain our poorest population, are supplied as elsewhere, namely, according to the circumstances of their inmates. There is usually a bedstead at each side of the door, often much shattered, beneath which all sorts of rubbish and lumber are huddled together, and also the store of potatoes for the family when they possess so much wealth. Nay, we sometimes detect a heap of horse-dung under the bed, which is collected by the children from the streets, and sold when a sufficient quantity has been accumulated. As to cleaning under the beds, this is never dreamt of, nor would it be easily effected, as they are generally closeted in upon three sides; and they are universally infested with bugs. The bedding consists of straw or

chaff, with a scanty supply of dirty blankets and mats, but no sheets; one or two broken chairs and stools, and a fir table, constitute the remaining part of the furniture; and it indicates some degree of opulence when an old chest is seen by the side of the wall. The foregoing description applies to the houses of the poorest class of hand-loom weavers, generally Irish, and to other indigent tradesmen, who support their families by their regular industry. There is, however, a still poorer class, consisting of vagrants, paupers, and persons who have no regular employment, but apply themselves to any casual work that may occur. These people live in the most miserable hovels, or are found crowded together in lodging-houses in such numbers, that, when collected at night, the floors are literally covered with their persons. They pay a small sum for their lodging at night, and disperse themselves during the day.

There are very few public works in Ayr, and none that can be regarded as nuisances. The greatest nuisance is the filth collected about the houses of the poor. For instance, the back premises of the poorer portion of High-street have their narrow alleys obviously used for the purpose of necessaries, as the ordure with which they are thickly studded renders it difficult to pick one's steps through them without pollution. In every little recess and corner there is a collection of ashes, garbage, and filth; but as there is not space in such depôts sufficient for the whole refuse of the contiguous dwellings, the remainder is discovered at the distant extremity of each alley, not confined in proper ashsteads, but widely diffused amongst the pigsties and dirty privies that close up the rear. In one place, near the south extremity of the churchyard, there is a large pig colony, called *swinefield*, where the sties are let at a rent to persons who have not sufficient room for them at their own houses. The ground here is full of inequalities, and the fetid drainings which proceed from the dunghills form abominable semi-liquid pools. In the more open streets which have no back alleys, this establishment of dunghills, pigsties, and privies, is close by the windows and backdoors of the houses; and wherever there happens to be an outer stair, the ashes and foul water are uniformly thrown from the top of it. This description is applicable in some measure to the meanest dwellings throughout every part of our parliamentary burgh; and the gardens which, with a little attention, might be rendered at once ornamental and healthful, are completely lost in both respects by reason of the surrounding filth. A large portion of the space which intervenes between the High-street and the river is occupied as a burying ground. Whether this constitutes a nuisance I do not pretend to determine, but I do not hesitate to affirm that the vacancy thus obtained is infinitely preferable to the dirty alleys and their foul accompaniments elsewhere. There are, however, in the High-street, two unquestionable nuisances, within the jurisdiction of the municipal authorities, which it is disgraceful to retain: these are

the slaughter-house and the fish-market. The entrance to the former is by a narrow close, and it occupies a portion of the space between the street and the river, not far from the churchyard. It is surrounded by the ruinous walls of old houses, which prevent the purifying river breezes from ever reaching it. The fish-market is merely a wide part of the High-street, on the causeway of which the finest turbot and cod are often laid out without regard to cleanliness; and the fishwives are seen pumping water on them from a well, and throwing the offal into the gutter, from whence, in hot weather, the most nauseating effluvia of fishy putrescence are exhaled. There would be no difficulty in finding suitable places both for the slaughter-houses and the fish-market, where they would neither be injurious to the health nor offensive to the senses, and it is a reproach to the authorities of Ayr that they are allowed to remain in their present situations and conditions. There are two candle-works in the High-street, which certainly render the atmosphere extremely disagreeable, but I don't know that I am entitled to record them amongst the nuisances; and I may apply the same remark to several public stables and cow-houses in the alleys already described, around which there is no space for proper stable-yards. There is a field, belonging to the burgh, close by the south beach, which is so little elevated above the level of the sea that it does not admit of thorough draining; but it is only in rainy weather that it is damp, and it cannot be accounted a marsh. There are likewise some quarry holes imperfectly filled up, beyond the Townhead of Ayr, and beyond Cross-street in Wallacetown; but their extent is so small that they appear to be scarcely worthy of notice. The river is perfectly free from stagnation. It is confined within sufficiently narrow boundaries by stone walls, which are carried out on both sides a considerable way into the sea, forming the north and south piers of the harbour; and the bed of the river has so much fall as to admit of a milldam near the Townhead. The ebbing and flowing of the tides reach to a short distance from the dam, so that there is no such thing as stagnant water in the river, even during the driest seasons.

It is a loss to Ayr that there are few indigenous manufactures, by which the profits as well as the wages of our industry might be retained amongst ourselves. The principal employment of the working classes is obtained from manufacturers in Glasgow and Paisley, who give work to about 1200 of our male population as hand-loom weavers, and to a still larger number of females as sewers of muslin. The prices of weaving are now very low, and it requires long hours of constant labour to yield a scanty subsistence. The best weavers can only make 8*s.* or 9*s.* per week, from which 1*s.* 6*d.* must be deducted for necessary expenses: a boy will make 3*s.* or 4*s.* About one-third of the weavers are Irishmen, and they are always in the most indigent circumstances. I am informed by the principal agents that there is fully as much

money sent to Ayr for hand-sewing as for weaving; and were it not that the wives and daughters of the weavers can add to the family income in this way, their poverty would be insupportable; an expert sewer will make 1*s.* per day, and a young girl 3*d.* or 4*d.* The coal trade, which furnishes work for colliers, carters, and seamen, is by far the principal local branch of industry in Ayr. Colliers can easily make 4*s.* per day, but they seldom work during more than four days in the week. During a strike a few years ago, the coal-master sent a number of Irish labourers down into the pits, and since that time a considerable portion of the colliers have been Irishmen. At one time the fishermen were a much more numerous body than they are at present; the most enterprising of them have recently taken up their stations on the shores of Argyleshire, for the convenience of the Glasgow market, to which they send their fish every morning by steam-boats, and those who remain in Ayr are lazy, and consequently poor. Probably the Glasgow and Ayrshire railroad will have the effect of bringing back the fishing trade to our bay. The wives and daughters of the fishermen employ themselves in digging up bait from the sands, and in selling the fish; I need scarcely say that they are not the most sober and orderly portion of our female population. We have one carpet factory, which furnishes work for about 200 workers of both sexes: they make tolerable wages, a good workman from 12*s.* to 14*s.* per week; and they are generally economical in their habits, and respectable in their conduct. At one time the leather and shoe trades were considerable in Ayr; but I understand they have now greatly diminished, and Kilmarnock has taken the lead in those departments. There is a species of industry peculiar to Ayrshire which is of great importance to the town, as it gives work to a numerous class who would otherwise be at a loss for profitable employment; I mean the Ayrshire needlework, which has become so celebrated. It not only yields a comfortable subsistence to females of the humbler classes, but it is cultivated by many of a superior class, whose circumstances are perhaps equally narrow, and who find it necessary to add to their incomes whatever they can acquire by profitable industry in which they can employ themselves privately and without any feeling of degradation. There is a shipyard, the spirited proprietor of which employs about 60 men at good wages, and has turned out several vessels of late of considerable tonnage. The exportation trade of our harbour consists principally of coal; and the most of our foreign trade is with America and the Baltic, from which we import cargoes of wood, hemp, tar, &c., though less, I believe, than in former times.

It is not to be supposed that the virtue of temperance will characterize a population whereof a considerable part consists of colliers, carters, sailors, and fishwives. In fact, drunkenness prevails to a very great extent, and not only causes idleness, but wastes the wages which are gained during the days of sobriety.

Although the colliers have large wages, they are, from their want of economy, and their dissolute habits, uniformly in poverty; and their families, though well fed, are miserably clothed, ill lodged, uneducated, and less industrious than the families of the weavers, the females of which work with great constancy at hand-sewing. The modes of living of these two classes are very different. The weaver is not intemperate, because he cannot afford to purchase ardent spirits, and the nature of his employment prevents him from having those hours of idleness during the day, which the collier is so apt to consume in dissipation. He lives on very innutritious food, seldom eats butchers' meat, and the most indigent, who are generally Irishmen, subsist chiefly on potatoes. The collier, on the other hand, indulges to excess in ardent spirits, and both he and his family partake of animal food every day. In short, the colliers live better than any of the other labouring classes in Ayr. The want of indigenous manufactures is greatly felt in checking enterprise, and depressing both the intellectual and moral characters of our operatives. Colliers, carters, fishermen, sailors, and handloom weavers, have scarcely any means of applying those mental qualities which nature may have endowed them with, in such a way as to raise them from their existing grade. Whereas, in the neighbouring town of Kilmarnock, where there are many local manufactures, such as carpet weaving to a very great extent, calico printing, shawl manufacturing, bonnet making, making machinery, currying, &c., we continually see enterprising clever journeymen saving a little money, forming partnerships, entering upon small manufacturing businesses on their own account, and not only raising themselves to respectable positions in society, but by their example affording such inducements to others to industry, sobriety, and carefulness, that the whole class of the manufacturing population is elevated to a higher status than in Ayr. Besides rendering themselves expert in the manual operations of their trades, they acquire a knowledge of the mechanical and chemical principles of the manufacturing processes in which they are engaged, and the modes of transacting general business; so that with a little money, and liberal credit, they experience no difficulty in conducting similar works for themselves. The operatives of Ayr are decidedly their inferiors in intelligence, enterprise, and ambition, and I attribute this inferiority to the want of local manufacturing establishments. In Kilmarnock the poorest operative, and the most opulent manufacturer, are linked together by an uninterrupted chain. A constant intercourse is kept up amongst the several classes of society; and whilst the increased intelligence and cultivation that obtain amongst the operatives are no doubt met by a lower state of refinement, and less fastidiousness in the manners and tastes of their superiors, than in more aristocratic communities, even this is not without its advantages; because, when a mechanic raises himself by successful enterprise to an equality with his hitherto more opulent townsmen, he finds that there is no great barrier, from

difference of education and habits, to prevent an unrestrained intercourse with the social circle of which he has now become a member. At the same time common feelings and interests still connect him with his quondam fellow operatives, amongst whom are to be found his nearest relatives; and whilst they receive from him their daily wages, their histories, circumstances, characters, habits, and wants, are familiarly known to him. Hence when distress assails a labouring family they are not merely regarded as objects of compassion from being fellow creatures in affliction, but they receive the full flow of sympathy due to brothers and friends who are only separated from their more fortunate neighbours by events of recent occurrence, and capable of being easily traced. But the upper classes of Ayr, instead of having risen from a lower station in life by virtue of their industry, intelligence, and enterprise, consist more frequently of persons who have been born in a higher station than their present circumstances enable them to maintain; so that although their benevolence is above all praise, it springs from different feelings, and meets with a different reception from those gifts of friendship and hospitality which are accepted of by one neighbour from another, as marks of fellowship rather than bestowments of charity. Indeed the mode in which the poor in Ayr receive assistance from the rich tends to vitiate the morals, and degrade the spirit of independence of the former. These look upon their benefactors as a distinct and favoured class, who have not obtained their present affluence by any merits which they can appreciate, or by any means which it is equally in their power to employ with a prospect of success, and when by their importunities or by false pretexts they extract gratuitous supplies, they are too apt to conceive that they are only receiving what is their natural due. They are thus supported by the alms of the bountiful without being either inspired with feelings of gratitude, or with a painful sense of disreputable dependence; whilst at the same time a modest and virtuous family may be pining in starvation, without their condition ever becoming known to those who would alleviate their distress with alacrity and pleasure, if the wide chasm by which the wealthy are separated from the poor did not too often exclude the latter from the sphere of observation of the former. The step between using false representations to obtain what you behold with angry discontent monopolised by others, and seizing upon it surreptitiously whenever an opportunity occurs, is so short that little difficulty is experienced in passing the boundary by which beggary is separated from larceny. There are accordingly systems of pilfering, which prevail extensively amongst the lowest classes of society, and by means of which the poor supply themselves with a greater share of the stores of the wealthy than all the alms they receive through the avowed channels of regular charity. The principal agents in this nefarious practice are a disreputable set of female domestic servants, who are in the habit of conveying

away the property of their masters either to their poor relations, or to persons from whom they receive a small remuneration. This vicious practice generally commences with collecting the refuse of the table in a vessel appropriated by the cook to that purpose, the contents of which are sold from time to time for a trifling sum to people who feed pigs. In order to increase their profits, the servants prepare double the quantity of potatoes, vegetables, soup, &c., that are required by the family, and they also toss whatever cold meat they can secrete into the pig's crock. As their customers are equally ready to purchase other articles, bags of raw potatoes, meal, coals, empty bottles, china ware, crystal, and iron utensils, are disposed of in the same way. In short, a large portion of the female domestic servants of Ayr are habitual pilferers; and amongst the class of people immediately below our industrious artisans there is no scarcity of abettors of their crimes, who give every facility and assistance in conveying away and disposing of the stolen goods. These practices pervade a large class of our inhabitants who have no regular employment, and who seem to settle in Ayr chiefly with a view to living on the public charities and private benevolence which are known to prevail to a greater extent there than in almost any other town in Scotland.

Poverty has an influence on the health of two classes of our inhabitants, viz., the hard-working poor, who in general support their families without the aid of public or private charity, and those who do not employ themselves in regular industry. The former are mostly weavers and out-door labourers. Their wages, when they are regularly employed, are merely sufficient to procure such a subsistence for their families as keeps them constantly on the verge of destitution; and when they are thrown idle by vicissitudes of trade, or by the inclemency of the weather, or when they have their expenses increased by domestic affliction, they are unable to provide for the wants of their families even during a very short period. Here we feel to its fullest extent the absence of local manufactures, by which a variety of branches of business are carried on in the same community at the same time, so that when one branch is depressed, another may be flourishing; and by which, families labouring under temporary difficulties are so much connected with, and interspersed among others in comfortable circumstances, that their wants are never so much overlooked as to reduce them to the last extremities of destitution. When one hand-loom weaver is thrown out of employment, all the weavers in the town are thrown idle at the same time; whole streets are reduced to a state of starvation; and it is only when their distress can be endured no longer that their condition begins to be considered by those who have the means of affording them relief. In such emergencies the benevolence of the wealthier classes comes to their aid. Money is raised by subscription, which is either distributed amongst them in small sums, or laid out in supporting soup kitchens, or given in the form of wages for

work provided for the occasion. The weavers are sometimes retained at their looms, yarn and wages being supplied from the subscription funds; sometimes, they, as well as the other labourers, are set to repair the highways, or make other public improvements. The former method of employing them has the advantage of requiring no sacrifice on the part of the weavers, whilst it has the disadvantage of prolonging the glut in the markets, which is the source of the evil. The latter has the advantage of conferring a lasting benefit on the community, whilst it has the disadvantage of being ill-suited to the constitutions, habits, dress, and delicate hands of the weavers. In cases of distress in individual families, from disease at home, or from casualties at sea, the charitable are ever ready to lend assistance; but I fear this falls far short of their exigencies. In such circumstances, as well as when reduced to straits from want of work, the people are obliged to borrow upon the credit of their scanty possessions, sums which greatly exceed in amount all the disbursements from public and private charity put together. This accommodation is afforded them by the pawnbrokers, two of whom have taken out licences in Ayr within these three years, and established extensive businesses. Indeed the extent of their businesses, in addition to that of irregular pawnbrokers, is a melancholy proof of the straits to which the industrious poor are reduced by temporary difficulties. One of these pawnbrokers informs me that he has nearly 4000 transactions during each of the winter months, and that not more than one or two per cent. of the pledges are left unredeemed, except during severe and protracted depressions of trade. This shows that most of his customers are industrious people labouring under temporary difficulties; the pledges remain on an average about six weeks in his possession. They are mostly articles of dress, but watches and various other articles of value are also pledged; and while I was in the warehouse making my inquiries, a savings' bank pass book, in which there were 6*l.* to the credit of the owner, was pledged for 1*l.* As this could only arise from the circumstance that the person required money before the bank should be open on the following Monday, it shows that pawning is found convenient to others besides the poor; but this seemed, from the pawnbroker's remarks, to be a rare exception to the general rule. I have not ascertained exactly the rate of interest charged, but from what I have learnt I can easily see that it amounts to a very heavy tax upon the incomes of those poor people who have occasion frequently to resort to this mode of procuring relief from their temporary distresses. This pawnbroking, however, besides affording temporary accommodation to the industrious, gives facilities to the worthless members of a family to supply themselves with the means of dissipation at the expense of their sober and well-doing husbands, sons, or brothers; it too often happens that a wife during her fits of intoxication will pawn the last blanket from her husband's bed. If we suppose that our two licensed pawn-

brokers have 50,000 transactions in a year, (there is comparatively little business done in summer), in a population of 3000 families, and that each family which has recourse to pawnbroking borrows on an average half-a-crown on each pledge, here is 6250*l.* borrowed each year for periods of six weeks by our industrious poor; and if we suppose that one-third of our population is of this description, each family will borrow about 6*l.* As this is done at a very high interest, it is a much less desirable way of obtaining relief than by having recourse to savings' banks and friendly societies, but unfortunately the poorest classes cannot save so much money from their scanty wages as will render these resources available to them, and the benefits derived from them are accordingly in a great measure confined to persons in more comfortable circumstances. I believe there is upwards of 1000*l.* per annum distributed in our parliamentary burgh by the different friendly societies amongst their sick members, and others entitled to relief. I have hitherto confined myself to the condition of the industrious poor, who only apply for charitable assistance during seasons of peculiar difficulties; but the actual regular paupers of the parishes, and those indigent families who, on finding themselves on the brink of poverty, take up their residence in Ayr on account of the reputation the town has for its public and private charity, constitute a numerous class which remains to be considered. In giving information respecting this class, I cannot do better than quote largely from an excellent report on the state of the poor, drawn up in 1839, by the Rev. A. Cuthill, but which refers merely to the parish of Ayr.

"The burden of pauperism is a grievous one to any community, even in its lightest form, but it is certainly greatly aggravated when it accumulates in a parish to such a magnitude as to conduce, in addition to a larger pecuniary expenditure than ordinary, to the demoralization of the lower orders, by undoing their feelings of independence, and interfering with the cultivation of industrious and provident habits. That such an effect has been produced in the town of Ayr, is an opinion pretty generally entertained, and as the main object of the task devolved upon us will have to depend on this point, we have it in our power to show that this opinion does not rest on a mere vague impression, but can be supported by an abundance of actual facts."* . . . . "In short, did we go over the whole of the parishes in Scotland, hardly one would be found so overrun with poor as this town, or that raises so large a fund for their support, as compared with the population. We state again, that with a population of only 7600" (viz. in the whole parish), "we have nearly 300 regular poor, besides a great many who receive occasional charity. For supporting these, the assessment last year was 900*l.*, besides nearly 300*l.* in addition, arising from collections at the churches, the rent of Sessionfield,

* Report of the Committee appointed to inquire into the State of the Poor and the Increase and Cure of Pauperism in the town of Ayr, 1839, p. 5.

feu duties, and sixty-four bolls of Kincase meal from Loans. Taking population as the standard, we have nearly double of the poor per cent. of most other parishes in Scotland, not excepting even large manufacturing towns, such as Glasgow, Dundee, and Kilmarnock. In the last named town, the population is nearly treble of what ours is, and yet, strange to tell, it is burdened with fewer regular paupers receiving public support." * . . . . "These," (viz. the local charities,) " some of which we shall have occasion soon to notice more particularly, may swell the whole sum at present appropriated to the maintenance of the poor, to 1400*l.* or 1500*l.* a-year; and they are as fixed and regular, as much to be depended on, as the money raised by legal assessment."† . . . . " The above extensive resources for behoof of the poor will furnish ample reason to account for their great increase in this parish. It is uniformly found that they never fail to abound in all places to the extent to which they are provided for. The funds set apart for their support operate thus in two ways, namely, first, by generating them among the native population, through imprudent habits, and, secondly, by attracting such as are liable to become paupers, to seek to establish a settlement in the place from other parishes. Though this may be assigned, however, as the reason generally of the evil complained of, yet we may be assisted in attempting a cure for it if we try to ascertain the specific modes in which it shows itself in the town of Ayr. It may be remarked then as the root from which it springs, that there is no place where Christian benevolence, for the relief of distress of every kind, has a more extensive practical operation than here; and so available might it be rendered for supplying the wants of the needy, that were it not for the purpose of equalizing the burden, the poor could hardly fail to be supported by it, were it properly methodized, even were no public provision whatever made for them."‡ . . . " It is through the operation of this principle that the numerous charitable institutions existing among us,—our Dispensary, our Smith's seminary for poor children, our School of Industry, and Sunday schools, and our various benevolent societies, &c., have derived their origin. And more than all, it is this which has called forth in the near prospect of death those charitable legacies, bequests, and mortifications for behoof of the poor, for which our town has been distinguished above most other places. We need hardly say that we are proud of the existence of such a spirit among us, but we mention these things, not for the purpose of self-gratulation, but solely with the view of illustrating our subject. And surely it cannot fail to appear abundantly evident that this same spirit of practical humanity, showing itself so conspicuously in favour of the poor, must necessarily operate as a lure to many verging on the condition of poverty, to seek to fix a settlement where their wants are so likely to be amply provided for, when rendered destitute through disease, infirmity, or old age.

* Report of the Committee, &c. p. 7. † Ibid. p. 8. ‡ Ibid.

But the influence of this philanthropic feeling is liable to show itself in a way still more hurtful than this, namely, by making many of the indigent working classes less provident than they should be in securing themselves and families against the evils of poverty, trusting that their wants will be attended to by public or private bounty, independent of their own exertions, should they ever be placed among the ranks of the destitute. Accordingly the shame and reluctance arising from the idea of parochial charity, or of partaking of charitable distributions, so characteristic once of Scotchmen, and nowhere more strongly felt than here, are year after year losing more and more of their influence among our native population. And we are sorry to say that this is accelerated greatly by the mixture with them of so many of the natives of Ireland, generally of loose principles, and not very scrupulous about asking charity, and also of strangers from other parishes. In proof of what we now state, it is well known that one-half of the amount of coals now distributed annually among the poor at this season was found sufficient a few years ago for those who applied for them, and were supposed to need them; and that every year the applicants are increasing for this donation, among a class who once would have spurned at the idea of receiving charitable aid, and this to such an extent, that a few years hence, if not checked, it is likely to embrace all needy operatives and their families."* . . . . "The same is the case with respect to the distribution of Alderman Smith's charity, and our half-yearly sacramental collections. Those who formerly would not have considered themselves proper objects of public bounty, when they see others getting, who they think have a more questionable claim as being strangers, and probably from the nature of their circumstances, not always easy to be ascertained by the elders, are thus tempted to forego their pride and independence for the sake of self-interest—for the sake of taking their share as others do of the gifts that are so liberally distributed."† . . . . "It is truly painful to witness the inroads which every year the above causes are making on the independent spirit and provident habits of our more indigent population. The higher rates of aliment also that we give to our paupers than they generally receive in the neighbouring parishes may have tended in some degree to their increase among us; while our having deviated from the simplicity of our Scotch parochial system in our mode of managing the poor, by the agency of so numerous a body of directors, may probably have had the same effect."‡ . . . . "We trust that the above exposition will serve to account for the enormous increase of pauperism among us. And while the same causes are allowed to operate unchecked, its demoralizing influence on the more indigent classes of society, which is much to be deplored already, may be rendered ere long hardly susceptible of cure." §

* Report of the Committee, &c. p. 9. † Ibid. p. 10. ‡ Ibid.
§ Ibid. p. 11.

The greater number of the families embraced in this "report," reside in the Townhead and adjacent streets of the burgh of Ayr. Newton and Wallacetown abound more than Ayr in the industrious poor, but have a much smaller number of actual paupers. In Newton the number of paupers in 1839 was 47, and in St. Quivox, from which Wallacetown is only separated *quoad sacra*, the poor on the roll were about 110, nearly the whole of whom resided in Wallacetown. Thus Newton and Wallacetown together only contain about one-half of the number of poor contained in Ayr, although they exceed Ayr in population by nearly 2000, and their inhabitants in general are much poorer than the inhabitants of Ayr. The expenditure upon the poor of St. Quivox is 250*l.* yearly, and that of Newton 164*l.*; these funds are raised by assessment and church collections. It would thus appear that a pauper in Ayr receives fully double the allowance of a pauper on the north side of the river.

From what has been stated of the hygienic advantages which the Parliamentary burgh of Ayr derives both from nature and from the general structure of the town, it may be inferred that it must maintain a high character for healthfulness. This is certainly true in reference both to the opulent classes and to artisans in comfortable circumstances; for a more favourable residence for rearing families of blooming robust children can scarcely be found anywhere than the temperate, dry, open, and clean town of Ayr, well supplied, as it is, with wholesome food, and abounding in means of salutary recreation. But the benefits thus held out to the more fortunate classes are to a great extent precluded from reaching the poor. In fact, poverty, when it attains to a certain pitch, seems to me to reduce all other predisposing causes of disease to insignificance in comparison with its direful influence. Scanty, uncertain, and innutritious food, insufficient clothing, squalor of person, incessant labour, sinking of the heart, cold lodgings, filthy beds, or harsh substitutes for beds, the atmosphere of their dwellings confined for the sake of warmth, and poisoned by too many breaths, or polluted by noxious exhalations, these hold the vital functions too rigidly and cruelly in their gripe to permit the more remote influences of climate to be in any appreciable degree effective either for good or for evil. As we have seen to what an extent pauperism prevails in Ayr, and what numbers of our industrious tradesmen in Newton and Wallacetown are constantly on the verge of destitution, we are at no loss to understand why our Parliamentary burgh, while it is a most healthy town to those who enjoy the means of obtaining health, should nevertheless abound more in the diseases of the poor than Kilmarnock and most other towns. There is no way of ascertaining with precision the amount of the population to which the dispensaries of Ayr and Kilmarnock extend their aid. Perhaps an approximation may be made from the number of deaths. If we suppose the deaths in the class of people who receive attend-

ance from the dispensary surgeons to be 2·7 per cent., and if we add one half to the recorded deaths to cover the cases of infants which have been still-born, young children which have not been entered on the dispensary books, puerperal women who are not admitted as dispensary patients, old people who have gradually declined without receiving regular professional visits, and whose deaths have not been notified at the dispensary, sudden deaths, and other omissions, we will have the whole deaths as follows, viz.—

Average deaths in Ayr for last five years . . 70·0
" " Kilmarnock for last five years 42·6

which at the rate 2·7 per cent. will give 2592 as the dispensary population of Ayr, Newton, and Wallacetown, and 1570 as the dispensary population of Kilmarnock; thus Ayr has fully double the dispensary population in proportion to its whole population that there is in Kilmarnock.

In my private practice I find consumption a much less prevalent disease in Ayr than in Kilmarnock, where I spent the first twelve years of my professional life. A few families have a strong hereditary predisposition to it, and amongst them it makes its ravages in spite of the climate; but, on the whole, it is a less frequent disease than either in the town of Kilmarnock or within the Kilmarnock district of medical practice. Even our dispensary patients present a much smaller amount of cases of phthisis than the dispensary patients of Kilmarnock. In Ayr, the number of dispensary cases of phthisis, on an average of the last five years, is exactly one per cent. of the whole cases of disease, whereas in Kilmarnock it is 2·18 per cent.; and if reliance can be placed on my estimate of the dispensary population of the two towns, it is only 0·24 of the dispensary population of Ayr, whilst it is 0·45 of the dispensary population of Kilmarnock. The same remark applies to scrofula. In Ayr, we have under this head, in the dispensary reports for the last five years, an average of 0·84 per cent. of the whole diseases treated, whereas in Kilmarnock, during the same period, the average is 1·82. This immunity does not, however, extend to rheumatism, which is also under the influence of climate, the ratio being 2·10 per cent., and in Kilmarnock only 1·81 per cent. of the diseases recorded at the dispensary. As I have for many years suffered from rheumatism, I can confirm, from my personal experience, the truth of this statement, for I find that the stormy weather of Ayr tortures me more than the foul air of Kilmarnock, although the health of my family, which was previously delicate, has been much improved since we shifted our residence to Ayr.

When small-pox, scarlatina, measles, and hooping-cough make their epidemic visitations, I believe they pervade equally all classes of our population—at least I am not aware that the poor are peculiarly liable to these diseases; although small-pox from neglect of vaccination, scarlatina, and measles, from the ardent spirits exhibited at their outset, and hooping-cough from expo-

sure to cold, are no doubt more fatal with them than where proper medical treatment has been adopted. The same may be said of influenza, which in January and February, 1837, gave 65 dispensary cases. This disease was neither more prevalent nor more fatal amongst the poor than amongst the rich; and I believe a greater number of patients died during the succeeding winter of pulmonary disease originating in the influenza than during the prevalence of the epidemic itself. This, perhaps, may have been partly occasioned by the local congestions accompanying the disease being overlooked, and attention paid too exclusively to the typhoid state of the constitution.

Cholera prevailed extensively in 1832; it commenced on July 20, and the last reported case occurred on October 29. The number of cases reported to the Board of Health was 439, and there were 191 deaths. It was confined principally to the poorer classes, and its great haunt was the Townhead of Ayr, probably because the poor in that quarter are more irregular in their habits than the industrious weavers on the north side of the river. In Kilmarnock it broke out on July 16, and continued till October 4, the number of recorded cases being 399, and of deaths 205. The deaths in both instances may be relied on, but I am aware that a considerable uncertainty exists in the recorded cases that recovered, in consequence of the different views taken by different medical men of the limit between diarrhœa and cholera.

