certainly does not prevail. Their cottages are in general badly lighted and ventilated, frequently damp and densely crowded. The construction of such property is, upon the whole, infinitely worse than in towns. It is not unusual to find a large family crowded into a hovel with only a small kitchen below, and a garret divided into two sleeping apartments above. Notwithstanding a very large sum of money is yearly obtained by these fishermen, yet such are their thriftless and improvident habits, that they are almost all in a state of great poverty. There are honourable exceptions to this sweeping censure; and here and there a neat cottage, with smiling contentment, is observable; and I would gladly hope that, by the laudable exertions at present making by the clergy and other benevolent persons in their neighbourhood, that these villages will shortly present a better aspect.

I am, Gentlemen,
Faithfully and respectfully yours,
EDWARD DE VITRE'.

No. 23.

ON THE STATE AND CONDITION OF THE TOWN OF LEEDS IN THE WEST RIDING OF THE COUNTY OF YORK.

By ROBERT BAKER, ESQ.

THE town of Leeds, in the West Riding of the County of York, is situated on the River Aire, which runs through it, and which is navigable only hitherto. It forms by far the most important of the 11 townships of which the borough is composed, having, by the census of 1841, a population of 87,613 persons out of a parochial and total population of 150,587. The acres of the parish or borough are stated to be 21,450, but the total acreage of the township is only 2,672 A. 2 R.

By the Municipal Act of Will. IV., the borough of Leeds was divided into 12 wards, of which eight are in the township of Leeds, viz., the North, North-east, East, South, Kirkgate, Mill-hill, West, and North-west.

It is proposed to consider these wards in this Report: the inquiries instituted only having reference to the town, and not to the borough.

The following Table exhibits the present builded and blank areas of these wards, *i. e.*, the surface which is covered with buildings, including the streets, and that which still remains, either building-land, or land allotted to agriculture, gardening, or other purposes; to which is added, the number of houses of various values, and the population of them, taken on a calculation of four and a half to a house, which was the ratio in the census

of 1831, of the statistical census of 1838 and 1839, and is nearly the same in the census just completed.

It is necessary, however, to observe, that the measurements here given are the present result of an entire admeasurement ordered to be made by the Town Council of Leeds of the whole borough, with a view to an improved valuation; while the number of houses at different values, is that obtained by the statistical survey of the town in 1838 and 1839, between when and now the whole population of the township has increased from 82,120 to 87,613. But for all practical purposes it is the same, for the increase has no doubt been distributed in similar proportions as heretofore. The object of this argument is to show the proportion of the working-classes, *i. e.*, persons who live in houses under 10*l.* annual rent, to the middle and upper classes, and their number, upon given areas, with a view to exhibit congregation, amongst the other elements which affect longevity:—

Wards.	Land.	Buildings.	Total.	Population of the Ward.	Dwellings under 10*l.* Annual Rent.	Population of the Working Classes at 4½ to a House.
	A. R. P.	A. R. P.	A. R. P.			
North . .	28 1 0	63 3 0	92 0 0	12,506	2,100	9,450
North-East	466 0 0	75 3 0	541 3 0	16,269	3,422	15,399
East . .	546 3 0	111 0 0	657 3 0	14,271	2,947	13,261
South . .	66 1 0	57 1 0	123 2 0	5,630	943	4,243
Kirkgate .	4 0 0	27 2 0	31 2 0	3,158	348	1,233
Mill-hill .	26 1 0	101 2 0	127 3 0	5,167	274	1,566
West . .	384 0 0	176 0 0	560 0 0	15,483	2,104	9,468
North-West	456 0 0	82 1 0	538 1 0	9,656	1,465	6,592
8	1,977 2 0	695 0 0	2,672 2 0	82,120	13,603	61,212

By this Table it is seen, that upon the 92 acres of the North ward are located nearly as many persons as upon the 541 acres of the North-east, the 657 acres of the East, and the 560 acres of the West. The importance of this will be manifest when we come to consider the districts of the registrars.

The town itself stands on sloping ground, the highest part of which is on Woodhouse Moor, to the west, and which is about 232 feet above the level of the River Aire below the Hunslet Weir.

The Hunslet Weir is here mentioned, because it is only below this, a distance down the river of about two miles, that an effectual drainage can be obtained.

Within it are going on daily the processes of flax-spinning and weaving by hand; the manufacture of woollen cloths, and of some worsted goods; of various kinds of machinery, of tobacco, and pipes, dye-works, ware and saw-mills, and other processes of industry.

The higher parts of the town are ordinarily clean for so large a manufacturing location; but the lower parts, which lie contiguous to the river and the Becks or rivulets are dirty, confined, ill

ventilated, and in many instances self-sufficient to shorten life, and especially infant life, when exposed to their influence.

The comparatively little sewerage of the town is emptied into the river and the Timble Bridge beck, a rivulet which runs from north-west to south-east, joining the river in the East ward. The river and this beck are so much the receptacles of all kinds of refuse, that long before either of them reach the town, their waters are perfectly discoloured. With the river it is not so much the case, but with the Timble Bridge beck, running through the most important ward of the town in point of population, the refuse left upon its sides, on its waters being drawn off for particular purposes, is so exhalant and noisome as to be offensive in the first degree. Some idea may be formed of the use of its waters by engines and dye-houses, that serious contentions have occasionally arisen between parties appropriating them for condensing purposes, on account of their heat.

The lower parts of the town are furthermore disgusting, particularly on account of a general want of paving and draining, for the irregularity of their buildings, for the violation of the common decencies of life in the abundance of refuse and excrementitious matter lying about in various directions, and what is indeed a matter of universal complaint in every part of Leeds, for the pavement, where there is any, being set in ashes, and occasionally covered with the same, by which, in dry weather, a black and irritating dust prevails, not only in the streets but the houses; and in dirty weather, a spunging puddle, most foul and most offensive.

The town of Leeds contains 586 streets, varying from 8 to 23 or 24 yards wide, three or four squares, and a great many courts and *culs-de-sac*. Over 86 of the streets only have the local authorities any control; for there seems to be no power under any existing Act of Parliament whereby newly opened streets may be added to those over which the public have an acknowledged legal right, without their being first thoroughly paved, and by common consent of all the proprietors, given up for public use.

By the census of 1841 the total number of inhabited houses has been found to be 17,737, of uninhabited houses, 1,249, and of of those building 220. For the most part they are put together without regard to architectural order or regularity. The levels of various parts of the town above the Hunslet Weir range from 232 feet, as before mentioned, to as low as 27 feet 9 inches; and whilst it is perfectly true, therefore, that a great part of the town might be effectually drained very considerably nearer the town than the Hunslet Weir, yet there are great portions of it adjacent to the river, and in the neighbourhood of the brooks, in such low situations, that either a distant fall will be required to obtain drainage, or frequent regurgitations from back-water will be inevitable.

The river Aire, which courses about a mile and a half through the town, is liable suddenly to overflow from violent or continued rains, or from the sudden thawing of heavy falls of snow. The lower parts, and dwellings, both in its vicinity and in that of the becks, are not unfrequently therefore inundated; and as the depth of the cellars is below the means of drainage, the water has to be pumped out by hand-pumps on to the surface of the streets. In those parts of the town, and particularly where the humbler classes reside, during these inundations, and where there are small sewers, the water rises through them into the cellars, creating miasmatic exhalations, and leaving offensive refuse, exceedingly prejudicial to the health as well as to the comfort of the inhabitants. It was stated on the authority of one of the registrars, that, during a season remarkable for an unprecedented continuation of hot weather, in one of these localities, the deaths were as three to two, while in other parts of the town, at the same period, they were as two to three. The condition of the Timble Bridge beck is doubtless much worse for drainage purposes than formerly, for the bottom has been raised by continual deposits, until the oldest water-wheel upon it has had to be removed as useless and inoperative; and stepping-stones, once the means of passage over it, are at this moment said to be buried under the accumulation of years, as much as one or two feet in depth. It is quite clear, therefore, that that which was once the main receptacle for the drainage of an entire district, is, in its present state, no longer capable of fulfilling that purpose; and that though a considerable amount of drainage might still be effected by it, yet, unless emptied of its superfluous matter, it cannot now be made available for the wants of the entire population in its course.

In an inundation about the period of 1838 or 1839, which happened in the night, this beck overflowed its boundaries so greatly, and regurgitated so powerfully into petty drains communcating with houses 100 yards distant from its line, tha many of the inhabitants were floated in their beds, and fever to a large amount occurred from the damp and exhalations which it occasioned. Of the 586 streets of Leeds, 68 only are paved by the town, *i. e.*, by the local authorities; the remainder are either paved by owners, or are partly paved, or are totally unpaved, with the surfaces broken in every direction, and ashes and filth of every description accumulated upon many of them. In the manufacturing towns of England, most of which have enlarged with great rapidity, the additions have been made without regard to either the personal comfort of the inhabitants or the necessities which congregation requires. To build the largest number of cottages on the smallest allowable space seems to have been the original view of the speculators, and the having the houses up and tenanted the *ne plus ultra* of their desires. Thus neighbourhoods have arisen in which there is neither water nor out-

offices, nor any conveniences for the absolute domestic wants of the occupiers. But more than this, the land has been disposed of in so many small lots to petty proprietors, who have subsequently built at pleasure, both as to outward form and inward ideas, that the streets present architecture of *various orders*, causeways, dangerous on account of steps, cellar windows without protection, here and there posts and rails, and everywhere clothes-lines intersecting them, by which repeated accidents have been occasioned. During the collection of the statistical information by the Town Council, many cases of broken legs by these unprotected cellars, and of horsemen dismounted by neglected clothes-lines hanging across the streets, were recorded.

It might be imagined that at least the streets over which the town surveyors have a legal right to exercise control, would be sewered: but this is not the case; of the 68 streets which they superintend, 19 are not sewered at all, and 10 are only partly so; nay, it is only within the three or four years past that a sewer has been completed through the main street for two of the most populous wards of the town, embracing together a population of 30,540 persons, by which to carry off the surface and drainage-water of an elevation of 150 feet, where, indeed, there could be no excuse for want of sufficient fall. I have seen, in the neighbourhood to which I now refer, an attempt made to drain the cottage houses into a small drain passing under the causeway, and which afterwards had to be continued, through a small sewer, and through private property, by a circuitous route, in order to reach its natural outlet, and the water from the surveyor's drain regurgitate into the cutting from the dwellings. It only needs to be pointed out that the sewer which has subsequently been made, and is most effective, is an evidence of the previous practicability of a work so essential to the welfare of the people; but, I may add, that many of the inhabitants of the districts a little further distant from the town, where fever is always rife, are yet obliged to use cesspools, which are constructed under their very doors, for the want of the continuation of this desirable measure.

Along the line of these two wards, and down the street which divides them, and where this sewer has been recently made, numbers of streets have been formed and houses erected, without pavement, and hence without surface-drainage, without sewers, or if under-drainage can be called sewers, then with such as, becoming choked in a few months, are even worse than if they were altogether without. The surface of these streets is considerably elevated by accumulated ashes and filth, untouched by any scavenger; they form nuclei of disease exhaled from a thousand sources. Here and there stagnant water, and channels so offensive that they have been declared to be unbearable, lie under the doorways of the uncomplaining poor; and privies so laden with ashes and excrementitious matter, as to be unuseable, prevail,

till the streets themselves become offensive from deposits of this description: in short there is generally pervading these localities a want of the common conveniences of life.

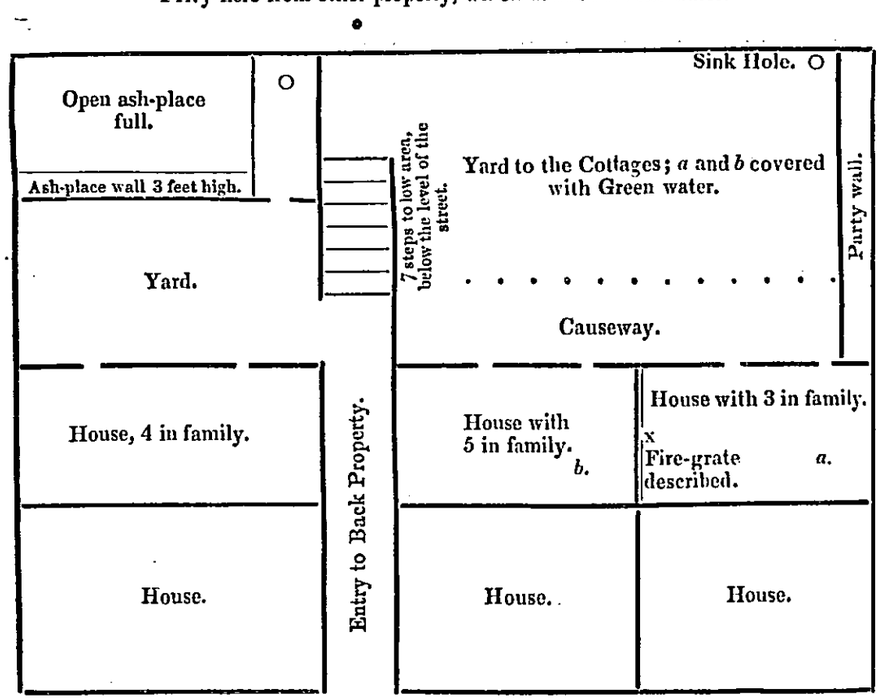
The courts and *culs-de-sac* exist everywhere. The building of houses back to back occasions this in a great measure. It is in fact part of the economy of buildings that are to pay a good per centage. In one *cul-de-sac*, in the town of Leeds, there are 34 houses, and in ordinary times, there dwell in these houses 340 persons, or ten to every house; but as these houses are many of them receiving-houses for itinerant labourers during the periods of hay-time and harvest, and the fairs, at least twice that number are then here congregated. The name of this place is the Boot and Shoe-yard, in Kirkgate, a location, from whence the Commissioners removed, in the days of the cholera, 75 cartloads of manure, which had been untouched for years, and where there now exists a surface of human excrement, of very considerable extent, to which these impure and unventilated dwellings are additionally exposed. This property is said to pay the best annual interest of any cottage property in the borough.

A remarkable instance of the value of preventive measures occurred in the year 1837.

