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COUNTY
BOROUGH OF SALFORD

ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1888,

BY

JOHN TATHAM, B.A., M.D.,

TRINITY COLLEGE, DUBLIN,

SALFORD:

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October, 1889.

TO THE GENERAL HEALTH COMMITTEE.

GENTLEMEN,

I beg herewith to present to you my Report on the Health of Salford, for the year 1888 ; which document—in common with the annual reports which have preceded it in recent years—has been drawn up in conformity with the General Order of the Local Government Board.

Since the issue of my report for the year 1887, two important events have taken place, which must inevitably exercise a beneficial influence on the public health of the country : I refer, in the first place, to the passing of a General Act for the eventual establishment, throughout the United Kingdom, of a uniform system of Compulsory Notification of Infectious Disease : and, in the second place, to the recent inauguration, by the Local Government Board, of a National Scheme for the Registration of Infectious Disease—the Board, as the central authority, undertaking to receive from the several notification towns, weekly returns of sickness locally reported, and, by way of exchange, to furnish each contributing authority with a collective statement of the weekly returns thus received.

Provision having now been made by a General Act, for the extension of compulsory notification to the community at large, it were much to be wished that henceforward the Local Government Board should remove the restriction under which their weekly disease returns are at present issued, and thus render available for national preventive purposes, the mass of information which they will in future receive from an ever increasing number of local contributors.

In the letters introductory to my last two annual reports, I have done my best to summarise, for the guidance of the Sanitary Authority, and of the public, the teachings of recent sanitary experience, both as to the causes of the high death-rate of certain portions of Salford, and as to the measures best calculated to improve the conditions of life throughout the borough. I will not, in this place, recur to the matter ; but will pass on, with a respectful request, that the observations contained in those letters may receive the early and thoughtful consideration of the Health Committee and of the Council.

As the present is probably the last occasion on which I shall report officially to the Salford Health Committee, I gladly embrace the opportunity now presented, of offering my cordial thanks to all those who have, in various ways assisted me in sanitary work during the long period of my residence in Salford as its Medical Officer of Health. My thanks are especially due to my brethren of the Medical Profession, for the efficient, kindly, and self-denying assistance which they have ever accorded me in the discharge of sometimes onerous duties. I desire furthermore to offer my hearty acknowledgments to the editors, severally, of the Manchester and Salford Press, for the generous assistance which they have always rendered to the cause of Public Health, by the gratuitous publication of my weekly and quarterly health returns. And lastly, I would tender my best thanks to the present, as well as to the past members of the Health Committee, for many acts of personal kindness which I have from time to time received at their hands.

I remain, Gentlemen,

Your obedient Servant,

JOHN TATHAM.

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CHAPTER XXI. THE HEALTH OF THE PRESENT

REPORT

1. *An account of the Health and Sanitary Condition of the Borough of Salford.*

Health of the People.—Meteorology.—A careful study of the vital statistics of the year 1888 reveals a slight improvement in the state of the public health, as compared with that obtaining in the immediately preceding year. Taking the *uncorrected death-rate* as a test, we find that there is a reduction, as compared with the year 1887, which is equal to more than four per cent. Unfortunately however, we are not entitled to claim, without reservation, even this modest amount of improvement, as the result of sanitary effort.

SECTION I.
State of Public
Health end of
1888

In recent previous years I have drawn attention to the continued depression in the birth-rate, as a condition which seriously modifies the conclusions to be drawn from a lowered death-rate. The annual birth-rate of Salford, during the last intercensal period, (1871-80), averaged 42.9 per 1,000 of the population: but since the last census year, the rate of birth has continuously fallen, until in 1887 it reached the lowest proportion ever recorded in Salford, namely, 34.3 per 1,000. In the year 1888, the birth-rate recovered very slightly, but it was then only 34.4 per 1,000. Had the last decennial birth-rate, of 42.9 per 1,000, prevailed throughout 1888, the births in that year would have been more than they actually were, by 1,758. The proportion of mortality in 1888, among infants under one year of age, was equal to 18.4 per cent. of the births: and at this rate, the 1,758 additional infants would have lost by death 323 of their number: and these 323 deaths, added to those which were actually recorded during the year, would have raised the mortality of Salford, from 23.0 per 1,000, the uncorrected rate, as it appears in this report, to 24.6, which is in excess of the normal, or Life-Table rate, *by 5.1 in the 1,000. In his successive Annual Summaries, the Registrar General of England draws attention to the disturbing effect of age constitution of populations on particular death-rates. In the Annual Summary for 1883 a series of factors were published, by which the recorded death-rate of each of the 28 great English towns might be corrected for this difference in age constitution, and thus rendered suitable for comparison with one another. The factor

Effect of continued depression of birth-rate on the mortality

* i.e. the rate of mortality that would prevail in Salford, if the population of the borough at all ages, were as healthy as is that of England and Wales.

SECTION I. for Salford is 1.0886; and on multiplying our *recorded* death-rate
Corrected Death- for last year by this factor, we obtain 25.0 per 1,000, in place of
rate 23.0, as the *corrected* death-rate of the borough.

But it has frequently been shown in these reports that the death-rate of the borough, as a whole, cannot be accepted as a trustworthy exponent of the health condition of its constituent parts. This will be readily seen on reference to the table D, page 29, where it is shown that the recorded borough rate of 23.0 per mille, is made up of district rates, which differ from one another by as much as 66 per cent. In the district of Pendleton, the rate of mortality last year scarcely differed from the quinquennial average, and in the districts of Broughton and Greengate, there was a considerable reduction, as compared with the same standard; but in the Regent Road district, the rate was somewhat higher than usual.

Meteorology 1888 The meteorological conditions prevailing during the year 1888, were on the whole, conducive to a low rate of mortality. In the months of February, March, and April, the weather was unusually cold and severe; in February the mean temperature was not less than 5.3° below the decennial monthly average, and in the two following months it was lower than the average by 3.0° and by 1.8° respectively. As a result of the severity of the weather the death-rate amongst old people was excessive during the first quarter of the year, but with this exception, no evil effects were produced on the health of the people. The weather throughout the third quarter of the year was cool and moist, the mean temperature of the atmosphere being lower than the average by 2.2° Fahrenheit, whilst the rainfall was in excess of the mean by 1.41 inches. In consequence of the coolness and moisture of the atmosphere, the autumnal rise in the mortality from diarrhoea was very much less marked than usual. Amongst children under five years of age, who are the chief sufferers from autumnal diarrhoea, the death-rate in the third quarter of 1888 was considerably less than half the average; and although the death-rate from acute lung diseases in "Old Salford," was somewhat in excess of the mean, nevertheless, the general death-rate of the third quarter of the year, amongst persons of all ages, shows a defect from the average, equal to 14 per cent.

Incidence of
infectious sick-
ness

Prevalence of Epidemic Diseases.—The year 1888 opened most unpropitiously, as regards disease prevalence; both small-pox and typhus fever having simultaneously made their appearance in the borough, in menacing proportions. Notwithstanding the excessive prevalence of small-pox in Sheffield throughout the latter half of 1887, the disease had made its appearance amongst the people of Salford, in four instances only during the whole of that year. In the first quarter however of the year 1888, Salford was

* Particulars of the Meteorological conditions of the year, will be found in the table on page 56

subjected to repeated invasions of small-pox, which in the majority of cases, could be traced directly to Sheffield. Notwithstanding every care on the part of the health department, and in spite of the prompt isolation of first attacks, the disease contrived, in a few instances, to steal a march upon us; and thus, in the course of the first quarter of the year, not less than 26 attacks were recorded as having taken place within the homes of the people of Salford.

Early in January, on the occurrence of one of the first small-pox cases, in the person of a tramp, who was detected in the work-house casual ward, I waited upon the guardians and asked their assistance for the provision of greater facilities for vaccination and re-vaccination, together with the adoption of other appropriate measures for checking the spread of small-pox. The guardians promptly complied with my request, and at once made arrangements that the public vaccinators should attend at the appointed stations on certain specified *evenings* of the week, in order to meet the convenience of workpeople and others who could not, without loss of work, attend for re-vaccination at the previously appointed hours in the *day time*. The guardians also caused to be printed forty thousand handbills, setting forth the times and places at which gratuitous vaccination and re-vaccination would be performed by the public vaccinators. These handbills, together with an equal number of circulars of warning, prepared by myself, were delivered by the police at every inhabited house in the borough. In addition to this, the health committee placarded the borough with posters, signed by the medical officer of health, drawing attention to the prevalence of small-pox, and appealing to parents to protect themselves and their children against it by vaccination. Throughout the second quarter of the year, as in the first, cases of small-pox continued to be imported into Salford, week after week, from infected districts outside the borough. Several of the cases could readily be traced to infection derived either from Sheffield, Hyde, Preston, Warrington, Oldham, or from Manchester. Infection was unfortunately introduced,—though by what means, is unknown—into the Union infirmary, at Hope; and, in the interval between the 12th and the 22nd of May, seven cases were removed thence to the small-pox hospital. The guardians however, were readily persuaded to secure the re-vaccination of the whole of their inmates, and consequently no further spread of the disease took place in that important institution. In the aggregate, 52 cases of small-pox were removed to Monsal, within the first three quarters of the year under notice; and as 48 of this number occurred within the first half of the year, it is evident that the disease was practically almost at an end by the close of June. As a result of the action of the guardians, a large number of adults were re-vaccinated in the earlier part of the year, both by private practitioners and by the public vaccinators. It unfortunately happened however, that just before the

SECTION I.

Epidemic
diseases

Small-pox

The Epidemic
stamped out

SECTION I.

