

**Reports on the sanitary condition of the labouring population of Scotland :
in consequence of an inquiry directed to be made by the Poor Law
Commission.**

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SANITARY INQUIRY :—SCOTLAND

REPORTS

ON THE

SANITARY CONDITION OF THE LABOURING
POPULATION OF SCOTLAND,

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

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

LONDON:

PRINTED BY W. CLOWES AND SONS, STAMFORD STREET,

FOR HER MAJESTY'S STATIONERY OFFICE.

1842.

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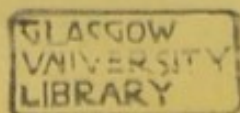
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SANITARY INQUIRY—SCOTLAND.

No. 1.

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*,

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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 necessities.

<i>The Four Necessaries.</i>		
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 pas sions, as fear, sor- row, &c.	Certain exciting passions, as anger, jealousy, &c.
Of the mixed so- cial aptitudes.	Solitude	Debauchery.
<i>The Two Noxious Agents.</i>		
1. Violence:—		
Wounds, Fractures, Dislocations, Burns, &c. Lightning.		
2. Poisons:—		
Animal, Mineral, Vegetable.		
Certain of these, such as <i>alcohol</i> 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 necessities 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 ocular 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 necessities, 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 foetid 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.

No. 2.

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 carcasses, 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 Montpellier, 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 foetid 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, Frobisher, 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 uncleanness. 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, uncleanness, 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.

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

Secretary.

QUERIES.

ANSWERS.

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.

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.

3. Have you seen many whose food you had reason to believe to be scanty and precarious?

27 out of 28—Yes.

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.

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.

		Yes. No.	
Medical practitioners generally dispensary officers.	}	10	0
Lay visitors of the poor.		7	1 Not in his district.
Clergy and Missionaries		9	1
Medical practitioners		7	2 Doubtful.
Lay visitors.		7	0
Clergy and missionaries		8	1
Medical practitioners		10	0
Lay visitors.		8	0
Clergy and missionaries		9	1
Medical practitioners		8	2 Doubtful.
Lay visitors.		5	2
Clergy and missionaries		7	1
Medical practitioners		9	1
Lay visitors		7	0
Clergy and missionaries		8	0

QUERIES.

ANSWERS.

6. Is this the case also as to many artisans?

19—Yes.

7. Also as to many single women, or widows with families.

23 out of 25—Yes.

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.

9. What are the ordinary profits of employment for women of the lowest rank when employed?

10. Are these employments generally overstocked in Edinburgh?

18 out of 19—Yes.

11. Are many of these destitute families or persons in receipt of assistance from their parishes?

Nothing conclusive.

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.

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.

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.

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.

	Yes.	No.
Medical practitioners	7	0
Lay visitors	7	0
Clergy and missionaries	5	0
Medical practitioners	6	2 Doubtful.
Lay visitors	8	0
Clergy and missionaries	9	0
Medical practitioners	7	2
Lay visitors	2	0
Clergy and missionaries	4	0

Medical practitioners . 2 only answer, from 4s. to 5s. per week.

Lay visitors . . . 3 answer, 3s. or less per week.

Clergy and missionaries 4 answer, about 3s.

Medical practitioners . 4 1 Dr. Coldstream, Leith.

Lay visitors . . . 7 0

Clergy and missionaries 7 0

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.

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.

Medical practitioners . 1 0

Lay visitors . . . 5 0

Clergy and missionaries 1 0

Medical practitioners . 1 0 Increase of destitution.

Lay visitors . . . 6 0 Ditto.

Clergy and missionaries, no distinct answer.

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.

No. 3.

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 aerial 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 aerial 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-

ment. 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.

No. 4.

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, 28th 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 McNeill 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 removable 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 opinion 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 50s. 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 advocacy; 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 neighbourhood, 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, Alloa, 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 proprietary 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 empanel 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 popula-

* See Public Bills, 1837, II. 267.

tion. It will generally happen, however, that the heritors of a 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-houses, 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.

No. 5.

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 regulating 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

* For names &c., of cases referred to, see App. A.

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 necessities 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 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.”

* 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.

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 wretchedness, 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 vigorously 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, that at least three-fourths of the patients resided in six closes in High-street—in which *six* closes, extending over a space of fifty yards, there are 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

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

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 foetid 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.

* 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.

6. 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 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 necessities, 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 will 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 statement of Dr. Cowan, 55,499), the expense of treating the patients, the loss of wages, and consequent pauperism.

No. 6.

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 Pentcailand; 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.

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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 Rigghead, 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.