But the disease which is the most formidable scourge of the poor is continued fever. Of this the town is never free, though it prevails to a much greater extent at one time than another: 1836, 37, 38, were severe fever years, the numbers of dispensary cases being in these years 222, 288, and 237 respectively, and the average mortality 9·6 per cent. In general, petechiæ could be discovered when attention was paid to that symptom. During the years 1839 and 1840 the numbers of cases were 96 and 124. In the course of the last five years these cases have occurred in the different quarters of the parliamentary burgh, nearly in the proportion of the dispensary population of those quarters; but in each successive year they seem to have selected a new focus. The total cases during that period in the burgh of Ayr have been 330, in Newton 257, and in Wallacetown 380, in all 967 in a population of 2592, so that in five years three-eighths of the poor have been attacked with fever. In 1836, there were 109 cases in Cross-street, Wallacetown; 73 in High-street and Townhead, Ayr, and 36 in Newton. In 1837, there were 101 in High-street and Townhead; 56 in Cross-street; and 35 in Newton. In 1838, there were 59 in Newton; 35 in Cross-street; and 32 in High-street and Townhead. At this moment it is raging chiefly in Newton-green, in which very few cases occurred during the previous years. It thus appears that, notwithstanding the great diversity in the nature of the abodes of the poor in regard to pure air, at least around the exterior of their houses,

still fever does not give a preference to one locality over another, but searches out the destitute wherever they are to be found. The year 1836 was the commencement of severe depression in the muslin manufactures, so that hand-loom weavers and female sewers were reduced to extreme difficulties. Cross-street is the principal residence of these people, and accordingly Cross-street was the great focus of fever in 1836. In the parish of Ayr a subscription was raised, and the weavers were all kept at their looms till they received work again from Glasgow and Paisley. In that year they were better off than the weavers of Wallacetown, and fever prevailed less in Townhead than in Cross-street. The low wages at which the weavers have been working to the manufacturers since 1836 have not proved sufficient to arrest the disease, and it has now visited each quarter of the town in its turn. We have seen that the portion of the High-street between the old bridge and Wallacetown is not only the most crowded part of Ayr, but it contains all the nuisances; yet fever has prevailed more at Townhead than in this part of High-street, and there have been very few cases of it in the neighbourhood of the slaughter-house, the churchyard, swinefield, and the stables and cowhouses in the narrow back alleys: the inhabitants of these places are in general not so poor as those of Townhead and Cross-street. Again, Cross-street is inhabited by colliers as well as weavers, the houses of the two classes are intermingled, the stench around the doors and the filth of the interior are as great amongst the colliers as amongst the weavers; but the colliers and their families live on a more nutritious diet than the weavers; and my talented friend, Mr. Gibson, who is surgeon to the coal works, informs me that while fever rages amongst the weavers; it is not by any means a prevalent disease with the colliers, although small pox and other epidemics are equally severe with both trades. This is not owing to the colliers being men of sounder constitutions than the weavers, for they are unhealthy looking, broken down by accidents, and whiskey, generally affected with chronic bronchitis, and on the whole short-lived. Their blood, however, is of a better crasis than that of the half-famished weavers, in consequence of their superior diet. In short, I cannot, from the investigation I have made into the localities and progression of fever, connect its ravages with the nuisances which are exterior to the houses of the poor. It seems to me to be the offspring of their poverty itself, which renders their constitution susceptible of attacks, especially when exposed to contagion. The progress the disease has made from place to place indicates the powerful operation of contagion as an exciting cause; whilst its selection principally, though by no means exclusively, of the poor, shows that poverty is the great predisposing cause. If, indeed, it were a demonstrated truth that fever never originates from any other cause than from putrid miasmata, or if it were even proved that this is its principal cause, then there could be no difficulty in accounting for each individual

case that occurs, because there is no instance in which some matter in a state of corruption may not be found sufficiently near to the patient to satisfy a theorist. But if this is still an open question, as I conceive it to be, the evidence afforded by my investigation does not support the doctrine, that fever is the result of exhalations from nuisances, because the amount of fever does not bear a constant relation to the prevalence of the assigned cause. Instead of being excited by effluvia flowing from *dead* vegetable and animal matter in a state of corruption, it appears to me that there is stronger evidence in support of the opinion, that it arises from the morbid cutaneous and pulmonary exhalations of *living* bodies, either labouring under fever or rendered unsound by being suffused with filth, and respiring imperfectly in ill ventilated, crowded, nasty houses.

The poor are humanely attended, and their diseases skilfully treated by five dispensary surgeons, who divide the town into districts, and visit the patients in their own houses, and whatever medicines they prescribe are supplied by the dispensary apothecary. The expenses are defrayed by an annual subscription. There is also a small fund for supplying patients with food and clothes in extreme cases. The medicines last year only cost 22*l*. 11*s*., and the clothes, &c., 8*l*. 17*s*. 6*d*. The surgeons receive a trifling sum, not as a remuneration for their services, but as a token of gratitude for the sacrifices they make for the good of the community, and the apothecary has a salary of 30*l*. The whole expenditure of last year was 106*l*. 5*s*. 2*d*. amongst 659 patients, or about 3*s*. each. The colliers are attended by Mr. Gibson, who receives a salary which the clerk retains from their wages. As there is, by a gross omission, no fund for supplying them with medicines, Mr. Gibson is often obliged to procure medicines for them, and for these he is seldom repaid.

I have thus arrived at the conclusion that fever amongst the poor is not so much to be attributed to the nuisances by which they are surrounded, and the filth of their houses, as to the innutritious diet and other hardships which result immediately from poverty itself. I am far however from maintaining that the former are not injurious to the health of the poor, or that they are unworthy of the consideration of a wise legislature. On the contrary, I know that they have a powerful influence in producing that cachectic state of the constitution which renders it prone to many fatal diseases, and I have no doubt to fever among the rest. I have prevailed upon delicate families to leave the vicinity of these nuisances, and the result has been a happy change in the state of their health. The blood requires the respiration of an uncontaminated atmosphere to maintain the body in a state of perfect health, and the less pure the inspired air the less perfectly will the blood perform its office. But we do not live upon air alone, and the most offensive air we ever breathe differs less from pure air, than innutritious and scanty food differs from a wholesome and sufficient diet. Whilst therefore the malaria of animal

and vegetable matters in a state of corruption is unquestionably detrimental to the general health, I consider that its influence in predisposing the system to fever is utterly insignificant in comparison with the effects of protracted semi-starvation and the other evils which have poverty for their immediate source, nor do I conceive that it contains at all the specific morbid poison by which continued fever is excited, in the way that marsh miasmata contain the specific poison of intermittents. As, however, it is highly injurious to the general health, I most earnestly recommend that every practicable measure should be adopted for relieving the town from its influence. I would suggest that an effective body of scavengers should have charge of the streets throughout the whole of our parliamentary burgh; that the alleys and closes should receive as much of their attention as the open streets; that feeding pigs should be rigidly prohibited, because it is well known that a pig cannot be profitably fed by a poor person in a town by honest means; and the honest public have a right to see these animals, which are at once our greatest nuisance and our most extensive resetters of stolen goods, whipt forth of the town. All heaps of ashes and other offal found uncovered should be confiscated and carried off by the scavengers every week, and the booty will pay the expense of its removal. When water is brought to the town, there ought to be cocks paid for at the public expense, and accessible only to the scavengers in the streets and alleys which require washing. Attention ought to be paid to the levels of the streets, and they ought never to be higher than the ground floors of the houses. The streets of Newton and Wallacetown ought to be provided with open sewers to carry the water to the river; and if the houses were paved with tiles, the advantage would be unspeakable and the expense not great. The slaughter-house and the fish-market ought to be removed immediately from their present situations; and after the pigsties and heaps of ashes are abolished, the fresh breezes from the river will gain access to the back premises of the High-street; and the people will begin to pay attention to their gardens, and acquire a taste for neatness.

The above-mentioned improvements are perhaps within the reach of our civic authorities; but how is poverty, incomparably the most potent of all our pestiferous agents, to be banished from our town? Neither the fevers nor the wretchedness of the poor will suffer much abatement from the weekly visitations of scavengers, or of well meaning ladies distributing amongst them religious tracts or cheap copies of the Cottagers of Glenburnie, and impressing at the same time on their minds the importance of sobriety, industry, order, cleanliness, and piety. Something more palpable is necessary to meet the emergency; better food and more of it, better clothes, better beds, better houses, and less incessant toil; these are the essential prophylactics against fever for the poor. In order to obtain these, much larger sums of money in proportion to the number of the poor must be distri-

buted than at present; and this can only be effected by one or both of two expedients, the assessments must be increased, or the number of poor must be curtailed. I think both of these means ought to receive attention. Irish families, and other strangers who have no obvious resources for their support, ought to be prevented from settling in Ayr, by the rigid enforcement of an efficient law of settlement. In this way the number of the poor might be reduced so far that an increase of the assessment in Newton and Wallace-town, not greater than the community could bear, might afford the desired relief, whilst the resources of the parish of Ayr are already amply sufficient for those poor people whom it would then have to provide for. But unless Ayr receives some security against the introduction of destitute strangers, and such as are about to become destitute, the disadvantages of situation, from its accessibility to the Irish, are such that it will never cease to be kept at the lowest stage of poverty, and the augmentation of its charitable funds will only have the effect of increasing the numbers of the poor. With regard to the industrious poor, the hand-loom weavers ought to be discouraged from bringing up their children at the loom, now that the extensive introduction of machinery has reduced the trade to its lowest ebb. It is the poverty of the parents that obliges them to employ their sons in weaving, as early as their strength is sufficient for the work, and the practice cannot easily be checked, without either improving the circumstances of the parents, or giving the children some other profitable employment. It is, however, much to be lamented, for lasting poverty is thus entailed upon a new generation, for the sake of a temporary relief, and that of small amount.

A fever hospital is much wanted in Ayr. It is unnecessary for me to give reasons for a statement the truth of which is self evident; but I may add one reason to those which are derived from the advantages such an institution would confer, both on the poor themselves and on the community at large—viz. justice to the dispensary surgeons, who are constantly exposing their lives to hazard by visiting the infected hovels of their fever patients. I believe each of the present dispensary surgeons has caught fever in his labours of charity, and one very talented young gentleman lost his life from this cause not many years ago. It would not cost the public more money to have the patients promptly removed to a fever hospital, and treated there apart from their families, than it pays at present in consequence of the increased extension of the disease, and the necessity of the healthy members of a family devoting their time to attendance on the sick. The only difference is, that at present the funds are obtained principally from private charity of which no record is kept, whereas the hospital would require regular contributions methodically managed by a responsible body.

Ayr, February 16th, 1841. JAMES SYM, M.D.

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ON THE SANITARY CONDITION AND GENERAL ECONOMY OF THE TOWN AND NEIGHBOURHOOD OF LANARK.

By John Gibson, Esq., *Surgeon*.

Gentlemen,—I have, to the utmost of my ability, complied with your request in furnishing a Report as to the sanitary condition of the town and neighbourhood of Lanark, where I have resided for nearly 30 years, and I trust the following details will meet with your approval, and facilitate the important object which you have in view.

The parish of Lanark is bounded on the south and west by the River Clyde, on the east by the parish of Carstairs, and on the north by the parish of Carluke.

At the last census the population of the town was about 4500, and the town and parish nearly 8000.

The town of Lanark stands on a very elevated situation on the banks of the Clyde, about half a mile from the river on the north side. On the south side of the town, the ground declines toward the river, some places falling in gentle slopes, and some in steep declivities. The town is about 670 feet above the level of the sea, distant from Edinburgh 32 miles, from Glasgow 25, and from Stirling, 35.

Lanark, on account of the dry and elevated situation of the town, is celebrated as a remarkably healthy locality, and is very seldom visited by epidemical disease.

Fever sometimes visits the town and parish; the malady is usually confined to the working classes, but seldom prevails to an alarming extent. The localities where it makes its chief ravages are narrow courts, back lanes, and the houses of the poor, where provisions are scanty, and little attention is paid to ventilation and cleanliness.

This infectious disease is generally introduced by vagrants and beggars, and spreads in all directions among the inhabitants of these dirty and ill-ventilated houses, and many of the inmates fall victims to the malady; and the want of food, clothing, fuel and cleanliness, are the chief causes of the fatality of the disease.

I have often entreated the magistrates to interfere on behalf of these unfortunate creatures, but in vain; they always seem to consider every shilling spent upon necessaries for the poor as money thrown away; even money subscribed for the relief of poor families, and placed in the hands of the magistrates, is dealt out to the afflicted in gills and half gills of wine, because in this way it affords a greater profit to the bailie than if given in the larger quantity of a bottle at a time. The same conduct is observed in regard to

all cordials and necessaries doled out by the bailies to the afflicted poor.

As the town of Lanark stands high, and most of the streets have a sloping direction, no offensive matter is allowed to accumulate, and no nuisance is permitted to remain on any of the public thoroughfares. A large common sewer runs under ground through the principal street, carries away the filth, and contributes much to keep the streets clean and dry. In many instances, in back courts and narrow lanes, dunghills are collected near the doors of the houses, and the entrance through the court and into the dwellings is seldom or rather never cleaned; these nuisances in hot weather must be very injurious to health.

The town is lighted with gas, although, from the scanty revenue of the burgh, the lights are far between, and in many places they merely serve the purpose of rendering the darkness visible.

The town is tolerably supplied with wells, but from the elevated site of the town it is difficult to bring in the requisite supply of water; and in seasons of long drought the deficiency is severely felt, and many are obliged to go to a distance from the town to procure water from a perennial spring, situated down on the bank of the river.

The great proportion of the population of Lanark are wholly supported by hand-loom weaving: this is the only business carried on to any extent in the town; above 900 individuals are employed in this branch of labour within the parish. This trade is at a very low pass, and can scarcely yield the means of subsistence to those who are employed in it. A weaver, in the prime of life, and possessing superior skill in his trade, cannot earn above 7*s.* or 8*s.* per week, to gain which he must work 14 or 16 hours per day, which must be eventually ruinous to the most vigorous constitution. The common wages scarcely average 6*s.* per week, and I know some old men who cannot earn more than 2*s.* 6*d.* and 3*s.* per week; from which sums must be deducted the loss of time at the end of every web, before they can be prepared to commence with a new one, the loom-rent, light, &c. The only addition to this miserable pittance is what the weaver's wife can earn when she is capable of winding the waft upon pirns, and her earnings vary from 6*d.* to 1*s.* 3*d.* per week.

Great must be the misery and privation of those who have a family of children to support upon such incomes, and there are many such in this town and neighbourhood; and yet the great body of them are well-behaved and intelligent men, who bear their hardships with commendable patience.

The great majority of the working-classes in the town of Lanark have only one apartment as the residence of the whole family, and must serve as sitting, eating and sleeping-room.

There are instances in which families have two apartments, and where great attention is paid to neatness, cleanness, and comfort;

but there are comparatively few so well accommodated. The majority have but one room, and little attention is paid to cleanliness or comfort; the furniture, which is both mean and scanty, consisting of the bare necessaries, is seldom cleaned, and bears all the marks of both long and rough service.

Many houses are covered with slate roofs, and are sufficiently defended against the elements; others are covered with thatch, and the rain often finds ready access, while the doors and windows are so open as to supersede the exertions of the family to ventilate the apartment.

In most cases the floors are nothing but the bare earth, hardened by the constant treading of the inmates; there are other cases in which floors are formed by beating earth and lime together, which, when dried, becomes solid enough to resist impression. A few are paved with stone.

Several houses are situated in confined localities, in back lanes, and narrow courts consisting of several stories, and each room, from the ground to the top flat, is occupied by a whole family; these are often abodes of poverty, and all its usual accompaniments. I know of no cases in which pigs are inmates of a family, nor do I suppose there is an instance of it to be met with in the town; and I think I can venture to say, upon the whole, that the squalid wretchedness which is to be met with in the dwellings of the poor, in other parts of Scotland, is not to be found in the town of Lanark to anything like the same extent.

There are very few country towns where the poor have so many sources of aid, arising from charitable funds, as in the town of Lanark. There is the Female Society for the relief of the sick, aged, and indigent females: it is supported by subscriptions, and its funds amount to about 40*l.* annually. The society is composed of a number of respectable females in the town, and has proved of signal benefit in supplying pecuniary relief, coals, and clothing to poor females. The society is well conducted, and the objects of its charity are carefully selected.

There is the general poor's fund of the parish, consisting of the moneys collected at the doors of the parish church on sabbath, which amounts to about 30*l.* per annum, or upwards. To this is added an assessment laid upon all the property possessed by each family, whether moveable or heritable, at the rate of twopence per pound; this assessment amounts to about 200*l.* annually.

This tax is laid on by fifteen men, who are chosen annually by the magistrates, and who assess the householders of the town according to the information they can obtain as to the actual property possessed by each family. The number of paupers supplied from this fund is usually about 60, and the supplies allowed are from 6*d.* to 2*s.* 6*d.* per week. These funds are managed and distributed by the Kirk session, and heritors of the parish.

There is, besides, a fund, amounting to 70*l.* per annum, dis-

tributed among the poor of the burgh by the magistrates. This sum arises from the rental of what is called the Hospital Lands.

There is also the Wilson fund, amounting to 32*l.* per annum, for the aid of indigent persons not upon the poor's roll, and bearing respectable moral characters, which is given out in annuities from 1*l.* to 3*l.* each.

This fund was left by a Mrs. Wilson, late of Bathgate, a native of Lanark; and the same benevolent lady endowed a free-school in the town for the instruction of 50 poor children. She also erected a commodious school-room, a dwelling-house and 50*l.* of annual salary for the teacher, while the school-books as well as the education are all free: over this fund and school the magistrates, the clergymen of the town, the rector of the grammar-school, with one or two others, are appointed trustees.

There is another charity called the Hyndford Mortification, consisting of 24*l.* per annum, left by the late Mr. Howison, proprietor of Hyndford. This fund is placed under the trust of the above-mentioned gentlemen, who meet once a-year to receive applications for aid, and to distribute said fund according to the claims of the applicants, who are to be, according to the letter of the deed, "the godly industrious poor who are receiving supplies from no other charity."

Two-thirds of this sum is, by the donor's will, to be distributed among the poor of the burgh of Lanark, and the other third among those of the landward part of the parish.

A mile from the town, and immediately on the bank of the Clyde, is the village of New Lanark, containing a population of nearly 2000, all of whom are connected with the cotton factory, erected there about 50 years ago, by Mr. David Dale, of Glasgow, and lately in the possession of Mr. Robert Owen, but now possessed by Walker and Company.

In this village fever and other infectious diseases prevail more than in the town of Lanark: this may probably arise from the low situation of the village, which stands at the bottom of a deep valley, on the margin of the river, enclosed by high grounds which conceal it from the traveller till he is close upon it, when all at once it bursts upon his view, presenting a romantic scene of extensive and handsome buildings, and of lively activity where nothing was expected but stillness and solitude; as also from the great number of families residing in the same building, from their daily confinement in the factory, and their constant and unavoidable intercourse with each other.

It is seldom, however, considering all these circumstances, visited with epidemical disease to any considerable extent; and there are few factory villages in the kingdom where the working classes enjoy so great a degree of health and comfort. This may be accounted for from their vicinity to the river, and the great attention paid to cleanliness, both as it respects their persons and houses.

Individuals, I understand, are employed by the overseer to inspect the houses every week, and to mark those which are cleanest kept, and at the end of the season, a small premium is awarded to the first, second, and third families, whose dwellings are marked as having been kept cleanest throughout the year. This is a great stimulus to cleanliness, and in a high degree conducive to the health of the villagers.

The company keep a store in the village for supplying the workers with provisions and clothing, and the utmost care is taken to have all the provisions of the very best quality.

A surgeon is provided to attend the village, and all the medicine ordered by him, as well as medical attendance, are free. The company also supply excellent schools for the young, where all the necessary, and some of the ornamental, branches of education are taught at a very trifling expense.

The wages at New Lanark are not nearly so high as in the other factories of Scotland, but the works are steady, and the people have many advantages which are not enjoyed, so far as I know, by any other class of labourers.

There is a friendly sick society in New Lanark, towards which each worker contributes a small sum monthly: the company usually allows 50*l.*, and sometimes more, yearly, to help the fund. The rates at which the sick are supplied are as follows:—When sick, 7*s.* 6*d.*; when recovering, 5*s.*; and superannuated, 3*s.* per week. There are, besides, three funeral societies in the parish of Lanark, two in New Lanark, and one in Lanark. On the death of a member or his wife, the family receives 4*l.*, and 2*l.* on the death of a child.

In the village of New Lanark the circumstances of the whole population are nearly on a level. There are none wealthy among them, and there are none who can be properly called paupers; although there are a few individuals in the village who are upon the poor's roll of the parish; but I believe these were all enrolled on the parochial poor's list previous to their residence in New Lanark.

One mile west from the town of Lanark lies the village of Kirkfieldbank, in the parish of Lesmahagow, situated on the low ground along the margin of the Clyde. The village consists chiefly of two ranges of houses, one on the south and the other on the north side of the toll-road from Lanark to Glasgow; the population may be from 800 to 1000.

Nearly adjoining is another range of houses on the south side of the same road, called Dublin, in the common phrase of the neighbourhood, on account of the great number of Irish families resident there; and close upon this row of houses is the village of Linville, consisting of a long range of straggling cottages, stretching along the south side of the Glasgow road. These villages may be considered as a continuation of Kirkfieldbank; and the

whole group may contain from 1200 to 1500 inhabitants, and weaving is their sole employment.

The situation of these tenements is very healthy, on account of their proximity to the river, which flows in view of each dwelling, and in many cases within a few yards of the doors.

In Kirkfieldbank and Linville the houses are kept free of nuisance, although all within is on a very mean scale, and little attention is paid to neatness or comfort.

In the row called Dublin, the houses have a meaner appearance; and from the broken-down state of both windows and doors, both wind and rain must obtain ready access. The internal economy of these cottages is of the poorest and the dirtiest kind to be met with in this neighbourhood. No family possesses more than one small apartment, where all ages and all sexes are huddled together by night and by day. The floors are the common earth on which the cottages are built, just in the state in which it was enclosed. Both the floors and walls of the houses are usually very damp, as no means are employed to carry off the water which falls from the rising ground behind, and finds its way to the foundations of the houses. The inhabitants of this row in general bear the appearance of great poverty, but I believe that a great proportion of their destitution arises from their improvidence and irregular habits.

In the village of Linville, the houses are, on the whole, more comfortable, and the people do not exhibit the same appearances of poverty.

The whole of this range of villages is very healthy, and is seldom visited by febrile disease.

This is no doubt owing to the detached situation of the houses, being mostly of one story, and exposed to the air in all directions, as well as to the flowing of the Clyde in their immediate vicinity.

Two miles further down the Clyde, on the south side of the river, and on both sides of the Glasgow road, stands the village of Hazlebank, containing a population, I should suppose, of 200, all of whom are weavers and miners.

The village has the appearance of poverty, and many of the houses seem to be falling into decay; and the remarks which I have made respecting the range of cottages commonly called Dublin are applicable here.

One mile below Hazlebank, on the same side of the Clyde, is the village of Crossford, containing 200 or 300 of a population. It lies on level ground, straggling, without any order, along the plain through which the Clyde here flows.

The villagers are mostly weavers, but there are interspersed among them a number of small proprietors and farmers, with a few other tradesmen, such as joiners, shoemakers, &c. There are also a considerable number of miners.

This locality is peculiarly healthy, and it is common for several

genteel families to repair to it in summer to recruit their health, in place of going to the sea-side. I have seldom known of febrile diseases prevailing in that locality. The village lies in the parish of Lesmahagow, and there are a few aged and infirm persons who receive a scanty allowance from the parochial funds; but the great body of the people are in circumstances of comparative comfort, according to their rank in society.

Nemphlar is a village on the north side of the Clyde, three miles from the town of Lanark; but in place of lying on the low grounds along the bank of the river, as those villages do which I have already described, it occupies a position nearly as elevated as the town of Lanark, stretching along the high grounds which rise to a considerable elevation above the river, the land sloping down from the village to the edge of the water in a southerly direction. This is a continuation of straggling houses, placed in all directions for about two miles along the high grounds, and the population may probably amount to between 300 or 400.

The majority of the inhabitants are weavers, but there are interspersed among them a considerable number of small proprietors and farmers. The proprietors possess from sixty to upwards of a hundred acres of land each. These families are all tolerably supplied with the necessaries of life; and I know of none among them who are abjectly poor.

The village of Cartland, in the parish of Lanark, lies about three miles from the town, and two miles north of Nemphlar: it contains about 200 or 300 inhabitants.

The village of Kilkadzow lies about two miles further to the north than Cartland, within the parish of Carluke: the population may be between 200 or 300. Both of these villages contain a mixed kind of population, such as Nemphlar, consisting of weavers chiefly, with some small farmers and proprietors and miners.

The weavers in all these small villages are more comfortable, because more sober and economical, than those who reside in more populous localities.

These villages are generally very healthy; epidemical diseases are seldom known among them. The few paupers to be found among them are usually weavers, who have become unable to labour through age and infirmity.

The dwellings of these localities are usually of a very homely description, but they are dry within; and though mean and ill furnished, one seldom meets with any nuisance in them, or the appearance of destitution. The small farmers and proprietors, among whom the poor weavers reside, are sometimes mindful of them in cases of extreme hardship, occasionally affording them some small supplies of milk, oatmeal, potatoes, &c.

The few paupers to be met with in these districts receive from 6*d.* to 1*s.* 6*d.* per week from the parochial funds of the respective parishes to which they belong.

There are a number of other small villages scattered over this

district, but it would serve no purpose to specify any others, as the details I have now given will be found applicable to them all, with little or no variation.

The agricultural population of this district differ very little in their style of life from the villagers, the farms being usually on a small scale, and there is little distinction discernible between master and servant.

The farm-houses are usually of one story, covered with thatch, and contain two apartments. The dwelling-house, cow-house, stable, and barn usually form one row of humble tenements attached to the end of each other. The family residence differs very little from the dwellings of the labouring classes, in respect of furniture or internal neatness. The kitchen is the more comfortable of the two apartments of which the dwelling usually consists, as it is more occupied, and has the advantage of a constant fire. The whole family convene here,—parents, children, and servants all sitting, eating, conversing, as well as labouring together without distinction.

The other apartment is seldom used but as a bed-room, and is in general very ill aired, cold, and damp, having an earthen floor, which is seldom dry.

There are few instances in which servants or hinds have separate establishments for themselves; and when any of the male servants happen to be married persons, their families are left to accommodate themselves where they find convenient.

These are a very healthy and robust race of people, and infectious diseases are scarcely ever known among them; they are cleanlier in their habits, and more correct in their morals, than the villagers.

A great proportion of the working classes in this district are sober and industrious people, correct in their habits, and civil in their manners, and many of them are regular in their attendance upon Divine ordinances.

There are seven places of worship within the parish of Lanark; and the great body of the people who attend these churches are of the labouring classes.

In this district there are ample means for the instruction of youth, as schools are to be met with in all directions, and many of them conducted on the most approved plans, and a great many young people are in the habit of receiving instruction in the common, and some in the more ornamental, branches of knowledge. The country part of the population are very attentive in the observance of the ordinances of religion on the sabbath, and in keeping their children at school.

But while I make these favourable statements regarding the general character of the district, I am sorry to say that there are very many grievous exceptions.

A number of the lower orders, both in the town of Lanark and in all the neighbouring villages, are grossly ignorant and immoral;

these desecrate the sabbath, employing it as a day of amusement and dissipation. They never attend any place of worship,—treat with scorn all attempts made for their moral reformation: such persons cannot be persuaded to send their offspring either to week, day, or sabbath-schools, although abundant instructions, of both kinds, are offered them free of all expense. It is chiefly among these ignorant and careless people that profligacy prevails, and is followed by its usual attendants, poverty and disease. (Most of this class of people are Chartists, who are constantly declaiming against the extravagance of the government, and all who possess more property than themselves.)

When any of this class can procure the means of obtaining spirits, they are in the habit of grouping in some low tippling house, or in one of their own dwellings, and continue drinking so long as they can procure a fresh supply of whiskey: these meetings often end in a noisy scuffle, and lead to an investigation before the magistrates.

These scenes take place among the very lowest grades of society, and the vagrants, who lodge in beggaries during the night.

There are a number of loose girls in the town and neighbourhood of Lanark; and infanticide is by no means uncommon, although frequently managed so as to elude detection.

There are many petty thefts committed, and sometimes personal injuries received in drunken quarrels, which are usually brought before the magistrates in the Burgh Court, or before the sheriff, who holds a court in the town once a-week. There are occasional instances of more serious offences which require to be referred to the assizes in Glasgow; but these cases are so rare as scarcely to bear any assignable proportion to the sober and inoffensive part of the population.

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REPORT ON THE GENERAL AND SANITARY CONDITION OF THE TOWN OF GREENOCK.

By W. L. Laurie, M.D.

Gentlemen,—It may not be deemed out of place to give a brief description of the topography, climate, &c. of this town, previous to entering upon the few facts which are to follow regarding its sanitary condition.

Greenock is situated on the banks of the river Clyde, about 20 miles lower down the river than Glasgow: the ground on which the town is built rises by a gradual ascent from the river side, it soon becomes more abrupt, and ascends to the height of about 600 feet; the great proportion of the town is built at the base of this declivity close to the river side. The soil on which the lower portion of the town stands was originally very soft and boggy, and, as may be supposed, is very inefficiently drained; in and about the other parts of the town the soil is generally of a gravelly nature, mixed with a marly clay.

The climate is proverbially moist and variable but temperate, and in order to indicate this, it may not be deemed unimportant to give in the present place the observations of the state of the weather for the last year, which I have extracted from a register which has been regularly kept in our hospital for several years past.

The following observations were made at noon, and the degrees of the thermometer and barometer marked show the highest and lowest degrees which occurred in each month.

January.—Thermometer ranged between 33 and 50; barometer between 28·30 and 30·52; pluviometer (Crichton's), 5 inches and ·86 of an inch; wind for the most part E., occasionally N. and S.; weather very changeable, with hail, snow, and rain.

February.—Thermometer 36 and 49; barometer 29·20 and 38·89; pluviometer 2·6; wind E., S., and S.W.; weather dull, soft, and windy.

March.—Thermometer 38 and 60; barometer 29·92, and 30·92; pluviometer 8·20; wind E. and S.W.; weather alternately very fine and dull.

April.—Thermometer 44 and 63; barometer 29·64 and 30·69; pluviometer 9·84; wind E. and S. W.; weather cloudy, dull, and foggy.

May.—Thermometer 43 and 64; barometer 29·60 and 30·60; pluviometer 2·29; wind E. and S. W.; weather wet and variable.

June.—Thermometer 53 and 66; barometer 29·60 and 30·50; pluviometer 2·8; wind W. and S. E.; weather dull, soft, and squally.

July.—Thermometer 49 and 69; barometer 29·30 and 30·60; pluviometer 3·5; wind S. and S. W.; weather alternately dull and fine.

August.—Thermometer 58 and 75; barometer 29·60 and 30·60; pluviometer 3·3; wind S. and S. W.; weather alternately fine and wet; very fine towards the end of the month.

September.—Thermometer 48 and 65; barometer 29·30 and 30·40; pluviometer 4; wind E. and S. W.; weather cloudy, wet, and windy.

October.—Thermometer 45 and 59; barometer 29·40 and 30·70; pluviometer 1·1; wind E. and S. W.; weather for the most part fine, with strong breezes.

November.—Thermometer 35 and 53; barometer 28·35 and 30·70; pluviometer 2·8; wind E. and N. E.; weather very dull and windy.

December.—Thermometer 35 and 49; barometer 34·30 and 30·74; pluviometer 2·3; wind E. and S. W.; weather fine at beginning of month, dull and wet towards the end.