Epidemic
disease

occurrence of the earliest cases of small-pox in Salford, an extensive re-arrangement of the districts of the public vaccinators was effected; and thus the poor people, who, at our urgent entreaty, had been induced to repair to the public vaccinators, frequently found that they had been directed to the wrong station. One of our public vaccinators informed me that on a certain evening, in the earlier part of the year, he was obliged to send away unvaccinated, at least a dozen applicants, who had been misdirected to his station. It is not surprising that several of these applicants, having once tried, unsuccessfully, to get vaccinated, refused, or neglected to make a second attempt.

Scarlatina

Scarlet fever, which in the years 1886 and 1887 had shown quite exceptional incidence in Salford, was far less prevalent than in either of those years, in the year under present review. The notified cases were equal to an annual rate of 5.44 per 1,000 last year, as compared with 7.75 and 7.04 per 1,000 in the two preceding years; the average rate in the five years ending with 1887, being 5.70 per 1,000. As had been the case in the two years immediately preceding, the district which showed the greatest proportional prevalence of scarlet fever in 1888, was that of Broughton, where the attacks bore to the population, the ratio of 7.12 in the thousand; whilst the districts of Regent Road and Greengate, were much less severely visited.

Diphtheria and
Enteric Fever

I regret to say that both diphtheria and enteric (or typhoid) fever were again abnormally prevalent last year; occurring in proportions which at times threatened to become those of a severe epidemic. In my report for 1887 I drew attention to the excessive prevalence throughout that year of these two diseases, as a feature of grave sanitary significance. For inasmuch as these diseases are fostered and spread by those filth conditions which it is the prime duty of a sanitary authority to remove, it follows that the continued excessive incidence of these diseases in any district, constitutes evidence of local sanitary neglect. Neither diphtheria nor enteric fever was conspicuously prevalent during the first half of 1888, but towards the end of the third quarter, and throughout the fourth quarter of the year, both these diseases showed exceptional incidence, especially in the Pendleton district of the borough.

Typhus Fever

With regard to typhus or gaol fever prevalence, the records of 1888 confirm the opinion which I have previously expressed, as a result of past experience, namely, that Salford must still be regarded as one of the English homes of this pestilence; for, in spite of all the precautions which the health department has hitherto been able to take, typhus fever occurs again and again, one year after another, in certain neglected and dilapidated districts of the borough. As has previously been mentioned, the year 1888 opened unfavourably with respect to typhus fever incidence, an outburst of the pestilence having taken place in a well-known fever haunt in Regent Road, which in previous years has supplied us with several groups of cases, and from which, later

on in the year under report, not less than 15 additional patients were removed to the hospital. Altogether, 31 cases of typhus were reported in Salford, during the year 1888: in every case prompt removal was effected, and thus the disease was prevented from becoming widely epidemic. Of the remaining common diseases of the miasmatic class not mentioned above, whooping cough is the only one which showed exceptional fatality in the year under notice. This disease, however, appears, from the excessive number of deaths attributed to it, to have been much more prevalent in 1888 than in any year of the previous five, the whooping cough death-rate during that year being almost double of the quinquennial average rate. In consequence of the coolness and moisture of the atmosphere in the autumnal quarter of the year, the deaths from infantile diarrhoea were much fewer than the average; whilst the rate of mortality from diarrhoeal diseases, amongst persons of all ages was only 89 in each hundred thousand of the population, as compared with 161 the average Salford rate, observed in the preceding five years.

Prevalence of Epizootic Diseases.—Inspector Fordham, M.R.C.V.S, of this department, reports that during the year 1888, only a single case of *pleuro-pneumonia* occurred in the borough, the animal affected being killed, and destroyed in the cremator at Wilburn street. There were four outbreaks of swine fever, in Salford, during the year, in the course of which eight pigs were killed, and their carcasses buried in quick lime, according to the regulations of the Privy Council. No case of foot and mouth disease has been reported in Salford during the year under notice, and consequently no portion of the borough has been declared an "infected area," under the Privy Council regulations. As a matter of fact, the borough has been exceptionally free from foot and mouth disease for several years' past. No case of *rabies* has been reported to the Inspector, nor has he had reason to believe that the disease has existed within his district, during the year under present notice. The Inspector has examined the carcasses of several animals which have been seized by the police, but in no case was he of opinion that the animals had suffered from *rabies* during life.

Sanitary Progress.—Since the issue of my previous annual report, two events of national importance have taken place, which may fitly be described as items of sanitary progress, namely, (1). The passing, by the Legislature, of a general act for the compulsory notification of infectious diseases. (2). The action of the Local Government Board in consenting to establish a central system of disease registration, for the benefit of those sanitary authorities who are furnished with the above-mentioned compulsory powers. In the necessary enquiries and negotiations antecedent to the above Parliamentary achievements, the chairman of the Salford Health committee, took an important and most useful part; and I trust that among many pleasurable reminiscences

SECTION I.

Epidemic disease

Typhus Fever prevalence

Contagious disease amongst Cattle

New Act for compulsory notification of infectious disease

Registration of infectious diseases

- SECTION I.
- Sanitary progress of his mayoralty, Alderman Dickins will feel that he can reflect with true satisfaction, upon the effective public service which he has rendered, by assisting to secure the passing of two of the most important measures hitherto devised by the Legislature for the protection of the health of the people.
- Hospital for infectious diseases Since the issue of my last annual report, the Salford Health Committee have obtained the sanction of the Council for the provision of suitable hospital accommodation for the isolation of infectious diseases. The difficulties and disappointments encountered by the committee in their search for an available hospital site, are now matters of history. The suitability however, of the Ladywell site has been affirmed, after protracted enquiry, by a commission appointed by the Local Government Board: the corporation and the public of Salford alike, may therefore be congratulated on the result of the health committee's labours, which are now, I trust, about to culminate in the erection of a fever hospital not unworthy of their important borough.
- Government Enquiry The appointment of an additional sanitary inspector during the year, is another item which may fitly be included in the category of sanitary progress. In my last report I strongly urged upon the committee the necessity of this step, in view of the rapid increase which is taking place in the population of the borough. Whilst gratefully acknowledging this recent addition to the staff of inspectors, I would express the hope that ere long the health committee will see fit to still further augment the number of their sanitary officers, so that the staff may become reasonably adequate for the due performance of their important and still increasing duties.
- Addition to Inspecting staff
- Future preventive action **Suggestions for future Preventive Action.**—For obvious reasons it is desirable that, in preparing his successive annual reports for the guidance of the Sanitary Authority, the Medical Officer of Health should submit for their consideration the general outlines of future preventive action, which seem to be suggested by a study of the vital statistics upon which these reports are based. Notwithstanding the material improvements which have been achieved within the last few years in the health condition of the borough, there still remain what I have previously designated "weak spots in our Sanitary armament," which call as loudly as ever for reform. Our general rate of mortality, although considerably reduced in recent years, is still much higher than it should be, especially in the older districts of the borough, where, as has been often urged by me, the conditions of existence are at the present time deplorably bad; whilst our rate of infantile mortality still compares unfavourably with the improved rates of other manufacturing towns. The experience of the year 1888 suggests no reason to modify the advice which, in many of my previous reports I have felt it my duty to offer to the Committee, with respect to future practical sanitation in Salford; and as I

am unable to discover any marked improvement with respect to any of the groups of defects which I have so often submitted for their consideration, I take leave yet once more to express the hope that before long the Health Committee or the Council will see fit to take these matters vigorously in hand; for in that event, I have every confidence that a substantial improvement would be readily effected. The principal "weak points" to which I refer in the present, as in past reports, are as follows:—(1.) The unsatisfactory condition of the homes of the people, and of the sewerage in the oldest part of the Borough; (2) The filthy condition of the Irwell; (3) The objectionable system still adopted in certain districts for the disposal of night soil; and (4) The continuance of the private slaughter house nuisance amongst the houses of the people.

SECTION I.
Suggestions for future preventive action

[At page 22 of my last annual report the hope is expressed that the sub-committee to whom the Building Bye-laws had been referred for "careful revision," would so deal with them as to prevent the perpetuation of sanitary evils in dwellings to be constructed in future. Hitherto, I have looked in vain for the report of that sub-committee. J.T.]

Revision of Building Bye-Laws

II.—Observations by the Medical Officer of Health, as to existing conditions injurious to health; together with suggestions by him for the amendment of these conditions.

Periodical Reports of the Medical Officer of Health —

SECTION II.

At each of their fortnightly meetings I have presented to the Health Committee a report, in which the current details of official work have been commented on, and the necessary authority has been obtained for the initiation of legal proceedings by the Sanitary Inspector. These reports have contained particulars as to the health and sanitary condition of the various districts of the borough from time to time; the fluctuations of the local death-rates have been discussed, and the Committee have been kept informed as to the local incidence of preventible sickness; they have furthermore been supplied with particulars of the admissions and discharges of patients at the Fever Hospital, and of the number of premises requiring systematic disinfection or sanitary amendment. Details have likewise been given of the nuisances abated by the sanitary inspector from time to time; of the unwholesome meat seized and destroyed, and of the samples of food and drugs submitted to the Public Analyst. These particulars, together with other matters requiring special attention, have been supplied to the Committee at their periodical meetings throughout the year, in order to facilitate the administration of the various powers, with which they, as the local sanitary authority, have been invested by Parliament.