In one of the streets of Leeds where stagnant water used frequently to accumulate after rain, and where there was perpetually occurring cases of fever of a malignant character, a deputation of females waited upon me in my capacity of Town Councillor, to ask if any remedy could be applied to this nuisance, which they declared was not only offensive but deadly. I directed them to communicate with the owner of the property, and to say, that if the grievance was not remedied, I should take further steps to enforce it. Never hearing again from the deputation, I presumed that the remedy had been applied, and had forgotten the circumstance, until the house-surgeon of the Fever Hospital, in 1840, in noticing the localities from whence fever cases were most frequently brought to the Institution, remarked, that "formerly many cases of malignant fever were brought in from —— street, but for two or three years there had been none, or not more than one or two." This fact alone is sufficient to point out the value of effective drainage. In the Leylands, a large and increasing neighbourhood is located along the sides of the Timble Bridge beck. This district is situated so low, that the sewer, which is but very small, is said to be always half full of water, which cannot get away, because the owners of the soil between the beck and the street will not allow lateral drains to be made through their property, which, though they might subject the houses to occasional inundations from back-water, yet for nine-tenths of the year would keep this main sewer perfectly empty and free. Under the circumstances it is necessary to carry this sewer by a long and circuitous route, and by several angles, to a more distant

part of the same beck, perhaps the distance of about 500 or 600 yards into another sewer, into which also branch sewers from higher levels are perpetually pouring their contents.

Drainage.—In many of this courts the want of drainage is severely felt. All the refuse water has to be thrown on to the surface, where it either becomes stagnant, or is absorbed, or is attempted to be removed by sumpholes. A court under these circumstances is shown on the subjoined ground-plan. The facts are related by a cottager occupying the house marked *a*.



Thomas Rooley is 66 years of age. His wife is also about the same age; worked formerly as a soap-boiler; is now unable to work, and lives on parish allowance, and the earnings of his wife. Has 2*s.* 6*d.* a-week. A son lives with them, who has been a long time out of employment. Has lived in this cottage for more than a twelvemonth; has had very bad health during that period, and his wife also has had rheumatism. The water in front of the house has accumulated from various sources. The yard has never been dry since he came to it. There is a sump-hole, a great depth, in one corner, made by the landlord, to take the water away; but it is full of deposit. The stench is often so bad, and especially after rain, that he and his wife cannot bear it. The fire-place of his house has a small place under it for ashes,

but he has been forced to remove the grate and put down an oven-plate to cover it with, in consequence of the stench coming under the house and making its way up the grate. Last week, in consequence of much rain, he would have been up to the knees in wet but for baling the water out and throwing it over the wall. He worked five hours at it. Last winter, when the thaw was, he had water in the house for some days. The necessary above drains into this water through the partition wall, and adds to its offensiveness. Then there are suds and dirty water also which are forced to be added to it, for there is no drain nor means of throwing them elsewhere. His wife and himself have both had bad health ever since they came, and they are too poor to remove. He has had rheumatism so bad, that he could not go out, and so has been more exposed to it than his wife. It is about 10 inches deep of water in the lowest corner.

Benjamin Hardwick is the owner. He and his father have had the property for 30 years. Formerly the water used to run down its natural fall into the high yard, where there is a small private sewer, but the owner some years ago built a partition-wall across to divide the properties, and so cut off his drainage, and it has been so so long that he cannot now disturb it. The tenants wanted to make a hole through the wall with a poker, but he forbad them, being afraid of a law-suit. He made a sumphole, to try if that would drain it away, but it was soon full; and has offered endless times to the owners of the property below to allow it to run off as formerly, and would give them a rental or an acknowledgment, or make a sewer at his own expense, but they will not. These houses have stood empty for four and five years at a time on account of this water, which is a nuisance not only to them but to all the neighbourhood. He has sometimes had it pumped out by a hand-pump, or laded it into the front street, but has been compelled to desist from its offensiveness to the neighbourhood whilst running away. Has had great complaints about it, but cannot remedy it.

This is one of many applications which have been made to me to view property either unpaved or undrained, by reason of obstinate neighbours, in the hope of getting the nuisance removed.

Nuisances.—During the progress of the statistical inquiry, one of the collectors recorded the circumstance of a woman, who, in passing through a dark entry leading from one street to another, fell into the refuse of an undefended privy, and but for the assistance of neighbours would have been suffocated.

Of the many nuisances of such kind which exist the record is indeed disgusting. It is not only in a physical but a moral point of view that they produce their effect upon the people. As slaughtering cattle in the public thoroughfares has a tendency to brutalize the feelings, so the perpetual presentation of these uncleanly *loci* to the eye, dulls the energies of even the most willing

housewives, and weakens in time the most cleanly original determinations.

In instancing the following fact, which happened two years ago, and even in this year has been repeated, there is exhibited an apathy to, or disregard of, consequences so extraordinary, that it calls for public condemnation. The contractor for the street sweepings, who is the treater with the Commissioners of Public Nuisances in Leeds, absolutely rented, and rents, or did rent a very few weeks ago, a plot of vacant land in the centre of the North-east ward, the largest ward in point of population in the township of Leeds, and containing the greatest number of poor, as a depôt for the sweepings from the streets and markets, both vegetable and general, for the purpose of exsiccating and accumulating till they could be sold as manure and carried away. So noisome were these exhalations, that the inhabitants complained of their utter inability to ventilate their sleeping-rooms during the daytime, and of the insufferable stench to which both by night and day they were thus subjected.

A great many of the privies of the cottages are built in small passages, between clumps of houses, which are different properties; others, with the ash entrance open to the public streets; and others at a little distance from, and open to, the front of the houses; whilst some streets are entirely without. The inhabitants, to use the language of an old woman, of whom inquiry was made, say "That they do as they can, and make use of the street itself as the common receptacle." These remarks apply in particular to three streets in Leeds, which contain a population of between 400 and 500 persons, where there is not a useable privy for the whole number.

The cesspools, which exist abundantly, though not so numerous as formerly, are a fruitful source of disease. In some streets they are formed under the flags which cover the front doors. In the clayey soil of the neighbourhood of Leeds they soon become full of putrescent matter. From Woodman-street and Cottage-street, where they are obliged, from want of drainage, to be resorted to, many cases of fever are annually taken to the fever hospital.

There are some slaughter-houses in Leeds in the midst of dense populations. In the Kirkgate and the North wards they prevail, and are very often highly offensive. Bone-mills and candle-makers' shops are also great nuisances. Perhaps, however, the greatest nuisance to which manufacturing towns are exposed, and more especially Leeds, is that of the smoke from the engine-furnaces, the dye-works and the tobacco-pipe furnaces. It is estimated that the engine-furnaces alone consume annually about 200,000 tons of coal. The dye-houses and pig-shops, and other furnaces, where steam-engines are not erected, add materially to this amount. The density of the atmosphere, occasioned by this immense consumption of fuel, added to that used for domestic purposes, may be conceived. The smoke, however, from the low chimneys of the dye-works and tobacco-pipe furnaces is a greater nuisance in particular localities than even that of the engine-chimneys, for the latter do carry the cloud above the heads of the people, but from the former dense volumes are conveyed through the streets by every breath of wind.

It has been suggested, that to the chemical changes of the atmosphere,—and in a great measure attributable to smoke,—arise the amount of small-pox which fell upon the southern migrants who were located in Yorkshire in 1836 and 1837, many of whom were affected by this malady. There is very little doubt, indeed, that this vitiated state of the atmosphere does tend to produce a great effect upon the structure of the lungs. The exact amount of this in Leeds, in proportion to other places, I have no present data to show, but it is in course of collection. I have a table of the deaths of 1,742 married men, of which 708 were from phthisis pulmonalis. This table was made in the general statistical inquiry of 1838 and 1839. Of the 2,279 widows there recorded, 1,742 were able to explain the cause of death in their husbands; and as the inquiry was indiscriminate, the fact is interesting. I have also a table of 427 deaths registered in one of the Leeds districts from January to July, 1841, of which 242 were about 16 years of age, and of which 78 were from pthisis also.

The supply of good water to the inhabitants of Leeds has for a long time been most justly complained of, but the evil is now remedied.

The only sources of supply, till very lately, were the river and pumps in private hands. The offensiveness of the river water was proverbial. It was distributed in pipes after having been forced into reservoirs, open to the atmosphere, where it could be "allowed to settle," which pipes were often found choked up with offensive matter. The cost of the pump-water was not very considerable generally, though its free use would doubtless be curtailed by the mere labour of fetching it from a distance; yet its sulphureous impregnation was an objection, though the water itself was stated to be very pure. Leeds has now, however, new water-works, which distribute a most abundant supply of pure water all over the town at a reasonable rate, which rate is estimated in fact in proportion to the rent, at about 1*s.* in the pound; so that if a poor cottager paid formerly 1*d.* a-week for water, and had to fetch it from some distance, for 5*s.* or 6*s.* annually he can now have a good supply brought to his door.

Houses.—It has before been shown that Leeds contained in 1839, 18,279 houses, of which 13,603 were under the annual value of 10*l.* The total number under 5*l.* annual value was 5,272. It is in this latter class of houses that the humbler part

of the industrious population resides. Perhaps there is no question of more importance than the size of the houses within the entire range of vital statistics.

The price of the building-land in Leeds varies from 1*s.* a-yard to the highest range of value. Beyond 3*s.* or 4*s.* a-yard, however, it is considered too valuable for cottage purposes. Generally it is freehold, and purchased in small lots, by different proprietors. The streets are usually formed, re-stated out, before the buildings are erected, after which their progress goes on according to the sale of sites. In periods of great prosperity, no property is more valuable than what is called cottage property in towns; for the demand for labour enables the operative to pay a high rent, which, for the most part, is collected weekly or quarterly, according to the character of the tenantry. Thus whole streets of houses have arisen in Leeds, in an inconceivably short space of time, and in many instances evidently for the sole end of speculation, without regard to the absolute wants of the tenants.

In instance of this, it has been shown, that in three of such streets there is now no useable privy, and other records exist of as many as 30 houses having been thus erected with only one privy for the whole. For the most part, all these houses are built back to back, and at the same period of time. The price of land, and the outlay on materials direct this. Two such houses are ordinarily built for a cost of from 65*l.* to 70*l.* each, which with the land, raises the entire cost to about 80*l.* a house. The average repairs may amount from 5*s.* to 10*s.* a-year. When new, these houses will let for 12*l.* a-year, and continue to be so let for a considerable period. A house of this description will contain a cellar, house, and chamber: there are very few of the rent of 5*l.* which contain more accommodation than this.

But it must be manifest that one sleeping-room, though it may be quite sufficient for a young couple, must be very inadequate to a family of five persons, or oftener eight; and it is no sufficient answer—in fact an answer founded in error—that with the increase of a poor man's familyhis means of affording them accommodation increase; on the contrary, an operative is almost at the head of his wages when he becomes a housekeeper and married; and if his means then are inadequate to pay the rent of a house with two sleeping-rooms, they rarely or ever become so. The wages of children added to the common stock, are more than consumed in food and clothes, during the earlier periods of life and parental control. But with many of the working-classes of manufacturing districts, this control is shaken at 14 years of age, and entirely gone at from 16 to 20, and but a very small portion of the earnings of children are then appropriated to the domestic use of the entire family. In fact, at the period when it is essential that the separation of the sexes should be enforced, there is often the less ability to effect it—and thus, in the houses of the working-

classes, brothers and sisters, and lodgers of both sexes, are found occupying the same sleeping-room with the parents, and consequences do occur which humanity shudders to contemplate. It is but three or four years ago since a father and daughter stood at the bar of the Leeds sessions as criminals, the one in concealing, and the other in being an accessory to concealing, the birth of an illegitimate child, born on the body of the daughter by the father; and now, in November, 1841, one of the registrars of Leeds has recorded the birth of an illegitimate child born on the body of a young girl, only 16 years of age, who lived with her mother, who cohabited with her lodger, the father of this child, of which the girl had been pregnant five months when the mother died.

The ordinary size of such a cottage-chamber is about five yards square, and about four yards high. Their contents vary form 600 to 1000 cubic feet, a part of which space is of course occupied by furniture. There are generally two beds in the same apartment where there are families, or even three, and not unfrequently instruments of labour, as looms, or the apparatus for combing wool, or for some other kind of handicraft. In the worsted districts are not unfrequently found the charcoal furnaces of the wool-combers in their bed-chambers, which are all day burning to enable them to use their combs for their occupation, at once heating and vitiating the atmosphere, and rendering the apartment wholly unfit for sleeping purposes.

Let a poor family, consisting of a man, his wife, and seven children, two or three of whom are adolescent, be imagined occupying one of these chambers, in a *cul-de-sac*, or in an undrained and unpaved street, seven human beings, each requiring 600 cubic feet of breathing room, shut up in a chamber not containing more than 1000 feet for the whole. The offices of nature performed in the same apartment with sustentation, sufficient perhaps to maintain the vital powers, but hardly enough to supply the draught which nature demands to nourish their growth; both parents and children rising in winter and summer at five o'clock in the morning, and labouring in other unhealthy atmospheres with occasional intermissions, from six A.M. till half-past seven P.M., in a temperature, probably, of 70, 80, or 90 degrees, tasting flesh-meat once a-week, and returning to the limited atmosphere of the night, unchanged, because unable to be improved, owing to the defective sanitary regulations, or an entire absence of them;—and the mind that so thinks, draws a picture which the theatre of any large manufacturing town could pourtray in a thousand instances. In the common lodging-houses, this impaction of persons in the same sleeping-apartment is most perfect. There is one common lodging-house in Leeds which contains two bed-rooms, of about 1,200 cubic feet each, separated by a partition of wood, and having one window in each room, looking into a narrow lane, where the pure air of heaven never blows—in each of which rooms, when last

visited, there were six beds, for the purpose of sleeping two and three persons in a bed, from which house many cases of malignant fever have been taken to the House of Recovery. In the summer of 1838, a labourer, a powerful and athletic man, and his wife came in from the country and took lodging in this house. In three days he was taken with typhus fever, and removed to the House of Recovery, where in twenty-four hours more he died. His wife was warned by the house apothecary of the institution of the dangerous character of her lodgings, and recommended to change them; but she refused, and in a few days was herself admitted and shortly died; and two nurses died, and one narrowly escaped, on administering to their necessities. Once more let us recur to the Boot and Shoe-yard, where, in 34 houses, occupied by 43 tenants, there were living, in 1839, 174 males and 166 females in 57 rooms, making an average of six persons to a room; most wretched hovels indeed, almost without furniture and the means of cleanlinesss, yet paying an annual rental of 214*l.*, and with no rents better paid, or less leakage.

One more instance is recorded of the necessity of attention to the number of sleeping-rooms in cottages. A gentleman appointed to an important commission touching the education of the people, and anxious to acquaint himself with the social condition of the inhabitants of large manufacturing towns, was introduced to me in the spring of 1840, as one likely to further his object by reason of my acquaintance with the various localities likely to interest him. In passing through a public thoroughfare, about 9 o'clock in the evening, our attention was attracted by an open door, from which a good light was shining, and to which we directed our steps for the purpose of examining the apartment, both as to size and to the apparent comfort of the inmates. To our mutual astonishment we were presented with the following *tableau:*— The chamber on the ground-floor, and level with the common causeway of the street, contained two beds; in one, sitting up, undressed, was a youth of about 16 years of age; on the floor, before the fire, was seated the father, preparatory to undressing; whilst the mother, *en chemise,* half naked, in fact, was standing with her back to the fire, with the most perfect *nonchalance.* Much more might be said, and many more instances given, but it is unnecessary,—

Ex uno disce omnes.