It is usual with the colliers, day-labourers, and other humble persons who live in Tranent and the neighbouring villages, to allow ashes, cinders, fulzie, and animal and vegetable materials to collect in heaps before their doors and windows. In winter, and in wet weather throughout the year, small collections of water are observed in the same situation, and this favours the process of decomposition. A cavity is generally dug in the ground in order the better to retain and define the heap, and, I presume, to retain water, in order to promote the corruption of the collected materials. This heap of putrefying materials is made the source of pecuniary returns, and is therefore carefully preserved and augmented. The colliers and others sell these materials for sums varying from 1*s.* 6*d.* to 4*s.* the cart-load. The mass is sold when it suits the convenience of the seller, or when he thinks he has a cart-load; and is removed when it is convenient for the purchaser. In some instances the proprietor "cotters" this manure: this means that he gives it up to the farmer in return for the use of a small piece of ground for the growth of potatoes, &c.

In some parts of Tranent, and of most villages in the vicinity, there are stagnant collections of putrid water before the houses of the poor, observed chiefly during the winter, and in wet weather during the summer. But these are observed in some places throughout the whole year, unless the weather is very hot. These collections of water proceed from various sources; from water and other impurities thrown out by the inhabitants; from rain which has no provision for being carried off; and also, in some places, from water trickling through the soil from the higher grounds. They often contain impurities from the houses, evolve effluvia of a very offensive and unwholesome nature, render the houses damp, and,

* The collier's family—an average family, of a man, his wife, who works, and two children, working—will make from 30*s.* to 40*s.* per week, if industriously employed throughout the week. The hinds get much less, but are far more comfortable. When fever breaks out among them, the house being close and small, the atmosphere becomes very impure indeed.

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 generally 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 uncleanness.

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. *Don come this*

The collier, compelled by the uncleanness 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 necessities 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 "hindin'," 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 "hindin'," 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 30s. 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 40s. 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 30s., 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 spoliage 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 sometimes 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 8s. or 10s. 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 chil-

dren 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 necessities 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 morbid 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 Traent.

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 vaccination. 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 vitiating 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 essentially 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 necessities 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 foetal state, and that they act, develop 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 remaining 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 phi-

lanthropy 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 occurrence 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 any 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.* 6 $\frac{3}{4}$ *d.* per week. But the names do not represent single indi-

viduals 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 assistance 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 1s. 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 depth 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 engulf 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 2s. 6d. 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 con-

joined 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 necessities, 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 disorderly, 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 Westpaus—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 wide spread 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.

6 Feb. 1841.

S. SCOTT ALISON.

No. 7.

ON THE SANITARY CONDITION AND 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 dampness 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.

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

* Population at last census, 8,961; males 4,257, females 4,704. The increase in the population is very considerable since then.

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 obstinate, 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 uncleanness, 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 con-

sider 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 uncondusive 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 Edin-

burgh 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 20s. to 25s. 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 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

* 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.

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 almost 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, 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

* I would say that 1 in 3 are affected with asthma.

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 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

* 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 person, 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.*

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 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% 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 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

* See Dr. Alison's Report on Tranent.

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 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

* 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.

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.

No. 8.

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 foetid 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 uncleanness 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 necessities.

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 foetid 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 2s. but he has not been able to redeem it.

This man has an allowance of 5s. in six weeks from the parish, but he has yet only received one payment. The rent of his house is 2l. 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 1s. 6d., 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 20s.

He has received 1s. 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.

No. 9.

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 $55^{\circ} 51' 32''$ north, and longitude $4^{\circ} 17' 54''$ 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 $47^{\circ} 57'$ 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†	282,000

And of the following descriptions, viz. :—

Married Men, 41,837; Widowers, 2,493; Bachelors, 1,507; Male Household-ers, 46,333; Widows, 9,506; Spinsters, 2,621; Female Household-ers, 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.	1837.	1838.	1839.	1840.
		Per week.	Per week.	Per week.	Per week.	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 } Ditto ditto in Newspaper and Job } offices }	per piece.	20 0	20 0	20 0	20 0	20 0
Mason† (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 25s. per week; others, workers in mills, from 2s. 6d. to 10s. per week.

In weaving factories—weavers from 6s. to 11s. per week; dressers from 25s. to 30s.; tenters from 22s. to 25s.

Hand-loom weavers—plain muslin, 1st class, 6s. to 8s. 6d., 2nd class, 4s. 6d. to 6s. 6d. per week, net. Pullicate, gingham, lappetts, &c., 1st class, 5s. 6d. to 8s.; 2nd class, 4s. to 6s., net. Harness work, gauzes, zebras, dresses, &c., 1st class, 7s. to 10s. 6d., net; 2nd class, 5s. to 7s., 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 17s. 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.
		<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
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 ½ 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 8½	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 1s. to 1s. 3d. 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 statist, 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	8,405	9	9½*
Ditto Fever Hospital . .	3,535	..	3,535	200			
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/.