Condition injuries to Health

Unhealthy condition of Labourers' Dwellings.—The amendment of the present wretched condition of the people's homes, would appear to be pre-eminently the task to which the

Housing of the labouring classes

SECTION II

Labourers'
Dwellings—their
unhealthy con-
dition

Demolition of
Birtle's Square

Condemned area
in Chapel Street,
still undealt
with

Sewerage and
River Conser-
vancy

Committee may most profitably address themselves during the coming year; and it is moreover a work which will most certainly be followed by encouraging results. Ever since the passing of the Public Health Act, in 1875, the Highway Committees of the borough have been constantly on the alert for opportunities to procure the widening of streets, and the cutting of new and capacious thoroughfares—the carrying out of which operations has necessitated the demolition of large areas of pestilential abodes, and the admission of light and air into dwellings which for scores of years had been immured in perpetual dinginess and gloom. I do not believe that the Highway Committees would for a moment claim that these demolitions were undertaken, otherwise than with the object of meeting commercial exigencies; but, as a sanitarian, it becomes one to be grateful for the substantial advantages which the public health has incidently derived from these acts of the Corporation, whatever may have been the object which they were primarily intended to serve. The demolition, however, of Birtle's Square, in Greengate, is a work which the Corporation has undertaken with the simple and avowed object of improving the health of the residents in that unfortunate locality. For many years before the Health Committee determined to destroy it, this wretched block of property—which consisted of 57 of the worst tenements in Salford—was notorious as a prolific fever nest, and as the resort of persons of the worst possible character. The demolition of Birtle's Square was effected under a Local Act: it was condemned by the Medical Officer of Health (together with another large area in Chapel Street, hitherto undealt with), and after much delay, its destruction was accomplished. The proceedings, however, were tedious, and in my judgment needlessly expensive; and inasmuch as even this wretched property was owned by several different persons, the necessary formalities for the utilization of the site have not, I believe, to this day been completed. The demolition, however, of Birtle's Square is unquestionably one of the most effective works which the Corporation has ever undertaken for the improvement of the public health; and although, after past experience, I should hardly recommend the Corporation to deal with other blocks of bad property under their Local Act, I would confidently appeal to them to proceed with the demolition of the many existing unhealthy areas at the earliest possible date, and in such manner as they may be recommended by their legal and medical advisers.

Unsatisfactory condition of the Sewerage, and of the River Irwell.—Year after year, in my successive reports, I have felt constrained to return to this important question, from a strong conviction that much of the excessive mortality, and of the low state of vitality hitherto attaching to residence in these ill-fated areas, is due to the imperfect condition of the sewerage.

The general question of sewage disposal in Salford is one which

is intimately associated with that of river conservancy, but from a medical or hygienic point of view, I do not know that anything which has not previously been advanced, can profitably be urged with respect to it, at the present juncture. It is no abuse of words, however, to say—as I have so often been compelled to say—that the present condition of the drainage is a standing menace to the health of the residents in sundry of the older parts of the borough. The shocking pollution of the river Irwell is another serious matter from a sanitary standpoint, but it is fortunately one which will soon have to be effectually dealt with, in view of the forthcoming operations of the promoters of the ship canal; and I am glad to find that a similar opinion is shared by the indefatigable chairman of the Irwell Conservancy Committee. The keenness of the interest which Alderman Walmsley evinces in this important question is, I think, coming to be recognised in other portions of the Irwell watercourse, not less fully than in his own borough of Salford.

SECTION II.

Sewage and
River Irwell
Conservancy.**Excrement and Refuse Disposal—The Tip Nuisance.—**

The subject of excrement disposal has always been a delicate and difficult one to deal with in Salford, owing to the tripartite constitution of the borough. It seems, however, a pity that the Corporation in its collective capacity, as the Sanitary Authority of the borough, cannot see the expediency of dealing with the question at once effectually and finally—taking care that the conservancy system, whatever it may be, shall be at any rate uniform throughout the entire borough.

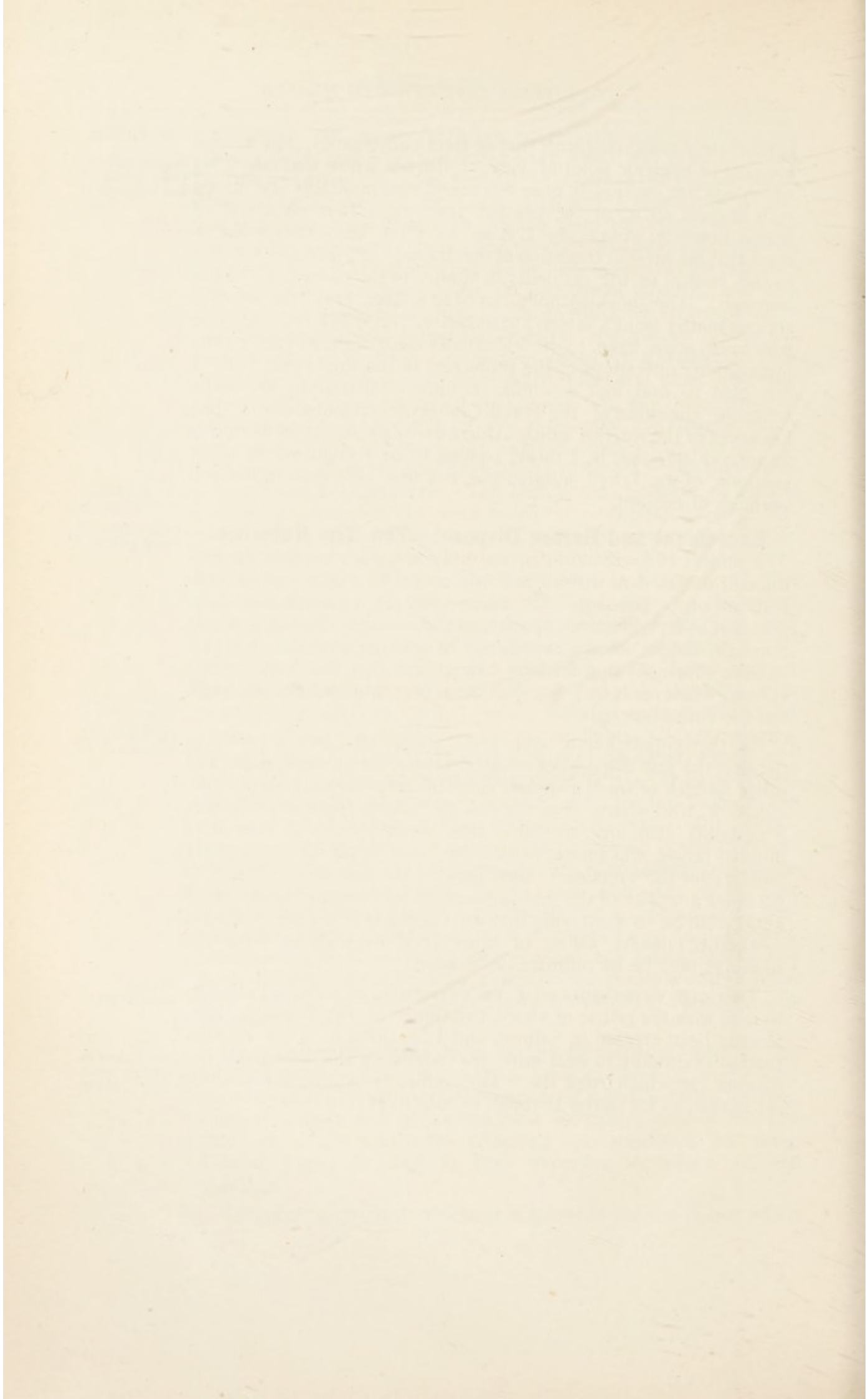
Refuse Disposal,
faulty system of.

As the population of our great industrial centres grows in density, the safe disposal of midden refuse, street sweepings, and other rubbish of small manurial value becomes an increasingly difficult task: and where, as in the case of Salford, there is practically a certainty that any available site, even though it consist of midden refuse, will sooner or later be seized upon by speculative builders for the erection of dwellings for the labouring classes, it becomes a matter of the first importance that organic refuse of all kinds shall be so dealt with, that what remains of it after treatment—whether clinkers, ashes, or other residue—shall be harmless, whatever may be its ultimate destination.

The Tip
Nuisance.

Two large destructors on Fryer's principle, of sufficient capacity to deal with the refuse of about two-thirds of the borough, have already been erected in Salford, and I hear that it is in contemplation eventually to deal with the whole of the refuse in this manner: in which event the "Tip" difficulty will be permanently set at rest, as far as the Borough of Salford is concerned.

Fryers'
Destructors.



VITAL STATISTICS.

STATISTICAL SUMMARY, 1888.

Area.—The Municipal Borough of Salford—comprising the Townships of Broughton, Pendleton, and Salford, together with a detached portion of Pendlebury—contains an area of 5,170 acres, or rather more than eight square miles.

Elevation.—The population of Salford resides at a mean elevation above sea level, of 140 feet, the elevation varying from 85 feet to 250.

Inhabited Houses.—There were 38,843 inhabited houses in the Borough at the rate-laying in 1888. At the last census each house was found to contain 5·15 persons.

Rateable Value.—The annual rateable value of the borough in 1888 was £763,007. The increase in the rateable value of the borough within the last decade has been equal to about nine per cent.

Population.—Estimated to the middle of 1888, the population of the borough was 207,326,—namely 99,534 males, and 107,792 females.

Density.—The mean density of the borough = 40·1 persons to an acre. Density of Broughton District = 27·1, Pendleton, = 21·7, Greengate = 121·1, and Regent Road = 79·1.

Annual rate of Increase of Population.—Was equal to 2·2 per cent. from 1861—71, and to 4·1 per cent. from 1871—81.

Marriages.—1,505 marriages were solemnized in the year 1888. The marriage-rate, *i.e.*, the rate of persons married, was therefore equal to 14·2 per 1000. For statement of marriage-rates in each of the years 1862 to 1888, see table A, page 20.

Births.—The births of 7,136 children were registered during 1888, namely, 3,586 males, and 3,550 females. The annual birth-rate was therefore equal to 34·4 per 1000. 273, or 3·8 per cent. of the births were illegitimate.

Vaccinations.—Of the 7,373 children whose births were registered within the twelve months ending midsummer, 1888, 74·2 per cent. had been successfully vaccinated by the end of June, 1888. 0·4 per cent. had been certified to be unsusceptible of vaccination; 11·6 per cent. had died unvaccinated; the vaccination of 4·5 per cent. had been postponed by medical certificate; 6·5 per cent. had removed to other districts; and 2·8 per cent. remained unaccounted for at the end of that month.