The rent of cottages of the labouring classes in Leeds vares from 2*l.* to 10*l.* a-year. Perhaps the great majority are between 4*l.* and 7*l.* Were the houses built upon a much larger scale, therefore, and with a much larger quantity of land appropriated to them, the annual value would be beyond the income of the labourers. The rates and rent of a house of 6*l.* a-year do not absorb much less than a seventh of the wages of the occupier, and perhaps a fifth or sixth upon the average wages of all classes

of artisans, and labourers of all descriptions. Whatever rent might therefore be added, by reason of original cost, would be increased by rates in proportion to the annual value, and great distress and privation would be thereby occasioned. The annual rent of houses with two chambers varies from 6*l.* to 8*l.*; but if to this were added large yards and separate out-offices, or garden ground, or anything tending to enlarge the original cost, the annual draught from the income of a working man would be too heavy for the other requirements of his family.

There are a few clumps of houses in Leeds having gardens before them, but no vegitation thriving in them, and an attempt at any cultivation of the soil only adds to the mischief which the additional rent occasions. One cannot but notice the moral and social as well as physical effect which an attention to the architecture and order of cottage houses and the good arrangement of the streets has upon the health and habits of the people. In every town, no doubt, this contrast can be made; but certainly so in towns built upon undulating land, where drainage can be effected, and where habits of out-door cleanliness can be enforced. In the Bank, in Leeds, a part of the East ward in which there is every variation of size and order of cottage dwellings, there is a large population located under a good landlord, who has erected his houses upon a good plan, with a due regard to the wants and requirements of his tenantry, with a due share of out-offices, and other accommodation; and with streets well paved and sewered; he has very rarely any houses to let. The whole estate bears upon the face of it comfort and enjoyment. Every house is clean and neat, and enanted by a respectable occupier. This landlord can have a selection of tenants, who count it a favour to obtain one of his houses, and his rents are regularly paid almost to a farthing. It is true that he has every advantage of situation and means, and he has availed himself of them, which hundreds of others have not, who are similarly circumstanced. There are no violations of decency to be seen here, and no disturbances nor assemblies of Sabbath-breakers; on the other hand, in the lower parts of the same ward, with effective means of drainage and pavement, are to be found houses occupied by tenants shadowed down through every grade, from the rents obtained on the first estate, to the 1*s.* a-week rent of the dark and dank cellar, inhabited by Irish families, including pigs, with broken panes in every window-frame, and filth and vermin in every nook. Here, with the walls unwhitewashed for years, black with the smoke of foul chimneys, without water, with corded bedstocks for beds, and sacking for bed-clothing, with floors unwashed from year to year, without out-offices, and with incomes of a few shillings a-week, derived from the labour of half-starved children, or the more precarious earnings of casual employment, are to be found within what seem the dregs of society, but are

human beings withal existing, from hour to hour, under every form of privation and distress. The tables exhibited under the article population, show how great this is—while without, there are streets elevated a foot, sometimes two, above the level of the causeway, by the accumulation of years, and stagnant puddles here and there, with their fœtid exhalations, causeways broken and dangerous, ash-places choked up with filth, and excrementitious deposits on all sides, as a consequence undrained, unpaved, unventilated, uncared-for by any authority but the landlord, who weekly collects his miserable rents from his miserable tenants.

Can we wonder that such places are the hot-beds of disease, or that it obtains upon constitutions thus liberally predisposed to receive it, and forms the mortality which Leeds exhibits. Adult life, exposed to such miasmata, gives way. How much more, then, infant life, when ushered into, and attempted to be reared in, such obnoxious atmosphere. On the moral habits similar effects are produced; an inattention on the part of the local authorities to the state of the streets diminishes year by year the respectability of their occupiers. None dwell in such localities but to whom propinquity to employment is absolutely essential. Those who might advocate a better state of things depart; and of those who remain, the one-half, by repeated exhibitions of indecency and vulgarity, and indeed by the mere fact of neighbourship, sink into the moral degradation which is natural to the other, and vicious habits and criminal propensities precede the death which these combinations prepare.

Number of Persons to a House.

The greatest number of persons living in one house is to be found in the lodging-houses for itinerant labourers, where, in some instances, they are as many as five to a bed. Three beds are not at all uncommon in one sleeping room, in the private houses of the cottagers, without always having the decency of a curtain between them, though sometimes this arrangement is made.

In the houses of the Irish poor, of which there are a great many in Leeds, who work in factories, and are engaged in weaving by hand plaids and other stuff goods, there is a general state of desolation and misery. Whether it is the improvidence of the Irish character, or their natural habits are filthy, or both, or whether there exists the real destitution which is apparent in their dwellings, I know not; but in them is more of penury, and starvation, and dirt, than in any other class of people which I have ever seen. The proverbial misery of the poorer Irish people is not overlooked, nor indeed is it apparently without reason; but whether that misery is the result of improvidence or not, is another question altogether; for the average amount of labour which they obtain in Leeds is evidently quite equal to that of the English labourers. They are mainly employed in plaid-weaving and bobbin-winding, and in

some or the mills of the town, of whose population they compose no inconsiderable amount, especially in those departments of mill-labour which are obnoxious to English constitutions, and to some unendurable. To such an extent, indeed, has the employment of the Irish been carried in Leeds, that, in 1835 and 1836, many of the flax-mills would have been obliged to stand for want of hands, but for the influx of Irish labourers which then took place.

The subjoined Table gives the wages of a large number of Irish weavers and their families, in the months of November of ten successive years, and of October in the present year, embracing periods both of great depression and of great prosperity. The men comprise young and old, skilful and unskilful, and quick and slow; all

YEARS.	Men, Women, Boys, and Girls.	Total Earnings for Four Weeks.	Average per Week.
		£. s. d.	s. d.
Nov. 1831.	104 Men . .	252 7 10	12 1½
	17 Women .	20 14 3	6 1
	14 Children	23 6 9	8 3
Nov. 1832.	114 Men . .	219 16 11	9 9
	7 Women .	74 1 9	5 6
	9 Children	13 4 0	7 4
Nov. 1833.	104 Men . .	218 1 5	10 6
	9 Women .	11 3 0	6 2
	10 Children	14 18 9	7 5
Nov. 1834.	120 Men . .	268 7 6	11 2
	10 Women .	12 5 9	6 1
	9 Children	12 15 6	7 1
Nov. 1835.	126 Men . .	323 10 11	12 10
	24 Women .	40 11 6	8 5½
	12 Children	14 0 10	6 0
Nov. 1836.	144 Men . .	330 0 0	11 6
	12 Women .	15 13 3	6 6
	18 Children	28 12 6	7 11
Nov. 1837.	133 Men . .	323 16 11	12 2
	14 Women .	18 0 0	6 5
	13 Children	20 6 0	7 9
Nov. 1838.	134 Men . .	307 5 0	11 6
	13 Women .	18 8 3	7 1
	12 Children	14 0 10	6 0
Nov. 1839.	145 Men . .	380 6 6	13 1
	29 Women .	41 16 0	7 3
	19 Children	32 12 5	8 6¾
Nov. 1840.	137 Men . .	308 16 5	11 3
	18 Women .	27 16 0	7 9
	10 Children	18 0 5	9 0
Oct. 1841.	150 Men . .	375 12 1	12 6¼
	23 Women .	37 8 5	8 0
	12 Children	21 11 10	9 0

of which qualities are most important in the consideration of this question; and to be accurate on this head, they are divided into three classes; viz., out of 150 men, 45 are taken as earning 18*s.* a week, 60 as earning 13*s.* a week, and 45 as earning 9*s.* a week; and almost invariably the women and children are the wives and children of the men therein specified. The month of November, too, is chosen as the period of the year best likely to give the average earnings.

The average wages which either of these persons earn is quite sufficient, with care, to provide for the wants of their families; and more than this, in some instances, with economy, to lay by something for the decline of life. Let us look for a moment at these earnings of these Irish weavers, which, although the subject might come more properly under the head of labour, has been now introduced under the idea that it is better to keep the destitution and the means of the Irish immigrant under consideration together, lest we should be led away by the former under general sympathy, and underrate the latter when we came to speak of it.

A plaid-weaver, for instance, of industrious habits, will rent a small house, consisting of a kitchen and chamber, at an annual cost of about 4*l.*, or a cellar at 2*l.* 10*s.* In the former case, the kitchen is not only appropriated to culinary purposes, but is the house, the sleeping-room, the hen-house, and the piggery; whilst upstairs are three or four looms, all but touching each other; and, perhaps, in a corner, a bed on the floor for one of the owners of those looms, which are employed as follows: one by the occupier of the house, the others by persons to whom they are either sub-let at a weekly rent, or who are relatives, friends of, or labourers for, the owner, who work either for weekly wages, or for the common maintenance of the family. In a cellar, a single loom for the weaver is all that it will contain.

It appears that in November, 1832, the lowest rate of wages was obtained, and the highest in 1839; and that the average of the 11 years of the men's wages only, has been 11*s.* 8*d.* per week. Taking the number of women and children in each month as showing the families, out of the total number of each month, who were benefited by the additional wages of themselves and children, we have a number, out of the several aggregates, whose weekly wages have been by no means inconsiderable; as, for instance, in the month of November, 1831, 17 families were benefited by the labour of the wives, and 14 by that of the children; the former averaging 18*s.* 2½*d.*, and the latter 1*l.* 0*s.* 4½*d.* per week, leaving, out of the total number of 104 men, the presumed heads of families, though by no means certainly so, 73 only as having but the 12*s.* 1½*d.* per week, as therein stated. But it would be unfair to set down these 73 persons as heads of families only earning 12*s.* 1½*d.* a week, and not to suppose that in most, if not in all the instances, they are assisted by the labour of their children in other trades of industry; not, perhaps to the extent of either 6*s.* 1*d.*, as in the case of these wives, nor yet 8*s.* 3*d.*, as in the case of the children; but on the

average of each family having one child above 13 years of age, earning about 4*s.* or 4*s.* 6*d.*

This presumptive advantage, which is believed to be much within the true state of the case, will give to the lowest year (*i. e.* to 1832) a weekly rate of wages to the men only (*i. e.*, without including the women and children of the Table), of 14*s.* 3*d.*, while in the highest year, and including the wages of the children, they are seen to be 1*l.* 1*s.* 7¾*d.*

The average rate of wages of the labouring classes of England scarcely exceeds this; and it is presumed, therefore, without laying much stress on the voluntary privations to which the Irish labourer will and does subject himself, to economize his earnings, when his labour is migratory and not fixed, that the statement is borne out, that were the habits of the Irish settler made more provident by sanitary regulations—regulations affecting his dwelling, his means of livelihood, and his indifference to personal and local cleanliness, and by the example of his English neighbours—that his character would cease to be what it has long been, viz., an expression of desolation and misery; that he would not be so often found the recipient of parochial and general charity, but might possess the same independence which his English neighbours possess, and that the destitution and mortality of towns might be materially reduced.

I have been in one of these damp cellars, without the slightest drainage, every drop of wet and every morsel of dirt and filth having to be carried up into the street; two corded frames for beds, overlaid with sacks for five persons; scarcely anything in the room else to sit on but a stool, or a few bricks; the floor, in many places, absolutely wet; a pig in the corner also; and in a street where filth of all kinds had accumulated for years. In another house, where no rent has been paid for years by reason of apparent inability to do it, I found a father and mother and their two boys, both under 16 years of age, the parents sleeping on similar corded frames, and the two boys upon straw, on the floor upstairs; never changing their clothes from week's end to week's end, working daily in the dusty department of a flax-mill, and existing upon coffee and bread.

In some parts of the town there are houses and cellar-dwellings under the same roof; *i. e.*, a cellar-dwelling, as it is called, on a level with the causeway of the street, and one or two tiers of galleries to other dwellings above them. These kinds of houses are not at all uncommon in Bradford, and in parallel streets running laterally on sloping ground, so that the street below is higher than the one above. These are then generally houses containing a room and chamber fronting the upper street, and cellars, as before stated, level with the lower street and houses, each containing a room and chamber above them, or two ranges of galleries; each room being, in fact, a dwelling, the same above as below. Where the means of livelihood also occupy the same department, these dwellings are

very much curtailed in size. I was, for instance, in one such not long ago, occupied by a tinner, whose various wares, both old and new, his anvil, his resin-pot, irons, and all, were about him, in such confusion as hardly to leave room to stand in without contact; and where the walls seemed not to have been whitewashed for years; and where a small back room or closet, without either window or ventilation but into the apartment to which I have referred, was the only sleeping-room of himself, and wife, and three children. The true cellar-dwelling, however, is only that which is below the level of the street. Multitudes of Irish families occupy these miserable places, wherein I have heard them occasionally express their anxious desire to change their then condition for that which was theirs in their native land; without, I believe, referring to their *amor patriæ*, but to the contrasted misery of both states. Many such cellars are, however, occupied by widows and aged poor, on account of the cheapness of the rent, and their ability to pay it; and in many instances such occupiers look comfortable enough.

There is, however, another class of cellar-dwellings, which must not be overlooked in the effect which would be produced by a restricted law as to dwellings, viz., the cellars of shopkeepers in public streets, *i. e.*, cellar-dwellings which are in fact shops and places for the sale of goods, having two or three rooms upon the same level, and which pay, in fact, a very high annual rent. In every public street, where frontage is of the first importance, these cellar-dwellings are to be met with, and as much as from 30*l.* to 50*l.* a-year is paid for the use of them. As I have heard no complaints of any diseases peculiar to this class of cellars, probably because they are always open to spacious and well-drained streets; their exemption from restriction, when above a certain rental, might be worth consideration. It seem clear that, whether in cellars or houses aboveground, the rate of mortality in large towns diminishes in proportion to the means of ventilation and drainage. Thus, in Leeds, by drawing a line through the centre of the map from north to south, the deaths in proportion to population on the east side of the map were, in 1839, as 1 to every 24; while on the other hand, in those parts of the town where the streets are spacious and wide, and the drainage sufficient, the deaths were only as 1 to 36; both ratios being exceedingly high, but the difference remarkable. As I propose to return again to this subject under the head of Population, I pass it by for the present, merely now referring to it to notice the present neglect of large means of ventilation in the crowded streets of towns, especially where the labouring classes reside. How few squares we find where the tainted atmosphere of thousands of breathings, and exhalations of a deadly character, may have vent, circulation, and dispersion.

It is not the four and a-half persons to a house which appears to produce so much of mortal mischief, as we find in towns like Leeds; for other towns contain by far more than these upon the average;

as for instance, London, where they are seven and a-quarter, Plymouth nine and three-quarters, Bath seven and a-half, and Newcastle nine, to every house; but, wherever a population is pent up within *small and dirty areas*, we seem to have fatality increased. In illustration of this, let us notice the births and deaths of the registration districts in Leeds in 1839, in proportion to the builded areas, houses, streets, and people.