† 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 handloom 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	1,097†
“ 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			
<i>coffins and graves</i>	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 <i>l.</i> 7 <i>s.</i> "), I find from Mr. Thomson's Report, were, on 1st August last, (there was also 319 <i>l.</i> 18 <i>s.</i> 9 <i>d.</i> 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
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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	
	<hr/>	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. :—

<i>City Proper</i> , for the year commencing						
1st September, 1839, and ending	£.	s.	d.	£.	s.	d.
31st August, 1840	11,830	2	2			
Deduct surplus income for the years						
1839, 1840	148	8	7			
	<hr/>			11,681	13	7
<i>Barony Parish</i> , for the year from 6th						
August, 1839, to 4th August, 1840	6,175	7	0½			
Deduct balance in treasurer's hands	43	10	4			
	<hr/>			6,131	16	8½
<i>Govan Annexation</i> , for same period .						
	1,448	7	7			
Deduct balance on hand	0	18	0			
	<hr/>			1,447	9	7
<i>Gorbals Proper</i> , 1839, 1840				326	5	5
	<hr/>					
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. Symons, 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 2. Calton ditto 3. Camlachie ditto 4. Cowcaddens ditto 5. Maryhill ditto 6. Shettleston ditto	77,385	..	..	..	..	12	12	862	453	862	453
			1	2	120	120	18	18	999	899	1119	1019
			..	..	..	..	5	5	272	226	272	226
			..	..	..	..	12	14	938	793	938	793
			1	2	80	70	7	9	349	243	429	313
			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." Cam-lachie, &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." Gorbals: "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 24½	4500	355
Dublin within the Metropolitan Police District . . .	1839	300,000	45,632	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 22½	223	734
Suburban Districts :						
Calton &c.	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 15s.! 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 is 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 Answer, 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 20s. to 30s."—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.—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 5s. to 8s. 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. "2s. to 4s. 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 2s. 6d. weekly."—No. 4. "1s. to 3s. for indoor work."—No. 5. "Some, though working from morning to evening, and sometimes till midnight, cannot average 6d. per day."—No. 7. "Clipping tambouring 6d. per day; winding 1s. 6d. per week."—No. 10. "3d. to 8d. per day."—No. 11. "Winders of cotton weft 4d.,

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.”

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	..
Calton.	70 Mrs. Wood	36	Sewer	Ditto . . .	Ditto . . .	1	..	..
	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	..	..
Bridgeton.	60 Widow Gordon . . . . .	..	None	Ditto	Widow . .	1	..	..
	70 William Hunter . . . . .	..	Weaver . . .	Blair Street . .	Married . .	1	..	..
	10 William Buchanan . . .	75	Ditto	Brown Street .	Ditto . . .	1	..	..
	20 Widow Boyle . . . . .	..	Winder . . .	Ditto	Widow . .	..	1	..
	30 Widow Stones . . . . .	..	None	John Street . .	Ditto . . .	1	..	..
	40 William Latimer . . . .	..	Ditto	Shaw's Court .	Married . .	..	1	..
Gorbals.	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	..	..
	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	..
Anderston.	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	..	..
	10 Widow Steward	82	Yarn-winder	Bishop Street .	Ditto . . .	1	..	..
	20 Ann Denniston	60	None	Cheapside Street	Unmarried	1	..	..
Anderston.	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, with- out furniture, bedding, &c.
				Meal.	Coals.	Straw.	Money.	
<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>					<i>s. d.</i>	
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 6s. 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 chil- dren 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 0 per month	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 0 per 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

No. 10.

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 miasmatic 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*, 16th 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 January, 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 necessities 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 necessities 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 6s. to 8s. 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 1s. 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 necessary and desirable; and that, while benefiting the poor in particular, it would contribute to the welfare of the community at large.

Dumfries, January 22, 1841.

R. D. McLELLAN, M.D.

No. 11.

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 butcher's 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 whittings 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 it 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 30s. 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 necessities, 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 butcher's 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 benevo-

lence 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 pawnbrokers 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, 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

* 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.

† Ibid. p. 7.

‡ Ibid. p. 8.

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. 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 accele-

* Report of the Committee, &c. p. 8.

rated 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.” §

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 inha-

* Report of the Committee, &c. p. 9.

† Ibid. p. 10.

‡ Ibid. p. 10.