Deaths.—The deaths of 4,775 persons were registered during 1888, namely, 2,346 males and 2,429 females. The annual death-rate amongst persons of both sexes was therefore equal to 23·0 per 1,000: amongst males it was 23·6, and 22·5 amongst females.

Estimated Increase of Population, = 4,595,—but the excess of births over deaths was only 2,361.

III.—VITAL STATISTICS.

Estimated Population.—At the middle of the year 1888, the County Borough of Salford—which comprises the townships of Pendleton, Salford, and Broughton—is estimated by the Medical Officer of Health to have contained 207,326 persons: namely, 99,534 males, and 107,792 females. It thus appears that the proportion of females in the Salford population is as 108 to 100 males. The *natural increase* of the population—that is, the excess of births over deaths during the year 1888—amounted to 2,361 only, although the *actual increase* was computed at 4,594. According to the Registrar General's returns, the Borough contained not less than 226,336 persons in the middle of last year, or 19,010 in excess of the estimate of the Medical Officer of Health.

SECTION III.
Estimated
Population 1888

Deaths and Annual Rate of Mortality.—During the 52 weeks of the year 1888, the total deaths registered in the Borough of Salford numbered 4,806. Of these deaths 4,130 occurred within the homes of the people, 615 in hospitals within the Borough, and 61 either in the Manchester Royal Infirmary, or in the Hospitals of Monsal or of Pendlebury—the two latter institutions being outside the Borough. In addition to the above deaths, the Salford Registers contain evidence of the deaths of 31 non-resident persons in Salford Hospitals. These deaths are, therefore, excluded from the *corrected* register of the Borough.*

The Salford death-roll, thus corrected, records the deaths of 4,775 persons in the year 1888, as compared with 4,856 in the year 1887.

Calculated on the population as estimated by the Medical Officer of Health, the annual rate of mortality in 1888 was equal to 23·0 per 1,000 living, as compared with 24·0 per 1,000 in the immediately preceding year.

The annual death rate of Salford during the first eight years of the current decennium averaged 23·2 per 1,000, and was, therefore, in defect of the mean rate in the preceding ten years by 4·7 per 1,000, or 17 per cent.

District Mortality.—Table D, page 29, shows the annual rate of mortality from certain diseases, and from certain classes of disease, in each of the four registration districts comprising the Borough. The Medical Officer of Health has frequently drawn attention to the variation in the conditions of life under which the

* For further information on this point see Table, page 54.

POPULATION, DENSITY, ANNUAL RATES OF BIRTHS, MARRIAGES, AND DEATHS,
IN EACH OF THE TWENTY

Year.	POPULATION (estimated to the middle of each year).					DENSITY (persons per acre).					
	Borough.	Regent Road.	Green-gate.	Pendleton.	Brough-ton.	Boro'.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.	
Quinquennial Means.	1863-67	111,436	38,679	37,224	23,646	11,896	21'6	36'2	141'5	9'8	8'4
	1868-72	123,576	45,762	36,626	26,453	14,738	23'9	42'9	139'2	10'9	10'3
	1873-77	144,690	55,967	34,845	33,027	20,852	28'0	52'5	132'4	13'7	14'6
	1878-82	171,274	67,684	32,449	41,529	29,612	33'1	63'5	123'4	17'2	20'8
	1883-87	193,940	78,075	31,867	48,446	35,551	37'5	73'2	121'1	20'0	24'9
1863	107,075	36,134	37,389	22,636	10,916	20'7	33'9	142'2	9'4	7'7	
1864	109,212	37,374	37,313	23,182	11,393	21'1	35'0	141'8	9'6	8'0	
1865	111,393	38,646	37,231	23,633	11,883	21'6	36'2	141'5	9'8	8'3	
1866	113,614	39,949	37,144	24,136	12,385	22'0	37'4	141'2	10'0	8'7	
1867	115,885	41,294	37,045	24,644	12,902	22'4	38'7	140'8	10'2	9'1	
1868*	118,198	42,674	36,941	25,152	13,431	22'9	40'0	140'4	10'4	9'4	
1869	120,526	44,087	36,823	25,658	13,968	23'3	41'3	140'0	10'6	9'8	
1870	122,965	45,551	36,704	26,177	14,533	23'8	42'7	139'4	10'8	10'2	
1871	125,890	47,195	36,517	26,920	15,258	24'3	44'2	138'8	11'1	10'7	
1872	130,301	49,301	36,145	28,357	16,498	25'2	46'3	137'4	11'7	11'6	
1873*	134,883	51,463	35,747	29,847	17,826	26'1	48'3	135'7	12'4	12'5	
1874	139,618	53,670	35,319	31,386	19,243	27'0	50'3	134'3	13'0	13'5	
1875	144,518	55,921	34,868	32,977	20,752	27'9	52'4	132'6	13'6	14'6	
1876	149,591	58,219	34,393	34,617	22,362	28'9	54'7	130'6	14'3	15'7	
1877	154,842	60,561	33,898	36,308	24,075	29'9	56'8	128'8	15'0	16'9	
1878	160,277	62,945	33,379	38,054	25,899	31'0	59'1	126'9	15'8	18'2	
1879*	165,899	65,371	32,843	39,848	27,837	32'1	61'4	124'9	16'5	19'5	
1880	171,727	67,839	32,291	41,697	29,900	33'2	63'6	122'8	17'2	21'0	
1881	177,220	70,180	31,867	43,418	31,755	34'3	65'7	121'1	17'9	22'3	
1882	181,247	72,084	31,867	44,627	32,669	35'1	67'9	121'1	18'5	22'9	
1883	185,345	74,020	31,867	45,859	33,599	35'8	69'4	121'1	19'0	23'6	
1884*	189,546	76,016	31,867	47,124	34,539	36'6	71'3	121'1	19'5	24'2	
1885	193,843	78,022	31,867	48,413	35,541	37'5	73'1	121'1	20'0	24'9	
1886	198,232	80,107	31,867	49,737	36,521	38'3	75'1	121'1	20'6	25'6	
1887	202,731	82,212	31,867	51,096	37,556	39'2	77'1	121'1	21'1	26'3	
1888	207,326	84,378	31,867	52,472	38,609	40'1	79'1	121'1	21'7	27'1	

* In the years 1868, 1873, 1879, and 1884 the facts are those registered in 53 instead of

IN THE BOROUGH OF SALFORD, AND IN ITS FOUR REGISTRATION SUB-DISTRICTS,
SIX YEARS, 1863-1888.

ANNUAL RATES PER 1,000 OF THE POPULATION.											Year.
MARRIAGES.	BIRTHS.					DEATHS.					
Registration Districts.	Boro'.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.	Boro'.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.	
13.0	38.3	38.3	42.8	36.8	26.4	27.7	30.7	31.7	23.0	14.7	1863-67
14.2	40.0	41.6	43.6	38.0	29.2	27.7	31.5	30.1	24.2	15.6	1868-72
17.6	43.6	46.6	41.8	41.2	41.9	28.4	33.2	29.6	24.4	19.8	1873-77
16.5	41.4	42.9	40.9	41.1	39.1	25.6	27.8	29.5	22.8	20.0	1878-82
15.2	36.1	37.5	38.0	34.6	33.2	23.2	24.6	29.1	21.1	17.6	1883-87
											} quinquennial means.
11.7	38.0	37.9	42.0	37.0	25.9	26.0	28.3	29.1	22.5	15.0	1863
12.7	38.6	37.3	44.3	38.2	24.7	26.5	28.7	31.0	21.7	14.6	1864
12.9	37.8	37.3	42.8	36.2	26.4	29.1	32.3	32.8	25.2	14.8	1865
13.4	37.9	38.5	42.8	35.6	25.9	28.8	32.2	33.9	23.0	13.6	1866
14.3	39.0	40.7	42.2	37.0	28.2	28.2	31.9	31.9	22.8	15.7	1867
13.3	39.3	38.5	43.5	40.4	27.9	30.5	34.3	33.0	28.7	14.9	1868*
14.1	38.9	39.1	43.2	38.3	27.6	26.4	29.2	29.2	23.3	15.8	1869
14.1	39.6	41.7	43.1	36.3	30.3	25.8	30.4	27.3	21.3	15.3	1870
14.6	40.7	43.6	44.2	39.4	26.2	30.3	34.9	32.4	27.2	16.2	1871
15.1	41.4	45.3	44.1	35.7	34.0	25.3	28.9	28.8	20.4	15.6	1872
14.3	41.5	43.7	43.0	40.5	34.1	28.3	32.2	30.1	26.6	16.7	1873*
16.2	42.1	45.9	40.9	37.3	41.8	28.2	32.6	29.2	24.9	19.5	1874
17.5	44.4	48.9	41.0	40.9	43.5	29.5	34.8	32.0	23.7	20.6	1875
20.5	45.5	47.7	43.3	44.1	45.3	29.5	34.5	30.2	24.9	22.4	1876
19.6	44.4	47.0	40.7	43.1	44.7	26.3	31.8	26.3	21.9	19.6	1877
17.9	44.7	46.5	42.5	42.9	45.6	27.1	29.8	28.8	23.6	23.2	1878
15.2	43.0	45.5	40.9	42.5	40.0	26.7	27.5	31.6	24.7	21.5	1879*
16.6	41.4	41.3	41.6	42.7	39.5	27.9	31.5	33.2	23.3	20.6	1880
16.3	38.8	40.2	39.0	39.2	35.0	22.6	24.8	24.8	21.6	16.7	1881
16.7	39.3	41.2	40.3	38.4	35.5	23.5	25.3	29.0	20.9	17.9	1882
15.7	36.5	38.9	38.1	34.5	32.7	23.1	25.1	28.3	20.9	16.8	1883
15.6	37.1	38.1	40.1	34.9	35.2	23.3	24.9	27.6	21.4	18.4	1884*
15.5	36.1	38.1	36.1	34.8	33.3	22.1	23.8	27.6	19.9	16.4	1885
14.6	36.5	36.8	39.5	35.4	33.6	23.6	25.0	29.8	21.0	18.1	1886
14.5	34.3	35.7	36.2	33.2	31.2	24.0	24.2	32.3	22.5	18.4	1887
14.2	34.4	34.2	37.6	34.7	31.9	23.0	25.1	27.5	21.8	16.6	1888

52 weeks; corrections have therefore been made in calculating the rates.