WARDS.		Builded Areas.		Number of Streets on each Area.				Number of Dwellings.	Population.	Births & Deaths in 1838 in each District.	
		Acres.	Roods.	Paved.	Sewered	Bad.	Total.			Births.	Deaths.
1.	North	63	3	37	18	43	80	2794			
	N. East	75	3	27	15	66	93	3813	28,775	1269	1219
2.	East	111	..	35	16	87	122	3461			
	South	57	1	10	1	13	23	1236	23,039	858	808
	Kirkgate	27	2	15	9	3	18	645			
3.	Mill-Hill	101	2	35	21	13	48	984			
	West	176	0	53	4	72	125	3305	30,306	1077	839
	N. West	82	1	32	3	45	77	2141			

In this Table, we find in all the districts about the same ratio of persons to a house; even in the wards apart from the districts this is so; and it is important to notice the fact, because numbers only might be supposed to produce the different results which arise in this ward to those of the other two. But it is clearly shown, I think, that fatality exists in ratio of ventilation and drainage, whatever adventitious aids may be given by other causes; for we find, in further investigating the facts here presented to us, that in the three districts enumerated, the deaths have varied not only in proportion to the builded acreage of the districts, but in conformity also with, and in proportion to, the number of streets within the area, and the average number of persons upon the acre and in each street.

Thus, for instance, there are in the district—

Streets, of which are			on an Area of					
		Good.	Bad.	Acres.	Rds.	Houses.	Population.	Births.	Deaths.
No. 1.	173	64	109	139	2	6607	28,775	1 in 22	1 in 23
No. 2.	163	60	100	195	3	5342	23,039	1 in 28	1 in 30
No. 3.	250	120	130	359	3	6430	30,306	1 in 28	1 in 36

	Acres.	Rds.	Streets.	Population upon the Acre.	Street.	Births.	Deaths.
No. 1. there is an area of	139	2	173	207	166	1 in 22	1 in 23
No. 2.	195	3	169	118	136	1 in 28	1 in 30
No. 3.	359	3	250	84	121	1 in 28	1 in 36

All of which is still more confirmatory of the previous assertion of

fatality being in ratio of ventilation; for, where the streets are spacious and wide, and the drainage and ventilation most perfect, as in districts Nos. 2 and 3, where there are fewer streets in proportion to acres, and in a better condition, there is also a much lower rate of mortality that in No. 1.

We may observe further, also, that in 173 streets, out of which 109 are described are bad, the deaths are one in every 23.

In 163, out of which 100 are described as bad, the deaths are 1 in every 30.

While in 250 streets, out of which 130 are described as bad, the deaths are as 1 in 36.

Building-clubs for the erection of houses are not uncommon, even amongst the working classes. They are managed generally by committees, and monthly savings are contributed by the subscribers. The principal question of the propriety of such societies is, as to the security which the subscribers have that their money is not only safely and well invested, but that the houses are erected with a due regard to safety, as well as comfort and accommodation.

Burial-Grounds.

The crowded state of the burial-grounds within the limits of the population is another source of prejudice to the public health requiring immediate attention. There are burial-grounds in Leeds to all the churches, and to most, if not all, the chapels; and as these are scattered over all the population, their consequences are felt over the whole area. It is unnecessary altogether to refer to the instances recorded of maladies accruing, and deaths even, to persons employed in opening graves which had been newly closed; nor to the effects upon congregations in churches where interments are permitted within their walls; the mere fact of there being burial-grounds within the limits of large populations is sufficient to demand their entire suppression. In Leeds, the principal parochial burial-ground is in Kirkgate, surrounding and immediately opposite the parish church, separated by this street, which is one of the thoroughfares of the town. This burial-ground (speaking of both sides of the street) has been disused for some years, excepting for interments in particular graves, on account of its perfectly engorged state, and the danger of disinterring decomposing bodies. About 11 years ago, another burial-ground, capable of containing 3680 graves, was added to that originally belonging to the parish; which, however, was stated to be also so full in January, 1841, that the bodies, when interred in particular places selected by the friends, were disinterred after the funeral and the retirement of the friends, and re-deposited in some other part of the ground; a practice which came before the magistrates of the town officially, and thus became of public notoriety. These burial-grounds are marked upon the map given with this Report along with another in the north-east ward belonging to the Primitive Methodists,

which is open to public desecration, owing to some dispute between the original owner of the ground and the sect whose place of interment it was. It is true that in Leeds we have a large and excellent cemetery, founded by a company of proprietors a few years ago, and situated out of the town; but it is only used by the Dissenters, no part of it having been consecrated for the use of the Church.

It is impossible to reprobate too strongly the practice of interring the dead among the living, and to expose the health of large masses of the people to the putrescent exhalations of burial-grounds, independent of the disgust which the disengorgement of the grave occasions, and the knowledge that a very few years only will intervene before the remains of friends and relatives will be disturbed and thrown aside to make room for others. In a few years more, when it will be thought that putrefaction has gone through all its stages in the parochial burial-ground of Leeds, it will be once more broken up for fresh interments; and, whether it has been completed or not, the habitations of the living, which everywhere surround this Golgotha, will be exposed to its exhalations.

Population.

By the Census of 1841, the population of Leeds is declared to be 87,613 persons, of which 41,884 are males, and 45,729 are females. The increase during the last ten years appears not to have been so proportionately great as in some other towns, according to the report of the Registrar-general, and according to the Census of the previous decennary periods—

For in	1801	the population	was	30,669
,,	1811	,,	,,	35,951
,,	1821	,,	,,	48,603
,,	1831	,,	,,	71,602
,.	1841	,,	,,	87,613

The total number of houses by the last Census is also given as 18,906; and as in 1838-9 it was ascertained that the number of dwellings under 10*l.* annual rent was 13,603, so it is more than probable, out of the additional number built since then, that cottage-houses have been erected in an equal ratio with former periods. This fact is of importance, because in endeavouring to arrive at the sanitary state of the population of large towns, and especially of those which are manufacturing, it is most desirable to ascertain as nearly as possible how many of the gross population are of the working classes, upon whose health labour, as well as congregation or causes peculiar to localities, may have an especial effect.

The more able part (in a pecuniary point of view) of the operative classes reside in houses which exceed 10*l.* annual rent. Taking, then, this rental as the line of demarcation, and multiplying the number of houses under 10*l.* annual rent by four and a half, which is the result of a division of the gross population by the entire

number of houses, there is given about the number of the labouring classes from among the whole population of Leeds. To the 13,603 houses of 1838-9, let us add the third of the increased difference in the number of houses of those years and 1841, and multiplying them by four and a half, we shall have about the number of the working classes of Leeds at the present time. Thus 470 being that difference, the number of houses under 10*l.* rent at this moment will be about 14,073, and this number, multiplied by four and a half, will give the working classes, in June, 1841, at 63,328, out of the whole population of 87,613.

The next point which it is important to represent is the Wards in which these classes mainly reside, viz.: in the North and North-east Wards, which form one Registration district; in the East and South Wards, which, with the Kirkgate Ward, form another Registration district; and in the West and North-west Wards, which, with the Mill-hill Ward, form the remaining Registration district.

In the above districts, too, are found their proportionate numbers to the middle and upper classes, and also the rate of mortality of the three districts; and I am anxious to lay considerable stress upon these divisions of the people and their results, because I believe it is only by some such arrangement as this that we shall be able to arrive at the true reason of the aggregate mortality of Leeds; which, although condemned as a town in its entire locality at the first glance, may really have only peculiar points of local influence from whence the gross results are derived.

By again referring to the Table in the first page and to the Table in page 14 of this Report, it will be found that—

	The Population of the Working Classes is	Out of a gross Population of	Deaths.
In the North and North-east Wards . .	24,849	28,775	1 in 23
In the East, South, and Kirkgate Wards .	18,747	23,079	1 in 30
In the Mill-hill, West, and North-west Wards	17,627	30,306	1 in 36

And this would seem to imply, that not only have ventilation and drainage an effect upon mortality, but labour also, notwithstanding the amount of births, whereby the deaths are increased by those of the infantile period.

The population of 87,613 divides itself, by the Census of 1841, into the classification on following page. Of this total number, 644 are Scotch, 4310 are Irish, 275 are foreigners, and 5086 are persons not born in the county.

Of these emigrants, the Scotch appear to be scattered through every branch of occupation, and confined to no one in particular.

Persons having sedentary occupations	1,586
Persons having perambulatory ditto.	967
Professions.	292
Merchants	427
Persons working in mines	130
General out-door labour and handicraft.	3,988
In-door labour and handicraft	13,445
Dyers	665
In trade	2,799
Not in business	1,905
Persons under 15 years old without occupations . . .	31,056
Other persons without occupations	21,990
Persons employed in manufacture	8,363
Total . .	87,613

The Irish are almost exclusively limited to plaid-weaving, flax-spinning, and bricklayers' labourers. The foreigners are wool-merchants, or agents having commissions in manufacture, with here and there Italian dealers in picture-frames, looking-glasses, small wares, plaster-of-Paris figures; and of those not born in the county, many mix up both in the in and out-door handicraft of the place, but the major part seem to be in domestic service. There is a great difficulty in deciding by any present data how much of effect labour has upon mortality, how much local influence, how much destitution and penury, and how much other causes which do not attract particular attention, because not sufficiently specific, for all these elements are to be found in combination in Leeds; and even though it is correctly ascertained how many of each occupation have arrived at 70 years of age and upwards. It is certain, however, that some occupations seem much more healthy than others, even where both inhabit the same locality.

The following Table gives the total number of trades and occupations in Leeds, in any of which there were persons, with the number of those persons also, in June, 1841, who had arrived at 70 years of age and upwards:—

TRADES.	Number in this Trade or Occupation.	70		75		80		85		90		95		100	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Accountant . . .	32	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Agent	78	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Army	96	1	.	1	.	1	.	1	.	.	.	.	.	.	.
Baker	63	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Basket-maker . .	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Beer-house keeper .	78	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Biscuit-maker . .	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Blacksmith . . .	187	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Block-maker . .	18	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Blanket-maker . .	7	.	.	1	1	.	.	.	.	.	.	.	.	.	.
Bookseller . . .	41	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Broom-maker . .	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Bricklayer . . .	237	3	.	.	.	1	.	.	.	.	.	.	.	.	.
Brush-maker . .	117	.	.	.	.	1	1	.	.	.	.	.	.	.	.

TRADES.	Number in this Trade or Occupation.	70		75		80		85		90		95		100	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Butcher	370	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Butter-factor	28	.	1	.	1	.	.	.	.	.	.	.	.	.	.
Cabinet-maker	258	2	.	.	.	1	.	.	.	.	.	.	.	.	.
Callenderer	16	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Carpenter	31	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Carpet-weaver	86	2	.	1	.	1	.	.	.	.	.	.	.	.	.
Cartman	52	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Chair-maker	9	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Charwoman	177	.	4	.	.	.	.	.	.	.	.	.	.	.	.
Clock-maker	26	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Clothier	234	25	5	2	2	4	.	.	.	.	1	2	.	.	.
Cloth-dresser	3001	12	.	.	.	.	.	.	.	.	.	.	.	.	.
Cloth-weaver	440	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Clothes-dealer	8	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Collector	10	.	1	1	.	.	.	.	.	.	.	.	.	.	.
Collier	128	.	.	2	1	.	.	.	.	.	.	.	.	.	.
Comb-maker	18	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Coal-dealer	29	1	.	.	.	.	1	.	.	.	.	.	.	.	.
Confectioner	65	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Corn-dealer	23	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Cooper	88	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Coach-smith	18	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Corn-miller	66	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Cropper	4	4	.	.	.	.	.	.	.	.	.	.	.	.	.
Drysalter	19	1	1	.	.	.	.	.	.	.	.	.	.	.	.
Dyer	646	4	.	.	.	2	.	.	.	.	.	.	.	.	.
Earthenware-dealer	7	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Furniture-broker	11	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Female servant	3579	.	3	.	1	.	.	.	.	.	.	.	.	.	.
Farmer	60	7	.	.	.	.	.	.	.	.	.	.	.	.	.
Gardener	113	7	2	3	.	.	.	.	.	.	.	.	.	.	.
Gasman	9	1	1	.	.	.	.	.	.	.	.	.	.	.	.
Glassblower	4	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Greengrocer	48	2	1	1	.	.	.	.	.	.	.	.	.	.	.
Grocer	168	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Gunmaker	13	2	1	1	.	.	.	.	.	.	.	.	.	.	.
Hairdresser	77	2	.	1	.	.	.	.	.	.	.	.	.	.	.
Hatter	79	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Hawker	109	.	4	.	.	.	.	.	.	.	.	.	.	.	.
Independent Persons	1676	48	201	25	60	28	63	2	10	.	6	.	.	.	.
Ironfounder	22	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Ironmonger	22	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Jobber	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Joiner	677	6	1	3	.	.	.	.	.	.	.	.	.	.	.
Labourer	2028	28	3	7	1	4	3	.	.	.	.	.	.	.	.
Leather-dresser	11	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Linen draper	176	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Linen-weaver	199	4	.	1	.	.	.	.	.	.	.	.	.	.	.
Lodging-house-keeper	95	.	2	.	3	.	.	.	.	1	1	.	.	.	.
Mechanic	710	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Male servant	388	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Mangle-woman	35	.	3	.	.	.	.	.	.	.	.	.	.	.	.
Maltster	45	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Mason	403	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Matron	3	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Milkseller	54	3	1	.	.	.	.	.	.	.	.	.	.	.	.
Miner (lead)	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
No Trade	*21990	14	119	4	45	6	25	.	5	2	1	.	.	.	.
Nurse	46	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Oil-miller	41	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Pattern-dyer	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Pawnbroker	40	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Pauper	†27	.	5	.	2	.	2	.	1	.	.	.	.	.	.
Port-mistress	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Plumber	129	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Publican	231	5	4	1	1	.	.	.	.	.	.	.	.	.	.
Press-letter	6	.	.	2	.	.	.	.	.	.	.	.	.	.	.
Provision-dealer	61	1	.	.	.	1	.	.	.	.	.	.	.	.	.
Pit-maker	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Rag-collector	12	2	.	.	.	.	.	.	.	.	.	.	.	.	.
Sack-maker	9	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Saddler	64	1	.	1	.	.	.	.	.	.	.	.	.	.	.
Roper	39	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Sawyer	107	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Shopman	47	4	8	1	1	.	.	1	1	.	.	.	.	.	.
Shroud-maker	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Shears-grinder	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.
School	191	1	.	.	1	.	.	.	.	.	.	.	.	.	.
Store-agent	8	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Surgeon	97	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Stuff-dyer	18	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Stuff-weaver	847	8	.	4	.	.	.	.	.	.	.	.	.	.	.
Stuff-singer	64	1	.	.	.	3	.	.	.	.	.	.	.	.	.
Stuff-presser	93	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Skinner	22	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Shoemaker	1277	14	1	1	1	2	1	.	.	.	.	.	.	.	.
Stockinger	11	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Stay-maker	76	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Teacher	4	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Tailor	808	10	1	3	.	1	1	.	.	.	.	.	.	.	.
Timber-merchant	12	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Tea-dealer	41	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Upholder	61	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Waterman	30	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Wool-sorter	203	.	.	.	3	.	.	.	.	.	.	.	.	.	.
Woollen-mill	322	3	.	.	.	.	.	.	.	.	.	.	.	.	.
Whitesmith	259	1	.	.	.	1	.	.	.	.	.	.	.	.	.
Wine-merchant	23	.	.	1	.	1	.	.	.	.	.	.	.	.	.
Weighing-machine	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Wool-comber	142	4	1	1	.	2	.	.	.	.	.	.	.	.	.
Warehouseman	491	3	1	.	.	.	.	.	.	.	.	.	.	.	.
Washerwoman	107	.	1	.	2	.	.	.	.	.	.	.	.	.	.
		287	384	78	133	62	97	4	17	3	9	2	.	.	.