It appears from the foregoing report that the fall of rain here, though not in general so heavy, is more continuous than in most other places, yet the quantity which fell was not great, being indeed far below (several inches) the amount reported to fall annually in some of the western parts of England.

The lowest point of the thermometer was only 33, and the highest 75, so that, though we have in Greenock a prevailing humid and damp atmosphere, it will bear comparison in respect to mildness with most parts of this island.

According to the census of this year, the population of Greenock was found to be 38,846.

To show the rapid increase which has taken place in the population of this town, I subjoin a statistical table for the last 50 years, which I have taken the liberty to extract from the "Greenock Advertiser" newspaper, contributed by Mr. Wilson of Thornly, by which it will be seen that the population has increased

with remarkably rapid strides, the increase in proportion being only below that of Glasgow by a very small per centage.

POPULATION TABLE.

Periodical Enumerations in Fifty Years	Families.	Average to a Family.	Inhabitants.			In 1000 of Population.		Increase every Ten Years.	Rate per Cent., or ratio of Increase every Ten Years.
			Persons.	Males.	Females.	Males.	Females.		
Year 1791.	3,387	4·43	15,000	7,467	7,533	498	502	..	16·4 per cent.*
Year 1801.	4,050	4·31	17,458	8,196	9,262	469	531	2,458	9· per cent.*
Year 1811.	4,490	4·46	19,042	7,978	11,064	419	581	1,584	16· per cent.
Year 1821.	5,360	4·12	22,028	9,381	12,707	447	553	3,046	24·8 per cent.
Year 1831.	6,353	4·34	27,571	11,973	15,598	434	566	5,483	
Year 1841.	7,330	5·16	38,846	19,502	19,344	502	498	11,275	41· per cent.

* Increase in fifty years, 159 per cent., 23,846.

	Families.	Persons.	Males.	Females.
Families and persons within the Parliamentary bounds at 6th June, 1841 .	7,241	36,114	17,629	18,485
In the country districts	89	777	376	401
Absentees at 6th June, 1841—in all, 1,955 persons; whereof 1,007 are seamen	..	1,955	1,497	458
Total	7,330	38,846	19,502	19,344

It is to be regretted that no register of births or deaths is kept in this place, so that there are no means of ascertaining correctly the average rate of mortality.

As I before mentioned, Greenock is situated on a declivity, having a northern exposure; the chief part of the town extends along the river side from east to west, for upwards of two miles (including Cartsdyke). It is very irregularly built, each person being allowed to build how and where he pleases, with little regard to any specified plan; this is much to be regretted, as, from the situation, it might have been made one of the finest looking towns in the kingdom, the view from the higher parts of the town being very extensive and varied, and commanding scenery seldom to be met with in the vicinity of so large a community.

The more wealthy part of the inhabitants live towards the west part of the town, and the houses are of a comparatively recent date.

Towards the east or old part of the town, the amount of population crowded into a small space can hardly be credited; the rapid increase of the population has so far over-stepped the means of

accommodation that not the meanest out-house remains without its tenants.

In considering the sanitary condition of a populous town such as this, the state and nature of the dwellings of the poor ought to form a particular object of inquiry. And as the queries issued a short time ago by the Poor Law Commissioners relating specially to this object, I shall enter into the subject more in detail than I was able to do at the time that I returned the answers to these queries.

The great proportion of the dwellings of the poor are situated in very narrow and confined closes or alleys leading from the main streets; these closes end generally in a *cul-de-sac*, and have little ventilation, the space between the houses being so narrow as to exclude the action of the sun on the ground. I might almost say there are no drains in any of these closes, for where I have noticed sewers, they are in such a filthy and obstructed state, that they create more nuisance than if they never existed. In those closes where there is no dunghill, the excrementitious and other offensive matter is thrown into the gutter before the door, or carried out and put in the street. There are no back courts to the houses, but in nearly every close there is a dunghill, seldom or never covered in; few of these are cleaned out above once or twice a-year; most of them are only emptied when they can hold no more: to some of these privies are attached, and one privy serves a whole neighbourhood. The people seem so familiarized with this unseemly state of things, and so lost to all sense of propriety, that it is a matter of no small difficulty, in some of the back streets, to make your way through them without being polluted with filth.

Behind my consulting rooms, where I am now sitting, there is a large dunghill with a privy attached; to my knowledge that dunghill has not been emptied for six months; it serves a whole neighbourhood, and the effluvium is so offensive that I cannot open the window. The land is three stories high, and the people, to save themselves trouble, throw all their filth out of the stair-window, consequently a great part of it goes on the close, and the close is not cleaned out till the dunghill is full: the filth in the close reaches nearly to the sill of the back window of a shop in front, and the malarious moisture oozes through the wall on the floor. This is one picture out of many; it is far from being overdrawn. Greenock is notoriously the dirtiest town in the west of Scotland, indeed it frequently goes by the euphonious name of "Old Dirty." I must admit that within this year there has been a little improvement in most of the principal streets, as the authorities have appointed a more efficient body of scavengers; but they never enter the closes where their services are most required. A dung-cart now goes round also every morning; but to thwart the authorities, or out of laziness, the cart is either allowed to pass before the ashes are thrown out, or they keep to the old plan of putting

them where their forefathers did. When I come to speak of the cause and extension of fever, I shall mention one or two localities where extensive nuisances exist, and which, in my opinion, though perhaps not the sole origin of fever, yet mainly contributing to its extension by their baneful influence. The "lands" of houses which the poor inhabit are generally two or three stories high, divided into flats, there being four or five families on each flat, according as they possess one or two rooms each. The rent of these rooms varies from 2*l.* 10*s.* to 7*l.*; the average size of each room I should think would be from eight to nine feet square, and about the same measure in height. The demand for this class of houses is very great, which induces the landlords to take such high rents.

I have a district, as a deacon, in one of the parishes, and the hovels (one cannot call them houses) inhabited by some of the paupers in this district, are such abodes of wretchedness that few could imagine that such places were to be found in a Christian community.

There is one poor man who was under my care in the hospital with asthma for six months, he was dismissed as incurable, and is now living with his wife and seven children in a dark room on the ground-floor, more fit for a coal-cellar than a human being; it is lighted by a fixed window about two feet square; the breadth of the room is only four feet, and the length eight. There is only one bed for the whole family, and yet the rent of this hole is 5*l.*

Still these houses are in such request, that at last term one of the paupers living in a similar place was out-bid as to the rent by another person. He could get no other house, and for a week he slept with his wife and three children in his pigsty: he had ultimately to seek a house in a neighbouring village. There are few of these houses drained, and none of them well drained; it is an impossibility to drain them, as there are no public drains in any of the streets, excepting one or two in the principal street of the town, and these do not occupy half its length.

There are few towns in the kingdom so well supplied with water as Greenock is, both for culinary and other purposes.

There is a joint-stock company, called the Shaw's Water Company, who have an unlimited command of water; it is distributed through the town in pipes. There are few good houses which are not so supplied. The town also possesses a reservoir of its own, and the water from it is distributed through the streets at intervals of 100 yards, to which the poor have unlimited access.

After what has been stated concerning the situation and condition of the houses of the poor, proper ventilation is unattainable; I allude to the worst description of houses, where, if they had the desire, the means are absent; but the majority of the poorest classes (who are chiefly Irish) have no idea of airing their dwellings; indeed the effluvium without is often worse than that within. They very frequently change their abodes, and when once settled in a

house with the prospect before them of soon removing, they lose all desire to make or keep their apartments clean and in good order. From the high rent of dwelling-houses, a man with a large family, even though in the receipt of good wages, is unable to have more than one small room. I have even found two and three families inhabiting a room not large enough for the same number of individuals.

There are necessarily a good many lodging-houses for vagrants, but none that I am aware of possessing any extent of accommodation. The charge for one night's lodging is 2*d.* and 3*d.*, 2*d.* being the charge when more than two occupy the same bed. I have hitherto only alluded to the poorest class of the inhabitants; of course there is a numerous body of respectable operatives, who live in comfort, and who feed and clothe their families well, and also give their children an education suited to their circumstances, and who even manage to save a little each week from their earnings, which is proved by the great success of the savings' bank, which has now been in operation for 26 years. Amongst this class of the community, notwithstanding the unmerited opposition it has met with, teetotalism has effected a great moral reformation; it has brought comfort and independence to many a fire-side which formerly knew only misery and degradation.

Excluding those who are addicted to the immoderate use of ardent spirits, the conduct of the working-classes is praiseworthy; the greater bulk of them attend church regularly, and likewise contribute more in proportion than the higher classes do to the various Christian charities.

Trade has for many years past been in a flourishing condition in this town, consequently the workmen are well paid: while other places are suffering from fluctuations in trade, the depression is little felt here.

A great body of the operatives have established friendly societies, which are well supported, and which in time of illness afford their sick brethren a weekly aliment sufficient for their maintenance. Several of these societies pay a medical man for attending their members while sick. It would be well for the working population if these benefit societies were more general, as too many of them are very improvident, laying past nothing, but, on the contrary, spending their whole gains, and when laid on a sick bed, depending on credit for their support; they thus run largely into debt, and when able to resume their employment, feel little disposed to pay what they owe; they thus lose all self-respect, and are degraded in their own and in the eyes of their fellow men.

Like other towns in Scotland, Greenock has a large pauper population; the great bulk of these (I would say three-fourths) are natives of other places, having come here in search of employment, and from destitution, disease, and other causes, have been thrown a burden on the community. A great number come from

Ireland and the Highlands with the express purpose of making a settlement, that is, supporting themselves in the best way they can for three years, when they can have a legal claim for relief from the parish. There are many who, though not claimants for public relief, suffer much, especially during winter, from want of food and fuel. We still here and there find some remains of that spirit of independence which would rather suffer than complain, still it must be a matter of regret to think that many, feeling unable to maintain that spirit of independence, are induced from their destitution to commit crime, perhaps their first offence, or fall a prey to disease in its most malignant form. Last winter, when visiting in my district, I was informed by a neighbour that there were two sisters in a garret in great want; I found one of them sitting over the scanty remains of a wood fire; I learnt that at one time they had been in good circumstances, but had been gradually reduced; they generally supported themselves by sewing, but owing to want of work, they had tasted almost nothing for three days; a neighbour had given them a few potatoes, and the other sister was out looking for a few chips with which to boil them; by the little relief they got, they were enabled to subsist for a week or two till they found employment. Such cases of endurance are seldom met with, but equal destitution is to be found in every close in the poor localities. Typhus fever last winter carried off many heads of families and left their children destitute. As I was passing one of the poorest districts not long ago, a little girl ran after me and requested me to come and see her mother as she could not keep her in bed; I found the mother lying in a miserable straw bed with a piece of carpet for a covering, delirious from fever; the husband, who was a drunkard, had died in the hospital of the same disease. There was no fire in the grate; some of the children were out begging, and the two youngest were crawling on the wet floor; it was actually a puddle in the centre, as the sewer before the house was obstructed, and the moisture made its way to the middle of the floor by passing under the door. Every saleable piece of furniture had been pawned during the father's illness for the support of the family. None of the neighbours would enter the house; the children were actually starving, and the mother was dying without any attendance whatever.

Many similar cases could be cited, but it were an endless task: there are few who have not like cases of misery to record.

There has been an assessment levied in Greenock for the support of the poor since the year 1816; the number of paupers on the different parish rolls for the past year are as follows:—

TABLE containing the Number of PAUPERS and ORPHANS in the different Parishes.

Parishes.	Poor.	Orphans.	Total.
West parish	186	74	260
South ditto	84	24	108
North ditto	60	19	79
East and Cartsdyke . . .	117	11	128
St. Andrew's.	76	23	99
Middle parish	349	75	424
Total	872	226	1,098

1,098 paupers appear to be a large proportion out of the population, yet no case is admitted by any of the sessions without a rigid scrutiny; numerous applications, having no legal claim, but which ought to be admitted, are rejected on the plea of want of funds.

The total amount expended on the poor last year was 3,808*l.* 11*s.* 1*d.* I learn that this year, from the increase of the poor's roll, 4,600*l.* will be required.

I have been furnished by a friend of mine with the following abstract table, taken from the poor's roll of the middle parish for the previous year, which shows the proportion of orphans to paupers, and the average amount paid to each:—

TABLE of the Number of ORPHANS and PAUPERS on the Middle Parish Roll, with the average Amount paid to each.

——		Amount paid per Year.	Per Month.	Per Year each.	Per Month each.
		£. s. d.	£. s. d.	£. s. d.	s. d.
Paupers, exclusive of Orphans . . .	336	847 10 0	70 12 6	2 10 5½	4 2½
Orphans	80	252 6 0	21 0 6	3 3 1	5 3
Total	416	1,099 16 0	93 13 0	2 12 10½	4 5

The average of 4*s.* 5*d.* per month is high, as the board of seven insane paupers is included.

Many indigent persons only receive 1½*d.* and 1¾*d.* per diem; they are those who can do a little for themselves by any employment they can procure, or by soliciting charity; a widow with three or four children generally gets 5*s.* per month; 6*s.* per month is considered liberal for a widow with five children.

I was told of six helpless widows, whose respective ages are 88, 87, 80, 70, 68, and 56 years: one receives 5*s.* per month, one 4*s.*, and the other four 3*s.*; it takes all their allowance, or nearly so, to pay their rent; and in bad weather, when unable to go out and beg, they are very destitute.

There is a great deal done for the poor by means of private charity. The Ladies' Female Benevolent Society distribute every

winter about 200 carts of coals, besides giving blankets and other articles of clothing to deserving and destitute females. In severe winters, the most of the Kirk Sessions also distribute coals amongst their own poor. For two winters past there has been a general soup kitchen established, which was the means of affording daily food to about 350 otherwise starving families. The different dissenting congregations, likewise, give their own destitute poor a little assistance, though possessing no general fund for the purpose.

Two years ago, when fever was very prevalent, three district surgeons were appointed by the United Sessions for attending the paupers in their own houses; they were much required, and have been of great benefit to the class among which they labour; but their attendance is much too restricted, as there is a more numerous class, a step removed above actual paupers, who are as unable to procure medical attendance as the paupers themselves. About eighteen months ago several influential individuals opened a subscription list for erecting a house of refuge for the destitute poor; a handsome sum was quickly raised, and the building is now nearly completed; the want of such a place has long been felt here, many a houseless wanderer being obliged to spend the night in the open air from the want of money to pay for a bed.

I shall now shortly allude to the state and extent of disease in Greenock.

Contagious fever is never absent from Greenock, and never will be, as long as the many sources of a vitiated and malarious atmosphere are allowed to remain undisturbed. Most medical men are agreed that malaria, or the noxious exhalation generated by the decomposition of vegetable and animal matter, is capable of producing fevers of various kinds. I have no means of ascertaining the total amount of cases which occur annually here, but it must be very great, if we can judge by the number of admissions into the hospital. It is not confined, however, to the lower classes, as many of our most respectable and wealthy merchants have been cut off by fever of a typhoid kind.

The majority of the cases which I admitted into the hospital last winter was of a continued form merging into typhus; fever appears to be most prevalent during the months of December and January: the number of admissions in each month during the year ending 1st May, 1841, was as follows:—

May	40	January	72
June	43	February	45
July	44	March	50
August	36	April	56
September	36		
October	60	Total	588
November	53		
December	63		

The average number for the last five years is about 430.

Many more cases were refused for want of accommodation;

this will shortly be remedied, as we have got plans drawn out for a new fever hospital.

The first question I generally put when a new case of fever is admitted is as to their abode. I was struck with the number of admissions from Market-street; most of the cases coming from that locality became quickly typhoid and made slow recoveries. This is a narrow back street; it is almost overhung by a steep hill rising immediately behind it; it contains the lowest description of houses built closely together, the access to the buildings being through filthy closes; the front entrance is generally the only outlet; numerous foci for the production of miasma lie concealed in this street, I think I could point out one in each close.

In one part of the street there is a dunghill, yet it is too large to be called a dunghill. I do not mistake its size when I say it contains 100 cubic yards of impure filth, collected from all parts of the town. It is never removed; it is the stock in trade of a person who deals in dung; he retails it by cartfuls: to please his customers he always keeps a nucleus, as the older the filth is the higher is the price. The proprietor has an extensive privy attached to the concern. This collection is fronting the public street; it is enclosed in front by a wall; the height of the wall is about 12 feet and the dung overtops it; the malarious moisture oozes through the wall and runs over the pavement. The effluvium all round about this place in summer is horrible; there is a land of houses adjoining, four stories in height; and in the summer each house swarms with myriads of flies; every article of food and drink must be covered, otherwise, if left exposed for a minute, the flies immediately attack it, and it is rendered unfit for use from the strong taste of the dunghill left by the flies. But there is a still more extensive dunghill in the street, at least, if not so high, it covers double the extent of surface; what the depth of it is I cannot say. It is attached to the slaughter-house, and belongs, I believe, to the town authorities. It is not only the receptacle for the dung and offal from the slaughter-house, but the sweepings of the streets are also conveyed and deposited there; it has likewise a public privy attached. In the slaughter-house itself (which is adjoining the street) the blood and offal is allowed to lie a long time, and the smell in summer is highly offensive. In two of the narrow closes opposite the market, there is in each a small space not built upon, and that space being the only spare ground in the close, is occupied by a dunghill; these two closes are notorious as nurseries for fever. I believe it to be a rare occurrence when fever is not to be found in them during any time of the year. Market-street is certainly one of the most filthy and unhealthy streets in Greenock; it is needless to say that many places here and there throughout the town are as bad; indeed I may state, that, from the best to the worst locality in the town, there is not a street but requires to be subjected to some rigid system for re-

moving away regularly the rubbish and impurities which are constantly exhaling forth so much miasma, and which is indirectly the cause of the yearly increase of so much destitution. I believe the authorities go as far as they are empowered to do in the removal of street nuisances; in my opinion nothing but a legislative enactment, compelling an extensive system of public and tributary drains, and prohibiting the existence of large collections of manure, &c. within the town, will effect the removal of those nuisances which are found to be so prejudicial to the health of the inhabitants. I have already alluded to the great want of drains in this town; the only public drains we have are of very small extent, and, at the corner of each street which the drain passes, there is an open grating about two feet square, out of which very bad effluvia arise during a succession of dry weather. There is a stream of running water at each end of the town; their course is rapid, and on that account not much impurity lies for any length of time. When the tide recedes, a great part of the harbours and about a quarter of a mile of the shore along by Cartsdyke is left dry; a most offensive smell arises from them. There is no stagnant water or marsh of any size near the town.

Besides contagious fever, we are also frequently visited by epidemics of the various eruptive fevers, such as small-pox, chicken-pox, scarlet fever, measles, &c. Two years ago small-pox prevailed to some extent and proved very fatal; a majority of the cases assumed the confluent form. At that time, of nine cases which I admitted into the hospital, who were sailors just arrived from a voyage, the eruption was confluent, and seven of them died; the other two, when convalescent, were seized with fever and one of them died. I may mention that, from the want of hospital accommodation, we seldom admit eruptive fevers. After the admission of these men, several patients took the small-pox, and many who had other diseases were removed by their friends from the dread of infection; since that time patients hesitate more, and show more reluctance to enter the hospital than formerly, but in general there are more applicants than can be well accommodated. I cannot say that we are more frequently visited by eruptive epidemics than other communities of the same size.

Influenza prevails to some extent every year, but it is seldom fatal; it is more prevalent at present than it has been since 1835; it chiefly attacks children and aged persons, and a good many of those have died from its effects. In my opinion the inhabitants of Greenock are more subject to scrofula and rheumatic affections than the inhabitants of towns further inland, probably arising from the moist and relaxing atmosphere which prevails. Occasional cases of hooping-cough occur, but in general they run a mild course.

I shall here give a table containing the number of cases admitted into the hospital during a twelvemonth, with a list of the diseases and result of the treatment:—

ABSTRACT of DISEASES treated during the Year ending May 1, 1841.

Diseases.	Numbers.	Cured.	Died.	Relieved.	Dismissed by desire.	Dismissed for irregularity.	Remain.
Remaining last year . .	40	36	4	..	..	..	..
1. Abscess	1	1	..	..	..	..	..
2. Amaurosis	2	2	..	..	..	..	..
3. Asthma	12	6	..	..	6	..	..
4. Ankle, dislocation of . .	1	1	..	..	..	..	..
5. Bronchitis	1	1	..	..	..	..	..
6. Burns	5	4	1	..	..	..	..
7. Concussion of brain . .	6	6	..	..	..	..	..
8. Consumption	11	..	4	..	6	..	1
9. Contusions.	16	13	1	..	..	..	1
10. Delirium Tremens . .	1	..	1	..	..	..	..
11. Dropsy of Abdomen . .	3	1	2	..	..	..	..
12. Ditto general	4	2	1	..	..	..	1
13. Dysentery	5	4	1	..	..	..	..
14. Erysipelas	12	10	..	..	..	..	2
15. Fistula of Urethra . .	1	1	..	..	..	..	..
16. Fever	588	508	50	..	..	..	30
17. Fracture of Arm . . .	6	6	..	..	..	..	..
18. ,, Knee-pan. .	2	1	..	..	..	..	1
19. ,, Ankle-joint .	1	1	..	..	..	..	..
20. ,, Leg, simple .	9	7	1	..	..	..	1
21. ,, Leg, compound	2	2	..	..	..	..	..
22. ,, Lower Jaw .	2	2	..	..	..	..	..
23. ,, Ribs . . .	2	2	..	..	..	..	..
24. ,, Thigh. . .	6	4	1	..	..	..	1
25. Frost-bitten	1	..	1	..	..	..	..
26. Gonorrhœa	2	2	..	..	..	..	..
27. Gangrene of Feet . . .	1	..	..	..	..	..	1
28. Heart, disease of . . .	2	1	1	..	..	..	..
29. Hydrophobia	1	..	1	..	..	..	..
30. Hysteria	1	1	..	..	..	..	..
31. Iritis Syphilitic . . .	1	..	..	..	..	..	1
32. Itch	3	3	..	..	..	..	..
33. Jaundice	1	1	..	..	..	..	..
34. Knee-joint, disease of . .	4	4	..	..	..	..	..
35. Liver, disease of . . .	2	2	..	..	..	..	..
36. Lungs, disease of . . .	10	8	2	..	..	..	..
37. Menorrhagia	2	2	..	..	..	..	..
38. Palsy	2	1	..	..	..	..	1
39. Phymosis	1	1	..	..	..	..	..
40. Piles	1	..	..	..	..	..	1
41. Prostate, disease of . .	1	1	..	..	..	..	..
42. Psoas Abscess. . . .	1	..	..	1	..	..	..
43. Rheumatism	13	13	..	..	..	..	..
44. Scurvy	7	6	..	..	..	..	1
45. Stricture of Urethra . .	1	1	..	..	..	..	..
46. Strabismus.	1	..	..	..	..	..	1
47. Syphilis	19	14	..	..	..	..	5
48. Testicles, inflammation of	3	2	..	..	..	..	1
49. Ulcers	37	35	..	..	..	..	2
50. Wounds	17	16	1	..	..	..	..
Total	830	695	69	1	12	..	53

Four hundred and eighty-four out-patients received medicine and advice.

The mortality appears to have been 1 in 11¾, which cannot be thought high, considering that we only admit the most acute cases and diseases which cannot be treated elsewhere, both from the want of accommodation and means, for I am sorry to say that the institution is not so well supported as it ought to be.

Of the 588 cases of fever, I should say that only two-fifths of them bore a typhoid character. A large number of accidents are annually admitted, they occur chiefly in the ship-building yards, from the carelessness both of the masters and men in not properly fixing the gangways and planks used around the vessels in building; this negligence ought to be inquired into, and means taken to prevent the loss of life and the great number of accidents which happen in these places. There are eight ship-building yards in Greenock, each yard employing from 60 to 120 apprentices; each proprietor pays a medical man for attending his apprentices during illness.

I feel sorry that, from the want of proper data, I can furnish no account of the comparative rate of mortality of this place further than that which occurred within the hospital.

With respect to the cause and extension of fever, I need add nothing more than I have already done, as I could furnish little that is not contained in the many able reports already published.

In my opinion much might be done to improve the sanitary condition of this town by proper measures; for however men may differ in regard to the primary cause of fever, there exists no discrepancy of opinion with regard to the fact, that a poor population, living in small and ill-ventilated houses, exposed to the various impurities contained in a vitiated atmosphere, have a tendency to have their vital functions disordered, and are thereby rendered liable to be attacked by nervous and other debilitating diseases.

That there exist in this place innumerable nuisances no one will deny; what is the extent of the evils they produce we cannot prove, but it is beyond a doubt that they do produce evils, and those of no small magnitude, and it is high time that some remedy was devised to counteract their baneful influence.

Among the many measures which would require to be adopted, I beg leave to suggest the following:—

1st. That a well organized Board of Health be established, with power to recommend to the local authorities any measures which they thought likely to exert a beneficial influence on the health of the inhabitants.

2nd. It would be desirable that proper persons be appointed to make periodical visits to the worst localities, and inspect the dwellings of the poor as to their state of cleanliness, &c., especially during the prevalence of fever; this was done during the time of cholera, and it was never objected to.

3rd. An extensive system of drainage and sewerage, not con-

fined to populous and detached portions of the town, but a large drain in every street, whether wholly occupied by houses or not, having tributary drains from every close and every house. Few towns could be drained at less expense than Greenock, the great proportion of the streets having a slope towards the river: there is a great deal of waste water about the town, which, instead of being allowed to run over the surface, might at little expense be turned into the main drains at the higher parts of the town, and which would effectually carry away all the liquid refuse which is apt to obstruct narrow drains.

4th. The removal of all dunghills and other collections of filth kept at present in the closes; in other well-regulated towns they are not to be found, and there is no necessity for having them here if the inhabitants were compelled to throw out their ashes, &c. at a proper time, when they could be carried away by the dung-carts. Public privies would require to be erected in suitable places and cleaned out at proper intervals.

5th. An effective body of scavengers, who should have power to enter every close and sweep away all the rubbish which cannot enter the drains; these closes ought to be so paved that their impurities could be easily distinguished and removed.

6th. That the cattle-market, slaughter-house, and certain manufactories and trades be removed beyond the precincts of the town. There are many minor points with regard to the size and distribution of drains, proper regulations for lodging-houses, and other inconveniences, having only a local bearing, which I need not now mention.

I have now gone over the chief points contained in your special inquiries, the other information which I have added I can vouch for as being correct, though it is not so extensive as I could have wished. If there be any of the subjects on which you would wish more minute information, or if I have omitted anything which would tend to forward your views, I shall feel most happy to supply it to the best of my ability.

I have the honour to be, Gentlemen,

Your most obedient servant,

W. L. Laurie, M.D.

To

The Poor Law Commissioners,

Greenock, 5th December, 1841.

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REPORT ON THE SANITARY CONDITION OF THE LABOURING CLASSES OF THE TOWN OF STIRLING.

By W. H. Forrest, Esq., *Surgeon,*

President of the Stirling Medical Association, Ordinary Medical Attendant on the Stirling Dispensary, &c.

1.—Have diseases of the various forms of continued fever, and other contagious febrile diseases, been prevalent in any, and what parts of your parish or district; and do such diseases recur at regular intervals, or are they rare and occasional only?

This question is best answered by a Table from the records of the Stirling Dispensary, showing the comparative prevalence of fever in the different streets of the town and in some of the adjacent villages during the last ten years:—

	Cases.	Population.	Equal to
TOWN.			
Saint Mary's Wynd	75	651	1 in 8·68
Saint John-street	44	493	1 in 11·20
Broad-street and Bow	53	657	1 in 12·20
Spital-street	22	307	1 in 13·95
Castle Hill	52	866	1 in 16·46
Baker-street	57	943	1 in 16·49
King-street	45	815	1 in 18·11
Cowane-street	37	851	1 in 23·
Upper and Lower Bridge-street	24	575	1 in 23·95
Craigs	10	492	1 in 49·20
Port-street and Mill-lane	8	444	1 in 55·5
Friar's Wynd	5	390	1 in 78·
VILLAGES.			
Saint Ninians	35	1369	1 in 39·11
New House	7	344	1 in 49·15

Twenty cases occurred in other parts of the country, the population of which is unknown. Added together, they form a total of 494 cases. Many other cases, however, occurred during the same period, which were treated privately by myself and other practitioners. During the past year, for example, eight persons, enjoying all the necessaries and many of the comforts of life, died in the upper part of the town alone of this disease.

2.—What are the seasons at which such diseases appear amidst any part of the population, and what are their characteristics?

This question will also be best answered by a Table indicating the number of cases which occurred in the dispensary during each month for the last ten years:—

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
1831	13	9	3	1	0	1	2	5	4	5	14	12	96
1832	12	11	2	2	0	1	0	3	0	1	1	1	34
1833	4	9	10	4	2	5	7	17	1	14	12	11	96
1834	3	2	9	2	0	2	2	3	5	0	2	1	31
1835	1	4	5	0	0	0	0	0	0	1	0	1	12
1836	0	1	1	1	0	0	0	2	1	0	0	0	6
1837	3	0	14	13	19	21	26	13	11	15	15	9	159
1838	4	6	2	1	2	0	10	2	2	2	1	1	33
1839	1	0	1	2	0	0	0	1	0	1	2	1	9
1840	0	3	4	1	2	5	3	7	4	8	4	4	45
Total	41	45	51	27	25	35	50	53	28	47	51	41	494

3.—Did the cholera at the time of its general prevalence prevail to any, and what, extent within the district?

The cholera prevailed to a very considerable extent in this town and neighbourhood at the time of its general prevalence. Ninety-six cases were reported to the Central Board of Health as having occurred in Stirling, 59 of which proved fatal. The disease broke out again during 1833, but none of the cases, during this attack, were reported to the Board of Health. Ten of these cases were treated in the Dispensary, three of which proved fatal.