SECTION III. inhabitants of these areas live, as explaining the fairly constant difference in the death rates to which they are, respectively, subject ; and he has insisted that a statement of the average death rate prevailing in the Borough as a whole is misleading, unless supplemented by a detailed account of the rate of mortality obtaining in its several constituent districts. Thus, on referring to Table D, we find that although the death rate in the registration sub-district of Broughton during the year 1888 did not exceed 16·6 per 1,000 of its population, the corresponding rates in the districts of Regent Road and Greengate amounted to 25·1 and 27·5 per 1,000 respectively.

Mortality in
England and
Wales

Mortality in other parts of the Kingdom.—The annual rate of Mortality in England and Wales during the year 1888 was equal to 17·8 per 1,000 of the estimated population.

In London

The deaths in London during the year 1888 corresponded to an annual rate of 18·5 per 1,000. This is by far the lowest death rate ever recorded in the metropolis : and it is worthy of notice, as showing the progressive diminution in the London death rate, that the three next lowest rates are those for the three immediately preceding years, namely, 1885, 1886, and 1887, when the figures were successively 19·8, 19·9, and 19·6.

In Dublin

The Dublin death rate last year was equal to 25·3 per 1,000, and that of Edinburgh to 18·0 per 1,000. In the 28 great English towns of the Registrar General, the death rate last year was equal to 19·4 per 1,000, which is lower by 1·9 per 1,000 than the average rate in the ten years immediately preceding. Of the 28 great towns only three had a death rate last year in excess of that of Salford, the remaining 24 towns showing a rate in most cases considerably below that obtaining with us. In the 50 other considerable town districts of England, statistics of which are annually published by the Registrar General, the death rate last year was equal to 18·4 per 1,000, or 4·6 below the Salford rate.

In Edinburgh

With the object of comparing the mortality of Salford and of its four registration sub-districts, with the death rate of the neighbouring large towns, I have extracted from the Registrar General's reports the figures given below,* which give the local rates of mortality without correction, either for age, or for sex constitution of the population. In the middle of the year 1888 these seven towns contained an aggregate estimated population of more than two millions.

* Average Annual Rates of mortality in two recent quinquennia, in important Lancashire and Yorkshire Towns

TOWNS.	1879-83.	1884-88.	Decrease per cent in later quinquennium.
Manchester	27·0	26·8	0·7 per cent.
Liverpool	26·8	23·4	12·8 "
Oldham	23·4	22·7	3·0 "
Leeds	22·7	21·5	5·2 "
Sheffield	22·3	21·0	5·8 "
Bradford	21·0	18·8	10·5 "
Salford	24·8	23·2	6·5 "

RECORDED AND CORRECTED DEATH-RATES PER 1,000 IN 28 GREAT TOWNS IN 1888.

Towns in the order of their Corrected Death-rates.	Recorded Death-rate.	Factor for correction for sex and age Distribution.	Corrected Death-rate.	Comparative Mortality Figure.
Columns	1	2	3	4
England and Wales	17.79	.....	17.79	1000
England and Wales less the 28 Towns	17.10	.....	16.72	940
28 Towns	19.40	1.0657	20.46	1150
Brighton	16.12	1.0296	16.60	933
Derby	16.27	1.0402	16.92	951
Hull	16.43	1.0316	16.95	953
Bristol	16.90	1.0351	17.49	983
Nottingham	17.28	1.0599	18.32	1030
Sunderland	18.07	1.0412	18.81	1057
Bradford	17.14	1.1045	18.93	1064
Birmingham	17.82	1.0663	19.00	1068
Birkenhead	17.80	1.0695	19.04	1070
Leicester	18.32	1.0474	19.19	1079
Norwich	20.17	0.9565	19.29	1084
Portsmouth	18.76	1.0301	19.32	1086
London	18.47	1.0615	19.60	1102
Huddersfield	18.52	1.0982	20.34	1143
Halifax	19.36	1.0864	21.03	1182
Wolverhampton	20.68	1.0311	21.32	1198
Newcastle	20.58	1.0583	21.78	1224
Leeds	20.60	1.0689	22.02	1238
Sheffield	20.54	1.0754	22.09	1242
Plymouth	22.34	0.9903	22.12	1243
Cardiff	20.46	1.0853	22.21	1248
Liverpool	20.34	1.0971	22.32	1255
Oldham	20.33	1.1097	22.56	1268
Bolton	21.61	1.0959	23.68	1331
Salford	23.03	1.0886	25.07	1409
Preston	23.91	1.0859	25.97	1460
Blackburn	23.91	1.0898	26.06	1465
Manchester	26.09	1.1143	29.07	1634

SECTION III.

Corrected death-rate in great English towns

The table on page 23, which, with the exception of the figures for Salford, has been taken from the returns of the Registrar General, shows the *true rates of mortality* in the 28 great English towns, corrected for age constitution of their several populations. It has been stated that this correction is necessary before the several towns can be fairly compared with one another as regards the healthiness of their populations. It is shown in the table, that the recorded death rate of Salford, which is 23·03 per 1,000, becomes, after correction, 25·07 per 1,000.

Salford mortality amongst males and females

Normal rate of Mortality, male and female.—Of the 4,775 persons whose deaths were registered in Salford last year 2,346 were males and 2,429 females.* The death rate at all ages amongst males was equal to 23·6 per 1,000, as compared with 25·0 in the immediately preceding year. Amongst females the death rate was equal to 22·5 per 1,000 last year, or 0·5 less than in the year 1887. The normal rate of mortality, calculated for Salford on the basis of the new English Life Table, being 20·5 for males and 18·5 for females—it follows that the recorded Salford rates in 1888 exceeded those of the life table by 15 and by 22 per cent. respectively. In equal numbers living † last year, the deaths of males were to those of females as 105 to 100.

Mortality at certain stages of life, compared with corresponding Life-Table rates

Mortality at different age Groups.—In Table B the Salford death rates are shown at several age groups for the year 1888, and for each year of the previous decade. The table also furnishes the means of comparing the local recorded rates at the various ages, with the corresponding rates of the English Life Table. In the five years 1884 to 1888, the recorded mean death rate of persons in Salford, at all ages, and of both sexes, averaged 23·2 per 1,000, and, therefore, exceeded the life table rate by 19 per cent., the excess in the preceding five years having amounted to 27 per cent. Amongst children under five years of age, the mean death rate was equal to 75·6 per 1,000 living in the quinquennium ending in 1888, and to 83·1 per 1,000 in the five years immediately preceding; the recorded “child death-rate” in Salford † was, therefore, in excess of the life table rate by 36 per cent. in the earlier of these quinquennia, and by 19 per cent. in the more recent. In the year 1888 the child death rate fell to 72·6 per 1,000, which, with one exception, is the lowest rate recorded since the year of the last census. Amongst persons at ages between five years and forty the recorded Salford death rates do not ordinarily differ materially from those of the English Life Table; in fact, the recorded female rate in 1888 was actually lower at these ages than the life table rate. At the age of 40 to 60 years, the Salford rate was equal to 24·0 per 1,000, as compared with 18·3, the rate of the English Life Table; and, at ages above 60 years, the rate was equal to 85·9 per 1,000, or 14·0 per 1,000 in excess of the life table rate. The

* See Table B, page 25

† That is, the mortality under five years of age.

TABLE B.

ESTIMATED POPULATION, AND ANNUAL RATES OF MORTALITY, AT ALL AGES, AND AT FIVE GROUPS OF AGES, IN THE FIFTY-TWO WEEKS OF THE YEAR 1888, AND IN EACH YEAR OF THE PRECEDING DECADE:—COMPARED WITH THE CORRESPONDING RATES OF THE NEW ENGLISH LIFE TABLE—FOR PERSONS, MALES AND FEMALES.

	PERSONS		MALES		FEMALES.	
	Estimated Population, 1888.	Deaths 1888.	Estimated Population, 1888.	Deaths, 1888.	Estimated Population, 1888.	Deaths, 1888.
All Ages.....	207,326	4,775	99,534	2,346	107,792	2,429
Under 5 years.....	30,404	2,208	15,176	1,129	15,228	1,079
5-20 years.....	67,020	376	33,200	187	33,820	189
20-40 years.....	67,271	584	31,930	283	35,341	301
40-60 years.....	33,214	798	15,504	407	17,710	391
60 and upwards.....	9,417	809	3,724	340	5,693	469

ANNUAL DEATH-RATES, PER 1,000 LIVING IN 1888, AMONG

	PERSONS.		MALES.		FEMALES.	
	Salford.	New Engl. Life Table.	Salford.	New Engl. Life Table.	Salford.	New Engl. Life Table.
All Ages.....	23.0	19.5	23.6	20.5	22.5	18.5
Under 5 Years.....	72.6	61.0	74.4	65.6	70.9	56.3
5-20 years.....	5.6	4.8	5.6	4.9	5.6	4.7
20-40 years.....	8.7	8.5	8.9	9.0	8.5	8.1
40-60 years.....	24.0	18.3	26.3	20.4	22.1	16.4
60 and upwards.....	85.9	71.9	91.3	75.2	82.4	69.8

ANNUAL RATES OF MORTALITY, TEN YEARS, 1878-87, AND IN 1888.