Total Persons alive above 70 years of age . . 1076

* These include persons of all ages above 15 years whose occupations were not named.
† The only persons who call themselves paupers.

By the above Table it appears that in Leeds—

1 Male in	1 Female in	Reaches the Age of
145·9	119··	70
536·9	343·	75
677·0	471·4	80
10471·	2689·9	85
13961·3	5081·	90
20942·	··	95

and in whatever trades or occupations there are else, in the town there were none in which any had reached that period of life; and that at 100 there are none living out of any class. But as it would be unfair to draw inferences from cases of which there are only very few examples, let us take 1000 persons in each of the following classes, and regard the longevity which they exhibit in their several aggregates, as for instance—

1. Persons in sedentary occupations.
2. Persons in out-door labour and handicraft.
3. Persons in in-door labour and handicraft.
4. Persons in independent circumstances.
5. Persons in trade.
6. Persons employed in woollen manufacture.
7. Persons employed in flax manufacture.

No. 4. consists of 1000	persons in independent circumstances	Of these there are alive at 70 years of age	1 in 30
2. of 1000	Persons engaged in out-door labour and handicraft	Gardeners	1 in 9
		Labourers	1 in 44
		Brick-makers	1 in 58
		Bricklayers	1 in 59
		Excavators	0 in 11
3. of 1000	Persons engaged in in-door labour and handicraft	Charwomen	1 in 44
		Joiners	1 in 75
		Cabinet-makers	1 in 86
		Blacksmiths	1 in 187
		Cap-makers	0 in 62
		Carvers and Gilders	0 in 104
5. of 1000	Persons engaged in trade	Saddlers	1 in 31
		Booksellers	1 in 41
		Upholders	1 in 61
		Bakers	1 in 63
		Linendrapers	1 in 88
		Grocers	1 in 168
		Butcher	1 in 185
		Braziers	0 in 7
		Tinmen	0 in 57
		Chemists	0 in 63
		Tobacconists	0 in 100
6. of 1000	Workers in woollen-mills	Cloth-dressers	1 in 250
		Woollen-weavers	0 in 440
7. of 1000	Workers in flax-mills	Flax-dressers	0 in 302
		Mill-workers	0 in 698
1. of 1000	Persons in sedentary occupations	Clerks	0 in 443
		Dressmakers	0 in 557

It will be seen that the arrangement of these classes as now presented is altered from that in which they were before placed. They now stand not only in their own order of healthiness, but their composite parts are also arranged in a similar manner: and here, as elsewhere, it is observed that persons in independent circumstances are the longest livers; next come out-door, then in-door labourers and handicraft, then trades, then workers in woollen-mills and flax-mills, and lastly persons of sedentary occupations, which seem to be the most fatal occupations of all. By another form of arrangement, taking trades merely, and without referring to particular classifications, we find that the order of healthiness begins with gardeners, and then goes on to saddlers, booksellers, labourers, charwomen, brickmakers, bricklayers, upholders, bakers, joiners, cabinet-makers, linen-drapers, carvers, butchers, blacksmiths, and ends with cloth-dressers; and that the order of unhealthiness begins with flax-mill workers, and then goes on with dress-makers, clerks, woollen-weavers, flax-dressers, carvers and gilders, tobacconists, chemists, cap-makers, turners, excavators, and ends with braziers.

These tables, whilst they show which are the most healthy occupations, show us also the different effects of labour upon longevity, for instance,—

Of persons having sedentary occupations, such as accountants, clerks, milliners, dress-makers, and the like, only 2 out of 1586 are found alive at 70 years of age; and yet these are persons who, for the most part, are not subjected to the local influences which affect the dwellings of the labouring classes.

Of the persons employed in flax-mills not one out of 2079 is found alive at 70; whilst out of 2028 labourers, including 169 agricultural labourers, there are 39 males; and out of 110 gardeners there are 10 males who have reached this period of life. or who have exceeded it.

There requires, however, some explanation on the subject of workers in flax-mills, which diminishes to some extent the apparent value of this contrast. It must be borne in mind that workers in flax-mills, and more particularly in the dusty parts of them, *i. e.*, hackling and dressing, now that machines perform the work which formerly was done by men, migrate very quickly, rarely staying for a continuous period; and they do this, not so much because the occupation disagrees with them, though in some instances no doubt it does, but because they seek and obtain other situations by which they are ultimately to earn their livelihood. Many, if not most, of the female spinners leave the mills at the adult period of life. Nevertheless, out of the 302 flax-dressers, who are a body wholly devoted to the same occupation, there are none to be found living at 70 years of age. But looking at the two classes, viz., "independent persons" and persons who are denominated as having "no trade," how forcibly is borne out Dr. Southwood Smith's observation, that "longevity aud happiness go hand-in-hand;" for,

out of 1676 of the former, it is seen that not less than 103 males and 340 females, and out of the latter 26 males and 195 females, have not only reached 70, but have some of them gained the quinquennial periods far beyond it. On the term "independent persons," however, it also requires to be said, that it seems to have been assumed by all who had no visible occupation, whether really in what are understood by independent circumstances or not, and the number of females is swollen by the residents in the alms-houses. Nevertheless Dr. S. Smith's argument is not at all gain-said, but strengthened: for the comfortable provision of these charitable institutions are to their inmates the independent circumstances of wealth, and health, and peace; and hence the longevity which is peculiar to both rich and poor, under the mental quietude of being above the world. It appears, then, to be distinctly shown that labour is one of the elements fatal to human life; not labour abstractedly, otherwise the "labourers," and the "gardeners," and others would have shown the same fatality as dress-makers or flax-dressers, nor is the labour which is known at the outset to shorten its term, such as the steel-grinding of Sheffield, here referred to; but labour of ordinary kind, and of every-day occurrence, which, added to local influences, saps the vital powers, and prematurely destroys them.

The accompanying Tables give the deaths which occurred in the various Registration districts of Leeds in 1840; and it will be considered extraordinary that in a locality so limited as within 10 miles round Leeds, the return of deaths should be found to vary so much as from 1 in 29 to 1 in 56. There is a difference in the ratio of deaths in 1840, to 1838, for which I am unable to account unless by the sanitary improvements which may have taken place in the North and North-east Wards, by reason of the statistical inquiry which was made by the Town Council. The total number of deaths in those Wards were given in 1838 as upwards of 1200, which in 1840 scarcely reach 1000, and the Kirkgate district is now shown to be the most fatal, as compared with any of the registration districts in the borough of Leeds. Rather more than one-half of all the deaths recorded have taken place under 5 years old; and it is remarkable that deaths under 5 years increase the mortality of England to a great degree, and that they occur in Lancashire, Yorkshire, and Middlesex mainly. And it is still more remarkable that those infantile deaths are concurrent with the increase of manufactories, and the abstraction of females from their homes and domestic occupations for mill-labour, or for other occupations which take them from home.

The great increase of deaths under 5 years seems to have taken place since 1801, and to have been greatest last year. The greatest number of mills at work was in 1836 and 1837, and their progressive growth has taken place between 1798 and 1840. By a return made to the House of Commons in 1839, by the Inspectors, it was found, that out of 423,735 persons employed in the factories of England, Ireland, Scotland, and Wales, 245,034 were females, and of the whole number also, 23,486 were under 13 years, and 162,396 were under 18 years of age; and when it is considered that these female operatives are taken from home and commence labour at the early age of 9 years, that to the youngest of them this labour requires that absence certainly as long as they remain at the mill, that thus in early life they have no adequate means of acquiring the necessary domestic information to fit them for mothers, and that, later on, their homes and children are both forsaken for the labour in which they have been brought up, there is too much reason to fear that by the employment of so large a number of females in mills, not only is a delicate constitution induced, by which sickly children are born, but that absolute neglect of their offspring takes place after birth. A great many instances of this neglect are within my own knowledge, but I only record two, which are as follows:—In Bradford, a power-loom weaver, a widow of 27 years of age, having two children, both of them under 4 years of age, at this moment places one out to nurse with her father at 2*s.* 6*d.* a-week, and the other with her sister at 1*s.* 6*d.* a-week, whilst she herself pays 3*s.* 6*d.* a-week to a female to wash and scour, and bake, and manage, in fact, all her domestic concerns. Again at Wilsden, I saw the other day a young female, apparently not more than 16 years of age, who, two years ago, bore an illegitimate child, which was put out to nurse forthwith, that she might attend to her power-loom, at which she now remains from 6 in the morning till 8 at night. The amount of this neglect, the medicaments used by nurses, who have not the sympathies of mothers to lull the cries of these infants, the means used to induce the premature births of illegitimate children, the effect of gravitation on the womb by long standing at labour, children of destitute parents, and the birth of children in impure and unwholesome atmospheres, I have no doubt swells this dreadful catalogue of human mortality and helps materially to make the amount of it what it is.

These tables show us a very large amount of diseases of the respiratory organs, as well as of epidemics; the latter prevail also in the ill-drained divisions of the town, while the former extend nearly equally over the whole districts. Whatever cases of cholera occur, they are to be found in the North district, almost without drainage. The number of accidents are large in proportion to the population; and what is extraordinary to observe is, that in the three districts which are wholly free from manufacture, there are found no cases whatever of asthma, nor cases of premature births, as there are in all the other districts in which manufactures obtain.

But how are we to account for the variation which exists in the ratios of longevity in these districts, but by the want of sanitary regulations to control elementary influences, and to regulate those which belong to the arts of life?

WHITKIRK.—Deaths in 1840. Population of the Registration District, which comprises Whitkirk, Templenewsam, Austhorpe, Thorpe, Stapleton, and Swillington Agricultural and Colliery.

| Diseases. | 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | | 70 | | 75 | | 80 | | 85 | | 90 | | 95 | | 100 | | Total | | Grand Total. |
|---|---|---

WORTLEY.—Deaths in 1840. Population of the Registration District, which comprises Kirkstall, Headingley-cum-Burley, Bramley, and Horsforth, Colliery and Agriculture.

| Diseases. | 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | | 70 | | 75 | | 80 | | 85 | | 90 | | 95 | | 100 | | Total. | | Grand Total. |
|---|---|---

KIRKSTALL.—Deaths in 1840. Population of the Registration District, which comprises WORTLEY, ARMLEY, FARNLEY, and GILDERSOME. Manufacturing, Agricultural, and Mercantile.

Diseases.	0		1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Convulsions	16	17	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Water on Brain	.	4	1	1	1	2	.	1	.	2	.	1	1	.	.	1	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Croup	.	1	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Malformation	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Typhus	6	3	.	1	.	.	.	.	1	.	.	1	.	.	.	1	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Debility	5	6	2	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Teething	2	1	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hooping Cough	5	3	.	2	.	1	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Scarlet Fever	1	1	4	5	5	2	3	2	6	4	3	.	1	1	1	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	1	1
Consumption	.	1	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	.	.	.	1	.	.	.	1	1	.	1	1	.	1	2	2	3	1	.
Infl. of Bowels	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	1	1
Measles	2	1	3	6	2	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.
Dropsy	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ophthalmia	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Thrush	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Lungs	.	.	2	2	2	.	.	1	1	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Accident	.	.	.	1	.	.	.	1	.	.	2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Diarrhœa	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
Worms	.	.	1	1	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Drowned	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Burn	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Brain	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sore Throat	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Water in the Chest	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dis. of Bladder	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Erysipelas	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Dis. of Heart	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Abscess	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dis. of Liver	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Apoplexy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hæmorrhage	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dysentery	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Palsy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Asthma	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Womb	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Want of Food	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Childbirth	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Peritonitis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Atrophy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Common Fever	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fracture	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carcinoma	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Infl. of Liver	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Influenza	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cholera	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rheumatism	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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Total	39	41	19	25	11	12	5	5	11	10	6	2	4	1	2	7	1	3	.	1	3	2	1	1	3	2	.	4	1	.	1	2	3	4	3	2

18	19	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	Total.		Grand Total.
M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M.	F.	
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HOLBECK—Deaths in 1840. Population of Registration District, which comprises Holbeck, Beeston, Churwell.

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

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

18		19		20		25		30		35		40		45		50		55		60		65		70		75		80		85		90		95		100		Total.		Grand Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
.	1	2	.	6	1	4	2	4	1	1	4	1	3	2	.	2	1	.	1	3	2	.	2	.	1	.	.	.	.	.	1	.	.	.	.	47	21	68
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.	1	2	.	9	6	5	6	7	5	5	7	3	4	4	5	6	3	4	5	6	7	6	7	3	6	3	11	3	2	.	2	1	1	1	.	.	196	189	385

Premature	. .	12
Total	. .	397

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

Registration District comprising HUNSLET. Pottery and Glass.

| DISEASES. | 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | | 70 | | 75 | | 80 | | 85 | | 90 | | 95 | | 100 | | Total. | | Grand Total. |
|---|---|---

ROTHWELL.—Deaths in 1840. Population of the Registration District, which comprises Rothwell, Middleton, and Lofthouse, with Carlton. Colliery and Agricultural.

| Diseases. | 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 50 | | 55 | | 60 | | 65 | | 70 | | 75 | | 80 | | 85 | | 90 | | 95 | | 100 | | Total. | | Grand Total. |
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nises the period of 21 years, as the adult and responsible epoch of life, the Factory Law stops short of this, and reduces the limit down to 18 years. To this early introduction of children to labour very few parents make any objection—it is to the contrary, indeed; there is an extreme desire manifested among parents that children may be admitted to employment at an earlier period; and the history of factory labour gives numerous instances of persons commencing at five years old, apparently without much prejudice to their physical condition. But we see only one side of the picture in looking at these examples; we see the living, but we know nothing of the dead. There is no record left of them to say how they died. In the collieries, as well as in the woollen and cotton factories, children are employed by their own parents. The greatest number, however, of children employed, are to be found in the various manufactories of woollen, worsted, cotton, silk, and flax, in the United Kingdom. Then again, the great arts of life, such as blacksmiths, bricklayers, cabinet-makers, dyers, joiners, mechanics, masons, plumbers, sawyers, shoemakers, tailors, whitesmiths, &c., embrace a large amount of all populations. In Leeds these alone amount to an aggregate of 5703. In none of these callings, however, does labour commence at a very early period, nor is it subject to much variation of temperature. The effects upon the moral health shorten the period of physical life more than labour; criminal statistics prove this.