4.—What is the *external* condition, in the following respects, of the residences of the population amidst which such diseases occur?—

a.—As to the contiguity of vegetable or animal substances in a state of decomposition, stagnant pools or undrained marshes, accumulations of refuse, either thrown from houses or otherwise?—

b.—As to the means adopted or the means available for the *removal* of such substances, or the prevention of the generation of malaria; whether there are sufficient drains or sewers adequately well supplied with water to dilute, and sufficiently sloping to carry off all such refuse; whether such drains are sufficiently *closed* to confine noxious exhalations from them; whether there is any regularly appointed service of scavengers or otherwise for the removal of such substances; whether there is such ventilation around the resi-

dences as to dissipate the noxious vapours apparently irremovable?

a. There are no stagnant pools or undrained marshes in or very near Stirling. The poor, notwithstanding, are very much exposed to the effluvia arising from decaying animal and vegetable substances. These, for the most part, are thrown from the houses into abominable receptacles, called "middings." Many, very many, of the poor do not put themselves to the trouble of depositing their filth in these receptacles, but use the first place that presents itself, such as common stairs, closes, &c. Many, again, throw it without any ceremony or hinderance from their windows into the public streets and closes.

b.—The drains or sewers, called in Stirling "*sivers*," are all open and sloping. On the public streets, they are, in general, well constructed, but in the closes their construction is so very bad that scarcely any of them run well. The only supply of water, so far as I know, which they receive, is from the heavens. The inhabitants of Stirling, during many months of the year, do not obtain water sufficient for their domestic wants, and they cannot, therefore, have any to spare for their sewers. There is a regularly appointed service of scavengers, but it is inefficient. A few old men sweep the public streets from time to time, and the sweepings thus collected are removed in a cart, without any apparent attention to time or order. Sometimes the sweepings remain on the streets for many days. To show how matters of medical police are neglected, I shall state a few facts which are known to every person in Stirling. 1st. The filth of the gaols, containing on an average sixty-five prisoners, is floated down the public streets every second or third day, and emits, during the whole of its progress down Broad-street, Bow, Baker-street, and King-street—the principal streets in the town—the most offensive and disgusting odour. 2nd. The slaughter-house is situated near the top of the town, and the blood from it is allowed to flow down the public streets. 3rd. The lower part of a dwelling-house, not more than three or four yards from the town-house and gaol, is used as a "midding" and pig-sty, the filth being thrown into it by the window and door. 4th. There are no public necessaries; and the common stairs and closes, and even the public streets, are used, habitually, as such, by certain classes of the community. 5th. Two drains from the castle convey the whole filth of it into an open field, where it spreads itself over the surface, and pollutes the atmosphere to a very great extent. 6th. A dwelling-house in the Castle Hill, the greater part of which is inhabited, is used by a butcher as a slaughter-house; and some of the butchers kill sheep and lambs in their back shops, situated under dwelling-houses. 7th. The closes where the poor dwell, and where accumulations of filth most abound, are, I may safely say, utterly neglected by the scavengers. In some situations the

ventilation around the residences is good, but in many others, and especially in the closes, it is very bad, and, in my opinion, quite irremediable.

5.—Describe the *internal structure and economy* of the residences of the population amidst which contagious febrile diseases arise,—

a.—State whether they, as well as the surrounding land, are drained or undrained?

b.—Whether they are properly supplied with water for the purposes of cleanliness of the houses, persons, and clothing?

c.—Whether there are good means of ventilation with a due regard to warmth?

d.—Whether there are proper receptacles for filth in connexion with the cottages?

a. They are not drained.

b. The supply of water is often very deficient. There is no water-company; and the water is not conveyed into the houses even of the wealthy inhabitants. In times of scarcity, it is no uncommon occurrence to see from eighty to one hundred persons waiting at each public well for water; and the scarcity of it is often made an excuse by servants for the neglect of domestic duties. I may therefore with propriety say, that the poor of Stirling are often not properly supplied with water for the purposes stated in the query.

c. There are no good means of ventilation in the closes, but in other situations the means of ventilation are good. The science of ventilation has not made much progress in Scotland among the lower orders, and when its importance is stated to them, they in general show a great contempt for it. I am almost daily in the practice, when attending fever cases, of opening a window for the purpose of admitting fresh air, but as soon as I leave the house the window is closed, and continues so till my next visit.

d. In towns such as Stirling, I conceive that there should be no receptacles for the filth of the houses, and I must therefore consider every such receptacle as improper, however well situated or constructed. If these are tolerated, under any circumstances, the habits of the poor, which are beyond all description filthy, will never be changed. *Vide* Answers to Query 4.

6.—As to the internal economy of such residences, describe further,—

a.—Whether they are unduly crowded, and several families or persons occupy the space which would properly suffice only for a less number?

b.—Whether there are any inferior lodging-houses crowded by mendicants or vagrants?

c.—Whether there is a gross want of cleanliness in the persons or habitations of certain classes of the poor?

d.—Whether there is a habit of keeping pigs, &c., in dwelling-houses, or close to doors or windows?

e.—Whether there is an indisposition to be removed to the hospitals when infected with contagious disease?

a —All the houses inhabited by the poor are unduly crowded.

b. There are numerous lodging-houses, of the very worst description, in various parts of the town, especially in Broad-street, St. John-street, Baker-street, and King-street. In all of these streets there are houses that harbour the lowest description of mendicants and vagrants.

c. There is gross and disgusting want of cleanliness in the persons and habitations of the poor. There may be a few exceptions to this character, but it holds true generally.

d. I have heard of pigs being kept in the houses of the poor, but this is by no means a general or common practice. It is a common practice, however, to keep them close to doors and windows.

e. We have no hospital in Stirling.

7.—Is the extension of the diseases described in Question 1 ascribable in any or what proportion to want of any of the necessaries of life, or to other causes than those specified in Questions 4, 5, and 6; if so, distinguish those other causes so far as you are able, and the extent of diseases resulting from them?

I am of opinion that typhus fever is produced by a specific poison, and that it is spread chiefly, if not altogether, by contagion. I do not think that this poison is ever produced by want of any of the necessaries of life, or by the causes specified in Queries 4, 5, and 6. These may, and I believe do, facilitate its diffusion, but they do not, in my opinion, produce the poison itself. They act rather as predisposing than exciting causes of typhus.

8.—What is the common cost of erection and average cost of repairing each description of the tenements or cottages inhabited by the labouring classes?

The residences of the poor in Stirling are generally very old houses, which have been gradually abandoned by the richer classes. Few houses have been erected for their accommodation.

9.—What are the rents paid by the labourers for each description of tenements or cottages?

The rents paid by the poor are enormous, and far above the value of the miserable apartments which they occupy.

10.—What is the general proportion of the rent paid by the labourer to his total expenditure?

I cannot answer this query.

11.—What is the common cost of the lodgings to persons of the labouring classes?

A labourer is accommodated in a poor family with permanent lodgings, for one shilling a-week. In the lodging-houses the charge is threepence for each mendicant or vagrant, every night.

12.—Are you of opinion that any and what legislative measures are desirable or available for remedy of any of the evils existing within your district?

The powers of the municipal authorities of Stirling are not sufficient for the purposes of a medical police. They do not, for example, possess the power of entering private property, and removing therefrom nuisances injurious to health. This was seriously felt immediately before the invasion of the cholera in 1832. I am of opinion that a Board of Health ought to be constituted with ample powers to enforce the removal of all nuisances both public and private, the cleansing, whitewashing, and ventilating the houses of the poor, the suppressing of all lodging-houses harbouring mendicants and vagrants, and the building of new houses for the poor, agreeably to a plan approved of by competent judges. This Board should, in my opinion, be composed chiefly of persons fully and accurately acquainted with the subject of medical police. I am also of opinion that any expenses incurred by this Board in the removal of nuisances, &c., should be paid by the parties offending, whether public or private, and that the proprietor should in all cases be liable for his tenant.

13.—Have any, and what voluntary exertions been made to improve the external or internal economy of the residences of the labouring classes within your district, and if so, describe their nature and effects?

A great many nuisances were removed, especially in the Castle Hill, immediately preceding the invasion of the cholera. In this quarter of the town all the nuisances on the public streets were, without any exception, removed, and most of those on private properties were very much mitigated. Every house in this quarter too, was, with a single exception, whitewashed, both outside and inside, and I believe with the happiest results. Several of the lodging-houses were also for a short time suppressed. These improvements were effected altogether by the energetic and unwearied exertions of a committee appointed by the Board of Health. In other districts of the town the duties of the other committees, similarly appointed, were not discharged so rigidly, and all traces of them are now completely effaced, whilst the inhabitants of the Castle Hill are still reaping the benefits of the rigid purification which this district underwent in 1832.

General Observations.

By the term typhus is understood the common continued fever of this country, and no other fever whatever. The statements in the preceding Answers therefore apply exclusively to it.

The Stirling dispensary, the different reports of which furnish the tables of disease contained in the preceding answers, was founded in 1831. Its object is to furnish gratuitously medical attendance and medicine to the poor. It is supported entirely by voluntary subscription; and no patient is admitted unless he is recommended by a subscriber, who certifies that the applicant is a poor person and unable to pay for medical attendance and medicine. Having been the ordinary medical attendant of this institution during the last ten years, and admitted and treated nearly all the cases of fever contained in the preceding Tables, I can, with great confidence, state that they can be implicitly relied on.

WILLIAM H. FORREST.

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REPORT ON THE SANITARY CONDITION AND GENERAL ECONOMY OF THE LABOURING CLASSES IN THE CITY OF ST. ANDREW'S.

By John Adamson, Esq., *Surgeon.*

Gentlemen,—If I rightly understand the object of your inquiry, it is expected of me, in the following Report, to exhibit the sanitary condition of the labouring inhabitants of St. Andrew's, in connexion with their general habits, grade of living, and such external circumstances as may be supposed to influence them.

With this view, I shall, in the first place, describe the condition of the town, so as to notice those general causes which may be supposed to affect the health of the community.

These are connected with the topography and meteorology of the district, the position and structure of the town, the nature of the soil, and the drainage, cleanliness, and ventilation of the streets and houses.

I will then illustrate the domestic economy of the working classes, by the information I have been able to procure regarding their personal habits, the wages of different trades, their customary food, and the aids which they derive from charity, whether public or private.

The rate of mortality in the town will be proved by the records of funerals compared with the estimated population; and the prevailing diseases will be approximated by a table compiled from the cases which have occurred in my own practice during the last five years.

Finally, I will endeavour to show how far there is evidence of disease which may be referred to the condition of the working classes alone, and in what way it might be obviated.

Topography, &c.—St. Andrew's is situated in latitude 56° 20′ north, and longitude 2° 49′ west. It is built upon a rocky eminence, projecting somewhat into the sea, at the bottom of the bay to which the town gives its name.

The length of this promontory is about three-quarters of a mile, —its breadth about half a mile. Its surface appears flat, though declining gently on all sides from a point near the centre of the town.

On the north side, or seaward, it terminates in a precipitous cliff, about fifty feet high: on the opposite side it slopes towards the Kinnesburn, a small stream which forms its southern boundary. On the west it is continuous with the valley of Strathkinness, and on the east it terminates in the harbour, which is separated from the sea by a narrow spit of sand-drift.

The neighbouring country is in a state of high cultivation, with the exception of a low and nearly level tract of sandy soil on the north-west side, which is chiefly used as sheep-pasture, and for the game of golf, for which St. Andrew's is celebrated.

On the west side it is level for several miles; but towards the south and south-east it rises gradually, until, at a distance of from one to two miles, it attains an elevation of 300 to 375 feet.

Meteorology.—The climate of St. Andrew's presents some peculiarities; its vicinity to the sea tending to lower the temperature in summer, and to elevate it during the winter months. It is thus more equable than in the neighbouring inland towns.

Temperature.—The temperature is shown in the following abridgment of a table, constructed by the late Dr. Jackson, for a period of eight years, viz. 1821 to 1828, inclusive. The observations were taken at 10 A.M. and at 10 P.M.

The temperature of 1840 is shown by an accompanying table, constructed from observations made at the coast-guard station, at 8h. 30m. A.M. and 7h. 45m. P. M.

1821 to 1828.		1840.	Morning.	Evening.
Temperature of January . .	37·099	,,	38·048	38·387
,, February .	39·099	,,	37·310	38·689
,, March . .	41·650	,,	40·080	40·467
,, April . .	46·499	,,	48·883	48·266
,, May . . .	51·175	,,	49·370	47·774
,, June . . .	57·326	,,	56·850	54·566
,, July . . .	60·182	,,	57·483	55·030
,, August . .	59·175	,,	60·306	57·322
,, September .	55·761	,,	51·583	51·483
,, October . .	49·409	,,	46·064	46·274
,, November .	42·927	,,	41·090	42·150
,, December .	40·204	,,	37·500	35·435
Mean annual temperature	48·374	Mean Morn.	47·047	Eve. 46·319
		Mean annual temp.		46·819

Winds—By observations on the wind taken at the coast-guard station from 1836 to 1840 inclusive, it appears that its direction is on an average from the

East, and points adjacent,	77	days in the year.	
West ,, ,,	177	,,	,,
North ,, ,,	45	,,	,,
South ,, ,,	41	,,	,,
Calm and variable	25	,,	,,

East winds are most frequent in April, May, and June. West, in January, February, July, August, September, October, and December.

Moisture.—The average atmospheric moisture is equal to about three-fourths of the actual capacity for the temperature. During

the early spring months, it is rather less, sometimes, though rarely, falling so low as one-half.

In the months of April, May, and beginning of June, St. Andrew's, in common with the east-coast of Scotland, is severely afflicted with a dense, chilly fog, called, "Easterly Haar." It usually comes in suddenly from the sea, about the middle of the day or afternoon, and is peculiarly cold and disagreeable to the feelings, although it does not appear to affect the mean temperature of the month.

Rain.—By the observations of the late Dr. Jackson, in 1835 and 1836, the quantity of rain for these years was,—

In 1835, 24·28 inches | In 1836, 34·00 ditto.

It occurs chiefly with the wind from east or easterly. Cloudy days occur chiefly with westerly winds.

Geology.—The site of St. Andrew's belongs to the inferior coal formation; it consists of alternate layers of sandstone and shale, with seams of clay iron-stone, and thin unworkable beds of coal.

On the beach at low water these strata are seen beautifully dissected by the sea, which has washed away the softer clay, leaving a succession of long ridges of sand-rock at regular distances.

Overlying the stratified rocks, there is a continuous layer of sand and gravel, varying in thickness from three to six feet, affording a dry and excellent foundation for the houses.

In a considerable space on the south side of the town, there is found a bed of clay of several feet in thickness underneath the sand; it retains the surface water, thereby causing some houses to be comparatively damp, and affording wells at the depth of a few feet.

The level tract of sandy soil on the north-west side of the town is evidently composed of the detritus of the promontory on which it stands, carried over by the tidal current, which is in that direction; the high ground to the south is a portion of a range of trap hills running through Fife.

St. Andrew's is thus seen to be free of every kind of malarious influence; its elevation and exposure on two sides to the sea are highly favourable for ventilation; and this is promoted by the direction of the streets, which allows them to be fairly swept by the prevailing winds. The rocky ridges offer facilities and inducements to sea-bathing, which is much practised by all classes of the inhabitants, while the gentle declivity and the composition of the soil prevent the occurrence of stagnant water, and render the streets and public walks dry and comfortable at all seasons.

Town.—The town itself does not cover the whole of the space

included in the description of its site; it is almost completely surrounded by gardens, which occupy a very considerable space between it and the sea-cliff and Kinnesburn, on its respective north and south sides.

It consists of three principal streets, lying east and west nearly parallel to each other; their length approaches to half a mile, and their breadth, for which they are remarkable, is, at an average, not less than 70 feet.

There are comparatively few lanes, the spaces intervening between the principal streets being mostly laid in gardens. By this means a great proportion of the houses, even in the middle of the town, have a considerable space of ground attached to them, so much so, that it forms a prominent feature in its general aspect, and when observed from some points, gives it an appearance of double its actual size.

By measurement, including its gardens, St. Andrew's occupies a space of 109 acres, affording 121 square yards for each individual.

It is divided into two parishes, St. Andrew's and St. Leonard's.

Sewerage.—There are few sewers of any extent, and not any through the principal streets; they are supplied with open gutters instead. Water-closets are common in the best class of houses, but by no means general in the town; they are usually connected with cesspools, which, in some cases, require a periodical cleaning, though generally they do not fill, from the porous sandy soil allowing the liquid parts to drain away: this is of less consequence, as the supply of water comes from a distance in pipes. There is a great deficiency of public accommodation of this kind, and, in consequence, a very disgusting habit prevails of committing nuisance even in the streets, and in all the corners and public walks around the town.

State of the Streets.—The scavenger department is defective and, in principle, ill conducted. This is the more to be regretted as the gentle inclination of the streets, and the plentiful supply of water, which is often to be seen running in a clear stream through the gutter of the South-street, afford so great facilities for this purpose. Funds, however, are wanting, and the filth is made to pay for its own removal. To further this object, it is allowed to collect to a certain extent; it is then scraped into heaps, which often lie for a day or two before they are supposed to be worth carting away. It is impossible, in such a case as this, to witness the effect of a good shower without longing to have the scavengers then employed, not in collecting and preserving the impurities, but in sweeping them into the gutters, where they would be washed away, certainly not to the profit, but very much to the comfort and cleanliness of the town. As a whole, however, St. Andrew's cannot be called a dirty town, at least in comparison with

other towns. The South-street is even clean ; and it is only to be regretted that, with so great facilities for perfection, the streets should not be all brought to that condition.

There are a few localities to which even the foregoing general description is not applicable; and as they assume a greater importance from some of the facts to be afterwards stated in reference to the health of their inhabitants, it will be necessary to describe them at more length.

Argyle, &c.—I allude particularly to a suburb called Argyle, several lanes at the west end of the South-street, and the east end of North-street, and neighbourhood.

In Argyle, the ground is almost level, and the soil, differing in this respect from the rest of the town, is naturally damp. The gutter on each side of the road is wide, and usually filled to overflowing with black fœtid mud, (*Scotticè*) "rotten gutter," the effluvia from which on a still evening are felt to taint the whole air. There are also numerous pigsties and cowhouses, the inhabitants of this locality being in many instances small proprietors or occupiers of land; and as almost every house has a garden behind, it is a matter of no little importance to be owner of a dunghill. These, as well as the pigsties, are often made to adorn the fronts of the houses, and their contents are continually swelled by the addition of sea-weed and every attainable impurity.

The internal economy of the houses in this locality is often very good, many of the owners being in good circumstances for their station in life. A few of the houses are small, damp, and too much crowded together.

Closes.—The lanes at the west end of South-street, seven or eight in number, partake very much of the character of Argyle; they are dirty, narrow, and, in addition, they are very deficient in ventilation.

North-street.—The east end of North-street is open and airy : it is tolerably paved, and supplied with proper gutters ; but it is inhabited to a great extent by fishermen, whose habits render it highly offensive. It is covered with offal of every kind, and upon the back of many of the houses there are dunghills filled with mussel-shells, dung from pigsties, &c.

In the adjoining huckster wynd, there is a large unoccupied space for a house, which is used chiefly as a depôt for dung by a small farmer ; and from the kind of mixture usually collected on it, it often becomes so great a nuisance, that the neighbours, usually not particular in these respects, have more than once petitioned the authorities for an order for its removal.

There are some minor localities of a similar nature not requiring particular description. One, however, in many respects unlike the others, must be ranked among them, from the occurrence of about a dozen cases of fever in it in 1839. It is a row of houses

at the Links; they are good of their kind, clean and well ventilated; but one of the few sewers of the town, recently constructed, passes along its front. It has several open gratings, and terminates in a ditch in the vicinity.

A practitioner of 30 years' standing in the town states that he never saw fever here until 1839, which was just after the construction of the sewer.

Property.—The annual value of real property within the burgh, above 2*l.*, is 8398*l.* 16*s.*

Tenements.—There are 1081 inhabited tenements: of these 281 are rented above 10*l.*, the greater number being spacious, well ventilated, and situated in the principal streets: they have, in the majority of cases, excellent gardens attached to them.

151 are rented between 5*l.* and 10*l.* They are situated in the wynds or lanes, as well as in certain parts of the main streets. They usually consist of half houses, two families living under the same roof.

329 are rented between 2*l.* and 5*l.*, from two to four families living under one roof, each possessing at least a room and closet, or two, and even three rooms.

In houses of this kind, the size of each apartment is about 14 feet by 16. When two are occupied by one family, they often contrive to have one a little superior to the other; it is used for sleeping in, and contains one or two beds, according to the number of individuals in the family; the other, also provided with a bed, commonly of the kind with folding doors, which allow it to be shut up during the day, is used as the kitchen, for eating in, and other domestic purposes. They are situated in some parts of the main streets, or in lanes and closes. In common with the preceding class, they have often small gardens, or at least back courts.

About 250 yield an annual rent under 2*l.*, from two to six, or even eight families, living under one roof. These are usually the lowest class of labourers and artisans, weavers, fishermen, widows, and single women.

The size of each apartment may average 12 feet by 14; though there is some variety in this respect, the rent being affected by peculiarities in situation, &c.

A few of these dwellings, particularly such as are inhabited by widows and single women, are very neat and clean internally; their owners, perhaps at one time servants in respectable families, retaining ideas of comfort unusual with their present means. But many, more particularly when the family is large, are both excessively dirty and crowded with furniture of little value.

The floors on the ground-flat are usually earthen, and this advantage is seldom obviated by an attempt, even, at order or cleanliness. This state of filth is remarkably characteristic of the houses of the fishermen inhabiting the east end of North-street;

they are, with a few exceptions, in a very dirty and miserable condition, and would be insufferable by any other class of inhabitants.

There are a few, but a very few, instances of dwellings exhibiting the wretchedness so often met with in large towns. I have noticed several where there was a want of bed-clothes, but I have no recollection of any where there was not at least a bedstead and some kind of bedding.

The usual furniture in the class of houses last described is, one or two beds with bedding, the mattress being filled with chaff; a deal table, a chest of drawers, or only a chest, a cupboard, two or three chairs or stools, with utensils for cooking, eating, and washing clothes.

It is rather a curious fact, that where there is the lowest notion of cleanliness, there is often exhibited an attempt at ornament, by gaudily-coloured prints pasted upon the walls.

It is remarked that there are no "kail-pots" among the fishers.

Population.—The population, by a census taken by Dr. Haldane, in 1836, was 4182, that is by actual census—

Of the parish of St. Andrew's . .	3882
Computation for St. Leonard's . .	300
	4182

In the statistical account of the parish of St. Leonard's, written in November, 1837, the inhabitants of St. Leonard's are stated to be 427 in the town and suburbs. I am not able to account for this discrepancy, but as the latter number, viz., 427, is very nearly the amount of the present population of St. Leonard's, I have adopted it, making the population for the whole town 4309.

There is also a considerable fluctuating population, consisting of students attending the University in winter, and other strangers resorting to the town for sea-bathing during the summer months. They are not included.

There is no separate account of the relative number of males and females in the town itself; in the town and country, however, there were, in 1831, 2520 males and 3101 females. There can be no great error in taking the same proportion for the town alone, which will give 1932 as the number of males, and 2377 females.

Trades.—The following statement is compiled from the survey for the police assessment:—

There are 137 widows who are householders.
67 spinsters ditto.
85 gentlemen and residenters, who do not follow any calling, and professional men.
42 shopkeepers.

There are 394 tradesmen.
49 day-labourers.
57 seamen and fishermen.
As also 250 householders who are not designated: they are chiefly widows, single women, and labourers.

It is difficult to define very strictly what may be the number of the labouring population as distinguished from the other classes, but if the tenements rented under 5*l.* yearly be supposed to indicate the number, there are 589 such families with an average of four individuals to each family,—in all 2356. Some of them are small proprietors and able to live without labour, or without constant labour; but the great bulk of them may be fairly enough divided into four classes, of which the two first are perhaps the most numerous.

Wages.—The wages of the first are from 12*s.* to 16*s.* weekly; they are chiefly masons, carpenters, tailors, carters, &c.

The wages of the second are from 6*s.* to 12*s.* weekly; they are chiefly day-labourers, weavers, and fishermen.

The wages of the third are under 6*s.*; they are weavers, weakly persons, washerwomen, who are out-of-door workers, &c.

The fourth class have no regular earnings; they are the sick, infirm, aged, and insane.

Charities.—The average number of persons who had received parochial aid during the seven years preceding 1837 was 103 per annum, and their allowances varied from 6*d.* to 2*s.* weekly, according to their exigencies (*Statistical Account of St. Andrew's, by Dr. Buist*): this statement includes, I suppose, the country part of the parish; the most ordinary allowance is 1*s.* per week; the total average expenditure, including the sum paid for the support of lunatics, is 417*l.* 0*s.* 4½*d.* for town and country.

In the parish of St. Leonard's, the average number of persons receiving parochial aid is fifteen, and the weekly allowance made to them is 1*l.* 2*s.*, being at an average nearly 1*s.* 6*d.* each; 20*l.* annually has also been disbursed for occasional demands, making the average yearly expenditure 78*l.*

The dissenting congregations collect publicly for their own poor about 20*l.* annually or upwards.

The expenditure of other public charities may be accounted about 103*l.* annually, (statement of Dr Haldane).

The chief of these is styled the "Ladies' Society:" they profess to give relief only during the winter season; the number at present in their list is seventy-two; they are infirm females, old women, widows with children, and a few destitute old men.

These people are visited at their own houses, by the ladies composing the society, who converse with them, inquire into their domestic economy, and, when necessary, relieve their occasional wants.

In this way they distribute tea, sugar, soup, and flannels.

They also give a regular allowance of two half-quartern loaves, or half a peck of oatmeal weekly, and sometimes half a loaf in summer.

It is a prominent object of the society to find out occasional cases of destitution from sickness or other calamities ; and when a family is thus known to have experienced to a certain extent the pinchings of poverty, they are waited on with consolation and assistance.

It is thus hoped that their gratitude is called forth and a kindly feeling generated between both classes.

They also endeavour to prevent begging and dissipation, by cutting off from their list all who are found to continue in these practices.

There is also a Female Society among the members of the Secession Congregation, with kindred objects.

It is also a practice common among ladies in St. Andrew's to expend a certain portion of their leisure in visiting the sick and destitute of their poorer neighbours. It thus happens that there are few cases of *long-continued* destitution which are not well known to the wealthier class; and many individuals are in the practice of giving money, clothing, coals, oatmeal, broth, and, in sickness, cordials to the necessitous.

The poor themselves are also not the least ready in thus aiding their suffering fellows ; and were it not for this *charity of the poor*, the amount of distress would be much greater than it is. Many cases of destitution arising from occasional sickness are not known beyond their immediate neighbours, and it is thus that their wants are supplied.

Medical Charity.—There is no public medical charity in St. Andrew's, the poor being attended gratuitously by any of the practitioners, for whom they choose to send.

They often manage of themselves to pay for the medicines prescribed ; at other times these are paid for by charitable individuals, or given for nothing by the druggist.

The kirk session occasionally pay for the medicines ordered in extreme cases ; but they usually protest against all charges of this kind, unless permission to incur the debt has been previously obtained from the member in charge of the district.

The trouble and loss of time thus occasioned to the practitioner are usually of more account than the trifling value of the medicine ; and I, at least, am now obliged either to leave the matter between the patient and the druggist, or, when the disease is a serious one, to order him to place the price to my own account.

Clothing.—The clothing of the working class is generally sufficient and respectable ; there is no appearance of rags or very great filthiness of apparel, except in a very few cases, in most of which the fault lies with the individuals exhibiting them.

Dissipation.—The sale of whiskey in St. Andrew's is between 11,000 and 12,000 gallons annually. Of this quantity, about one-half is sold in the shops of grocers, who are also spirit-dealers. The remainder is sold or consumed in the public-houses, twenty-four in number.

There are eleven houses licensed to sell ales and porter only.

As in most other towns, there are a certain number of notorious drunkards, and from the quantity of whiskey consumed in public-houses, a great part of which must be by inhabitants of the town, it is evident that there is much more tippling among the lower classes than is consistent with the welfare of their families.

Many indeed of the very worst cases of destitution arise from this cause, and as these are not generally accounted proper cases for charity, it often happens that the families of a drunken parent are exposed to great hardship.

As a class, however, the tradesmen of St. Andrew's may be justly styled sober and industrious, and if we overlook a few especial occasions, it is really a rare thing to see any of them drunk upon the street. A temperance society has probably effected considerable improvement in this respect.

Tobacco.—The use of tobacco is rather general: I have noticed that old men are given to snuff; the middle-aged more frequently chew; and the young almost invariably smoke.

Habits of Fishermen.—The fishermen and sailors inhabiting the east end of North-street must, in a great degree, be excepted from the foregoing general description of the habits of the working classes.

As a body, they present many peculiarities; for instance—they associate only with each other; they usually marry the daughters of fishermen, few women not bred in the trade being fitted for the duties of a fish-wife; they employ the whole of their time, not occupied at sea, either in bed or lounging at a corner of the street, in full view of the public-houses, of which there are several for their especial accommodation; and their only enjoyment seems to consist in feasting and drinking, at which they continue as long as their money lasts. In this way they are enjoying themselves in gluttony and drunkenness for one week; and the next, if the weather is unfavourable, they are on the verge of starvation.

The internal economy and arrangement of the houses of the working class often exhibit very remarkable differences in comfort and respectability, which seem to be more owing to the habits of the possessors than to any moderate difference in the wages. And although their food must also vary from similar causes, and from the numbers and necessities of the family, yet the following may be taken as a fair statement of the usual food of the best class of labourers, viz., those who are earning from 12*s.* to 16*s.* per week:—

Food.—The breakfast is porridge, with milk or small-beer; sometimes, but not often, tea, &c.

The dinner is broth, made with pork and vegetables or coarse pieces of beef; fried pork, with potatoes; often salt herrings or fresh fish, which are abundant and cheap.

Families of this class have usually gardens; and they are often well supplied with vegetables, such as green kail, cabbages, carrots, and onions.

The bread in common use is made with a mixture of peas and oatmeal (bannock), or of oatmeal alone (cake); they have either this or common wheaten-bread, with tea, in the evening; and for supper, potatoes or porridge.

This is the best style of living of the labouring men; many of them, such as the second class, with wages from 6*s*. to 12*s*., are not able to live in this manner; they have the same breakfast and evening meal, viz., porridge and potatoes, but their dinner is inferior; it consists of potatoes, with herrings or melted hogs'-lard, pork broth, and sometimes pork. I have seen a large family or this class dining from a dish of mashed potatoes and turnips, of potatoes and salt only.

The almost invariable possession of potatoes arises in some degree from a common practice among the farmers in the neighbourhood of allowing their reapers a small portion of ground for the planting of potatoes in lieu of part of their harvest wages; this ground is planted and attended to by the person receiving it, and when the season is favourable, they have a very cheap stock of potatoes for the year.

Many individuals of the third class are widows and single women, and with the aid of friends, or otherwise, they sometimes manage to live as well as any of the preceding class: they very often contrive to have tea at least once a-day; if there is any family, however, they are not able to get on without assistance; their food is the same as the preceding class, eked out by the pieces of bread, broken victuals, broth or meal, which they receive in charity; they manage to get through very often without being able to tell how they do so. I have inquired of a considerable number of this class whether they have enough, and though they have often expressed a wish that they could afford something better, they have in every case where I have happened to put the question, said that they had at least as many potatoes as they could eat. They have also occasionally complained of stomach complaints, which they attributed to their poor fare.