§ Ibid. p. 11.

bitants 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 attendance 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.—

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 exposure 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 crisis 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 ex-

halations 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 com-

parison 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 reseters 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 distributed 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.

No. 12.

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 Carlisle.

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 necessities 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 necessities 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 necessities, 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 cleaner 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 beggary 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.

No. 13.

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 Cartdyke). 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.

Let an apt

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 Carlsdyke	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 Cartsideyke 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	503	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 $11\frac{3}{4}$, 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.

No. 14.

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:—

TOWN.			
	Cases.	Population.	Equal to
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 necessities; 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 necessities 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 necessities 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.

No. 15.

REPORT ON THE SANITARY CONDITION AND GENERAL ECONOMY OF THE LABOURING CLASSES IN THE CITY OF
ST. ANDREWS.

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 $56^{\circ} 20'$ north, and longitude $2^{\circ} 49'$ 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 pur-

pose. 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 foetid 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. Hal-dane, in 1836, was 4182, that is by actual census—

Of the parish of St. Andrew's	.	.	3882
Computation for St. Leonard's	.	.	300
			<hr/>
			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 residents, who do not follow any calling, and professional men.

42 shopkeepers.

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 of 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	Females . .	234	
		<hr/>	
		438	
		<hr/>	

The yearly average is, Males . .	40·8
Ditto Females . .	46·8
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Yearly average of both	87·6
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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 occurred 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 16th, 1841.

No. 16.

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.

Aberdeen 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.
Labourers . . .	182	35	19·23	Wives & Children of	178	7	..
Weavers and Hecklers	102	10	9·80	„	64	4	..
Blacksmiths, Founders, &c. . .	91	7	7·69	„	38	1	..
Wrights, Sawyers, Coopers, &c. . .	62	15	24·19	„	56	3	..
Shoemakers . . .	50	10	20·	„	27	..	..
Tailors . . .	29	5	17·24	„	29	..	..
Bakers and Brewers	12	3	25·	„	2	..	..
Butchers . . .	7	3	42·85	„	..	..	..
Gardeners . . .	17	4	23·47	„	4	..	..
Shopmen and Clerks	18	2	11·11	„	10	3	..
Carters and Porters	28	7	25·	„	25	..	..
Seamen . . .	37	6	16·21	„	150	11	..
Pilots and Fishermen	2	..	..	„	14	3	..
Painters and Plumbers	9	..	..	„	6	..	..
Rope and Sail Makers . . .	12	..	..	„	5	..	..
Masons and Quarriers	25	2	8·	„	24	2	..
Combmakers . . .	30	..	..	„	4	..	..
Bookbinders . . .	2	2	..	„	..	..	..
Millers . . .	6	1	..	„	..	..	..
Stablers . . .	3	1	..	„	..	..	..
Dyers . . .	5	1	..	„	1	..	..
Barbers . . .	2	1	..	„	1	..	..
Tobacconists . . .	5	..	..	„	..	..	..
Soldiers and Pensioners . . .	3	1	..	„	5	1	..
Hawkers and Tinkers	7	..	..	„	12	1	..
Gas Workers . . .	2	1	..	„	..	..	..
Music Teacher . . .	..	..	..	„	1	1	..
Paupers . . .	29	1	..	„	32	2	..
Workers in Factories	123	13	10·56	„	7	1	..
Servants . . .	15	2	..	„	..	..	..
Children not otherwise entered . .	200	6	3·	Children not entered above .	174	6	3·44
Occupation not given	354	15	..	Married women, do. and widows	289	25	8·65
				Females working in Factories .	467	15	3·21
				House Servants .	222	17	7·65
				Nurses . . .	14	..	..
				Washerwomen .	29	4	13·44
				Sempstresses, Knitters, &c. . .	44	4	9·09
				Paupers . . .	29	9	31·03
				Trade unknown .	11	1	..

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 occupied 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 erect 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 foetid mud, from which, at nearly low water, the surface becomes covered with bubbles of a foetid 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. 300.

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 foetid 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.

No. 17.

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 Loeh 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 Edin-

burgh, 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 the 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 pittance, 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 pittance 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 as 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

* 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.

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 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,

Inverness, 2nd March, 1841.

G. ANDERSON.

To

The Poor Law Commissioners.

No. 18.

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. $57^{\circ} 8'$ and $58^{\circ} 10'$ north, and between long. 4° and $5^{\circ} 46'$ 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 dulce*). 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 expense 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 10s. 6d. 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 Ed-derton. 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 Portandruì, 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 under-wood.

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 proficient 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 watertight, 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 griever, 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. Cattle-men 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 bare-footed; 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 10s. 6d. 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 farmstead, 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 5*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 white-washed, 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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