It would hardly have been expected that the effect of labour upon health, whether from physical deterioration as the effect of the occupation, or immoral habits as its concomitant, that tailors would have taken the precedence, and yet it seems so, for the most healthy are tailors, then bricklayers, then shoemakers, joiners, cabinet-makers, dyers, sawyers, plumbers, whitesmiths, blacksmiths, mechanics, and, lastly, masons; but beyond these come workers in cloth-mills, and then worsted and flax mills. In all these divisions of labour the ordinary working hours never exceed ten, during the performance of which two hours additional are taken for meals, with the exception of factories in which the hours of labour are twelve, to which are added one hour and a half for meals in the course of the day; and it is singular, that though in apparently the worst form of human labour the longest hours obtain, the weakest powers are applied, and the slightest rest permitted. The hours of factory workers exceed those of all other labourers; more than half the work is performed by female hands, and an eighteenth of it by infants; and in a vast many instances six hours and more are continuously worked without refreshment. These hours too have been occasionally exceeded beyond endurance. There are cases on record of forty hours' consecutive work in factories, without any other intervals than that for meals; and previously to the passing of the Factory Act, the average term of labour was fourteen hours per day, and often through the entire night.

The rooms or workshops in which in-door labourers are employed vary very much both in size, temperature, and the means of ventilation; many of the factories of old were built and furnished without regard to these requirements; but though this condition is very materially improved, the nature of some kinds of employment, requiring high temperature, and the consumption of oxygen by human breathings, and by gas-lights, renders it imperative that the legislature should interfere not only to protect the human machine from competition with the steam-engine, but from the more insidious but not the less deadly effects which impure atmospheres, varying temperatures, and floating particles prejudicial to the delicate texture of the lungs, produce. Take, for instance, the case of a child of nine years old, requiring a large amount of sleep for the support of its physical strength, rising during the winter months at five o'clock in the morning, and going without food to its work in every variation of weather, from an atmosphere highly carbonized by too many breathings, into another, maybe, below zero; and then again into a third, with the thermometer at 72°, then working through a long day of twelve hours, and returning at half-past seven o'clock at night, to the same unventilated bed-room from whence it set out, and we have the daily existence of three-fourths and more of the 23,486 children who are exposed to factory labour. It is an error indeed to suppose that the labour of these children is materially shortened, if at all, because the law limits them to the performance of nine hours' labour per day. In all mills the machinery performs the actual work; the depressing agents upon the physical strength of the operatives are not those which exhaust from the wear and tear of muscular fibre directly, but from loss of nervous energy by perpetual excitement, and from long continuance in ill-ventilated and overcrowded rooms. There is no diminution of the working hours by this supposed diminution of the hours of labour. A child that rises at half-past five o'clock in the morning, and is at work from six till eight or half-past, is allowed one quarter of an hour for breakfast; then works from a quarter past eight till ten, then goes to school till twelve, then is at dinner till one, and playing till half past two, at work again till half-past four, then at tea till a quarter to five, and then at work again till half-past seven, when it returns home and may be supposed to be in bed at eight, has daily fourteen hours and a half of continuous watchfulness, always in the same direction, and without variation. Is it too much to imagine that this kind of labour is prejudicial to its physical condition; but that, in the laborious watchfulness of dress-making, the same unhealthy indications are produced? neither the one occupation nor the other being laborious in itself, but the injury being produced by the confinement of the attention to one object, and the unaltered position which is demanded. Observe the one leaning over the organs of respiration, denying to the frame-work of the chest its due motion, keeping the

lungs, in fact, for the most part more in collapse than in play, and plethorizing all the functions of digestion; and the other affecting all the organs which can suffer by gravitation, by standing through days and years, diverging the bones of the legs, flattening the arch of the foot, enlarging the hemorrhoidal vessels, and subjecting the skin to every variety of temperature. The domestic condition of the people helps, however, no little to produce untoward consequences—dwellings without ventilation—streets without drainage—and these too often predispose the system to receive a variety of evils. This occasional destitution may be imagined from the following statement, which is taken from the documents of a society existing in Leeds, for the purpose of affording relief to persons *labouring under sickness*, in addition to what they receive at the parish board.

In the six months of March, May, August, September, October, and July, 2,664 persons, having a united income of 79*l.* 14*s.* 7*d.* per week, or about 7*d.* per head, and sickness in each house, were relieved by this society.

The Workhouse Board have lately also registered with great care a series of inquiries on the subject of pauperism, which is likely to be of the utmost utility. These returns evince increasing destitution to a great degree, which cannot but be a subject of great anxiety, for it appears by them, that in September, October, and November,

			£.	s.	d.
1839,	1979	cases were relieved with	2986	9	10½
1840,	2268	„	3260	6	5 in money,
			590	5	6 loaves;
1841,	3038	„	3584	10	0 in money,
			964	13	6 loaves;

so that the cases of 1840 advanced in number 289, 1839—and 770 in 1841 over those of 1840. But the most important feature of these returns is, that in 1839 there were in the same months 495 fresh cases, of which 60 had never before been applicants—

In 1840 there were 510 fresh cases } in which {130} had never before applied.
In 1841 „ 638 „ } {275}

Amongst the Irish children who are employed in factories and elsewhere, and very frequently in high temperatures, it is easy to trace one of the physical effects which labour produces: why or how I know not, but the under eyelid is found of a rosy blush, which can rarely or ever be mistaken, and the invariable answer to the question "When have you had flesh meat?" is, "We never get it," or "Sometimes once a-week."—"What then do you live upon?" "Coffee and bread—or tea." But there is another effect yet produced by factory labour above all others which demands serious consideration, not only in a sanitary point, but in every relation in which it can be viewed, whether as perverting the order of nature or as being the basis of immoral habits in a double sense,

and thereby pre-inducing the causes of pauperism and disease, viz., the amount of female labour which is employed. In referring to the total amount of persons occupied in factories, it is seen that more than one-half of all the persons so employed are females. There are three or four results in consequence, which are inevitable.

1st. The congregation at all ages and of every grade of character, without the means of classification.

2nd. The early loss of parental control by the pecuniary means which are acquired.

3rd. The employment of female labour whilst males are unemployed.

4th. The utter inability of the wives of the operatives to obtain their requisite domestic acquirements by which the homes of future husbands may be made more attractive than society abroad.

The dread which many parents entertain of public schools, by reason of the consequences of congregation, may be more justly felt concerning the congregation of the mills, where children of every age not only mix with women of every age, but occasionally of every shade of depravity, and with the opposite sex also. In mills where hands are scarce, the moral habits of the applicant are rarely inquired into, nor is the contamination which she may bring with her a subject of consideration. It is not meant by this to be said that nine-tenths of the masters would permit a known bad character to be employed; but there are very few masters, if any, who know all their hands by name, or even by sight, much more how they live, or what they are. By this promiscuous mixing of the sexes, assignations are formed by day, to be kept in the evening when labour is over, and hence it is that hands from a mile or two in the country are preferred in town mills to town hands, not only because their habits are less corrupt, but because the means of forming and keeping assignations are fewer. There are districts in Yorkshire in which there is scarcely ever a marriage without previous pregnancy; but though this is not attributable to labour in mills, for it is common to those districts, and the fact is merely cited to show their standard of morality, yet the congregation of mills is made up of many individuals, of which some such, no doubt, compose a part. And whilst it is so, and without the strictest moral regulations, it is not necessary to do more than to ask the commonest understanding, such is the state of society, what are likely to be the results arising from such a promiscuous admixture of the sexes, in many of whom the principles of religion and morality have never been inculcated, and even if so, on whom, during their hours of work, they cannot be enforced?

This early deprivation of parental control is of great importance, for it is not only in the loss of that wholesome moral restraint which a parent's eye would see necessary, and the heart be solicitous to use, in order to ward off the effects of evil communications, but the still greater loss of all control whatever in a vast number of instances,

both in a pecuniary and moral point of view. Children begin to be workers, for instance, at 9 years of age, and for 4 years are earning 3*s.* or 4*s.* a-week. These wages are either paid by them to, or are drawn by, the parents, who reward the children with a penny a-week for their own use. When from 13 to 15 or 16 years of age the wages have been advanced considerably, a still larger weekly allowance is afforded. But when these girls become power-loom weavers, and can earn high wages, then the force of example comes into operation. One companion has a silk dress, another a new bonnet, a third other articles to be coveted and copied. And now a contract is attempted to be entered into with the parents; the girl will retain her own wages, find her own dress, and pay her parents so much a-week for her maintenance. This perhaps is refused, on the ground that with the declining strength of the parents, all the wages of the family ought to compose a common fund for all its wants. On this refusal there is altercation, which too often finally ends in the forced compliance of the parents with the wishes of the child, or in a separation, the girl going into lodgings where she can gratify her wishes; and being ultimately led off to other pursuits, in which the desire for finery in the first instance was the leading principle.

Thus large present pecuniary means in the hands of young people have very frequently led to this miserable result, a result the more terrible because in female life, and the more important because it has so powerful a relation, directly or indirectly, on everything which affects society. It reverses also the order of nature. Female labour is employed to the exclusion of males, because it can be obtained more cheaply, and because it is more controllable, and because their manipulations are lighter and more suitable. In 1836—7 the wages of wives in the worsted districts were often the sole subsistence of the families; the husbands idling their time in wilful dissipation, whilst among the woollen people industrious husbands in many instances were known not only to tend the house and manage its domestic requirements, but even to take infant children to their mothers at work for the breast.

Lastly, and perhaps not the least, comes in the inability to make home desirable, by the entire want of domestic education, which is consequent upon the early and continuous employment of females in factories. The charm which makes home so desirable to every heart, making a man's own fire-side more agreeable than the public-house, and the step by step encroachments of society abroad to be so much dreaded, is unknown; the principles of good management have neither been learned nor cultivated, the bases of all human happiness is unappreciated. To the female has been allotted, in the order of Providence, the domestic duties of human life. It is wholly unnecessary to say in what these consist, and it is equally unnecessary to point out how utterly incapable the female

factory workers of England are of obtaining the requisite knowledge of them. And yet what is there to prevent mills from being blessings to the community, instead of prejudices? Why should not the moral discipline of mills be equal to that of any large establishment in which order and moral conduct are fundamental principles? It requires only to shorten the hours of adult labour, to limit the labour of children to half a-day, and to combine with it a good and sound education—to fill, in fact, the endowed schools which everywhere abound, and which are now empty because their present hours of work are incompatible with the school hours, and the difficulty of recalling the children to work when once they have been permitted to leave the manufactory with scholars, and to make them subservient to their real purposes, viz., the education of the children of the poor. These, with an efficient system of moral government, might make the labour of females unobjectionable. In the young there would be a progressive growth with labour and education in useful combinations, to be improved through its further stages by introductions to the various institutions which abound everywhere for promoting the intellectual condition of the people, to which these early processes would be preparatory; while in more advanced age opportunities would be afforded for obtaining domestic knowledge suited to the capacities and situations of each. It is all-important to every one wishing well to his country to know that those who are to be the mothers of the future physical strength of the country are nearly without the means of estimating their just position, and that the rising race may chance to be without education at all, or with such a one as will only make its strength more dangerous; and that whilst most are careful for the manufacturing interest of England, the moral welfare of the people which it employs is nearly, if not entirely, neglected. There is one other view in which labour generally has not been viewed, and which the Factory Act itself even has overlooked, and that is, that there is no protection to the human constitution from the effects of labour upon it. It is true that before a child can be permitted to work at all it must have attained the age of 9 years, and then its labour is limited to 9 hours a-day; and before a young person can be permitted to work more than 9 hours a-day it must have a medical certificate that it is of the "ordinary strength and appearance of 13 years," and that then its labour is limited to 12 hours a-day. But there is no authority to watch the effect of labour upon the young constitutions thus submitted freshly to it, nor to advise that the kind of labour is acting prejudicially upon them. The common dictates of humanity would seem to point out the immediate discharge of sickly operatives by the employers, or their abstraction from it by their parents. But for years they may never be seen by the former; and in too many instances the latter either cannot afford to lose their wages or will not listen to the voice of nature. Again, young persons declared

by medical testimony to be physically unfit for 12 hours' labour per day, can have that testimony superseded by a baptismal register which declares them to be 13 years old, though the growth of the body is stinted and the developments manifestly imperfect. The children of the Irish are often objected to this effect also, that with the smallest means of supporting life, by reason of their destitution, theirs is the hardest labour, and in the highest temperature. Such children are everywhere to be found working all day, and sometimes in temperatures of 80° or even 90°, on a dietary of bread and tea or coffee, without butter and sugar, and without flesh-meat for days together, and lying down to rest upon straw or pallets of the humblest kind, with half the covering necessary to the season.

All these causes affect longevity; of the labouring classes more particularly, but of the community in general: and it is lamentable to see the rate of mortality in towns so high, when compared with the rate of mortality of those who live in pure atmospheres, and to know that very much of the ravages which particular diseases make on the human constitution is occasioned by the want of those sanitary regulations which ought to have grown with the growth of all other improvements, and, in fact, to have preceded them. Where labour is also prejudicial, there needs not miasm and want of ventilation to accelerate its consequences; and there is no doubt but that atmospheric influences have a preponderating effect on many occupations; they germinate and ripen the seed which labour has sown. The proof of this, if further proof were wanting, would not be difficult. As one striking illustration of longevity in different atmospheres, the population being employed in the same kind of occupation in every respect, both as to labour, ventilation while at work, and casualties of every kind, a comparison is instituted between the townships of Great Bradford and Horton in Yorkshire, both in the parish of Bradford, and contiguous, differing only in elevation and atmospheric influence. The town of Bradford lies in a hollow formed by the high land of the surrounding country, a part of which forms the township of Horton, and both populations, in about an equal ratio, are employed in worsted-mills, built about the same period of time, in the same kind of architecture, with the same appliances for ventilation and purification in every respect, differing only in comparison as to numbers both of population and mills.