The fourth class do not differ much from many of the preceding, they just receive so much more charity; and being recognized paupers, perhaps their living may be more regular, such as it is, than the others. Some of them complain of not having enough.

The following is the domestic economy of two old paupers, a

man and his wife, as stated by themselves: they receive 2*s*. a-week from the kirk session, and half a peck of oatmeal weekly during winter from the Ladies' Society; I believe, also, coals occasionally. The woman earns 9*d*. a-week by winding weavers' pirns, and they get broth from two families in the town.

The money is expended as follows:—1*s*. is put aside for house-rent, 6*d*. is expended for a peck of potatoes, 4*d*. for one ounce of tea, and 4*d*. for sugar (which serves them for the week, taking it twice a-day); leaving 7*d*. for salt herrings, fish, coals, soap, &c. They have not had more than 3*d*. worth of flesh in their house for six months.

Such is the condition of the recognized pauper; one of some privation, no doubt, but far removed from actual want.

Other cases of equal or greater necessity occur occasionally, where assistance is neither asked for nor wanted. There is a primary stage in the advance to destitution, and sometimes a temporary and accidental lapse into that condition where this may happen; it may be traced to the feeling that it is a degradation to have received public charity, and that it is only to be sought for, or given, in cases of great calamity, or on the occurrence of old age or infirmity.

I have found that medicines prescribed by me were not procured from this cause; the people preferred to suffer rather than own that they could not pay.

This is a sort of pride said to have formerly been more common, and even characteristic of the county; lest it should disappear entirely, I will not omit the opportunity of recording an anecdote exhibiting the feeling, though it did not actually occur within the town. A woman, aged above 70, who had no visible means of support but her labour, was known to be struggling with growing infirmities; she was seldom able to go out to work, and though she made no complaint, it was feared that she might be in absolute want of food: in these circumstances a lady in her neighbourhood was authorized by the clergyman of the parish to ask whether she would not require parochial assistance: when this was spoken of, the poor creature burst into tears, and said with much feeling, that she had reason to bless God she never rose that morning on which there was not both meal (oatmeal) and water in the house, and while she had this, none of the poor's money should enter her door.

I have also met with a few accidental cases where I imagined public relief should have been, but where it could not be obtained; and it is evident that such must continue to occur, not from any fault of the guardians of the parochial funds, but from the want of means to meet every demand. Indeed I have more than once remarked of a zealous advocate of the present system, that his benevolent feelings constrained him to give freely from his

own pocket what he would not on any account allow from the public funds under his charge.

Causes of Pauperism.—The direct causes of pauperism are old age and infirmity, drunkenness, death, or desertion of the head of a family, insanity and feebleness, or ill health preventing from employment in any remunerating occupation.

There cannot be said to be any manufactures in this town, and consequently there is no body of labourers to be thrown out of employment by fluctuations in trade.

Work can in general be easily obtained by able and steady male labourers; but of late years the employment of machinery has completely extinguished the spinning-wheel, once the occupation and support of aged and infirm *females*. Many of them who cannot sew, or unable for field-work or washing, can find very little to do. The winding of weavers' pirns is so ill paid, in consequence of the very small earnings by weaving, that a woman cannot make more than from $1\frac{1}{2}d.$ to $2\frac{1}{2}d.$ a-day at this work. And even the weavers themselves, making only $1s.$ a-day with their utmost exertions, are on the very verge of pauperism, and are thrown into the list of destitutes by the slightest causes.

Mortality.—There is no registration of deaths in St. Andrew's; and in consequence I have not been able to discover the diseases which are fatal, or the ages at which death occurs.

An accurate account, however, of all the funerals is taken by the sexton; and I have estimated the number of deaths in the town by going over this document very carefully, with the assistance of the church beadle, so as to exclude all the funerals which have come from the country.

The very few cases of deaths where the bodies have been removed to other burying grounds have been ascertained by the recollection of the beadle, corroborated by inquiries at all the undertakers in St. Andrew's. I have thus discovered the dates of these funerals, and having incorporated them with the list mentioned, I feel satisfied that it exhibits the actual mortality.

The total deaths for five years, viz. 1836 to 1840 inclusive, are		Males . .	204
Ditto	ditto	ditto	Females .	234
			438
		The yearly average is, Males .	40·8
		Ditto ditto Females .	46·8
		Yearly average of both . . .	87·6

The population has been computed as 1922 males and 2377 females, which gives a

Mortality of 1 in 47·3 males
And 1 in 50·7 females.

The mean annual mortality of males and females is 1 in 49·1.

If the lower census by Dr. Haldane in 1836 is taken, the mean annual mortality will be 1 in 48·8 of the whole population.

Mortality of the different Months.—The average deaths of each month computed from a mean of five years, viz. from 1836 to 1840 inclusive, are—

January	10·8	July	7·0
February	8·4	August	6·8
March	7·4	September	4·8
April	5·4	October	4·4
May	8.4	November	9·0
June	6·0	December	9·2

Among the deaths recorded, four occurred by accidents, two by suicide, two, if not more, among strangers visiting the town, and a few were old people from the country, who had come into it to reside in their old age. In this way the apparent mortality of the town itself has been slightly increased.

Mortality in Argyle.—I have procured an accurate census of the suburb Argyle, and an account of the whole deaths which have occured there in the last five years, with the view of discovering the effect of the supposed unwholesome effluvia arising from the filthiness of that locality.

The inhabitants are 338, and the deaths 36, or 7·2 annually, giving a mortality of 1 in 47.

Mortality among the "Fishers."—Among the fishermen inhabiting the east end of North-street, there is conjoined both external and internal filth, with irregular habits and dissipation; and with the view of exhibiting the effect of this combination, I have procured a census of this portion of the town. It includes all the inhabitants of the North-street east of the Secession meeting-house, and the Castle Wynd.

The population is 498.

The deaths during the last five years 58, giving an annual mortality of 1 in 42·9.

Diseases.—There are no public records from which to arrive at the diseases prevailing among the labouring population. I have, however, constructed a table, from an analysis of my own practice, showing the relative frequency of some of the more common diseases and the months in which they have occurred. A great proportion of the cases have been among the labouring classes:—

Diseases.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.
Scarlatina . . .	8	6	2	3	9	19	27	24	9	15	16	4	141
Measles	.	.	.	.	.	.	1	10	0	23	46	10	90
Influenza. . . .	27	.	.	.	.	.	.	.	.	.	.	.	27
Hooping cough . .	1	.	.	.	.	.	.	1	2	1	1	1	7
Fever, common continued; typhus and infantile remittant.	12	6	5	8	6	3	11	4	7	4	8	7	81
Do. symptomatic .	2	2	1	3	3	2	0	3	1	3	9	4	33
Bronchitis . . .	12	7	4	4	6	6	7	4	1	2	1	5	66
Pneumonia . . .	1	1	2	3	7	2	2	2	1	0	2	6	29
Phthisis	6	1	1	1	0	7	2	2	0	2	2	1	25
Stomach complaints.	9	4	7	1	4	1	2	4	2	6	3	1	44
Gastritis, peritonitis, enteritis. . . .	1	0	2	1	4	2	2	3	4	2	3	6	30
Diarrhœa and dysentery	6	6	3	5	3	1	4	5	6	5	3	3	51
Organic disease of the brain, apoplexy, paralysis . . .	2	1	4	0	1	2	2	2	2	2	0	0	18
Inflammation of the brain and membranes	.	.	2	1	0	1	1	1	0	0	1	1	8
Hydrocephalus . .	1	1	3	2	2	1	2	1	2	1	0	1	17
Ophthalmia . . .	3	3	3	1	1	3	1	1	0	2	3	1	22
Erysipelas and erythema	1	3	1	4	1	0	2	1	1	3	4	2	23
Rheumatism . . .	2	2	1	1	1	0	1	1	0	0	9	5	23
Diseases peculiar to females. Hysteria .	5	4	5	6	3	8	5	2	0	0	3	4	45
Diseases of the heart. Pericarditis . . .	2	0	3	1	1	0	0	1	0	2	0	1	51
Small-pox . . .	.	.	.	.	1	.	.	.	.	.	.	.	1

Scarlatina. — Scarlatina occurred chiefly in June, July, August, October, and November of 1837. A few cases have also appeared now and then at various periods and localities; it has exhibited a very remarkable difference in severity, which sets at nought all attempts to account for it by natural causes; sometimes being as deadly as cholera, at other times so slight that the children affected have not even been confined to the house. This happens in the same family, or among children situated in every apparent respect alike.

Different epidemics of the same disease vary as much in their general characters; and it is commonly remarked here that there is usually a period of great severity, and another of comparative mildness in their course; this variability of symptom adding to the difficulty of appreciating the effects of external causes. The greatest number of bad cases, however, have been in localities which were dirty and ill ventilated, and I have imbibed a strong impression that, dwelling in such localities

predisposes to a severe form of the disease, although I can urge no definite facts to prove it.

Measles.—All the cases of measles occurred in 1840, in July, August, October, November, and December; it exhibited in its course some very remarkable peculiarities, which in our present state of knowledge regarding the essential nature of this disease, as well as scarlatina, point out the hopelessness of trying to account for them by such supposed causes of disease as are chiefly considered in this Report,—for instance, the first children affected were almost all of the better class, and about five or six years of age. These cases were comparatively mild. After an apparent cessation of the disease for some weeks, it suddenly became general among younger children of all classes, and was now, in many cases, very severe, and even fatal. It attained its greatest degree of severity and extent in the beginning of November, and when it had again almost disappeared, it all at once revived among much older children (viz., from 10 to 14) of the better class, and in these cases it was again extremely mild in its symptoms. I have not been able to form any opinion as to the effect of destitution upon this disease; it has not appeared to have any influence.

Influenza.—All the cases of influenza occurred in January, 1837: it affected all classes indiscriminately, and certainly showed no particular favour to the wealthy.

Phthisis.—It is to be regretted that there are no records by which the comparative frequency of phthisis in the town can be ascertained. I cannot even give the comparative mortality with other diseases occurring here, or indeed any definite facts regarding it; although I feel certain that it is often brought on in the predisposed by indulgence in dissipation, close confinement to work, or living in ill-ventilated localities.

Bronchitis—Is a very common disease among the children and adults of the labouring class; it affords distinct evidence of arising from exposure to cold, and, except that the labouring population are very liable to this exposition in their occupation, it shows no other connexion with pauperism.

Pneumonia.—The same may be said of pneumonia.

Diarrhœa and dysentery appear to result from errors in diet; as well as atmospheric influences in children, it occasionally arises from neglect and improper food.

Fevers.—The fever which appears in St. Andrew's is usually the mild form of typhus: it is not attended with any eruption on the skin; and when death occurs, the usual morbid appearance is in the bowels, which are ulcerated on their internal surface. To show the localities of this fever, I have made a map of the town, on which I have marked the situation of every case of fever which has occurred. These marks are very remarkably grouped in certain situations, viz., in Argyle, Huckster-wynd, and east end of

North-street, and at the row of houses at the Links; all of which localities are already described as the filthiest in the town, or presenting some peculiarity of this kind.

The cases have not been confined to the poorest class inhabiting these localities; and it is quite remarkable that only one case has occurred among the paupers on the poor-roll, being rather less for this class than for the rest of the town. I feel therefore as much warranted in asserting that there is no evidence in St. Andrew's of destitution exerting a direct influence upon the origin of fever, as in stating that it does arise in some degree from impure air.

Rheumatic affections have been most frequent in the month of November; and, considering the small number of cases, it is rather remarkable that some have occurred in that month in each of the five years.

Hydrocephalus has been most frequent among infants; yet I have attended a few cases, and have assisted at the *post mortem* examinations of several more, where the children were at school, and exhibited great precocity of intellect. This may have been the consequence of the disease, or state of brain predisposing to it; but I have so often observed great cerebral irritation in other affections occurring in children who had overworked themselves, in consequence of the high degree of emulation kept up in our public schools, that I have no hesitation in affirming it to be an occasional source of disease.

It is now seen that, as far as I have been able to bring it forward, there is little or no evidence of disease resulting directly from destitution. It does occur, however, from this cause in an indirect manner. Labourers are not usually provident, and they are too often surprised by sickness, without being at all prepared for the evil day. They are well aware that if they once fall into debt, it is often impossible to recover their ground; and they often struggle on, when afflicted with disease, in the hope of thus overcoming it, but only thereby aggravating its severity: in other cases, they are driven back to their work from a sick-bed, at a far too early period of convalescence, thereby provoking relapses and even other diseases. These appear at first sight to be voluntary exposures, and they often are so; but they are also too frequently unavoidable, as well from the feeling attached to the receipt of parochial charity as the difficulty of obtaining it.

I have now stated all the facts which I am able to bring forward, from the very limited field for this inquiry, presented by St. Andrew's; and it must be admitted that they do not allow of any very marked conclusions. The sources of disease, whether inherent in the human body or acting upon it as external causes, are so various in their numbers and mode of action, and even so mutually influential, that it is, under any circumstances, difficult to distinguish and define them; in the present instance, the

labouring classes are in comparatively small numbers to the wealthier inhabitants; and, when in want, they are so generally reached by some amount of relief from public or private sources, that their sufferings must be far minor in degree, compared with that destitution in larger towns, to which so much disease is attributed. The internal economy, too, of many of their houses is good, however faulty they may be externally in certain localities. The constant exposure also of the great bulk of labourers to the open air—the prevalence of gardens, which give even the weaver and artisan a certain amount of healthful recreation—and the almost universal practice among the men, women, and children, of the poorest class of labourers and tradesmen, of working at the harvest, must all tend in some degree to neutralize the hurtful agencies to which they are exposed. To these must be added the peculiarly salubrious situation and general features of the town and locality. The consequence, as proved by the small mortality, is, that there is a very trifling amount of fatal disease, which is to be accounted for by known and controllable causes; and I am not warranted in asserting more than that there appears to be some cases of continued fever, fairly attributable to filth, besides a high probability of an increased degree of severity in some other diseases from the same cause; that some diseases are aggravated or induced—that even death is sometimes to be found among the indirect effects of destitution; and that the greatest mortality of all occurs in that locality where filth and dissipation are conjoined.

There can hardly be a doubt that some of these influences have their origin in the inferior standard of comfort and cleanliness attendant upon poverty. And I do not forget that, although the degree of destitution may not go below that point to which the system can accommodate itself with impunity, even if the limit of human life were attained, there may still be room for the exercise of charity and benevolence as a social and Christian duty. This part of the subject, however, is at present in other hands, and with them I may leave it. I will confine my remarks to the modes which appear most obvious for the removal of those agents, to which disease may be ascribed.

In the first place, the state of the streets and lanes should be improved: this is the department of the magistracy; and the manner is simple; indeed, it was formerly adopted during the visitation of the cholera, in 1832.

It would also be desirable, that destitution of the necessaries of life were obviated without recourse to private charity at all, and I am so sanguine as to believe that, in time, the same benevolent feelings which now prompt to the relief of occasional and paltry wants, and are thereby in a great degree limited and exhausted, would find a higher field, in raising the physical and social condition of the labouring population.

The external condition of all their houses, and the internal economy of many of them, afford so much room for improvement, that the result of a very little exertion would at once be evident and encouraging, if the people were at first directed and assisted in these improvements, so that they might see the change which is within their power; and were they encouraged to keep it up by a judicious method of reward, in a short time new tastes and desires would be created for a higher degree of comfort and cleanliness. Education, also, is within the reach of all, and a little exertion would make its attainment universal. The oatmeal and loaves of the Ladies' Society, now no longer required, might issue from the shop of the bookseller instead of the baker, to contribute to the religious and secular instruction, or to the amusement of the present recipients. In this way many of the supposed causes of disease would disappear, while a more liberal and ready relief would obviate some at least of the cases of disease arising indirectly from poverty. By similar means, also, it would appear possible even to heal the moral cancer of North-street. Very great exertions have long been made for the reformation of its inhabitants, by teaching and preaching among them; yet it must be allowed, they remain the same reckless reprobates as ever. In their case, it is very clear that something more must be done before success can be expected. They must be brought to that point in the social scale where church-going is practised as a respectable ceremony, before they will be affected by moral influences alone; and this will not appear so hopeless a task, if we examine the apparent causes of their present state, which I believe to be in a great degree physical. For instance, the mode in which they dispose of their fish is by hawking them through the town, from door to door; the wives belonging to each boat going together—often four or five in a body—apparently because they cannot trust each other on separate beats. In this way the greater part of their day is spent, and too often wound up with a carouse in a public-house. In the mean time their houses and children are totally neglected; the latter are rarely sent to school; they do not associate with other children; and, tainted by the example continually before their eyes, they grow up into fishermen and fish-wives as profligate and degraded as their parents.

I do not mean to propose a fish-market merely as a specific for this evil, but I feel very confident that if this was erected in the town, and if accommodation was given for cleansing and baiting the fishing-lines, so that it need not be done in the dwelling-houses, thus making their external economy more susceptible of improvement, the women would have leisure to attend to their domestic duties; they would not be continually thrown into their present temptations to drunkenness; the children would be looked after and sent to school; and the men themselves, experiencing for the first time in their lives something like

domestic comfort, would have less craving for their present enjoyments.

In this way the minds of this whole community would become amenable to the lessons of the praiseworthy individuals who have hitherto laboured so vainly among them, and a moral reformation would be added to their physical improvement.

Were this even of no importance in itself, it would at least effect the object to which its proposal is limited in this Report, it would remove the indubitable sources of the comparatively high rate of mortality among this portion of the inhabitants of St. Andrew's.

Such are the few recommendations I feel myself warranted to make in connexion with the facts which have been here stated.

And I have the honour to remain,

Gentlemen,

Your most obedient Servant,

JOHN ADAMSON.

To

The Poor Law Commissioners.

March 16*th*, 1841.

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ON THE SANITARY CONDITION OF THE POOR OF ABERDEEN.

By Dr. A. Kilgour and Dr. John Galen,

Secretaries to the Committee of the Magistrates and Town Council for Inquiring into the Sanitary Condition of the Poor of Aberdeen.

Having been appointed, at a meeting of a Committee of the Town Council with the medical gentlemen attached to the Infirmary and Dispensaries, as secretaries for managing the Inquiry as to the Sanitary Condition of the Poor of Aberdeen, it appeared advisable to us and the gentlemen present not to adhere, in all points, to the form of questions transmitted by the Poor Law Commissioners of England, (it being in many respects not applicable to this town,) but to follow up the views and intentions of the Commissioners as detailed in their Circular of 19th June, 1840, by such machinery as might be best suited to the locality. Accordingly, we were directed to prepare and issue certain Tabular Forms and Queries, having reference to the number of the population attacked with fever, and applying at the different medical charities; their ages; their station of life as indicated by their occupations; and the nature and character of their residences; with the opinion of the medical officers of these Institutions as to the causes of the extension and propagation of the fever, and the means of correcting such circumstances as they might consider as fostering or promoting the extension of disease among the community. And we were directed to prepare a General Report on the condition of the town, to be transmitted, along with the individual Reports, to the Commissioners.

In the performance of this duty, we have found reason to regret that we have not been enabled to ascertain numerically some points of considerable interest; and, in fact, we feel that the information expected in a report of this kind cannot be furnished with unquestionable accuracy until the department of statistics has made more extensive advances, and furnished securer grounds for general inferences.

In this Report we adopt the following order:—

I. Fever, and its statistics, and cholera.

II. The supposed causes of fever, embracing the paving, drainage, and sewerage; the deficient cleanliness of the streets and lanes; the deficient cleanliness and ventilation of dwelling-houses; the too crowded state of the population; poverty, and intemperance.

III. The remedies suggested for these agencies.

1. Fever.

Aberbeen has been visited by three epidemics of fever in the last twenty-two years. The first was in the years 1817-18-19. We have no means of ascertaining the number attacked during that epidemic; but it was so great that the infirmary, which at that time had only two wards for fever patients, admitting eleven patients each, was found altogether insufficient, and two additional places were opened as fever hospitals.

The second epidemic was in 1831-32. During this epidemic two additional fever wards were opened in the infirmary, and accommodation given to fifty-two fever patients, instead of twenty-two as formerly. From the Dispensary Record, we find the following in regard to fever patients for these two years:—

1831, admitted . 705; dead . 15
1832, do. . 1999; do. . 42

The third epidemic may be said to have commenced towards the end of 1837, and extended over 1838-39, and to the present period of 1840.

We subjoin here a Table of fevers at the Dispensary and Infirmary, with the deaths at each, for five years, regretting that, from deficiencies in their respective records, it cannot be extended over a longer consecutive period of years:—

General Dispensary.			Infirmary.	
Year.	Admitted.	Dead	Admitted.	Dead.
1835	355	6	261	18
1836	277	10	407	32
1837	656	34	651	42
1838	757	34	515	10
1839	733	22	575	63

If we deduct from those admitted in the Dispensary, one in ten being about the proportion of those afterwards sent to the Infirmary, it will follow that the cases of fever in each year, at these institutions, have been—

Year.	Admitted.	Dead.
1835	581	24
1836	644	42
1837	1242	76
1838	1222	44
1839	1251	85

In regard to the present epidemic, it appeared to us advisable

to include a period from 1st July, 1838, to 1st July, 1840, because within this period only could we find the information we desired in the Infirmary Register; and we submit the following Tables from the different returns given in to us.

The first Table includes the ages of those applying at the dispensary and infirmary (deducting those entered in the dispensary registers and afterwards sent to the infirmary), with the deaths in the respective ages. We have commenced the series with those of twelve years of age, because under this age children are not admissible to work in factories at full hours, and very few consequently are at any employment. In another Table, most of those under twelve years of age are put down as not engaged in any occupation, and we therefore preferred placing all under that age in one division.

TABLE I.—AGES OF THOSE ATTACKED AND DEAD.

Ages.	Males.			Females.			Both Sexes.		
	Number Attacked.	Number Dead.	Deaths per cent.	Number Attacked.	Number Dead.	Deaths per cent.	Number Attacked.	Number Dead.	Deaths per cent.
Under 12 —	558	21	3·76	498	26	5·22	1,056	47	4·45
From 12 to 20	369	21	5·69	496	12	2·42	865	33	3·82
,, 20 30	250	30	12·	395	27	6·84	645	57	8·84
,, 30 40	139	17	12·23	205	20	9·75	344	37	10·76
,, 40 50	105	40	38·09	146	19	13·01	251	59	23·51
,, 50 60	54	17	31·48	72	10	13·89	126	27	21·43
,, 60 70	23	6	26·09	44	8	18·18	67	12	17·91
,, 70 and upwards	11	4	36·36	19	4	21·05	30	8	26·67
Total . .	1,509	156	10·34	1,875	126	6·72	3,384	280	8·27

The second Table points out the numbers attacked in each of the months in the same period, the same deduction being here given for those sent from the dispensary to the infirmary as in the former Table.

TABLE II.—NUMBER ATTACKED EACH MONTH.

	1838.	1839.	1840.
January . .	..	103	245
February . .	..	82	290
March . .	..	70	294
April . . .	..	79	322
May . . .	..	62	253
June . . .	..	76	224
July . . .	81	106	..
August . .	74	118	..
September .	79	140	..
October . .	56	182	..
November .	79	240	..
December .	91	244	..

In the following Table the object aimed at will no doubt appear to be to ascertain the liability of certain trades or occupations to fever, and the mortality in these. Had the material for this Table been as complete as we desired, it would have afforded us considerable information as to the social condition of the sick, and the disposition of fever to extend by contagion in families. The Dispensary Registers contain the occupation of every patient, or, in the case of wives or children, the occupation of the husband or father, but in the Infirmary Registers nothing is entered but the occupation or trade, if any, of the patient.

We have endeavoured to be as accurate as possible in this Table, but, from the discrepancy in the plan of the registers at the two institutions, we cannot refer to the female column as to be, in all points, relied on, for if the entries, "*married women,*" and "*children not at work,*" had been spread over the occupations of the husband or father, the prevalence of fever *in families* would have been made much more manifest, and given force to the opinion as to the highly contagious nature of the disease. Even the large number of females entered as "*working at factories*" will be corroborative of this to the minds of those acquainted with the domestic state, to be afterwards noticed, of our manufacturing population.

The proportion of "*house servants*" is very great; but it is partly swelled out from families getting alarmed even at a slight illness in servants, and their being in consequence sometimes sent to the hospital as fever, and entered thus, when that is not the disease.

TABLE III.—OCCUPATIONS OF THOSE ATTACKED AND DEAD.

Males.	Number attacked.	Dead.	Per cent.	Females.	Number attacked.	Dead.	Per cent.
				Wives & Children of	178	7	..
Labourers . . .	182	35	19·23	,,	64	4	..
Weavers and Hecklers	102	10	9·80	,,	38	1	..
Blacksmiths, Founders, &c. . .	91	7	7·69	,,	56	3	..
Wrights, Sawyers, Coopers, &c. .	62	15	24·19	,,	27	..	..
Shoemakers . .	50	10	20·	,,	29	..	..
Tailors . . .	29	5	17·24	,,	2	..	..
Bakers and Brewers	12	3	25·	,,	..	..	..
Butchers . . .	7	3	42·85	,,	4	..	..
Gardeners . . .	17	4	23·47	,,	10	3	..
Shopmen and Clerks	18	2	11·11	,,	25	..	..
Carters and Porters	28	7	25·	,,	150	11	..
Seamen . . .	37	6	16·21	,,	14	3	..
Pilots and Fishermen	2	..	..	,,	6	..	..
Painters and Plumbers	9	..	..	,,	5	..	..
Rope and Sail Makers . . .	12	..	..	,,	24	2	..
Masons and Quarriers	25	2	8·	,,	4	..	..
Combmakers . .	30	..	..	,,	..	..	..
Bookbinders . .	2	2	..	,,	..	..	..
Millers . . .	6	1	..	,,	..	..	..
Stablers . . .	3	1	..	,,	1	..	..
Dyers	5	1	..	,,	1	..	..
Barbers . . .	2	1	..	,,	..	..	..
Tobacconists . .	5	..	..	,,	5	1	..
Soldiers and Pensioners . . .	3	1	..	,,	12	1	..
Hawkers and Tinkers	7	..	..	,,	..	..	..
Gas Workers . .	2	1	..	,,	1	1	..
Music Teacher .	..	..	..	,,	32	2	..
Paupers . . .	29	1	..	,,	7	1	..
Workers in Factories . . .	123	13	10·56	,,	..	..	..
Servants . . .	15	2	..	,,	174	6	3·44
Children not otherwise entered .	200	6	3·	Children not entered above .	289	25	8·65
Occupation not given . . .	354	15	..	Married women, do. and widows	467	15	3·21
				Females working in Factories .	222	17	7·65
				House Servants .	14	..	..
				Nurses . . .	29	4	13·44
				Washerwomen .	44	4	9·09
				Sempstresses, Knitters, &c. . .	29	9	31·03
				Paupers . . .	11	1	..
				Trade unknown .			

Several inferences, besides the one noted, viz., the extension of the disease by contagion in families, might be made from the preceding Table; but we do not consider that we are called upon to make these, and we leave the Table to speak for itself.

The Infirmary Register contains no information as to the districts of the town from which the fever cases are brought; and from the imperfect state of some of the returns from the dispensaries, we find it impossible to define in a map those parts of the town most subject to malarious influences; in fact it appears that wherever the poor are collected together, fever, when it occurs as an epidemic, extends its ravages amongst them by contagion. Fever is constantly more or less present in all the districts of the Dispensary; and the extent of the epidemic appears to depend upon the condensation of the population, aided by want of ventilation, poverty, and the other usual remote causes of the disease. Not being able to form any table or map of localities where fever exists, or to connect it in any district with any *distinct and indisputable malarious influence,* we refer to the individual reports, leaving the opinions therein expressed to be weighed by the Commissioners by the amount of facts brought forward in each report.

The cholera visited Aberdeen in August, 1832. Mr. Campbell, who acted as superintending surgeon at that period, has furnished us with the following particulars. The number of cases was 260; and the deaths 105. Of this number 56 cases occurred in a fishing village containing 56 houses, or 112 rooms, with 480 inhabitants, or above four individuals in each apartment, close to the sea and harbour. This village, consisting of two squares of houses, was so deficient in drainage as to call for strong remonstrances from the Board of Health to the magistrates and town council, who are the landlords. At Cotton, a manufacturing village within two miles of the town, there were 28 cases, of which 11 died; and in Old Aberdeen there were 13 cases giving four deaths. Almost all the other cases were in the east end of the town, which includes a part of it inhabited chiefly by the poorer classes.

The appearance of this epidemic was anticipated by the most active exertions of a Board of Health, by whom the town and suburbs were divided into districts, which were visited by a committee of the board; and cleanliness, whitewashing, and the removal of all nuisances effected at the expense of the landlords or of the Board itself. The dread of the invasion of this disease excited even the lower classes to unwonted cleanliness; and on reading over the reports of the district committees, we observed that the internal condition of the houses visited by them was, upon the whole, very satisfactory.

In the following year the state of the town was so healthy that the directors of the General Dispensary brought the gratifying circumstance before the public in their Annual Report, and ac-

counted for it in terms which may be quoted as bearing some reference to the present inquiry.

"As the causes of this diminished sickness amongst those requiring the assistance of the dispensary, the directors believe they may ascribe—

"1st. The cleanliness in the houses of the poor, as promoted by the exertions of the district committees of the Board of Health during the appearance of the cholera in this country.

"2d. The opening of the additional fever-wards in the infirmary, by which those affected with fever obtained ready admission, and thus have been separated from the crowded apartments of their dwelling-houses, and the spreading of the infection thereby prevented.

"3d. A third cause, however, and one which the directors refer to with much satisfaction, has been the full employment of the labouring classes, at such wages as have furnished to them the necessary comforts of life. Whilst they hope that this, the most efficient means of diminishing sickness, will long continue, they would at the same time strenuously put in the view of the landlords of houses oocupied by the poorer classes the great importance of keeping them in the most thorough state of repair and cleanliness, and especially of frequent whitewashing, as tending so much to the comfort and health of the inmates."

II.—Causes of Fever, or of its Propagation and Extension.

1st. *Paving, Drainage, and Sewerage.*

Aberdeen is for the most part remarkably well paved, and ample powers are vested in the commissioners of police for enforcing this in all streets within the boundaries prescribed in their Act. With the exception of a few lanes near the harbour, the town is well situated for effectual drainage. But unless in a few of the principal streets built within the present century, there are no large common sewers. The streets amount in number to 108; and a return from the police states that in all these there are only 28 sewers, measuring altogether 4442 yards. But on examining the police records, it appears that the sewers, from four to six feet deep by two and a half to three feet wide, extend to only 2175 yards; and the others are drains from one foot to three feet deep, and from nine inches to one foot and a half wide. The police state in addition, "There are a great many drains, covered and open, in the streets, lanes, courts, &c., of which we have no list, and it would be very difficult to make one."