		1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	Mean 1878 to 1887.	1888.
PERSONS	All Ages,	27.1	26.7	27.9	22.6	23.5	23.1	23.3	22.1	23.6	24.0	24.4	23.0
	Under 5 Years,	95.2	89.6	102.9	69.6	80.1	73.1	78.2	70.2	77.4	79.6	81.7	72.6
	5-20 ...	6.1	6.1	7.0	5.0	4.5	5.8	5.5	5.0	5.6	5.5	5.6	5.6
	20-40 ...	9.8	9.9	9.7	9.4	9.5	8.9	9.2	9.1	8.6	8.3	9.2	8.7
	40-60 ...	24.7	25.9	24.3	24.5	23.8	24.2	22.4	22.5	24.4	24.3	24.1	24.0
	60 and upwards	84.6	92.5	77.4	83.8	75.9	82.7	79.7	79.8	82.0	86.3	82.5	85.9
MALES.	All Ages,	28.3	28.7	30.0	24.1	24.4	25.0	24.6	23.5	24.4	25.0	25.8	23.6
	Under 5 Years,	100.7	99.4	109.5	74.9	83.3	77.8	85.2	75.6	81.8	83.1	87.1	74.4
	5-20 ...	6.5	6.3	7.3	5.9	4.4	6.0	5.9	5.4	5.7	5.6	5.9	5.6
	20-40 ...	10.3	9.5	10.8	9.8	9.5	9.5	9.0	9.9	8.4	8.5	9.6	8.9
	40-60 ...	25.6	29.0	27.3	27.4	26.7	29.2	23.1	24.1	26.5	27.1	26.6	26.3
	60 and upwards	94.9	105.7	86.1	89.6	81.0	89.2	84.7	87.3	84.8	89.8	89.3	91.3
FEMALES.	All Ages,	25.8	24.8	26.0	21.1	22.7	21.5	22.2	20.8	22.8	23.0	23.1	22.5
	Under 5 Years,	91.8	80.1	96.4	63.7	77.0	68.3	71.1	64.7	73.0	76.0	76.2	70.9
	5-20 ...	5.7	5.9	6.7	4.2	4.6	5.6	5.2	4.6	5.6	5.4	5.4	5.6
	20-40 ...	9.3	10.2	8.8	9.1	9.4	8.0	9.4	8.4	8.7	7.8	8.9	8.5
	40-60 ...	24.0	23.3	21.7	22.0	21.3	19.9	21.8	21.1	22.6	21.8	22.0	22.1
	60 and upwards	77.9	83.8	73.2	79.9	72.4	78.6	72.5	75.0	80.3	84.1	77.8	82.4

SECTION III. Mortality at certain ages average annual rates of mortality at these two latter groups of ages were equal to 23·5 and 82·8 respectively in the five years ending with 1888, and to 24·6 and 82·5 per 1,000 respectively in the five years immediately preceding.

Deaths of infants under one year in each thousand births

Infantile Mortality.—Measured by the ratio which the deaths under one year of age bear to the registered births, infantile mortality in Salford was equal, last year, to 184 per 1,000, which is identical with the average rate in the preceding five years. In the first, or March quarter of the year, the rate of infant mortality was equal to 158 per 1,000 births, or 5 per 1,000 more than the quinquennial average for the quarter. In the second quarter it was 169 or 17 per 1,000 above the average. In the third quarter it was 225, or 41 per 1,000 below; whilst, in the fourth quarter, it was 185, or 16 per 1,000 above the average rate in the five previous corresponding quarters. As in past years, the rate also varied in the several districts of the borough. It was lowest, namely, 128 per 1,000, in Broughton, and highest (206) in Regent Road. Throughout England and Wales, the infantile death rate last year was equal to 137 per 1,000 births. In the 28 great towns of England it was equal to 154, and in the 50 second rate town districts, it averaged 148. In Edinburgh it was equal to 128, and to 167 in Dublin.

The following table gives the rate of infant mortality in the Borough of Salford during 1888, from the principal diseases to which children are subject, together with the average rates in the years 1878 to 1887. The infant death rates, under the various headings, during 1888, are also given for the several districts of the Borough.

RATES OF MORTALITY UNDER ONE YEAR PER 1,000 BIRTHS.

	Borough Total.		Registration Sub-Districts, 1888.			
	1878-87.	1888.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.
Chief causes of infantile mortality						
All Causes	181	184	206	190	181	128
Ten Causes:—						
Measles	4·3	4·6	5·5	5·8	5·5	0·0
Scarlet Fever	1·1	0·6	0·3	0·8	1·1	0·0
Whooping Cough ...	7·3	12·3	13·9	12·5	11·5	9·7
Diarrhoea.....	28·0	18·2	22·9	25·9	8·2	14·6
Lung Diseases	32·4	37·8	44·0	40·1	35·2	25·1
Tubercular Diseases..	14·9	10·5	8·0	12·5	13·2	10·5
Premature Birth	15·1	15·7	15·6	15·0	16·5	15·4
Brain Disease and } Convulsions .. }	30·3	28·6	25·7	35·1	34·6	20·3
Found Dead in Bed ...	...	2·8	2·4	5·0	3·3	0·8
Syphilis	4·6	5·2	6·6	5·0	5·5	1·6

Deaths of illegitimate children

Illegitimacy in relation to Infantile Mortality.—

Table C, on page 27, shows that of the 7,136 children born in Salford in the year 1888, 273 were illegitimate. In the nine years

TABLE C.

BIRTHS IN THE BOROUGH OF SALFORD AND IN ITS FOUR REGISTRATION SUB-DISTRICTS—DISTINGUISHING LEGITIMATE FROM ILLEGITIMATE BIRTHS; ALSO THE PROPORTION OF MORTALITY AMONG LEGITIMATE AND ILLEGITIMATE INFANTS UNDER ONE YEAR OLD.

IN 52 WEEKS OF THE YEAR 1888.

	Births.		Percentage of Illegitimate Births to Total Births.	Deaths under One Year.		Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Illegit.		Total.	Illegit.	Total.	Legit.	Illegit.
Borough	7136	273	3·8	1310	103	184	176	377
Regent Road District ...	2884	106	3·7	594	41	206	199	387
Greengate ..	1198	54	4·5	228	20	190	182	370
Pendleton ..	1820	72	4·0	330	24	181	175	333
Broughton ..	1234	41	3·3	158	18	128	117	439

CORRESPONDING DATA FOR THE NINE YEARS 1879-1887.

Borough	63448	2827	4·5	11484	1037	181	172	367
Regent Road District ...	26298	1273	4·8	5057	465	192	183	365
Greengate ..	11310	565	5·0	2231	217	197	187	384
Pendleton ..	15303	636	4·2	2597	226	170	162	355
Broughton ..	10537	353	3·4	1599	129	152	144	365

SECTION III. 1879 to 1887 not less than 2,827 children have been born here out of wedlock. Of the 273 children thus unhappily born in 1888, there died within the first year of life 103; in other words, 37·7 per cent, of these little unfortunates perished. Amongst children born in wedlock the proportion last year was 176, a rate which is considerably above the average proportion, as well as vastly in excess of what it ought to be. In the district of Broughton the deaths of illegitimate infants were equal to 33 per cent. of the illegitimate births, whilst in Regent Road the proportion was equal to 39 per cent.

Mortality amongst persons over sixty years of age

Senile Mortality.—Of the 4,775 persons at all ages whose deaths were registered in Salford last year, 809, or 33 per cent. were returned by the registrars as having either attained, or exceeded, the age of 60 years. Calculated on the population estimated to be living at this age in the middle of the year, these deaths are equal to a rate of 85·9 per 1,000, which exceeds the average rate at this age in the previous five years, by 6·0 per 1,000.

Causes of death

Classification of Causes of Death.—The 4,775 deaths, from all causes, registered in the 52 weeks of the year 1888, were thus distributed:—896 deaths, or 19 per cent. of the total mortality were referred to the specific febrile or zymotic class of diseases; 797, or 17 per cent., to the constitutional class; 341, or 7 per cent., to the developmental class; and 2,273, or 47 per cent., to the local class of disease; whilst 468 deaths, or 10 per cent. of the total mortality, remain undistributed. The deaths which thus remain unclassified, are those which have been returned by the registrars as due to violence, or to some ill-defined cause, such as sudden death, dropsy, atrophy, marasmus, “found dead in bed,” &c. It has, therefore, been considered advisable to place in a group by themselves the deaths thus imperfectly described.

Classification of district mortality

In the upper section of Table D are given the annual rates of mortality, per 1,000 persons living, during the year 1888, from all causes, and from four principal classes of disease; in the middle and lower sections of the table, the rates are also shown for the several prevalent diseases, or groups of disease, which are believed to have relation to what is known as “sanitary condition;” and throughout the table, the 1888 rates, which are distinguished by heavy type, are compared with the corresponding mean rates in the five years immediately preceding. It appears from this table, that, as compared with the quinquennial average, the death rates from zymotic and from constitutional diseases, were lower during 1888 than the average, but that the diseases belonging to the other classes, were somewhat in excess. The lower sections of the table, however, show that the death rate from the “six miasmatics,” which are the most important diseases of the zymotic class was considerably higher last year, than the average.

TABLE D.