	Population.	Births.	Deaths.	Mills.
Bradford . .	34,560	1 in 25·8	1 in 37·3	39
Horton . .	17,618	1 in 28·	1 in 47·	22

The difference between the two localities will at once be seen, and can only be accounted for by the difference in atmospheric influences: the former population being resident in ill-conditioned dwellings, without sufficient ventilation; the latter residing in localities which, though undrained in many instances, are yet open to pure air and breezes, which never reach the town without the most perfect contamination. It is thus that the impure atmospheres of

crowded houses and workshops is most prejudical to human life. The age at which the bulk of the labouring population die is far below that of persons not subject to the same causes; for instance, while the average age at which the gentry and professions die in the town of Leeds is 44, the average age of the industrial classes in every occupation, as shown by a correct return of the ages at which 400 deaths took place in various Benefit Societies, is not higher than 37. If we look at the diseases of which both classes die, we shall be able to trace the influence of these causes more closely to its results: for instance, in 1840, there died—

	Epidemic Diseases.				Diseases of Brain.					Diseases of the Respiratory Organs.					Diseases of Digestive Organs.			
	Fever.	Small-pox.	Measles.	Influenza.	Hydrocephalus.	Apoplexy.	Paralysis.	Convulsions.	Inflammation.	Inflammation of Lungs.	Asthma.	Consumption.	Bronchitis.		Stomach.	Liver.	Bowels.	
1. Persons in Independent circumstances	1	.	.	.	.	.	2	.	1	.	.	1	.		.	2	.	.
2. Persons engaged in out-door labour and handicraft . .	12	.	.	.	.	.	.	.	1	4	4	19	4		.	.	2	.
3. Persons engaged in in-door labour and handicraft . .	1	.	.	.	.	2	1	.	2	1	.	6	1		.	.	.	.
4. Persons engaged in trade . .	3	.	.	.	.	.	.	.	2	.	1	9	.		.	1	.	.
5. Workers in woollen-mills . .	.	.	.	.	.	4	3	.	1	2	5	29	.		.	.	2	.
6. Workers in flax-mills . . .	2	.	.	.	.	.	.	.	.	.	.	5	.		.	.	.	.
7. Persons in sedentary occupation	1	.	.	.	1	.	.	.	.	.	1	5	.		.	.	1	.
Total . . .	20	.	.	.	1	6	6	.	7	7	11	74	5	.	3	5	.	

We see here how largely diseases of the respiratory organs prevailed, diseases of debility, in fact, which are perhaps as much the result of impure atmospheres, and labour or destitution, as climate. Further, of 20 tailors who died in Leeds last year, 15 died from diseases of the chest, of which 13 were consumption; and of 6 schoolmasters and mistresses, all died from consumption without exception.

Remedial Measures.

The remedial measures essential to improve the health of the inhabitants of large towns are several: as, for instance—

Sewering, draining, and paving to the streets.

Architectural order, size, ventilation, and accommodation to the houses.

A better legal definition of the term "nuisances," with more extended powers for their removal.

The establishment of public baths and pleasure-grounds for the use of the labouring classes, and enclosures in which to dry newly-washed clothes.

Ample public supplies of pure water.

The prevention of smoke within every practicable limit.

The extension of fever hospitals, and the perfect and uniform record of all that pertains to their inmates, as to sex, diseases, trades, residences, and every other particular which can tend to elicit information on local causes, and this not only with fever hospitals, but all medical charities throughout the kingdom; and finally, the establishment of local Boards of Control, by whom the powers of any sanitary enactments may be enforced, and of which paid medical officers, in ratio of population, and limited both as to amount of remuneration as well as to number of sittings, shall form a part. These may seem formidable recommendations, but I believe they are essential to the advance which our population has made within the last 25 years, and to its requirements.

The first great difficulty requiring to be removed is clearly to show what is a public street; for unless by a specific interpretation, there is now no law extant which clearly defines this term, and without which, therefore, general sanitary enactments would be in a great measure unavailing in such towns as Leeds. It has been before observed that out of the total number of streets in Leeds, viz., 586, only 68 are paved by the town. These 68 streets, then, are the only ones which are under any regulation, whether as to paving, draining, sewering, or cleansing. These have, in fact, become highways, and are under the control of the surveyors of the highways, who are appointed by the vestry annually. But these surveyors have no power whatever over any streets which have not, as it is said, been taken into the town, *i, e.*, have been paved and sewered, and had application made for their enrolment amongst the number of highways at the quarter-sessions. It is true that by the General Highway Act of 5 and 6 Will. IV., c. 50, it has been determined, "If a man opens his land so that the public pass over it continually, after a user of a very few years, will acquire a right of way;" and that no "bar has been set up," nor "has any indication been made," to show the right of any landlord to any of the great mass of unpaved streets in Leeds, and that a dedication to the public may be persumed from a "user" of 6, 8, or even 30 years; but unless there is a specific enactment that the owners of property, on first laying it out in public streets and for building purposes, shall first sewer and pave and flag the same under competent authority, and that then such streets shall be taken and deemed to be highways, and be subject to the laws which control highways, it is not likely that much permanent good will ever be effected. The deeds of conveyance in 99 cases out of every 100 of the small plots of town streets require the *purchaser* to pave and sewer and flag forthwith; yet as there is no compelling power, and as there is very seldom unity of purpose, for such a purpose at least, between owners of property, one of whom may be resident and feel the grievance, the other non-resident, and careless because he does not feel it, the powers of such

deeds are a dead letter and unavailing, and nothing but an enactment will accomplish it. In the flagging of causeways, steps should by no means be allowed, nor grates, nor cellar windows, nor other openings be left unprotected. Serious accidents have frequently arisen from these causes, which might have been easily prevented. Paving and draining might be thus effected, but not so always with sewering, unless very ample powers are given by an Act to enable the surveyors or Board of Control to carry sewers through lands a considerable distance, and below levels which were, but are not now available, owing to accumulations of refuse matter in water-courses which formerly carried off that drainage, which must now be directed into another channel. By referring to the map attached to this Report, the position of the houses on the south side of the river may be noticed, as well as those which lie contiguous to, and in the course of, the brook or rivulet which runs from north-west to east, *i. e.*, from New Town to the river opposite Francis Island. Any drains formed in the streets in either of these neighbourhoods could not be carried low enough to drain the cellars without constant regurgitation from both sources. I am apprehensive, and I am confirmed in this view both by the town surveyor, as also by Mr. Fowler, another general surveyor and civil engineer in Leeds, who has favoured me with the levels of various parts of Leeds above the river, that to effect sufficient drainage in both these localities the sewers must be carried a mile and a half below the weir at Hunslet, and not nearer to the town. The Beck itself ought to be cleaned out and restored to its original level. If it were, in ordinary cases, good drainage might be accomplished in localities which now are rife with fever at all periods; and though the drains might be subject to regurgitation, yet as the river Aire is one of those rivers which rises and falls with equal rapidity, this inconvenience would not be of long standing. It is manifest, however, that a rigid enforcement of a particular kind of sewering, whether in depth or width, might be impracticable in some localities, and probably something on this head ought to be left to the Board of Control. It ought, however, to be an enactment that every dwelling-house *should* be drained into the common sewer of the street; and perhaps this would be an easy mode of getting rid of cellar-dwellings, which, by being below the level of the sewer, thereby rendering its drainage impracticable, would carry upon the face of it a condemnation as a place of residence, not only tangible but reasonable. The value of drainage is nowhere better evinced than in the case of the Boot and Shoe-yard, where, after a thorough drainage from end to end, the number of cases of typhus fever in 1840 and 1841 were reduced from 46 in the former year to 4 in the latter.

With regard to the ventilation of neighbourhoods, it is essential that property should sometimes be taken down, and large squares made here and there, in the midst of dense populations, as ven-

tilators: for this, provision, in many instances, does exist. In Leeds, for instance, there is an Improvement Act, by the powers of which rates may be levied, and buildings be purchased and taken down for the purpose of public improvement. But without meaning at all to disparage the services of those who for years have been in office under the authority of this Act, so long as the board is a non-medical board, nor has medical advice within its pale, the *necessity* of sanitary improvements will neither be duly considered nor effected.

But power should also be given to the surveyors to drain the surfaces of sites of land in streets and neighbourhoods which remain undrained and are declared unhealthy, and also to direct the fencing off of such sites which are lower than the streets themselves, in such a manner as shall be satisfactory to the surveyors. Great dangers accrue from excavated sites being left unprotected, especially in thick weather and at night. With regard to the former means, I offer the following cases in proof of its necessity:—

December 15, 1840.—Sarah Asgurth, a widow aged 40, residing in Madras-street Bank, in a low, damp, and ill-ventilated cellar, within a few yards of which is a constant stagnant pool of dirty water, says:—"She began to be ill a few days ago when attending her husband, who died of typhus. Recovered in 35 days.

Rosanne Mody, aged 16, *neighbour to S. Asgurth*, and who attended upon her previous to her removal, says—"She got a 'bad smell,' and has been ill ever since." Symptoms the same as in the last case. Recovered in 36 days.

Mary Fothergill, living *next door* to Sarah Asgurth, a married woman aged 22, also taken with typhus in January, 1841. Symptoms were severe at first, but were suspended by removal from the locality; and recovered in 12 days.

Margaret Thompson was taken on the 13th January, 1841, aged 30, with typhus in its severest form. She *resided in the same neighbourhood*. Recovered after 48 days.

Sarah Stevenson *also came from the same locality*, and died in 2 days.

William, the husband of Mary Fothergill, had also typhus on the 26th January, 1831; *resided in the same locality*. Recovered in 26 days. In addition to which, 3 Irish lodgers removed on account of their dread of fever, one of whom took it, and recovered after 27 days. These cases distinctly show the continuance of the cause.

Again, Priscella Nuttall, of Purdy's-court, York-street, one of the most horrible of streets in the North-east Wards, was seized with typhus on the 20th January, 1841.

G. Nuttall, from the same locality,		on the 3rd of	February.
Ellen Hartley	ditto	on the 5th	ditto.
M. A. Hartley	ditto	on the 5th	ditto.
Richard Hartley	ditto	on the 13th	ditto.

Four cases also in Vernon-street, close to Purdy-street, also occurred in a similar rotation to the above.

The above are records made by the house-surgeon of the Fever Hospital in Leeds, who adds—"that the Leylands are notoriously bad for want of surface drainage and sewerage; and that about three years ago a healthy man from Keighley came to lodge opposite Imperial-street (a neighbourhood very pregnant with fever), was seized with typhus of an alarming character, and died in a few days; his daughter, a stout healthy young woman, having a very narrow escape." He further adds—"That cases of this character are so common in the various yards of Kirkgate, York-street, Marsh-lane, Goulden's-buildings, and Lisbon-court, that they cease to be observed particularly; and that it is no uncommon thing for Irishmen to be seized with fever after lodging a night or two in some of our notorious receptacles for itinerants."

The size of the houses and the necessary accommodation for the comfort, cleanliness, and decency of their inhabitants, it is scarcely necessary to dwell upon. It is doubtful whether many of the deaths which occur in the manufacturing as well as in the agricultural districts, especially from diseases of the chest, do not originate from this source alone. The horrible state of the atmosphere in many of the bed-rooms of the humbler classes is familiar to the medical profession, and its consequences admitted on all hands. I have touched before on the immoral results of but one sleeping-room; there should be two at least to every dwelling, whether there are children or not. How often is a temporary separation of even man and wife necessary in cases of epidemic disease, and especially in phthisis, which is, alas, too little understood; and in cases of death how essential also it is to have two rooms, to separate the living from the dead until interment takes place. Whatever may be the price of land, there is always room upwards, or should be at least, to give height to sleeping-rooms, and a chance for ventilation: height is of the first importance, and should be enforced. This of itself would almost prevent cellar dwellings from becoming residences, or would make them such as to be less objectionable. Of the necessity for other accommodations, such as privies and places of deposit for ashes and vegetable refuse, there will not be two opinions, and it needs no argument to enforce attention. It would, however, be of lasting advantage to have the word nuisance, *i.e.*, the punishable nuisance, more clearly defined than it now is, in a sanitary law; for without it is so, privies, which are built fronting the public road, and of which there are dozens in Leeds, and ash-houses, with their scattered deposits on causeways, will not be removable. Ash-places should be open to the air by large pipes when forming the basement of dwellings, as is too frequently the case, or they should be surrounded by walls of a sufficient height to protect the houses from their effluvia when open to the atmosphere altogether; and as they are built in narrow

passages as part of clumps of cottage dwellings, haying, in fact, sleeping-rooms over them, it is necessary to enact that there should be no such building in future, but that to every 5 or 6 houses erected a privy should be added, attached as out-houses, but not further connected with the dwellings themselves. Nothing would be more easy than some such arrangement, and decency as well as necessity demands it. As an instance of the requirements which are necessary, I refer to the plan of the nuisance in the yard in page 5 of this Report, which I not only, since it was drawn, have brought under the notice of the local authorities, but have absolutely obtained their view of it; and yet, notwithstanding the urgency of the case, there exists no power to compel its removal. In the first place, there is no common sewer in the street; in the second, the natural course would take the water on to private property; and so it remains, exhaling its putrid miasm over the whole neighbourhood. Might not the Board of Control have power to declare nuisances, and to enforce their removal. Powers are provided by the Municipal Act, as well as by local Acts, in all towns which have corporate bodies, to remove nuisances where they exist; but there is so much difficulty in obtaining information by private parties against neighbours or neighbourhoods where they exist, and in defining what is legal nuisance, that they remain untouched.

The establishment of public baths and pleasure-grounds would highly contribute to the health and comfort of both sexes. In Leeds, some years ago, a public company established a swimming-bath of large dimensions, which, on every Saturday in the season, is open to the working classes at the charge of 2*d.* each. But baths are requisite in more than one locality of a large town, and might in many instances be afforded by the civil authorities so as to be gratuitous to the bathers. Public walks and gardens, and places of innocent amusement and recreation, and, in fact, whatever can tend to produce moral results in the labouring classes, ought to be considered as duties confided to the educated classes, who are, after all, but trustees of all that they have, for the commonwealth. If it is asked where these requirements are essential, it is answered, that in every large town they are demanded by the necessities of congregation. In the broad fields and pure air of villages, the necessity for room wherein to imbibe oxygen into the lungs, physical enjoyment, and of promenading where the beauties of nature can add to the moral happiness of the people, is not felt; but in smoky atmospheres, where pure air is an unknown luxury, and amid the pent areas of mill walls, where there is no vegetation visible, every means is required to keep up the bodily strength and to enlarge the mental.

In looking at the number of streets across which clothes-lines are drawn, on which to hang their linen, one cannot but imagine the straits to which the working classes must be put, to enable them weekly to accomplish this object. We feel country-washed linen a

luxury, whether for cleanliness or for appearance; surely it is not too fervent to imagine, that the more homely clothing of the humble classes might add to their comfort, if dried out of doors, and in other places than the public streets, or within doors, in the already too exhausted atmospheres of their dwellings.