The deficiency of large common sewers is attempted to be made up by cesspools. These are most numerous near recently-built houses in streets and squares off the main line of new streets. Rain and surface water, and the water used in kitchens and water-closets, are conveyed into these cesspools.

To a question to the police, "Whether these cesspools are

known to them?" the answer is, "The number is not known, but we believe there are a great many."

The Act under which the police of this town is managed by a body of commissioners contains no powers to tax the inhabitants for the making of common sewers, however necessary; nor, a greater omission still, to compel those opening new streets, or building in them, to put down a sewer.

We do not find, however, in the Returns sent in to us, deficient drainage or sewerage entered as causing or propagating fever; and, in fact, from the declivity of the streets and lanes, and the granite used in paving them, the water runs speedily off, and the town appears superior to many others in drainage.

2d. *Deficient cleanliness of Streets, Courts, &c.*

In the Returns we find several entries on this subject. Aberdeen, like most other towns, had at one time been very closely built; and hence not only the old streets and lanes (the latter amounting to about 60) are comparatively narrow, but there are courts or closes to the number of 168, of which the average breadth is not above seven feet. As nearly all families of the better classes have left courts for more airy residences, the character of courts and closes has much fallen. They are occupied by a much inferior description of tenantry than they were some years ago, and much less attention is given to keeping them clean. They are not only ill ventilated, but they have an open kennel running along them which is the receptacle for all sorts of filth. In regard to ash-pits and privies, they are either remarkably deficient, or these are kept in the worst possible order.

The same remarks apply to almost all the lanes and wynds; and it will be observed from the Returns that the great proportion of the fevers occur in closes or courts, or in lanes or streets which are narrow and very dirty.

By the Police Act, the whole manure, excepting that of stables, and that also of houses in a few streets in the suburbs, is the property of the police. This manure is farmed by parties, the police collecting it at their own expense, and the police funds derive a profit from the manure. The manure is collected by carts every morning from the street-doors, or heads of closes, where it is deposited in boxes, intimation being given of the passing of the dust-cart by a bell attached to it. Where there are ash-pits, these are emptied early in the morning when full, or when the police may think fit.

This plan is well adapted for houses in the line of the streets, but inhabitants of courts and closes are not regular in depositing their ashes at the head of the court, and consequently, where in these there are not ash-pits, the filth is retained in the house till it has accumulated past endurance, or is thrown out in the court, forming an open dunghill. Mr. Fraser, in his Report, refers to

this as a cause of fever in Masson's-court, Justice-street, in particular.

The police state, in the Return furnished by them, that there are 418 ash-pits, of which the manure belongs to them, and only 104 privies attached to these. Now, in examining some of the most densely-peopled streets, and those where the courts are most numerous, the proportion of receptacles for filth is far below what it should be: thus the Gallowgate, a street of 616 yards in length, and containing 44 courts, with an average of four houses in each, has only 17 ash-pits and 10 privies; and North-street, extending to above 500 yards, with numerous courts, and densely peopled by a very low class, has only 12 receptacles for filth and not one privy. None of the houses in these streets, be it observed, are provided with water-closets, and the ash-pits and privies are for the most part the property of the better class of the inhabitants, and are kept locked up from the public.

One of the greatest errors in the Police Act is that by which the Commissioners cannot errect public water-closets or privies in those parts of the town where they may be required. The Return from the police states that there are only three privies open day and night to the public belonging to the police; and 31 belonging to stablers, the latter of which, however, are only open during the day, and are not kept in the best order. In consequence of the deficiency in this respect, the bye-streets and lanes, as well as the courts, are commonly exceedingly filthy; and to keep them clean would require a much greater body of scavengers than the police employs.

As connected with this part of the subject, we may notice two nuisances which are brought under notice in several of the Reports; these are the Harbour and the Denburn.

The latter, which we notice first, is a mill-burn which passes through what will soon be the centre of the town. It is open above, but built with stones in the bottom and at the sides, and it is laid out with cascades, &c., in the ornamental style. In times of heavy rains the stream is full and rapid; at other times the quantity of water scarcely covers the bottom. Into this ornament of the town, which extends to 588 yards, there fall above 45 drains, kennels, or common sewers; and at one part it is the recipient of all the filth from some low houses in the vicinity. The Cholera Board entered a strong complaint against this public nuisance.

The Harbour is a tidal one, with only a very moderate fall. Into the upper part of the Harbour runs the stream above noticed, as also another mill-stream, which, though now covered up in the most of its course through the town, receives a great number of drains, privies, &c., in its progress. Besides these two sources of impurity, the upper part of the Harbour receives the refuse of some large manufactories, and several drains and sewers. All

the sewers and drains of the town terminate in the basin of the Harbour. The consequence of this is that the Harbour is covered with a thick fœtid mud, from which, at nearly low water, the surface becomes covered with bubbles of a fœtid noxious gas, which, bursting, give forth a most intolerable stench that is perceived at a considerable distance in the town.

It does not appear that fever prevails in the vicinity of any slaughter-houses, tanneries, nor burial-grounds, and no entry is made in regard to any of these in any of the Reports.

Aberdeen may be said to contain only two burial-grounds in the town. One of these (St. Nicholas's) is not closely surrounded with dwelling-houses, and it is as neatly laid out as circumstances will admit of. It contains 1A. 3R. 25P. 14Y., imperial measure, and is divided into 2452 graves. The burials in it were—

For 1838 . . .	545
1839 . . .	258
And up to 1st August, 1840 . . .	196

so that it would appear this burial-ground is being forsaken for the cemeteries in the suburbs.

Of the above extent, 1R. 13P. 8½Y., containing 592 graves, is apportioned as a burial-ground for the poor: and the returns to us of the number interred in this space, during the corresponding periods, as above, are—

1838 . . .	394
1839 . . .	122
And up to 1st August, 1840 . . .	100

so that the falling off appears to be chiefly among the poor, arising probably from the circumstance that they can afford to purchase ground lairs in the new burial-grounds, and still more from the poor-rates not paying for coffins unless the body be buried out of the dead-house.

To the questions, "How many coffins are put into one grave in the poor's ground? What is the order in which these coffins are put down, and the quantity of earth between them, as also the depth of the grave to the sole of the lowermost coffin?" the answers are, "The number of coffins put into each grave average from five to six; and the intervals commonly from nine months to one year or thereby. The order in which they are put down is, the one upon the other; the quantity of earth between each is about one inch, and the depth of each grave from nine to ten feet, and sometimes eleven feet."

We have reason to believe, though it is not here stated, that the old coffins are taken up and the new one put in lowermost the former lying about on the ground until the interment of the last body; and the statement of the depth of the grave is, we think, given much beyond what is usually the case.

The other burial-ground (St. Clement's) is also not closely sur-

rounded with houses. It contains 2R. 23P. 19Y., imperial measurement, divided into 1055 graves. Of this space, 5P. 10Y., containing 60 graves, are appropriated to the poor. The total number of funerals here was—

For 1838 . . .	109
1839 . . .	128
And up to 1st August, 1840 . . .	63

Those of the poor were—

For 1838 . . .	9
1839 . . .	6
And up to 1st August, 1840 . . .	5

The rule is the same as to the mode of putting down the coffins as in the former case.

3rd. *Deficient Cleanliness and Ventilation of Dwelling Apartments.*

These are two points which in part depend upon the supply of water, and the construction of the houses; and still more on the habits of the people.

According to the Return of the police, the quantity of water supplied daily, on an average of one week, is 568,800 gallons, but this includes the water furnished to manufactories, so that we have no data to calculate the quantity for each person. Even dividing this quantity, however, by 48,000, which may in round numbers be taken as the population using police water, it is not a high quantity to each, supposing none to be used in the manufactories. The police state that there are 1446 families having water-pipes into their houses, which, multiplied by four, gives 5784 as the population abundantly supplied. All others must draw it from the public wells. The police state that nine courts have a pipe in the court for the use of the inhabitants of the court generally. The police can supply water to any extent, and the poor pay no tax for it.

Mr. Fraser alludes in his Report to the bedding in two lodging-houses never being washed after fever, and where new comers are put into a bed previously occupied by a fever case; but even in the houses of the labouring classes very little attention is often paid to cleaning the bedding or wearing apparel after fever; and when an individual of the family has been removed, the others continue to occupy the same bed, and for the most part become affected with the same disease.

The houses in Aberdeen occupied by the poor and labouring classes are on an average three stories high; and few of these have cellars which are inhabited. The glass in the windows of the common staircase is often broken, and ventilation thereby so far promoted; but in general the houses are not well ventilated; the windows are often small and seldom opened, and the poor, for

the most part, even when fever exists in the house, cannot be induced to keep the windows partially open. An increase of intelligence amongst the lower orders, and the example of cleanliness and purity in others, and especially in the streets and lanes around them, can only eventually lead them to improvement in this respect.

Very few of the houses of the description now noticed are provided with pipes for carrying off the dirty water from the apartments up stairs into the kennel or drain, and hence it is allowed to stand often until it has become putrid. The water and filth, when carried down stairs, are often in part spilt, and the common stair is, from these and other causes, in a state of extreme dirtiness.

Whitewashing the walls, and especially the walls of common stairs, is almost never attended to in the lowest class of houses, and very seldom in those of the labouring classes, excepting where a removal has taken place, when the apartment is whitewashed by the incoming tenant. Frequent removals therefore—a practice very prevalent amongst the labouring population here—however injurious to them in an economical point of view, are of use in ventilating and cleaning houses.

Hitherto rents were paid twice a-year, and were generally paid with great regularity; but of late, in consequence of the frequency of arrears, a practice is creeping in of collecting them in small sums weekly, and a class of landlords, in this way, contrive to obtain even a much higher rent than their premises are worth, whilst, their risk being less, they are entirely careless as to the character of the individuals they admit as tenants, and being sure of their property being let to some persons or others, refuse all repairs, whitewashing and painting.

4th. *Overcrowded Dwelling Apartments.*

This seems to be more generally admitted as the cause of the extension of fever than any other.

We have no correct data for stating the average number occupying one apartment among the poor and labouring classes, but all the Reports that specially notice this cause regard it as very high.

Those who apply for advice at the dispensaries or the hospitals are, for the most part, occupants of one, two, or, at the furthest, three, small rooms. Aged paupers, and widows with young families, occupy chiefly a single garret room; labourers also, with wife and family, occupy one room only; whilst two or three mill-girls generally sleep in one apartment.

Where a family is so far advanced as that two or three members are working, two rooms are commonly rented by them, and used in this way, viz. the father and mother, with the younger children, sleep in the room used as the kitchen, whilst the others sleep in the adjoining apartment, some of them in a bed erected

in it, and others in a temporary bed put down on the floor at night.

Where the weekly income from the combined wages is greater, and especially where there are young men working as tradesmen, there are sometimes three apartments, each with its one or two beds.

Dr. Keith says the "crowding is fearful. I have seen six or eight sleeping in one apartment, with every crevice stopped, and have more than once been nearly suffocated by entering the apartment after several of them were up and out."

Mr. Wood says, "Overcrowded dwelling apartments are very general;" and there are several houses in his district, "occupied as inferior lodging-houses, which are crowded with mendicants or vagrants; and here contagious diseases are always found, if found anywhere in the neighbourhood."

Mr. Fraser also brings to notice the existence in his district of "lodging-houses where beds are procured by vagrants at a low rate, are kept very dirty; and when a patient is removed, or dies, the first new comer is put into the bed previously so occupied, without any measures being taken to prevent contagion."

Dr. Galen says, "The most important circumstance which I have observed, as regulating the propagation of febrile diseases, is *contiguity to the sick*, arising from the overcrowded state of the apartments."

Dr. Dyce says, "In my opinion, contagion has had more influence in the production and propagation of fever than any of the causes specified." He regards deficient cleanliness and ventilation, and too crowded apartments, more as predisposing than exciting causes; and he states that "When fever once has appeared in a poor family, it seldom ceases until all its members have been attacked, as few or no means are taken to check the disease, beyond the removal of those attacked to the infirmary." Dr. Dyce refers to those entered as mill-workers (by far the most numerous class), as proving the extension of fever by contagion among persons occupying the same house or room.

Dr. Kilgour reckons deficient cleanliness and overcrowded dwelling apartments as causes of fever; but states that, of all causes, contagion is most operative in extending the disease. He says, of 482 cases, of which a record has been kept, 284 came from infected houses.

Mr. Templeton says, "An overcrowded state of the dwelling apartments is the chief cause of the propagation of fever."

5th. *Poverty and Intemperance.*

The Queries of the Commissioners contain no reference to those causes of epidemic diseases; but as several of the medical gentlemen seemed to place much stress on these, we added them to the other supposed causes of fever in the blank form we issued.

Mr. Campbell regards overcrowded apartments, poverty, and intemperance as the most general cause of fever.

Mr. Fraser says, "I consider fever attributable to all the causes mentioned, but more especially to poverty and intemperance."

Mr. Leslie says he considers poverty and intemperance as more particularly the cause of fever.

Mr. Templeton regards poverty and intemperance as, in a few instances, assisting in the propagation of fever.

Mr. Wood found poverty as a cause of the disease among widows having children, labourers, weavers, and some others: and that these classes are reduced to extreme poverty when laid aside from work by sickness or accidental causes. He also found intemperance the cause of much disease; and that the intemperate were, of all others, the most liable to be attacked with the worst and most contagious fevers.

Dr. Kilgour mentions intemperance as a cause of fever, and says that "the intemperate and those exposed to poverty and other privations were the most fatal cases."

Dr. Galen says, "When persons exposed, in overcrowded apartments, to contiguity with the sick, take the disease, it has appeared to me to be aggravated by circumstances connected with the individual, as advanced age, previous habits of intemperance, and recent privation of rest, with anxiety of mind."

III.—Remedies suggested for the preceding Agencies, whether as creating or propagating Fever.

Where so much difference of opinion exists as to the primary cause of fever, it cannot be expected that there will be anything like unanimity of sentiment as to the means to be adopted for checking or arresting this malady.

We have read over the remarks in pages 29 and 30 of the "Reports on the Sanitary State of the Labouring Classes, as affected chiefly by the Situation and Construction of their Dwellings in and about the Metropolis;" * and in so far as the suggestions there, and especially those in regard to thoroughfares, lanes, courts, buildings, and drainage and sewerage, are not provided for in the Police Act of Aberdeen, we would urgently advise that they be added in a new one, which, from what we have already stated, is most imperatively called for. All the reports, with the exception of that by Drs. Galen and Harvey, call for an improvement and extension of the police, and we think a committee of the police commissioners, or of the town council, or of both, should be elected annually to act as a Board of Health.

It is almost unnecessary to say that such nuisances as the Harbour and the Denburn, in their present state, should be cor-

* Vide Appendix to this Report, p. 15.

rected at any sacrifice. One large sewer, to convey the whole drainage and sewerage of the town to the extreme end of the harbour, readily suggests itself as a remedy.

Whitewashing the apartments of the poorer classes is recommended in several of the reports; and we think this should be made compulsory on all landlords of low-rented houses, and be done at least once a-year, at the sight of the police inspector.

With respect to the other circumstances, intemperance and poverty, dwelt on in several Reports as causes, or at any rate as means of aggravating fever, we do not consider it necessary to make any remarks here. We refer to the reports themselves for the remedies proposed for these. Mr. Leslie, Mr. Frazer, and Dr. Kilgour recommend better allowances from the poor's funds to the sick poor; and Dr. Keith and Mr. Wood propose an extension of the means of religious instruction and training as a corrective to the physical and moral degeneration of the poorer classes.

Amongst the most important of the remedies suggested, we find that Dr. Galen, Mr. Templeton, Dr. Harvey, and Mr. Wood, all agree in recommending increased hospital accommodation, or some means of separating, absolutely or relatively, the sick from the healthy. We believe there is an unwillingness on the part of patients to enter an hospital; but when once there, they almost invariably feel thankful for the change, and urge their friends, when ill of fever, to go to the infirmary. Unfortunately for many fever patients, they do not take the benefit of the hospital at a sufficiently early period of the disease, and the removal to it in the advanced stage is much more injurious than otherwise.

(Signed) A. Kilgour, M.D.
John Galen, M.D.

APPENDIX.

Extract from the Report of Dr. Arnott and Dr. Kay, on the Prevalence of certain Physical Causes of Fever in the Metropolis, which might be removed by proper Sanitary Measures.

It appears that the magnitude of the evils complained of in the preceding communications has caused occasional and irregular efforts for their removal by the local authorities, which, wanting in most cases the direct sanction of law, and being dependent on the general concurrence of the inhabitants for the authorization of the expenses incurred, have necessarily been inadequate for the removal of the nuisances of which complaint is made. The expenses thus incurred have frequently been illegally charged upon the poor-rates, and not seldom without any public concurrence of the inhabitants, but only with their tacit compliance in the acts of the local authorities: since the law has made no provision for the payment of such charges out of the poor-rates, the

auditors have been unable to allow them, and even the irregular and insufficient efforts alluded to are therefore likely to cease.

The visitation of cholera, and the formation of special boards of health, powerfully excited the public attention to the extent of these evils, and the amount of social mischief, of which they were the fertile sources; and well-directed efforts were at that time made, with considerable success, for the temporary abatement of whatever noxious physical influences were found to impair the well-being of the poorer classes and endanger the community generally. Though these efforts have for some time past ceased to be made, because the special boards of health have been dissolved with the disappearance of cholera, the facts disclosed by the investigations conducted by those boards produced an impression on the public mind which still remains, and which will lead the more intelligent members of the middle classes to welcome any effort which the government may make to procure a legal sanction to their efforts for the removal of these evils.

It does not appear that such authority could be so usefully entrusted to any other public body as the Board of Guardians:—

1. Because the means of inspection necessary to the detection and prevention of the evils complained of already exist in the paid officers of the Board.

2. Because they are a representative body in constant communication with the inhabitants, who are interested alike in the removal of the evils, and in the right application of the funds contributed by them as rate-payers.

3. Because the evils, the removal of which is sought by the exercise of the authority of the Board of Guardians, are such as affect the health of the poorer classes especially, and, by depriving them of ability to labour, occasion their dependence upon the parish, and the Board will therefore necessarily witness both the effects of the evils complained of on the health of these classes, and also be in a situation to ascertain the effects of their interference.

In order to procure the removal of the nuisances described, two classes of powers might be conferred on the Board of Guardians:—

1. Power to procure the temporary cessation of the evil reported.

2 Power to prevent its recurrence.

Under the first class of powers the Board of Guardians might be authorized to direct at the public expense—

1. That uncovered and stagnant drains and ditches, or open and stagnant pools of water, from which fœtid effluvia arise, should be emptied and cleansed.

2. The drainage of any open common or waste land which appeared, upon the report of two of the medical officers, injuriously to affect the health of the inhabitants or to cause ague.

3. The removal of accumulations of refuse thrown from the houses, or otherwise collected in the streets, courts, lanes, and entries, and the cleansing of all surface drains of such streets, courts, lanes, and entries.

4. To direct the removal of accumulations of filth from cesspools, privies, piggeries, cow-houses, stables, &c., yards of dwelling-houses, and houses, whenever two of their medical officers certified in writing that the state of such places was likely to prove injurious to the health of the neighbourhood.

5. To cause from time to time an inspection of the lodging-houses at which paupers, vagrants, and mendicants are reported by their officers to lodge.

6. To direct the whitewashing of the rooms of such houses at least twice every year, and if, after notice to that effect from the clerk of the Board, dated ten days previously, the inspector shall find the occupier has neglected to comply with such directions, to authorize the Board to cause the house to be whitewashed by such persons as they may appoint for that purpose, and to recover the cost of such whitewashing and cleansing by application to the occupier or owner of such property, or by a summary mode upon refusal of either of them.

7. When the inspector shall report that three or more families live under the same roof, to authorize the Board to cause such house to be whitewashed and cleansed in a similar manner at least twice annually, at the expense of the owner.

8. Empowering the Board to direct two public surveyors to examine the state of any house which shall be reported to be so dilapidated or insecure as to threaten the safety of the inhabitants or the public, and upon receiving such report, to remove the inhabitants from such house, and to direct the owner of such property, under penalties to be summarily recovered, to cause such habitation to be rendered safe, or to be removed, as may seem most expedient to the Board on the report of the surveyors.

9. To prevent the habitation of houses which have for such causes been deserted, and from which no rent is on that account obtained by the landlord.

We cannot close the Report without remarking that the extirpation of the evils arising from these defects in the sanitary police of large cities cannot be effected unless powers are confided to some authority selected by the legislature for the prevention of those grievous defects to which our attention has been drawn. The imperfect drainage, or the absence of all drainage whatever, the want of a proper pavement in the street, &c., are frequently found in districts which have been recently covered with masses of new habitations huddled together in confused groups, with streets so narrow, and courts so completely enclosed, as to prevent the dilution of the malaria arising from various sources within their precincts by the ventilation of free currents of air.

Many of the most recently erected suburbs of our great cities exhibit so complete a neglect of the most common and obvious precautions, that it can be attributed only to the fact of the increase of the population being so rapid that the owners of such property can command tenants, notwithstanding the absolute neglect of sewerage, and the absence of many precautionary arrangements absolutely necessary to ensure health. We do not suppose that the means of preventing the recurrence of such evils can be immediately applied; and the circumstances under which this Report is prepared do not enable us to do more than briefly to allude to the nature of the powers which it appears to us to be desirable that the legislature should confide to some competent authority, whenever this subject can obtain the attention which its great importance justly demands.

We do not attempt to determine to what body these powers should be confided, nor do we consider it necessary to describe the exact mode of

their operation, but it seems most expedient that to some authority should be confided power to cause the survey of land (in the vicinity of towns) likely to be built upon, and to enforce certain conditions on the owners and lessees of such property.

Thus no building should be commenced until plans of the intended streets were prepared, describing the situation of every block of houses for such an extent of area as should be required by the Board entrusted with the regulation of the precautionary measures; duplicates of such plans should be deposited with the Board, and no building should afterwards be erected on the site otherwise than had been delineated in the plans.

The Board should have authority to prevent the formation of streets of less than a certain number of feet in width, and to prevent the formation of courts having communication only by means of covered entries, or alleys of less than a definitive width, with thoroughfares and streets.

It should also have power to prevent the habitation of cellars in any houses erected after the period of the enactment.

Authority should be given to require that, before any buildings are erected on any plot of ground now unoccupied or only partially occupied with houses, such plot of ground shall be drained by such sewers as the Board shall deem sufficient; and, provided any owner or occupier of such land should proceed to build without having provided such sewers as the Board should direct, the Board should have authority to cause such sewers to be made at the cost of such owner, and should be empowered to recover the cost from him.

That the Board should have authority to require that every habitation should be provided with a drain communicating with the main sewer, with a proper receptacle for every kind of refuse.

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SANITARY REPORT ON THE TOWN OF INVERNESS, NORTH BRITAIN.

By George Anderson, Esq., *Solicitor in Inverness.*

Before answering in detail the printed queries to which returns have been required, the following general observations on the situation and climate of Inverness may probably render the after-details more pointed and intelligible.

This town stands on a nearly level plain, within a mile of the mouth of the river Ness, which falls by a short and rapid course (of only seven miles) into the Moray Frith, from the great inland reservoir of Loch Ness. Traversed by the river in a direction from south-west to north-east, this plain, which consists entirely of *sand* and *gravel*, (covered with a slight coating of vegetable mould, seldom exceeding two feet in thickness,) is skirted on the south and east by a gravel terraced bank, which rises from 80 to 90 feet above the river, and on a detached portion of which formerly stood the ancient castle of Inverness. Underneath and close to the walls of this castle the oldest buildings of the town were clustered in the uncouth and irregular manner characteristic of most towns similarly circumstanced; and those houses were usually crowded together in courts or closes, with their gable-ends and a general gateway towards the public road or street. As the population increased and times became more peaceable, the dwellings of the old burghers, many of whom were Flemish and Danish merchants,—monopolists of the trade here and at other points along the north-east coast of Scotland,—began to branch off from the protecting nucleus of the castle, along the open plain towards the east and north; and in the year 1685 the river, close under the castle wall, was crossed by a handsome stone bridge, built by means of public subscriptions collected from all parts of the kingdom, which thus gave access to the western side of the plain. A wooden bridge still farther down the stream, built in the year 1808, has increased the means of communication, and all along the western bank are the newest parts of the town, chiefly occupied however by the poorer classes of inhabitants, the houses being in general only *one story* high and covered with *straw thatch*. The outskirts of the place also, in all other directions, consist of dwellings of a similar description, the suburbs on the limits of the ancient royalty of the burgh exhibiting much the appearance of detached villages, passing under the local names of the villages of Haugh, Lochgorm, Merkuich, Green of Muirtown, and Tomnahurich-street.

From the very open or porous character of the subsoil the grounds in and around Inverness are seldom retentive of surface water, and as there is also a considerable inclination of the plain towards the river, a good *drainage* could be easily procured from almost every part of the town. With the exception however of the principal streets or thoroughfares in which the best houses and shops are situated, there are but few covered common sewers, and in the suburbs generally and from all the side alleys and closes rain-water and other accumulations pass away only by means of surface or open drains. Hence among the dwellings of the poorer classes *stagnant pools* very frequently occur, and the drainage in these places, naturally bad enough, is often purposely obstructed by the people for the purpose of adding to their *dung-hill* heaps or *middens*, which, as manure for their potatoe-grounds, form the chief treasures of the poorer cottagers and labourers. A gas and water company established some years ago has afforded a great increase of comfort and cleanliness to the buildings along the main thoroughfares; but to the back closes and suburbs such *luxuries* have not as yet been extended; and hence the want of order, decency, and comfort, are painfully observable among them. *Water-closets* and public *privies* are both rare, the consequences of which, morally as well as physically, may be easily imagined, and no doubt much infectious disease, if not occasioned, is harboured and perpetuated by the want of them. The disgusting state of all the bye-lanes and roads about Inverness proves what the people must suffer on this account.

As already stated, the dwellings of the humbler classes are in general only *one* story high; that is, they consist of a ground-floor divided into two or three small apartments, with two or three garret-rooms in the roof above, which is covered externally with turf or straw thatch. Such buildings are often intermixed with houses of a better description, and from being but seldom painted or whitewashed, they have not a cheerful or cleanly aspect. Most of them are provided with small back courts or gardens, in which a few common vegetables are grown; but their principal value is as stances for *pig-houses* and dunghills, which, in many instances, are improperly allowed to rest upon or touch the dwelling-houses; while it is not to be disguised that cases exist where the *pig*, the *horse*, and *cow*, all live under the same roof with their owners, and the manure allowed to accumulate there also. It is very common for a labourer's *family* to have only a single apartment or a room and a closet, while one room is the usual accommodation rented by single persons, and that frequently without a particle of ground attached.

Amidst such a combination of unwholesome circumstances it is rather wonderful that malignant fever does not very greatly prevail in this town. It is scarcely ever entirely free of it, and occasionally it breaks out in some of its most contagious and

dangerous forms, such as measles, scarlet and typhus fever, and sometimes even small-pox, spreading upwards among all classes of the community. The writer is strongly inclined to believe that the comparative healthiness of Inverness, notwithstanding its low and undrained position, is owing chiefly to the salubrity of its climate, as influenced by its situation and the natural porousness of the soil.

Lying near the inland termination of the Moray Frith, and well protected by surrounding hills, the cold north-east winds which (especially in spring) blow from off the German Ocean, are felt much less severely here than more to the east and south; while placed, as the town is, at the end of the Great Glen or Caledonian Valley, which, with its lateral mountains, acts as a mighty tunnel to carry along and conduct across the island the softness of the west-coast breezes without their usual excess of rain, and situated between the Moray Frith and Loch Ness, the whole district partakes of a free and mild atmosphere. Hence snow seldom lies above a few days on the plain around Inverness, and the severity of the frost is less than is frequent about Edinburgh, or even London. The constant flow of a broad rapid river, which was never known to be frozen through the centre of the town, must also contribute very essentially to keep up a due circulation of air and to promote the health of the inhabitants, and the regular sea-breezes, which daily affect the lower parts at least of the town, must add to its salubrity.

During the prevalence of cholera in 1832 and 1834, a Board of Health was organized which applied very stringent means for removing filth, and cleaning, ventilating, and whitewashing the dwellings of the poor, by which they were much benefited; but under ordinary circumstances, such an exercise of authority would be resisted by the people, and the magistrates in fact dare not attempt it.

The artisans and labourers of the place are generally frugal and sober, and their diet is of the most temperate description, consisting of oatmeal pottage and potatoes, qualified by fish, with which Inverness is abundantly and cheaply supplied from the haddock and herring banks in the adjoining frith. The indigent poor, however, are much worse off, and but for the known liberality and charity of their poor neighbours a little easier in circumstances than themselves, their situation would often be most deplorable. As it is, they can only be said to *exist*, certainly not to *enjoy* any of the comforts of life; while, from he want of cleanliness in their persons and dwellings, they are very seldom visited at their own abodes by their betters. In fact, the opinion is by no means rare, that it is improper and impolitic, and tends to increase pauperism and crime, for the more wealthy systematically to inquire after or take much *personal* trouble about their poorer neighbours, who are hence but seldom cheered in

their wretched dwellings by the presence and advice, or the *alms* of their superiors.

The Kirk Session funds (consisting of collections at the established churches, and the produce of specific mortifications), being, with about 200*l.* annually, at the disposal of the magistrates of the burgh, the only sources of *public charity*, afford but mere pittances, and that but to a portion of the poor, generally not exceeding 2*l.*, the greater number getting only 1*l.* a year. The inadequacy of such pittances to support life, and pay room-rent, &c., especially in seasons of scarcity or sickness, has called forth, at different times, various benevolent schemes, such as a public soup kitchen, a dispensary for the sick poor, and a ladies' district visiting society; but none of these excellent institutions, dependent at they are on the voluntary contributions of the inhabitants, (amounting in the town and parish to about 16,000,) have, with the exception of the dispensary which still subsists, maintained a footing for more than a few years, or been able to supply the necessities of an increasing pauper population. The Ladies' District Visiting Society (instituted in the year 1835) gave relief for about three years to from 800 to 1000 poor persons in the town of Inverness alone, exclusive altogether of the poor in the *landward* part of the parish; and occasionally they have had even 1200 individuals on their list who were considered by the society as *objects of charity*, but very many of whom, it has been maintained, would not be entitled to support under the *Scottish Poor Laws*. From the society's funds having gradually declined, and the church collections considerably fallen off, the Kirk Session, on whom the charge of the poor actually devolved in November, 1837, came to be "unanimously of opinion that some more permanent measure for the support of the poor than any hitherto resorted to in this place is imperatively called for." The Kirk Session were led to adopt this opinion from "considering the number of destitute persons to whom they are unable to give any assistance from the limited nature of their funds and the small amount which, for the same reason, they are able to give to those actually upon the list; and considering, besides, that the *voluntary associations*, which have been formed from time to time for the support of the poor, have uniformly failed of accomplishing the object they intended, from the want of public support of sufficient *extent* and *permanency*." They therefore instructed their agents to furnish the Session with a detailed report on the Scotch law for imposing and levying an assessment for the poor; the mode of management adopted in other parishes similarly situated, and also on the extent of pauperism in the town and parish of Inverness.