ANALYSIS OF MORTALITY—ANNUAL RATES PER 1000 LIVING IN EACH OF THE REGISTRATION SUB-DISTRICTS OF SALFORD IN THE 52 WEEKS OF THE YEAR 1888 AND THE AVERAGE ANNUAL RATES IN THE PREVIOUS QUINQUENNIUM 1882—1886—INSTITUTION DEATHS DISTRIBUTED

REGISTRATION SUB-DISTRICTS	ANNUAL RATE OF MORTALITY AT ALL AGES FROM ALL CAUSES AND FROM FIVE CLASSES OF DISEASE.											
	All Causes		Zymotic		Constitutional.		Developmental		Local.		Other Classes.	
	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888
REGENT RD	24.7	25.1	5.0	4.9	4.3	3.8	1.6	1.6	11.2	11.9	2.6	2.9
GREENGATE	29.2	27.5	5.7	4.9	5.5	4.6	1.5	2.0	13.9	13.7	2.6	2.2
PENDLETON	21.2	21.8	3.8	4.3	4.4	3.8	1.4	1.8	10.1	10.0	1.5	1.9
BROUGHTON	17.8	16.6	3.6	2.6	3.3	3.4	1.1	1.3	8.5	8.0	1.3	1.3
BOROUGH...	23.3	23.0	4.5	4.3	4.3	3.8	1.5	1.6	10.9	11.0	2.1	2.3

REGISTRATION SUB-DISTRICTS	FROM ALL CAUSES				AT ALL AGES FROM							
	Under 1 Year per 1000 Births.		Over 60 years.		Six Miasmatics.		Diarrhoea.		Acute Lung Diseases.		Phthisis	
	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888
REGENT RD	196	206	81.4	86.1	2.6	3.4	1.8	1.1	5.2	6.1	2.4	2.3
GREENGATE	204	190	93.2	99.7	3.2	3.1	1.9	1.4	6.8	7.0	3.3	2.7
PENDLETON	175	181	79.2	85.5	2.1	3.3	1.4	0.5	4.6	4.0	2.5	2.0
BROUGHTON	149	128	75.2	72.5	2.0	1.7	1.3	0.6	3.5	3.0	1.6	1.7
BOROUGH...	184	184	82.0	85.9	2.5	3.0	1.6	0.9	5.0	5.1	2.5	2.2

REGISTRATION SUB-DISTRICTS	ANNUAL RATE OF MORTALITY UNDER FIVE YEARS PER 1000 LIVING AT THAT AGE.											
	All Causes.		Nervous Diseases.		Six Miasmatics.		Diarrhoea.		Acute Lung Diseases.		Tubercular Disease.	
	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888	Five Years 1883-87.	1888
REGENT RD	82.0	81.2	11.2	8.4	12.3	16.3	12.5	7.2	14.8	18.9	6.8	4.1
GREENGATE	95.1	83.5	14.0	11.4	14.7	16.7	15.0	9.6	16.6	18.0	9.7	7.4
PENDLETON	67.8	69.9	10.8	10.4	10.3	15.0	9.0	2.8	12.6	14.5	8.4	6.6
BROUGHTON	57.0	48.1	7.8	7.8	8.0	7.1	9.7	4.2	10.8	10.5	5.8	5.8
BOROUGH...	76.9	72.6	11.1	9.2	11.5	14.4	11.6	5.9	14.0	16.1	7.6	5.5

*True Croup is not included amongst "Acute Lung Diseases" in this table, although it forms part of the Sub-order "Respiratory diseases" of the Registrar General. It is however included in the "Local Class" of diseases at the head of the table.

SECTION III. It follows, therefore, that had the fatality from diarrhœa attained its ordinary height last year, the aggregate mortality from the zymotic class of disease would have likewise shown an increase, instead of a decrease, as it has done.

Classification of mortality

In order to compare the rate of death last year from certain prevalent diseases, with that which obtained during the two previous quinquennia, table E has been constructed, in which the death rates from certain causes in 1888 are compared with the mean corresponding rates in the quinquennia 1876 to 1880, and 1881 to 1885.

Statement as to life saved and life lost in 1888

Comparative Nosological Table.—Table F, on page 32, which is abridged from the classified list of diseases of the Royal College of Physicians, and which is known as No. 3 of the model forms issued by the Society of Medical Officers of Health, furnishes the details of mortality at the different age groups, in the year 1888. The following statement, which is deduced from column 14, of table F, and from the corresponding columns of previously issued tables, indicates the diseases which have shown, respectively, a greater or a less fatality in 1888, as compared with the corrected annual average numbers in the previous ten years. In this statement is shown the amount of life saved, and of life lost, in 1888, as compared with the mean annual mortality in the previous ten years.

Cause of Death.	Diminution in 1888.	Excess in 1888.
Small-pox	—	5
Measles	22	—
Scarlet Fever.....	63	—
Typhus fever.....	2	—
Whooping cough	—	67
Diphtheria and croup	—	46
Ill-defined fever	8	—
Enteric fever.....	—	17
Diarrhœal diseases	149	—
Phthisis and other tuberc: diseases.....	129	—
Premature birth	8	—
Brain and nervous diseases	73	—
Heart diseases	6	—
Respiratory diseases.....	40	—
Urinary diseases	—	16
Atrophy, other ill-defined causes	15	—
All other causes	—	89
	515	240

Balance of diminution and excess... 275

TABLE E.

AVERAGE ANNUAL RATES OF MORTALITY AT CERTAIN AGE-GROUPS IN TWO SUCCESSIVE QUINQUENNA, AND THE ANNUAL RATES IN THE YEAR 1888.

CAUSES OF DEATH.	All Ages.			Under 5 years.			5-20 years.		
	Quinquennial means.		Year.	Quinquennial means.		Year.	Quinquennial means.		Year.
	1876-80.	1881-85.	1888	1876-80.	1881-85.	1888	1876-80.	1881-85.	1888
All Causes.....	27.6	22.9	23.0	95.4	74.2	72.6	6.4	5.2	5.6
Smallpox	0.5	...	...	1.0	0.1	...	0.5	...	...
Measles	0.8	0.7	0.6	5.1	4.5	4.2	0.1	0.1	0.1
Scarlatina	1.2	0.5	0.5	5.8	2.4	2.0	1.0	0.4	0.6
Diphtheria.....	0.1	0.1	0.3	0.5	0.5	1.1	0.1	0.1	0.4
Croup (not spasmodic)	0.2	0.2	0.3	1.5	1.4	1.7	0.1	0.1	0.1
Whooping Cough.....	0.9	0.7	1.1	6.2	4.8	6.9	0.1	0.1	0.2
Cont'd Fevers. { Typhus	0.1	0.1	...	...	...	...	...	...	...
{ Enteric.....	0.4	0.3	0.4	0.8	0.3	0.2	0.4	0.4	0.5
{ Continued	0.1	...	...	0.4	0.1	...	0.1	...	...
Diarrhoea and Dysentery.....	1.8	1.3	0.9	11.2	8.4	5.9	0.1	...	...
Puerperal Fever	0.1	0.1	0.1	...	...	...	...	...	...
Other Zymotics.....	0.6	0.4	0.3	3.0	1.9	1.6	0.1	0.1	0.1
Phthisis	2.7	2.5	2.2	0.7	1.0	0.2	1.2	1.1	0.8
Other Tubercular Diseases	1.2	1.1	0.9	6.9	6.2	5.3	0.3	0.4	0.4
Diseases of { Brain	3.4	3.0	2.8	13.9	10.9	9.2	0.5	0.6	0.6
{ Heart	1.0	1.1	1.1	0.2	0.2	0.2	0.2	0.3	0.3
{ Lungs	6.0	5.0	5.1	19.4	14.7	16.1	0.6	0.5	0.6
{ Digestive System	1.0	0.9	0.8	1.6	2.1	1.9	0.2	0.2	0.1
Other Diseases.....	5.5	4.9	5.6	17.2	14.7	16.1	0.8	0.8	0.8

CAUSES OF DEATH.	20-40 years.			40-60 years.			Over 60 years.		
	Quinquennial means.		Year.	Quinquennial means.		Year.	Quinquennial means.		Year.
	1876-80.	1881-85.	1888	1876-80.	1881-85.	1888	1876-80.	1881-85.	1888
All Causes.....	10.6	9.2	8.7	26.0	23.5	24.0	85.5	79.9	85.9
Smallpox	0.6	0.1	0.1	0.3	...	0.1	0.1	...	...
Measles .....	...	...	...	...	...	...	...	...	...
Scarlatina	0.1	...	...	...	...	...	...	...	...
Diphtheria.....	...	...	...	...	...	...	...	...	...
Croup (not spasmodic) .....	...	...	...	...	...	...	...	...	...
Whooping Cough.....	...	...	...	...	...	...	...	...	...
Cont'd Fevers. { Typhus	0.1	0.1	...	0.1	0.1	0.1	...	0.1	...
{ Enteric.....	0.3	0.3	0.6	0.3	0.3	0.4	0.5	0.1	0.1
{ Continued .....	...	...	...	0.1	...	...	0.3	0.1	...
Diarrhoea and Dysentery.....	0.1	...	...	0.2	0.1	...	1.7	1.4	0.4
Puerperal Fever	0.1	0.2	0.2	...	...	0.1	...	...	...
Other Zymotics.....	0.1	0.1	0.1	0.3	0.3	0.1	0.8	0.5	0.7
Phthisis	4.3	3.9	3.5	4.9	4.1	4.0	1.9	1.6	1.9
Other Tubercular Diseases	0.1	0.1	...	0.1	0.1	...	0.1	...	...
Diseases of { Brain	0.6	0.6	0.7	2.8	2.8	2.9	11.9	13.6	12.0
{ Heart	0.7	0.7	0.5	2.4	2.5	2.7	6.5	7.5	7.8
{ Lungs	1.3	1.1	1.1	7.6	6.8	6.2	29.5	26.4	27.1
{ Digestive System	0.6	0.4	0.3	1.8	1.5	1.7	4.3	3.9	3.0
Other Diseases.....	1.6	1.6	1.7	5.1	4.9	5.6	27.9	24.7	32.9

TABLE F.

DEATHS REGISTERED IN SALFORD, FROM ALL CAUSES DURING THE YEAR 1888.