It is highly dangerous to permit as a practice the drying of clothes in the public streets; but in taking away this little privilege, we must remember the condition of the poor, and provide for them accordingly.

We have an excellent botanical garden in Leeds failing for want of subscribers, whose use is limited to those who can afford to pay for admission. Is there any reason why this should not be also appropriated once a-week gratuitously to the use of the poor, and that an annual subscription from the borough rate should enable the proprietors (where boroughs have no other funds) to afford this gratification to the labouring classes, under protective regulations?

The necessity of public cemeteries far away from the living cannot be too strongly enforced. To have dead bodies putrefying and exhaling within the precincts of a town, is a practice highly to be deprecated, and its consequences seem hitherto to have been strangely overlooked. At this moment Leeds is said only to have room for interments for six months longer, and yet measures have been refused by the vestry to lay a rate for the purchase of a cemetery; and although the fact has come before the magistrates that the dead are interred, and immediately disinterred and removed to other graves, that the ground in which they were first placed may be made available for other interments. Disgusting and degrading as is this notorious fact, the consequences of this early removal of bodies in a putrescent state is highly detrimental to the public health, and perhaps there is no law on the Statute Book which requires more immediate attention than this. By several Acts of Geo. III. & Geo. IV. it is the right of every parishioner to be interred in the parish burial-ground; and powers are given to churchwardens, with the consent of the vestry, to rate the inhabitants for the purchase-money of additional burial-grounds; but if the vestry refuses to grant the rate, whatever may be the requirements of the parish, in this particular there is no remedy. It may thus occur, and does now happen in the town of Leeds, that in a few months there will be no more room wherein to bury the dead. Places of public worship have sprung up without provision for the interment of the poorer part of their congregations, who are necessarily taken to the parish burial-ground: and yet a church-rate, because it is a church-rate, though attempted to be obtained only for the purposes of a public cemetery, has been refused, and no legal remedy exists by which the difficulties can be overcome.

Leeds, which has not been well supplied with pure water hitherto, has now abundance from one of the best sources, and of the

purest quality, and provision is made for giving it very cheaply to the poor.

The extension of fever hospitals in large towns is essential to their welfare. Nor ought they to be left to private charity for their maintenance. It is known that fever, though generated in low quarters of a town, travels by insidious stages to the higher, and in so doing scatters its seeds upon rich and poor alike. Whatever tends to the preservation of the public from contagion, then, is a public benefit, and ought to be paid for by the whole community. The Fever Hospital has been one of the most useful institutions that has been founded in Leeds by its benevolent and charitable people. The lives which have been preserved within, by attention and skill, and without, by the removal of contagion from other inhabitants, are incalculable. It is shown by the map that fever prevails in all the district which formed the tract of the cholera in 1832; and that it maintains the same localities through succeeding years the books of the institution satisfactorily demonstrate. For instance, in the years 1838, 39, 40, and 41, there were removed from the following localities the cases of typhus fever here shown—

	1838.	1839.	1840.	1841.
Boot and Shoe Yard . . .	25	9	46	4
Wellington Yard	11	11	19	5
Workhouse	1	2	11	7

During 1840, the cases of typhus fever occurring in the Boot and Shoe-yard were so numerous that the overseers refused to give any further relief to persons who were found lodging there, because of the charge which these typhus cases threw on the parochial funds, by their admission to the Fever Hospital: the cases also which have previously been mentioned in this Report, show how certain localities generate fever to a great degree. It may be said, however, that the records of the Fever Hospital, giving only the cases that are removed into it, are not a criterion of the amount of fever affecting the better classes of society; but it must be remembered that the working classes are a more numerous body than the middle or upper classes, and that if each case so admitted be merely an example of a local cause, it is more than probable that that cause operates upon the homes of the poor more severely than the rich. Presuming, however, that the domestic servants indicate that fever prevails in the well-ventilated parts of the town, we should look for the name of the street to point out where these are, and we find but an instance or two of fever happening in such neighbourhoods; while in referring to the mothers and children at *home* who have been admitted into the hospital, we find them comprising by far the most numerous class of all the cases that were admitted through the year. The large amount of mill-girls who are affected by typhus speaks both against locality and labour: the heated and moist atmospheres of flax-mills, and the perpetual variations of temperature by currents of air blowing upon the skin,

no doubt render their constitutions more susceptible of local influence. From the returns of the Fever Hospital, it is clear that the cases of labourers admitted into the House of Recovery are those of itinerants who are affected by the unwholesome character of their town-lodgings. But if they were not—if they arise from the action of miasm taken abroad—there is the greater necessity for these lodging-houses to be under sanitary control, for the protection of the inmates, amongst whom fever might be thus casually introduced. Whilst on the subject of fever, I may be permitted to say, that there were admitted into the House of Recovery in 1840, from various localities in Leeds, including a few cases from the neighbourhood—

116 cases of simple fever,
183 „ typhus,
14 „ variola,
19 „ scarlatina,

out of which there were 65 deaths.

It is highly important also to notice, that almost all these cases occurred between the ages of 8, 30, 36, 40, 50, and 60, and that out of the total number the following persons were of the occupations attached, viz:—

Sempstresses	7	Weavers	9
Mill-girls	46	Shoemakers	12
Nurses	10	Mechanics	8
Labourers	65	Cloth-dressers	6
Domestic servants	46	Mothers and Children at home	104
Vagrants	10		

The rest being cases of one or two to particular occupations. The whole number of cases occurred in 52 localities, every one of which has been so distinguished for many years.

The classes most affected by fever are thus shown to be mill-girls, labourers, domestic servants, and mothers and children at home; and there can be no reasonable doubt that all these persons more or less imbibe contagion from local causes.

Of what immense advantage it would be to have every medical charity placed under statistical regulations, and responsible to the Home-office for their returns of cases admitted within their walls! It is remarkable, that this has not been long ago thought of sufficient importance to place them all under one kind of statistic discipline, embracing every particular connected with the inmates both as to sex, disease, residence, local causes, wages, labour, &c., facts which would be useful beyond measure to the legislature, the philanthrophist, and, above all, to medical science. An aggregate detail of such cases would form a table of which it would be idle to calculate the value. In the House of Recovery at Leeds, for instance, till within two or three years there has been no correct record kept of any case, and in many instances no record at all either of the residences or the localities of fever; and yet how essential it is that both these should be correctly stated, and how useful

it would be to trace each case to its origin, and develop the causes which are so fatal to human life: such a universal register would in a few years render a first-rate service to everything relating to longevity, whether as connected with trades or occupations, or local influences, or climate; and as it would be quite unexpensive, the opportunity lost is without excuse.

The smoke nuisances come perhaps a little late under consideration, but it is not less important than any of the preceding causes requiring remedial measures. There is a crusade at present against long chimneys, which is likely to bring forward every suggestion which science and ingenuity can add to abate the evil. The table of the deaths in Leeds gives also the number of steam-engines, with their mode of application, and their aggregate horse-power, which, be it remembered, has arisen in Leeds within the period of 57 years. This table shows the number of steam-engines in the borough of Leeds to have increased from two engines and twenty horse-power, which it then had, to 362 engines and 6600 horse-power, which it now has; an increase most amazing in a power so productive, and requiring a consumption of fuel to an enormous extent. But it is not only steam-engines that form the smoke nuisance: dye-house pans, whose chimneys are very low, and generally built alongside the brooks and rivulets, and contiguous to the dwellings of the poor, pour out their dense volumes of unconsumed carbon, which traverses the streets and fills the houses. I have before stated that the consumption of coal in Leeds has been recently estimated at 200,000 tons annually; but this estimate appears to me to be much below the mark. Taking the consumption of coal, however, at this amount, it must be manifest what a condition of atmosphere every working day in the week exists. It is interesting to observe the change which takes place on the Sunday, when the manufactories and furnaces are unemployed: there is then doubtless the smoky atmosphere of a large city, but the eye may traverse from an elevated station over the whole edifices, and see from hill to hill. The remedy for this nuisance is, however, I fear, yet involved in some obscurity. Many attempts have been made during a considerable period of time to discover a means by which less smoke might be emitted, on the principle of saving fuel, of which smoke forms one of the most valuable components. Most of these have, however, been laid aside as ineffectual or too expensive—affording no saving in fuel, requiring too much power—affecting the condition of the boiler, by alternations of heat and cold, or being too complicated in their machinery to be long in effective order.

A patent was some time ago taken out by Witty, for burning the smoke of small furnaces without engines, and was, I believe, effectual; but it is not in general use, although most imperatively demanded by the necessity of the case. Then again, scarcely any invention which has been promulgated has been applicable to furnaces without engines, or, at all events, has been applied; the

greatest direction of thought having been given to furnaces where power might perform some part of the process. The revolving grate and Stanley's feeder seem at present to have the most general reputation, not for burning all the smoke, but as throwing out the least quantity with the smallest detriment; and there is no doubt that if all parties were compelled to adopt them, and use them, if there were no other means existent, these alone would effect an amazing benefit. Both these patents, however, require power, and are therefore probably inapplicable on that account to furnaces without engines. The patents now in vogue are three in particular: viz., Hall's, of Leeds; Hall's, of Nottingham; and Williams's, of Manchester; all of which are in operation in the town of Leeds. The first consists of a division of the fire-plate into two parts, one-half of which, as I am informed, is fed at a time; and that thus, when the other half is fed, the first being red-hot, its smoke is brought into contact with the heat of the first half, and is consumed.

The principle of the patent taken by Mr. Hall of Nottingham is that of clearing the fire-grate by a valve, which, as it is drawn forward by power every time the fire requires renewal, carries also the coal along with it, and feeds the fire; whilst air is thrown into the front of the fire, which has first been heated by being made to pass through tubes in connexion with the flue.

Mr. Williams's patent, of Manchester, I do not so fully comprehend, but I believe the introduction of air for the better consumption of the carbon of the coal is one of its leading features. It seems to be taking the lead, at present, in public opinion, and has had the strongest testimonials in favour of its scientific principles. I imagine that air will be admitted, one day yet, into the revolving grate, and that that will be a means of further improving the advantages which it already has. My own opinion is, but I give it with the utmost deference, that wherever furnaces are fed by hand and not by machinery, that the most perfect system will fail for want of care on the part of the engineer, or by particular opinions as to the means of raising the necessary power. We must not overlook the fact, that a very great many boilers, connected with engine-power in the country, are working on a pressure far greater than would be accomplished if the engine regulated, as in the revolving grate, its want of steam by its own act, throwing out of gear its machinery when sufficient steam is generated, and throwing it in again when more steam is required. There is perhaps no greater difference existing in anything of the same nature than in the mode of firing engine-boilers, and it will be found very difficult to steer the proper course between necessary control and unnecessary interference.

On a review of this part of the subject, it appears to me that the public attention is now so thoroughly directed to it, and so much dissatisfaction exists on the prevalence of smoke, that remedial measures will be taken without delay. Michael Angelo Taylor's

Act, which is, I believe, "The Smoke Act," is hardly sufficiently comprehensible as to the declaration of the nuisance. It is necessary to swear that a chimney is a nuisance personally to the complainant, and this is a mode of engendering offensive feelings, and not sufficiently broad to abate the evil without considerable expense to the prosecutor if the party were litigious; again, "that which is everybody's business is nobody's," and although at this time public attention in Leeds is actively aroused to the smoke nuisance, the population is indebted to the zeal, personal labour, and the expense of the town-clerk for an inquiry which, if successful, will certainly lead to one of the greatest improvements of recent times. But a remedy for an evil so crying should not be left to the zealous service of individuals. It should be part of the powers of the Board of Civil Control to regulate the smoke nuisance along with all other nuisances, by whom the applicability of a general Act to various localities would be better understood.

The last important remedial measure to which attention is directed, is the means by which the provisions of a sanitary law are to be carried into effect. The obvious authorities to whom only the great powers with which any such Act must be clothed can be delegated, are those whom the legislature has already called into operation and entrusted with civil government, viz., the Town Councils of boroughs in the first instance; secondly, where there are no Town Councils, but there are Commissioners under local Acts, then to such Commission; and thirdly, where there are neither Town Councils nor Commissioners, then to the Magistracy, or to Committees nominated by the Magistracy in the divisions under their jurisdiction; but in all cases there should be the paid co-operation of medical men in whom the board could have confidence. Such boards I would denominate Boards of Civil Control, or give to them some name by which they might be understood as distinct from existing authorities. The number composing it might be regulated by the population; for the sake of argument, say 12 in number to every 100,000 of the population, and in that ratio, either under or over, to any population whatever. Of these 12, two should be the senior medical officers of public institutions, where they can be obtained, and where not, then the best and most competent practitioners in the neighbourhood in whom the board might have confidence. These officers should be paid at the rate of two guineas each for every sitting, and not more; and whatever might be the number of sittings of the General Board, which never ought to be less than once in every four weeks, the sittings of the medical officers need in no case exceed one half of the number. The whole expenses of such a board, and the application of its powers, will of course have to be levied by a rate which ought not to exceed 5*d.* in the pound on the annual value of the district under its control. The present rateable value of the borough of Leeds is 295,582*l.* 2*s.* 10*d.*, and a rate of a penny in the pound would raise therefore

annually more than 1200*l.* for the purposes of the board, which, with 5*d.* in the pound as its maximum, would give ample provision for all the sanitary improvements which time and circumstances might suggest.

In the consideration of the foregoing Report, and in the facts which are presented, I have endeavoured to exhibit the town of Leeds (certainly one of the most unhealthy towns in England) in its true condition, a condition which equally characterizes most of the manufacturing towns of England which have risen from existence into importance during the last half century, with the most amazing rapidity. It is to be sincerely regretted that, with the growth of manufacture, and thereby with the means of improvement, that so little attention has been generally directed to the social and moral welfare of those whose physical strength has contributed so much to the capital of the districts in which they dwell. But it is the fact, that the great interests of the country have flourished on the moral and physical strength of the labouring population, which have suffered on the one hand by all the local influences without, which are consequent upon neglected congregations, and within, by neglect of moral discipline and restrictions, which, had they been employed, might have made mills, manufactories, and workshops, blessings wherever they were erected; and it is a matter of sincere congratulation, and will be, to every well-wisher of his country, that the Poor Law Commissioners of England have instituted an inquiry fraught with such immense benefit to the population of the empire.

No. 24.

FIRST REPORT

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

By Sir John Walsham, Bart.

Newcastle-upon-Tyne, 16th April, 1840.

Gentlemen,—I. As the earliest instalment of the information due from me in reply to your circular of the 11th of last November, that severe personal illness, and the undiminished pressure of general business in a district of great extent and complicated interests have allowed of my presenting,—I now proceed to offer to your notice three tables, in which I have been anxious to arrange the voluminous data I have succeeded in collecting during the last three months, after such fashion that the leading points