The Report which was in consequence furnished to the Kirk Session under this permit was afterwards published, so far as it related to the *pauper statistics* of the parish; and was the origin

of a minute and careful scrutiny as to the numbers and condition of the poor by a paid officer, whose information was subsequently revised and corrected by district committees, appointed under authority of the landward heritors, the magistrates and town council of the borough of Inverness and the members of the Kirk Session; these three bodies composing the board of legal administrators or guardians of the poor.

The results of this investigation ultimately demonstrated that there existed in the town and parish a mass of pauperism which the existing charities were unable to relieve, and in consequence, after a struggle and much discussion, a legal assessment of 1600*l.* was imposed at a statutory meeting of the board, (held on the 4th February, 1840,) for supporting the poor for a year, and defraying all relative and previous claims and expenses. Officers were appointed to collect and distribute the fund, and a large committee named to revise the applications for relief, which were lodged in the form of printed schedules properly filled up; and that committee, after a most strict and careful investigation, reported at the annual statutory meeting this year, (3rd February, 1841,) to the effect that they could *not reduce* the list of poor entitled to *permanent relief,* on account of great age, infirmity, and sickness, such as permanently to prevent the parties from earning their livelihood *below* 470, almost the whole of these being in a state of the greatest destitution, and that exclusively altogether of those who required only *occasional relief.*

In the course of last year, however, the discussions which had taken place in the parish and generally throughout Scotland, in regard to a legal provision for the maintenance of the poor, aroused very strongly the feelings of the people, especially of the smaller house proprietors in Inverness; and those who conceived the imposition of a legal assessment to be attended with danger, and as introducing an evil system from which it would be impossible afterwards to retract, stirred up much hostility to the measure, and in consequence not a fourth part of the sum assessed for could be collected.

The poor, however, had been supported for about six months by the Assessment Fund, connected with that of the Kirk Session, and public begging suppressed, the paupers having agreed with the utmost readiness to discontinue their wandering habits on being assured of support at their own houses, and on seeing that, under the *legal* system, even the *bed-ridden* among them were not neglected.

Some of the principal proprietors in the parish are *non-resident,* and part of the property, both in town and country, is in the hands of trustees or creditors; and as neither of these classes can be reached under any *voluntary association,* the advocates for a legal provision for the poor have very strongly urged that, in the present advanced and complex state of society, the poor cannot be

adequately provided for, and that no fair or equitable mode of contribution can be devised or permanently kept up without unequal pressure on some one class, and especially on the resident householders, or tenants and persons in business, except by means of a *legal compulsory assessment.* Their views, however, have been disregarded; and as the principal heritors in the parish appear disposed to allow the less wealthy classes to arrange the *mode* of supporting the poor among themselves, a return has been made to the old voluntary subscriptions and casual almsgiving; and, chiefly through the votes of the smaller house proprietors, called *feuars,* the measure of assessment has been stopped, at least for the present season.*

The circumstance that none of the neighbouring parishes are assessed, and that in consequence a local assessment in Inverness would be offering a premium to the influx of strangers to acquire a legal settlement here, has strongly influenced some in falling back on the old practice; while many others labour under the impression that a new and general legislative measure for Scotland is about to be passed, for which it is advisable for them to wait; or that, as the law at present stands, the list of paupers can be greatly reduced; and that, besides, they are under no obligation to provide for any of the poor, but such as are totally unable to earn *anything* for their own support!

It is proper here to remark, that there are no causes in the trade or commerce of Inverness strongly operating to produce an undue annual increase of poor in the town or parish. There are no manufactures or special trades carried on to any considerable extent, subjecting the population to sudden impulses or occasional distress from the want of employment. The lower orders mainly consist of artificers and *labourers,* dependent on the rural prosperity of the neighbourhood, and the moderate commercial traffic of the town; and it is believed that *pauperism* increases much slower among such a population than in manufacturing districts. The only considerable source of an unusual addition to the poor of this parish likely to occur is from the poor hamlets in the country. It is by many believed that numbers of the poor peasants or *cottars,* who, under the new system of management pursued in regard to Highland properties, are now in course of being removed from their old possessions, flock into towns, and by contriving to dwell "unbeggared" there for three years afterwards, become paupers, entitled to parochial support in their new residences. To a limited extent this is true, especially as in the tide of emigration now going on; the young and able among the rural population endeavour to get abroad, while the aged and

* The committee's report to the meeting of legal administrators, in February, 1841, demonstrated that an assessment of 1000*l.* would yield but a scanty and bare subsistence, even to the *legal poor* of the town and parish, apart altogether from other objects of charity.

infirm are left at home. But the evil thus complained of is much exaggerated; and the cases of the poor persons lately inquired into in Inverness show that the large majority of them are individuals who were either born or had a long industrial residence in the parish; and as *females* greatly preponderate over *males*, very many of them are old domestic servants, unable to work, and whose wages never were sufficient to let them save a fund for their latter days' support.

The foregoing general sketch, it is hoped, will render the answers to the following queries more explicit; and in preparing those answers the writer has to acknowledge his obligations to his medical friends and townsmen, Dr. John Inglis Nicol, present provost of Inverness; Dr. Hugh Fraser, medical officer to the Inverness Prison Board; and Dr. R. A. G. Manford, who acted as professional secretary to the Board of Health here during the visitations of cholera in the years 1832 and 1834. The first has not answered the queries in detail; but he has favoured the writer of these remarks with the following brief and graphic statement, which he has no objections should be made public as on his authority.

"Inverness is a nice town, situated in a most beautiful country, and with every facility for cleanliness and comfort. The people are, generally speaking, a nice people, but their sufferance of nastiness is past endurance. Contagious fever is seldom or ever absent; but for many years it has seldom been rife in its pestiferous influence. The people owe this more to the kindness of Almighty God than to any means taken or observed for its prevention. There are very few houses in town which can boast of either water-closet or privy; and only two or three public privies in the better part of the place exist for the great bulk of the inhabitants. Hence there is not a street, lane, or approach to it that is not disgustingly defiled at all times, so much so as to render the whole place an absolute nuisance. The *midden* is the chief object of the humble; and though enough of water for purposes of cleanliness may be had by little trouble, still the ablutions are seldom—MUCK in doors and out of doors *must* be their portion. When cholera prevailed in Inverness, it was more fatal than in almost any other town of its population in Britain.

(Signed) "JOHN INGLIS NICOL, M.D."

The information supplied by the other two medical gentlemen will be found, with their names attached, in the answers to the different queries.

It is only further necessary to add that the NORTHERN INFIRMARY at Inverness (as it is called) is an excellent and well-conducted establishment for the sick poor, but not exclusively for those of the town, as it is the only infirmary in the whole northern counties of Nairn, Inverness, Ross, Sutherland, and Caithness. Upwards of 300 patients pass through it annually, and formerly the managers relieved nearly as many *out-door* patients in the

town of Inverness; but the number of such is now reduced to about 120 since the establishment, in 1832, of the Town's Dispensary for the sick poor, which affords a great deal of gratuitous professional attendance and medicines *at their own houses*, the number of patients under the charge of the dispensary for the year ending 31st December, 1840, being 418, the number of visits to them at their dwellings 980, and those treated at the dispensary being 226.

A sketch or ground-plan of the town accompanies this Report, with the view of showing the positions of the suburbs, and of the localities where the poor are most densely congregated, and which are coloured red.

Humbly reported by,

G. ANDERSON.

To *The Poor Law Commissioners,*

Inverness, 2nd March, 1841.

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REPORT ON THE SANITARY CONDITION AND GENERAL ECONOMY OF THE TOWN OF TAIN AND THE DISTRICT OF EASTER ROSS, MADE TO THE POOR LAW COMMISSIONERS.

By James Cameron, Esq., *Surgeon*, Tain.

Gentlemen,—In compliance with your request, I propose in the following pages to give a Report, which I trust will be found faithful and correct, respecting the sanitary condition and the general economy of the labouring population of the town of Tain, and of the several parishes that compose the district of Easter Ross.

The county of Ross is situated within lat. 57° 8′ and 58° 10′ north, and between long. 4° and 5° 46′ west. Its extreme length is 85 miles; it comprises 2434 square miles, exclusive of the island of Lewis; it is bounded on the south by Inverness-shire, on the north by Sutherland and the Dornoch Frith, on the east by the Moray Frith, on the west by the Western or Atlantic Ocean.

Its surface is much diversified: the lowest point is about the level of the sea; the loftiest point is Ben Wyvis, about the middle of the county, the height of which is 3720 feet above the level of the sea. In Easter Ross the highest point is the Hill of Strui, in the parish of Edderton, 1041 feet above the sea-level. The western division is mountainous and deeply indented with glens and lochs. The form of the eastern division is that of a plain promontory, terminating in a low rocky headland called Tarbat Ness, or Tarbat Point, and its surface on the west is hilly, and toward the east slightly undulating. This district, to which I now limit my observations, contains no navigable river or piece of fresh water of any considerable size. The streams are torrents, brooks, or artificial drains; with the exception of Lochslin, the lakelets are what are commonly called mill-dams; and, in consequence of recent drainage, there are few stagnant pools that deserve particular notice. The prevalent rocks along the southern coast, the outlines of which are singularly rough and bold, are red sandstone and limestone; the northern coast is bounded by stripes of white sand and sand-hills, covered here and there with bent, stunted heath, and the sea-daisy. The soil is various: in the low lands it generally consists of clay and loam; in the undulant parts of *detritus*, or a mixture of red and black sand; and, in the higher declivities, of a mixture of vegetable matter and small siliceous stones. The climate is very variable: about one-fifth less rain falls in Easter than in Wester Ross. The quantity of rain which fell at Tarbat Ness Lighthouse during 1840, as indicated by the weather-gauge, is 20·94 inches. The average

quantity of rain which falls in Scotland appears to be about 31 inches; and the average quantity for Easter Ross is about 23 inches. The most prevalent winds seem to be the westerly and south-easterly. A damp and cold east wind generally prevails in the months of May and June; fogs, proceeding from the east, are most frequent during the end of autumn and the beginning of spring; thunder-storms and showers of hail are unfrequent; the air is pure, bracing, and salubrious; the water is generally excellent, especially in the vicinity of the different declivities, where springs of the purest water abound, some of which are highly chalybeate. In those flat places commonly called *lōns* the water is less pure, though generally reckoned wholesome. There is no mineral-work apart from quarrying and tile-making recently introduced, though a stratum of coal was long ago discovered at Portandrui, in the parish of Nigg.

The labouring inhabitants are of Celtic origin, with comparatively little intermixture, and, with the exception of a few artisans and shopkeepers, they are all employed in field-work or in fishing. There are seven villages inhabited by fishermen.

The common food of the inhabitants is chiefly vegetable, consisting of potatoes, oatmeal porridge and cakes, and brose. The labouring classes seldom taste flesh or fowl, except on particular occasions, such as weddings, christenings, and funeral dinners, and on New-year's Day, which is their only holiday. In general they are able occasionally to buy fish, which is both plentiful and cheap,—salt herrings and dried fish in winter, and cod and haddock during the summer season. The poorest class are obliged, in seasons of scarcity, to draw their subsistence from shell-fish, such as crabs (partans), limpets, periwinkles, cockles, mussels; and from sea-weed, such as the *Fucus palmatus* (in Gaelic, duiliasg), the *Fucus esculentus*, and the *Fucus pinnatifidus (pepper dulse)*. Some of these, indeed, appear at the tables of the rich, and are considered *delicacies*. The potato is unquestionably the chief article of diet, and may well be styled "the staff of life" in this district. The people are almost wholly engaged in its cultivation during the months of April and May; and there is probably no part of the United Kingdom that produces potatoes more grateful to the taste or of a more nutritious quality. Tea and coffee are the principal luxuries, though they are now, fortunately, become so common as hardly to deserve that name. Among the men the habit of snuff-taking is almost universal, and of those who do not take snuff the most part smoke, the tobacco-pipe having come more into use since the visitation of cholera.

The agricultural inhabitants clothe themselves in corduroys, and the fishers in woollen stuffs; and in general they are both decently and warmly clad. Cleanliness is not their characteristic virtue, but unquestionably it is becoming more common

among them, and they are rapidly acquiring habits of neatness, order, and taste, with respect to both their persons and dwellings. Dunghills and cesspools are now but seldom seen about the fronts of their cottages, and cattle have ceased to find shelter under their master's roof. With respect to their houses the chief defect seems to be a want of ventilation. The windows, which are often composed wholly of wood, are far too small, and are far too seldom left open; and I need hardly add that the want of a free circulation of air, besides predisposing to disease, is most prejudicial to invalids, and especially to the bedridden. The want of a neat and well-ordered garden is also a glaring defect about cottages in this district; and I am convinced that proprietors could scarcely do their cotters a greater service, with respect to their health and morals, than by encouraging among them a taste for horticulture, both culinary and ornamental. Among the working population the period of daily labour extends from 5 o'clock A.M. to 6 o'clock P.M., with the intervals of an hour for breakfast and an hour for dinner. The only regular holiday throughout the year is New Year's Day, O.S. Among adults amusements or games of every kind have almost disappeared; and now their only recreation, if such it may be called, seems to be absolute cessation from labour. Doubtless they have of late greatly improved as to enterprise and habits of steady industry; but while they have lost much of that laziness and waywardness imputed to the unmodified highlander, I fear they have lost also much of his free and serenely joyous spirit. It should be remembered, however, that they are at present in a state of transition, which, when complete, will elevate them in the scale of civilization, and may render their condition happier and more secure.

The state of education in this district is lamentably low: the schools seem to require a more searching and vigilant superintendence, and the system, generally, is far in the rear of modern improvement. The circumstance that Gaelic is the vernacular, and that the business of tuition is conducted wholly in English, presents a formidable obstacle; yet far too little is done, or attempted, towards obviating it. During the summer months especially the schools are thinly and irregularly attended, and no well-devised attempt has been made to promote the secular instruction of adults. Throughout the district there is no Mechanics' Institute, School of Arts, or similar institution; and I know of only one library designed for the poorer classes, namely, that connected with the Secession-Church in Nigg.

The moral statistics of this district are reckoned very creditable to its inhabitants: the principal immoralities appear to be *petty theft* and *lying*. Valuables are very seldom stolen; and with respect to the latter vice, it seems very often to originate from an imperfect understanding of English, and a love of what is novel

and marvellous. A habit of whiskey-drinking, once so common, is now happily become rarer, in consequence of the vigilance of the magistracy in discountenancing and putting down low "change-houses." Conspicuous crimes are almost wholly unknown; travelling is perfectly secure; the inhabitants use no particular precaution against nightly depredation, and hospitality has lost few of its ancient honours.

The labouring classes are generally a healthy people, well formed, robust, and active. Much of the mortality among them is attributable, besides the ordinary causes, to want of seasonable medical aid, and to improper and empirical modes of treatment.

Their bearing is independent; their manners are simple and naturally polite; they have a proper sense of personal dignity; they are keenly alive to either injury or kindness; and they are lastingly grateful for sympathy and attention.

Having made these brief preliminary remarks, I now descend to details, reserving for the conclusion of my report such reflections and suggestions as may seem to me most worthy of consideration.

Easter Ross consists of nine parishes, viz.: Tain, Tarbat, Fearn, Nigg, Loggie Easter, Kilmuir Easter, Rosskeen, Edderton, and Kincardine.

The parish of Tain is bounded on the east by the parishes of Tarbat and Fearn, on the west by the parish of Edderton, on the south by Loggie Easter, and on the north by the Dornoch Frith. Its greatest breadth is four and a half, and its length ten, miles. A great proportion of the parish consists of a large tract of sand, called the "Fendom," lying along the Dornoch Frith for a distance of six miles, wholly unfit for any purpose except for the grazing of a few sheep. There is also in the parish a considerable proportion of peat-moss and hill-land uncultivated; the rest consists of arable land and wood. Altogether the parish of Tain is not so fertile in corn as the surrounding neighbourhood; the valued rental of the parish is 3650*l.*, exclusively of the revenue of the town. There are no minerals dug in this parish. The royal borough of Tain is situated on the south side of the Dornoch Frith, being distant from it about a quarter of a mile. From the hill of Tain, the altitude of which is 780 feet above the level of the sea, and which lies about two miles to the west, there is a gradual but distinctly perceptible slope. On the edge of this slope stands the town, which commands a magnificent view, embracing the lofty and many-shaped range of the Sutherland mountains, the sandy Firth of Dornoch, and a wide extent of sand and heath, bounded by the western outline of the German Sea. The population of the parish of Tain, according to the recent census, is 3158: of this number 2176 belonged to the town, and the remainder to the country. The population of the parish consists principally of those employed in agricultural pursuits, of tradesmen, shop-

keepers, and fishermen. There is only one village in the parish, viz., the fishing-village of Inver.

The town of Tain has been lately lighted with gas, which has also been introduced into almost all the respectable houses. The town is but indifferently supplied with water, from draw-wells and a few springs. That procured from the springs, which are rare, is of excellent quality; but that from the draw-wells is inferior.

There are two or three covered sewers; but these are not sufficient for keeping the town clear of impurities. There is a piece of drain here and there, but very inefficient; and it frequently happens, during a heavy fall of rain, that the streets and roads are covered, and many of the houses inundated. There are three courses of water that run through the town. In summer they are scantily supplied; but in winter they are sometimes converted into torrents. They are in a great measure undefended, and in some places overflow their banks after heavy rain. The courses are not kept clear, and, in consequence, filth proceeding both from animal and vegetable matter is allowed to remain in them. By proper management these courses would prove very beneficial to the town; and at a moderate expénse might be made to assume a different aspect, tending to beautify the town. The streets and lanes are very irregularly placed; and, with the exception of a portion of the main street, they are all unpaved.

In front of the houses of the poorer classes the channels of the streets and roads are not kept open, water being allowed to remain in a stagnant state, and all sorts of refuse being thrown into these channels, and collected there in heaps, in order to form dunghills. There are numerous houses in a decayed and useless state, which are converted into reservoirs for all sorts of filth. There are various causes which render the collecting of manure profitable to the inhabitants: their food principally consisting of potatoes, of which vegetable they raise large quantities, it requires all their ingenuity throughout the year to collect a sufficient supply towards a succeeding crop; and the farmers in the neighbourhood are in the habit of purchasing cart-loads from them, for which they pay from 1*s.* 6*d.* to 2*s.* 6*d.* per load. Thus the greatest pains are taken by the inhabitants to procure and collect impurities of all descriptions; such as ashes, dirty water, decayed and decomposed matter, &c.: and this mass is husbanded with the greatest care and attention, and lies at their doors during most part of the year. There are in many instances stagnant pools about the houses, into which the refuse is thrown to keep it in a moist state. These collections of water proceed from various sources, viz. from dirty water and other impurities thrown from the houses, from rain-water, which has no means of being carried off, and in some places from water trickling through the soil. They render the houses damp, and emit most offensive and unwholesome effluvia.

The practice of keeping pigs is very common in Tain, particularly among the poor and working classes. From the limited accommodation possessed by this class, the pigsties must of necessity be near the houses; in general they are placed behind them; in many cases they are attached to them, and in the immediate vicinity of the back doors and windows. Others, again, are placed immediately in front.

During the last three years the town has increased in size, and on the main street and other parts a number of elegant dwelling-houses and places of business have been erected, which have imparted to the town an aspect superior to that of most burghs of its size and population. The County-house was unfortunately consumed by fire some years ago, when three persons were burnt to death. The present gaol is narrow in its accommodation, and anything but a wholesome place. A new gaol is, I understand, about to be erected. The principal street and a few others are wide and airy; but the back streets and lanes are narrow and ill kept.

There are in Tain several families in good circumstances; and, indeed, a considerable proportion of the population consists of respectable individuals in the middle rank of life. No landed proprietor lives in the town. There are no regular policemen; the only persons acting as such are the town-officers, two in number.

There is only one scavenger, or street-cleaner, for the whole town, and this individual is an old and infirm man, wholly incapable of performing the duties of the situation. There is in the town an excellent academy, and three well-conducted schools. The inhabitants seem very desirous of giving their children all the education their means will admit: from the moderate fees required, they are enabled to give their children a good plain education, and even the rudiments of a classical one.

The houses of the labouring classes are thatched with straw, and are seldom water-tight. They generally consist of two apartments; namely, two rooms on the ground floor, or one room on the ground floor and an attic. Those of the poorest class consist only of one apartment. Almost all these houses have floors composed of clay, or of a mixture of earth and clay, and are damp, among other causes, from the very defective drainage, and the heaps of refuse with which they are almost always surrounded. Though there is generally a sufficient declivity to carry away the filth and water, little or no advantage is taken of this circumstance. A conspicuous want of cleanliness prevails among the poor, and even among those who are in general somewhat above that rank. The houses are not well constructed with respect to ventilation. In instances not a few, the chimneys being ill framed, the houses are subject to smoke, and are consequently filthy. In order to obtain a desirable degree of *warmth*, every opening by which the external air might be admitted is carefully closed up. From the want of a proper provision for that purpose, the streets are very often

dirty, the mud and filth being in many places ankle-deep. With very few exceptions, the gutters or channels run close to the houses. If the streets were sufficiently repaired and paved, and proper sewers constructed, the services of scavengers would be less required, in consequence of the natural declivities of the locality, of which at present little or no advantage is taken. Of late considerable improvements have been effected by the authorities, perhaps as many as could be expected from the low state of the burgh finances.

There are three lodging-houses in Tain, which are chiefly occupied by beggars and hawkers. These places are kept in the filthiest condition imaginable; I have been credibly informed that the bedclothes used in one of these houses have not been washed for the last five years. Summer being the season when these people are generally abroad, these low lodgings are then often crowded to excess. During the week-days the beggars and hawkers perambulate the country, returning on Saturday night. They frequently, especially when collected in large numbers, drink to excess; and their conduct on such occasions is riotous and disgusting in the extreme. The general charge for such lodgings is two-pence per head for the night, with an ample allowance of whiskey to the landlords, by way of perquisite.

These individuals are, unfortunately, the means of introducing infectious diseases, such as fever, small-pox, measles, &c. Measures have recently been adopted by the authorities in the neighbouring counties for repressing this grievous nuisance; and I sincerely trust that the authorities in this quarter will in the same way endeavour to rid the country of diseased and debauched vagrants.

Some time ago a teetotal society was instituted in the town, which, at its commencement, consisted of 140 individuals, principally of the lower class. The membership has since been reduced to about 20. Many of those who have joined themselves as members of this society have done so from no other motive than that of inducing dissipated persons to follow their example. Cases of intoxication are now, happily, uncommon, except at fairs and on occasions of special festivity. The morals of the lower classes are superior to those of the same rank in most other places. Crime and the grosser immoralities are uncommon, and the forms and decencies of religion are in general well observed.

Tain is abundantly supplied with fish of various kinds and of the best quality, by the numerous fishing villages along the shores of the Friths. This source of subsistence is much resorted to, and renders living in Tain comparatively cheap. The food of the working people generally consists of fish and potatoes. Butcher-meat sells from 4*d*. to 6*d*. per lb. In former years it rarely exceeded 4*d*. per lb.; but of late, since steam communication with London has been established, the graziers of the district ship cattle

largely, and it is this, in connexion with the recently introduced system of high feeding, that has chiefly occasioned the increased price of provisions in the Tain market.

Parish of Tarbat.—This parish, the termination of the promontory of Ross, is bounded on the south and east by the Murray Frith, on the north by the Dornoch Frith, and on the west by the parishes of Tain and Fearn. The population, according to the late census, was 1826: of these 388 families were engaged in agriculture, 246 in trade and manufactures, and 70 were otherwise employed. This is considered a good corn parish; and there are several agriculturists, originally from the south, who cultivate large farms. The soil is in some places light and sandy, but a considerable proportion of the large farms consists of a deep black loam, capable of bearing all ordinary farm produce. The plantations and hedges are of stunted growth: the general aspect is bare, and the air is keen and bracing.

The principal villages are Portmahomac and Balnabruach. Portmahomac is situated on a creek in the northern shore, and is the principal harbour in the Dornoch Frith: the population amounts to 400. About the middle of July the herring-fishing here commences, and it is continued with much activity until September. The number of boats engaged at this fishing station averages about 100; and the average take per boat is about 105 crans, sold to the curer at about 10*s.* 6*d.* per cran. During the rest of the year the fishermen are employed in fishing cod and haddocks; and these in some instances are cured for exportation, the remainder being sold throughout the country. With respect to the fishing population of this district, I may state that in general they are poor: their poverty may, in some instances, be traced to the fluctuations of their success in fishing, and an improvident expenditure when the fishing has been prosperous.

Many of these villagers have a small plot of ground attached to their houses, in which garden vegetables, principally potatoes, are reared; and these, along with fish, constitute almost their whole means of subsistence. The houses in these villages are irregularly built, and little or no attention is paid to ventilation or cleanliness. There are no resident proprietors in this parish. The real rental is about 5632*l.* sterling.

The average number of boats employed in the herring fishery at the several stations in Easter Ross is about 350; of these, 87 only belong to the district, the rest belong to the southern coast and are here only for the season. Each boat is manned by the owners, usually four in number. At the end of the season the amount of their earnings is divided among them. In successful seasons it averages about 70*l.* sterling, exclusively of the gains made by the cod-fishing, which is carried on about the same time. At other seasons the boats belonging to the district are employed in the *white* fishing for home consumption. The average amount

for the crew of each boat *during the year* does not exceed 160*l.* sterling, which has generally to be divided among four families. Out of this amount they have to expend for the necessary repairs of boats and fishing tackle about 20*l.* annually; thus, but a poor pittance is left for the support of each family, which in general consists of 6 or 7 souls. In their habits they are very indolent, and by no means cleanly. I know of no class of people among whom improvement has made less progress.

Parish of Fearn.—This parish is about two miles square, and is bounded on the south by the parish of Nigg, on the west by Loggie Easter, on the east by Tarbat and the Moray Frith, and on the north by the parish of Tain. The soil is various: it consists in many parts of a deep and rich loam, and it generally yields abundant crops. About three-fourths of the land is arable, the remainder being covered with heath and short grass. The arable land is in the highest state of cultivation; and its produce fetches the highest price in the London markets. The population is 1940; of these, 113 families subsist by field labour, and only 55 are engaged in trade. There are two fishing villages situated along the shore of the Moray Frith, having a population of about 955.

There are 8 landed proprietors in this parish, one only is resident. The real rental of the parish is about 5500*l.* The names of the fishing villages are Hillton and Balintore. The latter was once much frequented during the fishing season; and there is an extensive building for packing and preparing red-herrings, which, being now disused, serves only to indicate former prosperity. It is proposed to erect a harbour here suitable for ships; the site being considered the most eligible for that purpose on the northern shore of the Moray Frith, which is entirely destitute of such a convenience. The expense of this most desirable structure would be greatly diminished by the circumstance that there is an excellent stone-quarry on the very spot.*

Parish of Loggie Easter.—This parish rises with a gradual ascent towards the north, where, and towards the north-east, it is bordered with wood. It is about 7 miles in length and 3 in breadth; and is bounded on the south by Kilmuir Easter and Nigg, on the east by Fearn, and on the north by Tain and Edderton. The cultivated land consists of clay, on a light or sandy bottom; and it is considered to be in a high state of cultivation.

The population of this parish is 994; and, with few exceptions, the inhabitants are employed in agriculture. Hugh Rose Ross, Esq., of Cromarty, who is worthy of the most honourable mention as an improver of this district, lately established a tile-work in this parish, which promises to succeed well, and gives employment to many of the neighbouring people. Tiles are now exten-

* This parish contains the largest piece of fresh water in Easter Ross, called Loch Eye, which is two miles long and about half a mile in width.

sively used for drainage throughout the country. There are 4 landed proprietors connected with this parish. One only resides in it, viz. H. Ross, Esq., of Cromarty. The real rental is 2730*l*.

Parish of Nigg.—Nigg is the southernmost parish of the district and county, and is of a peninsular form. It is bounded on the south by the Moray Frith, on the west by the ferry and the Bay of Cromarty, on the north by the "sands" of Nigg and by part of Loggie Easter and of Fearn, and on the east by the Moray Frith and part of Fearn. A hill, or eminence, called "the Hill of Nigg," from the summit of which may be seen parts of seven counties, stretches from east to west along the southern border. The parish consists of this hill, of its northern declivity, called "the Strath," and of a narrow strip of meadow-land, called "the Lōns" (from the Gaelic word *lōn*, a meadow). Its surface is finely diversified, exhibiting, in miniature, almost every variety of scene; and, from its position, its eminences command a magnificence of land and sea prospect unequalled perhaps in Britain. The southern side of the hill is bold and precipitous, presenting the "celtissimæ rupes" of Buchanan, which are penetrated in many places by huge caverns, studded with stalactites, floored with pebbles, and filled with the heavy odour of cave-plants. These and the littoral rocks exhibit many interesting geological developments, which have recently attracted the attention of men of science. The soil is various, consisting, in several places, of a deep rich loam,—in others of a light lively mould,—in others of clay,—and, in the lōns or meadows, and in the hollows of the hills, of bog-earth, or of a mixture of white and bluish sand, full of small whinstones. There are excellent quarries of white and red sandstone; and limestone is common along the southern shore. A stratum of coal was long ago discovered at Portandrui, on the eastern shore, but it is not worked. Several rare plants are found in this parish; and it is much celebrated for its numerous springs of water, some of which are reckoned medicinal. At the western end of the mill-dam above Culnaha there is a spring of chalybeate water of considerable strength, which, if properly kept, might prove of public advantage. There are about 2050 acres under careful cultivation, and about 1000 acres which might be profitably cultivated. The grain sent from this parish is considered equal in quality to any grown in Britain; and its farmers possess the advantage of unusual facilities for the exportation of produce. According to the census of 1841 the population is 1435. Of these the majority obtain their sustenance by agricultural labour and by fishing.

There are two churches in this parish, one of which is among the oldest belonging to the United Secession; and there are four schools, viz. the parochial school, a female school, and two well-conducted voluntary schools, into one of which the most recent improvements in elementary education have been introduced. Connected with the Secession Church there is a select library,

founded by Mr. Douglas, of Cavers, to which the poorest class have ready access. I understand that this excellent institution is acknowledged by those who have availed themselves of it to be productive of much benefit. There are seven landholders in this parish; and of these only two are resident. The real rental amounts to 5000*l.* sterling. There are three villages inhabited by fishermen, viz. Shandwick, Balnabruach, and Balnapellin, the aggregate population of which amounts to 420. The climate of the parish of Nigg is reckoned bracing and salubrious. It has been remarked that less rain falls here than in any part of the adjacent district. The inhabitants have been noted for a spirit of independence, and for a laudable ambition of rising in society by industry at home or adventure abroad.

Parish of Kilmuir Easter.—This parish is about ten miles in length and four in breadth. It is bounded on the west by the parish of Ross-skeen, by Loggie Easter on the east, on the north by Edderton and Kincardine, and on the south by the Frith of Cromarty.

The parish contains about 17,000 acres, of which 2500 are arable, 1000 are pasturable, and 4500 are wood-land. The soil is various, but generally of a light, gravelly kind. The higher grounds are mostly barren moors. There is no, properly so called, fishing village in this parish, though at one time there was. The descendants of the former fishermen have now betaken themselves to trades. There are three villages in the parish, the population of the largest (Millton of New Tarbat, or Parkhill) being about 200. The population of this parish in 1841 was 1472. Of these 190 families are employed in agriculture, and 95 in different kinds of trade. There are six landowners; of these, three generally reside in the parish. The real rental is 3800*l.*

Parish of Ross-skeen.—Ross-skeen is bounded on the east by Kilmuir Easter, on the west by Alness, on the north by Kincardine and Edderton, and on the south by the Bay of Cromarty. Its extreme length is 30 miles, and its extreme breadth 12 miles. That part which stretches along the coast is level; the ground rises from the shore with a gentle acclivity for four miles, and thence becomes rough and hilly. There are about 3900 acres under cultivation, 30,000 uncultivated, and 3000 acres underwood.

There are two hemp manufactories, which give employment to about 70 people, whose wages average from 9*s.* to 12*s.* a-week; and the spinning department occupies a considerable number of females throughout the parish. The population is 3185. Of these 1908 reside in villages, namely, Invergordon, Bridge-end of Alness, and Saltburn; of these Invergordon is the largest, containing a population of 1000. Having the advantage of a fine harbour, it is the principal seaport in Easter Ross, whence live-stock and grain are shipped for the Leith and London markets.

From its position, and the superiority of its natural advantages, Invergordon promises to become the largest and most flourishing town in the county.

There are five heritors connected with this parish; one of these only is resident. The real rental is about 6000*l.*

Parish of Edderton.—Edderton is bounded on the west by Kincardine, on the north by the Dornoch Frith, on the east by Tain, and on the south by Loggie Easter and Ross-skeen. Its length is 10 miles, and its breadth about 8. The soil is various, from the rich alluvial degenerating to the most sterile; about one-third is under cultivation, the remainder being unfit for tillage. The population, in 1841, was 970; of these 137 families were employed in agriculture, and 18 in trading.

There are three landowners, none of whom are resident. The real rental amounts to 2368*l.* 3*s.* 2*d.* sterling.

Parish of Kincardine.—Kincardine is bounded on the north by the parishes of Creech, Assynt, and Lochbroom, and by Edderton, Ross-skeen, and Loggie on the east and south. It is more than 35 miles in length, and varies in breadth from 5 to 20. There is very little arable land throughout the whole of this extensive range, which is mostly mountainous, and fit only for pasture. The number of inhabitants, in 1841, was 2115; of these 296 families are employed in agriculture, 48 in trade, and 98 are variously employed.

There are 8 landholders connected with this district, none of whom are resident. The real rental is from 4000*l.* to 5000*l.*

Having thus offered a slight sketch of the several parishes composing the district of Easter Ross, I now proceed to make a few remarks respecting the condition of the poorer classes in this district, with reference to employment and the means of subsistence. The poorer classes in Easter Ross subsist chiefly by field-labour or fishing. The district is now unquestionably one of the first in Scotland, both as to agricultural process and produce; its farmers yield to none in skill, enterprise, and success. Not long ago Easter Ross consisted of a series of small farms, presenting a numerous, virtuous, and happy tenantry; but now the system is quite changed, the small farms are few, and consist generally of intractable slips of moorland; the large farms are generally occupied by men of some capital, who have received a respectable education, and who, when steady and circumspect, are able to live comfortably, and to lay by something toward the education and settlement of their children. They are acquainted with, and ready to introduce as their means permit, the various and most recent improvements and refinements in agriculture. The extent of those called *large* farms is various, the average being probably about 400 acres; the extent of the former small farms, into which they were divided, was also various, the average being probably about 20 acres. The farms of Wester Rarichie

and Culliss, in the parish of Nigg, lately occupied by one person, and paying a rent of about 1300*l.*, were formerly divided into 17 farms, supporting 17 families. Now, as far as I have been able to learn, on consulting the most trustworthy authorities, these small farmers of former days lived comfortably and maintained a spirit of independence equal, at any rate, to that of their more refined and ambitious successors. I must not forget to add a circumstance so honourable to them as this,—that they gave their children the very best education their means would permit,—an education equal in quality, if not in show, even to that now afforded to their children by most of their affluent supplanters. I have been credibly informed that not a few of them were proficients in Latin literature, and that the recitation of long "Screeds," from their favourite Roman poets, was not unfrequently one of their ingle-side recreations. But as this simple, manly, and patriarchal race, the sinews of Scotland, have become extinct, or nearly so, in this quarter, I must refrain from dwelling further on their circumstances, however much I may feel attracted to the subject, by respect for a class from the bosom of which have undoubtedly sprung many of our country's bravest defenders and brightest ornaments. Their successors, it must be admitted, if not braver and better men, are far superior to them in agricultural science and artificial refinement. They may be behind the English farmers in horticultural taste and improvement; but as skilful agriculturists, good citizens, and kind masters, they are equal I believe to any class in Scotland. Besides the farmers, those who subsist in this district by field-labour may be divided into—1st, crofters; 2nd, farm-servants; and 3rd, occasional field or day labourers. 1st. The crofters are tenants-at-will, who cultivate a very small piece of land, from 1 to 5 acres, generally either a patch of moorland on the pit-lands, or remote corners of an estate or large farm, for which they often pay exorbitantly, as much as their neighbours do for the best land. Their crofts being insufficient for their full employment or support, they generally have recourse to some trade, or labour occasionally with the neighbouring farmers. Their lot is precarious, for their "wee bit" may, they know not how soon, be incorporated with the "big farm," and little or no encouragement is given them toward building or improvement. 2nd, Farm-servants: on an average there are from 4 to 5 servants on a farm, the half of whom are generally married, and live in detached or connected cottages, each consisting of commonly two rooms and a closet. These cottages are strongly built and water-tight, and so constructed as to be capable of adequate ventilation. The unmarried servants live in barrack-like buildings, called "bothies," where they themselves dress their food, and where they may live comfortably and cheerfully. The fare of the farm-servants is coarse, though substantial and wholesome, con-

sisting chiefly of farm produce, but they are not strangers to the luxury of a cup of tea. They are remunerated as follows: the foreman, or grieve, generally gets 10*l.* per annum, besides 6 bolls of meal, 6 bolls of potatoes, 12 barrels of coals, a cart-load of peats, a pint of sweet milk a-day, and about 900 yards of drill for potato-land, for which he supplies manure and seed, and which he cultivates at his own cost.

Married ploughmen get 6*l.* or 7*l.*, with the preceding additions. Unmarried ploughmen get the same remuneration, with the exception that they have a smaller allowance of potatoes. Cattlemen have the same wages as the ploughmen. Herd-boys get 3*l.* or 4*l.* annually, with food in the farm-house. Female house-servants have wages to the amount of 3*l.* or 4*l.*, with food. Farm-servants are in general well and warmly clothed, the males in corduroys, or coarse woollen stuffs; the females in flannel petticoats and cotton-prints. The females go bare-headed, or wear "mutches," which they take a particular pride in keeping neat and clean. Most of them also are provided with warm blue cloaks. The men always wear strong worsted stockings and thick shoes, or half-boots. The young women during summer often go barefooted; the morals of this class of people are reckoned exemplary. They are much exposed to damp and wet, and generally not careful to prevent the ill consequences of such exposure; and I have no hesitation in pronouncing that to this cause, with the want of *seasonable* medical aid, may be attributed the majority of deaths among the young of this class. It is a duty of farmers —and one which should be earnestly impressed on them—to instruct their servants how to escape the baneful consequences of exposure to damp and wet, and to see that their instructions are attended to. After such exposure, as soon as they have ceased working, servants should be directed or reminded to change their clothes and shoes and stockings, and put on dry ones, and by exercise to prevent themselves from feeling chilly after work. I am persuaded that habitual attention to this simple direction would prevent many an indisposition, and tend considerably to diminish the number of deaths among this large and meritorious class, preventing moreover much delay and disappointment to their employers. These remarks will apply also to the other classes of labouring poor.

(3.) Occasional field or day labourers are employed either in weeding, hoeing, and reaping, performed chiefly by women; or in trenching, digging drains, making or mending fences, &c. Men of this class earn from 7*s.* to 9*s.* a-week; women earn by reaping 1*s.* a day, and for other employments 6*d.* a day; their dress is similar to that of farm-servants, only less uniform. Their condition is generally less easy and comfortable, in consequence of the uncertainty and fluctuations of their employment.

The next most numerous class of labourers in this district are

the fishermen. They are supported by the profits of the herring season, and by occasional fishing throughout the year. The crew of each boat consists of four men, among whom the profits are equally divided; the average price of a cran of herrings is 10*s.* 6*d.* Our fishermen cultivate potatoes to a considerable extent, both for use and sale; they pay for their land in manure. Their cottages, some time ago, were miserable cabins of the lowest description, receptacles of filth and nauseating effluvia; but I am happy to add that a great improvement has recently become manifest as to this class of cottages. On the shores of Nigg and Fearn, especially, the houses of the fishermen are well and comfortably constructed, many of them being, indeed, superior to most of those of the rural population. However, along the whole coast, there is still room for much improvement; for many of the huts are mere hovels, with scarcely any provision for the admission of light and fresh air; and in the immediate vicinity of even the most respectable houses heaps of stinking garbage, mixed with various sorts of filth, are allowed to accumulate and load the air with unwholesome effluvia. The general health of this class cannot be improved till these nuisances are removed, and till the inhabitants learn the importance of ventilation and personal cleanliness. As to ventilation, they seem to have no idea whatever of its importance; but, as to personal cleanliness, I am happy to say, they appear of late to have made considerable advancement. They are, in general, well and warmly clad in blue woollen stuffs. The men always wear stout shoes or tall sea-boots; the women, except in winter, or on Sundays, generally go barefooted. They have the reputation of being a very prolific race; intermarriages with the rural population are very uncommon; and it is seldom that the children deviate from the perilous craft of their fathers. They are characterized by peculiar notions and practices; and they have a certain feudal spirit, or *pride of order*, which tends to preserve them as a *separate* community, and to promote concord among themselves. Their morals are not below those of any class of the community; and the villages of Shandwick and Ballintore deserve to be particularly noticed for the respectability of their appearance, the cleanliness of their habits, the civility and decorum of their manners, the purity of their morals, and their exemplary attention to religious duties whether at sea or on land. Though more exposed to damp and wet than any other class, they seem to suffer little from this cause,—a circumstance that may be attributed to early and continued habit. They are, in general, a well-made, good-looking, and healthy class. If they paid more attention to ventilation, and domestic and general cleanliness, disease would, probably, be unfrequent and less fatal among them.

The next class I shall notice are the artisans. The most common of these are masons, joiners, cartwrights, blacksmiths

coopers, weavers, shoemakers, and tailors. The weavers have no regular employment, but execute private orders for coarse woollen stuffs, blankets, &c.; and they do not wholly depend on their trade for subsistence. The tailors are in general very inferior workmen in all matters of proportion and taste. The charges of our artisans are generally moderate; but those who are skilful and regularly employed are able to live comfortably. Cases of destitution among this class are frequent; cases of dissipation are not rare; and they seem less healthy and more subject to disease than either the field-labourers or fishermen. Their houses are generally equal to those of the married farm-servants; some of them, as those of the masons and house-carpenters, are better finished and better furnished. Their clothing is, in general, warm and respectable.

The next class to which I shall allude are the shopkeepers.—In Tain there are upwards of 72 of this class. Of these none are to be reckoned among the poorer orders,—several of them having large establishments, and being able to educate and maintain their families in a highly respectable and creditable manner. Altogether, indeed, this class is equal in character and comfort to those of the same calling in most of our provincial towns.

There are also rural shopkeepers throughout the district, whose number and business have of late much increased. Their system is, to a considerable extent, conducted by barter. In exchange for merchandise, such as tea, sugar, and soap, they take country produce, especially eggs, which they send to the London market. The average price of eggs is *four-pence* per dozen; and large quantities of these are now in this way profitably exported. Poor people in this district are enabled to keep poultry at a very trifling expense; and they are thus able to obtain many little comforts which would be otherwise beyond their reach. The rural shopkeepers are generally natives of the parish in which their shop is situated, and are persons who have been enabled to set up by dint of industry, saving, and good character; but, from the facilities or temptations which their insulated positions offer to fraud, I would suggest the propriety of having their weights and measures frequently inspected.

I shall now briefly revert to the construction, situation, &c., of the houses of the labouring classes in this district. Those of the farm-servants are built in the immediate proximity of the farm-steading, in a line with each other, forming as it were one side of a short street: some of these houses have immediately in front a pavement or causeway. On many of the large farms the houses are roofed with tiles or blue slate; the more common practice, however, is to thatch them with straw and clay; and they are generally kept water-tight. Their site is, in general, dry, though frequently too near the fold or court of offices. Most of them have pigsties either before or behind; but rarely immediately attached

to them. The dwelling-houses are usually constructed of stone or mud-work. The flooring is made of a mixture of earth and clay, wood flooring being seldom used. The fireplace and chimneys are well constructed. All the rooms ordinarily are used as dormitories. They are generally kept clean and in good order, the walls being whitewashed with lime. The furniture consists of a few chairs, a cupboard, a table, and a bed; curtains are often seen in the best apartment, but in general they are closely shut up with boards,—a practice detrimental to health. Their bed-ticks are stuffed with straw or chaff; feather-beds are not used in such houses.

The houses of crofters and day-labourers are generally inferior to those of farm-servants. They are also less cleanly in their habits: in many cases they and their cattle live under the same roof. In not a few cases their houses are constructed wholly of turf, the smoke being allowed to find its way out wherever it can find an aperture. In many cases, the cattle enter through the same door with the inmates, and the "domestic" fowls, strictly so called, perch themselves on the rafters or couples above the heads of their lords. This description, however, is happily applicable only to the minority, and the more ancient of these dwellings. The houses of artisans and shopkeepers depend for their comfort and accommodation, in a great measure, on the industry, character, and success of their occupiers. There is no manufactory worthy of particular notice in this district. Many of the cottars, in Nigg and Ross-skeen especially, contrive to eke out a livelihood by spinning hemp for the manufactories in Cromarty and Invergordon. I may remark here that there is a conspicuous and lamentable want of commercial and manufacturing enterprise throughout this and the other districts of the north. The disposition of capitalists seems to be rather to secure what they have earned by industry and frugality, than, by speculating, to employ it as a lever to raise their fortunes and the general interests of the community. In proof of this I need only add that *seven* northern counties required the co-operation of Aberdeen to enable them to maintain one steam-boat in carrying on the direct communication between these ports and London.

It must be remarked that the number of *real* paupers is known to be double that of those who actually apply for relief. Delicacy, or a species of pride, or commiseration for those who are more depressed and wretched than themselves, prevents the former from becoming candidates for the miserable pittance doled out to them by the Kirk Session. Indeed, from the scantiness of the funds, it often happens that importunate applicants are sent away unrelieved. In some parishes it is the custom to attach the furniture of the pauper after his death at the instance of the Kirk Session, in order to swell the pauper funds. The average value of the furniture is from 5*s.* to 15*s.*

The only other resource of the poor is mendicancy. The houses of almost all the respectable inhabitants of the district are open to vagrant beggars. Considerable sums are often collected in this manner by the poor. Some respectable families in the country contribute largely to the vagrant poor—much more so than they would have to do, were a legal assessment in force. The expense of supplying wandering mendicants falls most heavily and disproportionately on the benevolent and kind-hearted.

There are several maniacs who wander about this district, and who depend solely on charity for a precarious and miserable subsistence. They are generally of a harmless character; but exceptions occur. Some years ago one of this class, on a very slight provocation, killed another idiot by hitting him on the head with a stone. After his trial and conviction he was quite unmanageable, and, refusing to eat, soon died. Some of these poor, uncared-for wretches once earned a respectable livelihood. It is surely a heavy reproach on the authorities that there is no provision made for supporting maniacs and for alleviating their sufferings; and it is a circumstance honourable to the manners of the people, though not so to the preventive policy of their so-called protectors, that so few accidents occur from the unrestrained and fitful passions of the maniacs who are suffered to roam at large over the district.

It must not be supposed that poverty is confined to the enrolled paupers. It may too often be found in the turf cabin of the lower sort of crofters, whose few acres of sterile ground are not sufficient, after the most patient cultivation, to yield even a supply of potatoes, the only or principal article of their aliment. How are these, when infirm or old, enabled to pay their rent, except, perhaps, by begging in a quarter where they are not known?

Among this class isolated cases of continued fever are to be met with at all seasons, but more frequently from the month of October till April; and when any epidemic or contagious disease prevails among them, it commonly diffuses itself with a fearful rapidity and malignity. The state of such families on these occasions is truly pitiable. Out of many similar cases that have come under my own observation, I mention the following. Some months ago, while passing through the western part of the parish of Edderton, I was waited on by a female who besought me to visit her sick husband. I complied, and was led to a miserable hut, consisting of two small apartments, one of which was used both for kitchen and byre, wherein I found two half-naked children and a starveling heifer. In the second lay the husband, in the last stage of continued fever. He had now been ill for three weeks; and during the last week he could get no assistance towards turning him in bed, his wife, who happened to be in the last stage of pregnancy, being utterly unable to do so. On his back

I found a large bed-sore. All the cash in the house consisted of 1*s.* 6*d.*, and the eatables of a peck of meal and a few potatoes. The whole furniture was not worth 20*s.* A day or two thereafter I again visited this wretched family. I found that, during my absence, the mother was delivered, her only attendant being a feeble old woman; and I found a child of five years of age nursing the infant, whilst the mother was obliged, in this situation, to attend to the household duties. A few hours after I left, the husband was a corpse. This helpless family could not afford medical attendance, and seemed very grateful for the two gratuitous though unsuccessful visits paid them by me. On a representation of their case to some humane persons in the neighbourhood, a temporary supply of necessaries was sent them; and a collection was made in the parish for their behoof, which amounted to 3*l.* Two brothers of this cotter died of the same fever shortly before, none of whom received medical assistance; and all the three were able-bodied, stout young men.

Typhus fever is rarely met with in this district; frequently, however, synochus in its last stage assumes the typhoid symptoms, and in this state invariably proves fatal among the poorer classes. I believe that in every instance febrile diseases spread from the town into the country; the rural and urban poor being greatly predisposed to such diseases. This predisposition does not, in my opinion, arise so much from the filthiness of their persons and abodes as from the nature and insufficiency of their diet, which consists of potatoes with an occasional herring, or piece of oat-cake. Butcher-meat is far beyond their attainment, and is very seldom tasted even by the better sort of workmen and labourers. The quantity and insufficiency of their food has a tendency to occasion disease of the digestive organs and to weaken and deteriorate the whole system, rendering it incapable of resisting the poison of contagion, even in its mildest form. These causes produce indigestion, and irritable and strumous habit of body, organic disease of the lungs, liver, spleen, and kidneys, and mesenteric glands. The last of these is of very frequent occurrence, especially among children. The want of a provision toward women lying-in is much to be deplored, this important duty being in general intrusted to a set of inexperienced old quacks who call themselves midwives. Death is a frequent consequence of their mode of treatment; and the wives of the district have to thank their constitution and hardy habits that it is not more frequent. It is seldom, indeed, that medical skill is called in till the manifest symptoms of death have frightened them to try the last resource.

On being lately called to attend a young female who was lying-in, I found her surrounded by a set of old women who had, previously to my arrival, plied her so freely with whiskey, that she was visibly in a state of intoxication! Now this was a "de-

cent" country-woman, and the ardent spirits had been given her by the attendants on the specious plea of shortening her sufferings.

In 1832 cholera appeared in Easter Ross, during the fishing season. It was, with a few exceptions, confined to the fishing villages, where it found a field but too ripe for its fatal operations. In the remote village of Inver, situated on the low sandy shore of the Tain Frith, and notorious for its nausea, its ravages were fearfully rapid. Here it cut off nearly the half of the inhabitants. The town of Tain and most of the rural districts escaped this visitation. During the prevalence of cholera, a Board of Health, empowered by Act of Parliament, was established in every parish. The exertions of this Board prevented all communication with the infected places. Medical assistance was amply provided. The houses of the poor were cleaned and whitewashed, medicine was furnished, meat and clothing supplied to the indigent, and their huts underwent a thorough cleansing. During the cholera panic, many of the inhabitants forsook their houses, and dwelt in lonely places, as far as possible apart from any human haunt. No sooner, however, did cholera disappear than these Boards were broken up, and matters as to the condition of the poor returned to their pristine posture.

As there is no registration of diseases, deaths, or burials, or any chronicle of the causes of mortality, kept in this district, I have no data or materials towards a full and accurate nosological report.

There is no institution whatever toward affording medical aid to the sick poor. The ratio of mortality is high: in my opinion 19 out of 20 die without having had the benefit of medical advice. The nearest dispensary or infirmary is that of Inverness, distant from Tain about 35 miles. This district is considered to be well supplied with medical men; but it is also unfortunately infested by a set of empirics or quacks, and of ignorant midwives, who, though they have never received any medical education, nor, indeed, any education whatever, yet practise largely and lucratively among the country people, pretending to understand the most difficult and complicated cases. This class of impostors are most mischievous and dangerous. When a medical man is called to attend any of their patients, his first and painful duty generally is to announce the near and now inevitable approach of death.

I have thus, Gentlemen, presented to your notice, with as much correctness as the circumstances of my information would allow, the principal facts and statements that seemed to be demanded by the nature of the Report which you did me the honour to assign me: and, in conclusion, I would briefly recapitulate and animadvert on some of the more prominent parts of that Report, and make such suggestions respecting them as I deem worthy of your closest consideration. I shall accordingly advert—

1. To the state of *pauperism* in Easter Ross. It has been seen

that the number of those in this district whom destitution drives to vagrancy is comparatively small, but that the number of those who suffer from a want of the means of proper and sufficient nutriment or diet is very considerable. It has been seen, also, that the kirk collections are not applied wholly to the support of the parochial poor; and that, even if they were wholly so applied, they are far from being adequate for the purpose. It appears, further, that, especially at certain seasons, this district is overrun with clamorous vagrants from *other* quarters; and I am persuaded that, if the alms given to such in each parish were confined to the poor of the parish, they would be almost sufficient for their adequate support. I would suggest on this subject that there should be an equitable and regular assessment in each parish for the support of the poor of *that* parish *alone;* that the assessment should be made by a Board of Guardians of the poor, elected by the householders of the parish; that one of the resident landowners, or of the accredited agents of the non-resident, should be, in rotation, authorised to call meetings of said board, and act as their chairman or president; that the assessment be in proportion to the rental or income; that the kirk collections for the poor should be under the direction and at the disposal of the Board, but that the clergy and kirk sessions have no control in any respect over the Board, and that all its proceedings be conducted without regard to religious or sectarian distinction, and be carried on in an open manner. The institution of such a Board, I am convinced, would meet with no opposition from the well-disposed part of the community, and would add but little, if anywise, to their present expense toward the support of the poor. But, as a preliminary step, it would be necessary to carry into effect sufficient measures for the prevention of vagrancy, or the intrusion of beggars of any description from other quarters. There exist, unquestionably, ample means within the district for the *adequate* support of *all* its poor; and the method I have indicated seems to me the best calculated to bring these means to bear satisfactorily both with respect to the poor and those on whom their support must depend. But I repeat, the preliminary step *must* not be neglected.

Though proclamations against vagrants annually make a formidable appearance in the newspapers, yet, as there is no police or provision in this district towards executing their purpose, they of course prove nothing better than mere idle threats, laughed at by the beggars themselves. I would further suggest that the institution I have proposed be compulsory only as an *experiment*, a definite but sufficient time being fixed for its duration, at the expiration of which, if the majority of those on whom the burden falls be opposed to its continuance, it shall cease to be compulsory. As it is an established fact that many deaths occur every year among the poor, apparently from the want of seasonable medical aid, it should be a principal object of the proposed Board to

engage, at a fixed annual allowance (which need be but small), a proper medical person, who shall be bound to attend any of the poor of the parish whenever called on to do so. This measure is more desirable and urgent from the absurd prejudices against "the doctors" unhappily still so prevalent among the vulgar, and which often prevent them from receiving medical aid, even when they might have it *gratuitously*. I believe, indeed, the medical men of the district are always, when they have their time at their own disposal, ready to advise the poor gratis, and even to attend them gratuitously in cases of peculiar urgency. It would be proper, perhaps necessary, that the Board should appoint an officer or messenger, one of whose principal duties it should be to call the doctor when his services are required for the poor, as well as to report to a superintendent appointed by the Board all cases in which medical aid may be presumed desirable. The feelings and prejudices of the poor, in my opinion, render these appointments necessary.

With respect to the working classes generally, I would remark, 2ndly, That in this district they seem in no instance to have availed themselves of *the principle of association*, productive of such advantages both to themselves and the public in England, and especially in Holland. They have no "Benefit Societies" of any description; this is a glaring desideratum, proceeding partly from the narrowness of their means, but chiefly from ignorance. This is a circumstance which I would earnestly press upon the consideration of all who have any influence over them, and who feel a real interest in their improvement.

I would observe, 3rdly, with reference to education among the poor, that it is very defective and superficial, partly from the want of a vigilant and effective supervision of the schools, partly from the prevalence of Gaelic, but chiefly from the irregular attendance of the children. The winter is here the season selected by the poor for the instruction of their children at school. Then a miscellaneous crowd of youth of all ages, released from the labours of the harvest-field, flock to the parish school; but unfortunately, as soon as the active round of rural labour returns, as soon as the nights grow short, the fagging ends, and the poor urchins are withdrawn, to forget, during a long summer of toil, almost all that they had learnt during the few and short days of winter. Poor parents employ their children at an early age on various easy kinds of work, such as herding, weeding, and hoeing; and so little sensible are they of the importance of education, or so little do they value what is to be learnt in their schools, that they allow their children to play the truant on the most frivolous pretences. It is undeniable that the whole system of parochial scholastics in this quarter requires a thorough inspection and revision.

4thly. In the formation of large farms by the aggregation of

several small ones, I would, in order to prevent the increase of pauperism, or the necessity of emigration, recommend a gradual process, such as the following: at the death of each tenant I would, according to an expressed agreement, transfer his piece of ground to the next tenant who possessed the largest farm, and proceed thus till all the small farms had coalesced into one. In this way each tenant would foresee so far the fate of his family, and be enabled to provide for their support after his decease; and a general and sudden dispersion of the tenantry, with the consequent outcry, uncertainty, and misery, would be prevented. Thus, likewise, might the landholders avoid the reproach of injustice, cruelty, or avarice, and the public might be saved many an appeal to their passions and their pockets. I can, indeed, think of no obstacle to this plan but what would proceed from an avarice reckless of the body of the people.

5thly. I would again notice here the fact that there is in this district no registration of deaths. The attention of the legislature having been recently directed to this subject with respect to Scotland, I trust this *desideratum* will be soon supplied. I think it will be desirable and necessary that the registration should be *compulsory*, and be wholly under the direction of the civil authorities. A coroner's inquest is also a glaring *desideratum* in the list of our institutions, which, I trust, will be soon supplied in connection with the proposed introduction of a general, uniform, and compulsory system of registration.

6thly. It appears that the most prevalent diseases among the poor in this district are fevers, to which they are predisposed by insufficient, meagre, or unwholesome food; or distempers proceeding from exposure to cold or damp. The influential cannot be too earnest in impressing repeatedly upon their dependants the importance of seasonably using the usual and proper precautions against the ill effects of wet and cold. Inattention to personal and domestic cleanliness, and especially to ventilation, largely contributes in this quarter to foster and aggravate disease. Old persons, when attacked by illness, however slightly, generally betake themselves to bed with the expectation and intention of not rising again. This baneful custom, which prematurely prostrates strength and causes much inconvenience, ought to be discountenanced. I have already noticed the propensity of the vulgar to encourage and confide in quacks, of which, I doubt not, many a death is the consequence. Those who are accountable for the prejudices of the vulgar ought to look to this. The poor suffer much from ignorance and prejudice—though, as a distinguished writer somewhat paradoxically remarks, "the vulgar have not *their* prejudices—they have the prejudices of those who ought to remove them if they had any." After all that legislation can do for the poor, much, very much must be left to the personal influence and the private and benevolent exertions of indi-

viduals of that class on whom they depend; who, if they knew and practised their social duties, would be sparing in superfluities to themselves, that they might supply necessities to others. It is much to be regretted, with reference to the poor especially, that so many of the landowners of this district are absentees or non-resident. It is truly much to be desired that proprietors should act in accordance with "a sound conception of the right to property—namely, as being *official*, implying and demanding the performance of commensurate duties." If they but acted thus, legislation would have less to do—indeed there would be no occasion for "Poor Laws."

I have now, Gentlemen, furnished you with such a Report respecting the district of Easter-Ross as my means of information enabled me to make, and the objects of your commission seemed to require. I am prepared to assign sufficient authority for all my facts and statements; and I shall be gratified if my report, such as it is, receive your approbation, and contribute in any degree to promote the immediate purpose and ultimate object of your Inquiry.

I have the honour to be, Gentlemen,
With the highest respect,
Your obedient servant,
JAMES CAMERON,
Surgeon.

To
The Poor Law Commissioners.

Tain, August, 1841.

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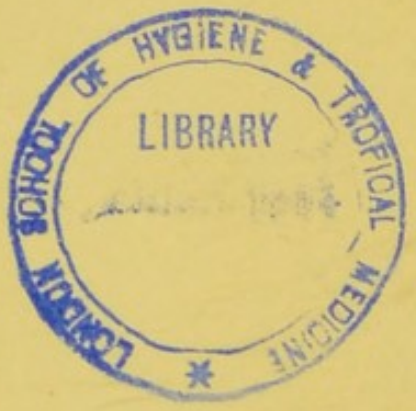
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