DISEASES.	AGES IN YEARS.													TOTAL.	20 to 40	40 to 60	60 and upwards
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.				
I. SPEC: FEBRILE, OR ZY- MOTIC DISEASES	306	358	80	27	19	23	30	26	10	8	8	1	...	896	67	27	12
II. PARASITIC DISEASES	1	2	...	...	...	...	...	...	...	...	1	...	...	4	...	...	1
III. DIETIC DISEASES .....	...	...	...	...	...	...	1	8	8	3	...	...	...	20	4	14	2
IV. CONSTITUTIONAL DISEASES	85	99	31	13	42	48	143	138	112	57	24	5	...	797	267	203	57
V. DEVELOPMENTAL DIS: ...	136	1	...	1	...	...	...	...	1	18	85	81	18	341	...	4	199
VI. LOCAL DISEASES.....	530	377	62	26	49	34	94	200	254	275	254	107	11	2273	216	507	506
VII. DEATHS FROM VIOLENCE.	30	23	10	8	4	3	13	15	14	13	8	5	...	146	24	29	18
VIII. DEATHS FROM ILL-DEFIN- ED & NOT SPECIFIED CAUSES.	222	38	4	...	...	...	4	5	8	7	9	1	...	298	6	14	14
TOTALS.....	1310	898	187	75	114	108	285	392	407	381	389	200	29	4775	584	798	809
I. - Zymotic Diseases.																	
1. MIASMATIC DISEASES.																	
Sm: Pox { Vaccinated .....	...	...	...	1	...	1	2	1	2	1	...	...	...	8	4	3	...
{ Unvaccinated .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
{ No Statement .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	33	54	5	...	...	...	...	...	...	...	...	...	...	132	...	...	...
Scarlet Fever	4	56	35	5	...	1	...	...	...	...	...	...	...	101	1	...	...
Typhus Fever .....	...	...	1	1	...	...	3	2	...	...	...	...	...	7	2	3	...
Whooping Cough	88	123	11	...	...	...	...	...	...	...	...	...	...	222	...	...	...
Diphtheria	3	29	19	8	2	...	...	...	...	...	...	...	...	61	...	...	...
Simp: Contd: Fever.....	1	...	...	1	...	1	...	...	...	...	...	...	...	3	1	...	...
Enteric Fever	1	5	8	10	13	19	15	11	5	3	...	...	...	90	38	14	1
Miasm: Dis: (other).....	2	2	1	...	1	...	...	...	...	...	...	...	...	6	...	...	...
2. DIARRHOEAL DISEASES.																	
Simp: Cholera .....	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Diarrhoea, Dysentery	130	47	...	...	...	1	1	1	...	1	3	...	...	184	3	...	4
3. MALARIAL DISEASES.																	
Remittent Fever.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ague .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. ZOOGENOUS DISEASES.																	
Cow Pox, Effects of Vaccin: ..	2	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Hydroph: Gland: Splenic Fev:	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. VENEREAL DISEASES.																	
Syphilis	37	...	...	...	1	...	1	1	...	1	...	...	...	41	1	1	1
Gonorrhoea, Str: Ureth: .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. SEPTIC DISEASES.																	
Erysipelas	5	...	...	...	1	...	...	...	3	3	1	...	...	13	...	1	6
Pyæmia Septicæmia .....	...	1	...	1	1	1	2	...	...	1	...	...	...	7	3	1	...
Puerperal Fever.....	...	...	...	...	1	8	9	...	...	...	...	...	...	18	14	4	...
II. - Parasitic Diseases.																	
Veg: Par: D: (Thrush)	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
An: Par: D: Wrm: Hydtd: .....	...	2	...	...	...	...	...	...	...	1	...	...	...	3	...	...	1
III. - Dietic Diseases.																	
Starv: Want Breast Milk .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scurvy .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chr: Alcoholism .....	...	...	...	...	...	1	7	8	3	...	...	...	...	19	3	14	2
Delir: Trem: .....	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1	...	...

DISEASES.	AGES IN YEARS.													TOTAL.	20 to 40	40 to 60	60 and upwards.
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.				
IV.—Constitutional Diseases.																	
Rheum: Fev: Rheum: Heart	...	1	1	...	6	2	3	4	3	1	...	...	...	21	9	4	...
Rheum: Chronic	...	...	...	...	...	1	...	...	...	2	1	...	...	4	1	1	2
Gout	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rickets	9	4	...	...	...	...	...	...	...	...	...	...	...	13	...	...	...
Cancer, Malignant Dis:...	...	...	1	...	...	6	19	32	27	14	4	...	...	103	13	58	31
Tabes Mesenterica	45	30	3	...	1	...	...	...	...	...	...	...	...	79	...	...	...
Taberc: Mening: Hydroceph:	18	41	14	1	...	1	...	...	...	...	...	...	...	75	1	...	...
Phthisis	2	5	8	11	35	43	130	109	74	23	6	...	...	446	234	133	18
Taberc: Dis: Scrofula	10	17	4	1	...	2	...	...	1	...	...	...	...	35	2	1	...
Purpura, Hæmor: Diathesis	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Anæmia, Chlorosis, Leucocy:	...	...	...	...	1	...	2	1	1	2	...	...	...	7	2	2	3
Diabetes Mellitus	...	...	...	...	...	2	4	2	2	1	1	...	...	12	5	4	3
Constitutional Dis: (other)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
V.—Developmental Diseases.																	
Premature Birth	112	1	...	...	...	...	...	...	...	...	...	...	...	113	...	...	...
Atelectasis	6	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...
Malform: Congen: Defects	18	...	...	1	...	...	...	...	...	...	...	...	...	19	...	...	...
Old Age	...	...	...	...	...	...	...	1	18	85	81	18	...	203	...	4	199
VI.—Local Diseases.																	
1. DIS: OF NERVOUS SYSTEM.																	
Brain and Mem: Inflam:	28	29	13	4	9	4	2	4	5	4	3	...	...	105	8	9	6
Apoplexy and Paralysis	...	...	...	...	1	3	5	24	35	35	44	16	3	166	19	62	84
Insanity, Gen: Par: Insane	...	...	...	...	1	...	4	...	7	4	5	2	1	24	4	10	9
Epilepsy	...	1	1	1	1	1	4	4	1	3	1	...	...	18	8	3	3
Convulsions	173	41	3	...	...	...	...	...	...	...	...	...	...	217	...	...	...
Laryng: Strid: (Spasm Glot:)	3	2	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...
Sp: Crd: D: Parapl: Par: Agit:	...	1	...	...	1	2	5	4	4	5	2	...	...	24	6	8	8
Nervous Dis: (other)	...	3	2	3	...	...	...	2	2	2	...	1	...	15	...	4	3
2. DIS: OF ORG: SPECIAL SENSE.																	
Ear—Eye—Nose—Dis:.....	1	...	...	1	...	2	...	...	...	...	...	...	...	4	2	...	...
3. DIS: OF CIRCULATORY SYS:																	
Pericarditis	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Endocarditis (Acute)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Valvular Dis: .....	...	...	2	2	3	1	3	7	4	4	4	2	...	32	6	12	7
Heart Diseases (other)	3	1	3	4	8	2	10	39	34	31	28	15	2	180	24	75	62
Aneurism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Embolism, Thrombosis	...	...	...	1	...	1	1	1	...	...	...	...	...	4	1	2	...
Blood Vessels (other Dis: of).	...	...	...	...	...	...	1	1	1	1	2	2	...	7	1	2	4
4. DIS: OF RESPIRATORY SYS:																	
Laryngitis	3	5	2	...	...	1	1	...	...	1	...	...	...	13	2	...	1
Croup	7	44	5	...	...	...	...	...	...	...	...	...	...	56	...	...	...
Asthma, Emphysema	...	...	...	...	...	5	3	2	6	...	...	...	...	16	2	8	6
Bronchitis	148	79	6	1	...	8	29	61	93	92	49	3	...	569	19	121	195
Pneumonia	106	128	14	4	10	10	19	27	36	28	22	8	1	413	42	65	44
Pleurisy	...	...	...	1	...	1	2	3	1	1	...	...	...	9	3	3	2
Respiratory Dis: (other)	13	8	2	...	2	1	1	1	5	6	5	1	...	45	3	10	7
5. DIS: OF DIGESTIVE SYSTEM.																	
Teething	1	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Sore Throat (Quinsy)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stomach (Diseases of)	8	2	...	1	...	...	...	...	5	1	3	...	...	20	...	6	3
Enteritis	21	6	2	1	...	...	...	...	...	1	...	1	...	32	...	1	1
Intestine (Obst: Dis: of)	...	3	...	1	1	1	1	5	6	2	7	3	...	30	4	11	10
Peritonitis	...	1	1	...	1	2	3	4	1	1	1	...	...	15	6	5	1
Ascites	...	...	...	...	...	...	...	2	2	...	...	...	...	4	...	3	1
Liver (Cirrhosis of)	...	...	...	...	...	1	8	12	7	2	...	...	...	30	5	18	7
Jaundice, Liver Dis: (other)	3	...	...	...	...	2	2	4	10	1	2	...	...	24	3	13	5
Digest: Syst: (other Dis: of)	6	7	1	...	1	1	...	1	...	...	...	...	...	17	2	...	...
6. DIS: OF LYMPHATIC SYSTEM.																	
Lymph: Spleen Dis: .....	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...

DISEASES.	AGES IN YEARS.													TOTAL.	20 to 40	40 to 60	60 and upwards.	
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.					
7. DIS: OF GLAND-LIKE ORG: OF UNCERTAIN USE.																		
Bronchocele, Addison's Dis:...	...	...	...	...	...	...	...	...	1	1	1	...	...	3	...	2	1	
8. DIS: OF URINARY SYSTEM.																		
Nephritis	1	5	2	...	...	1	2	1	5	7	2	...	...	26	4	9	5	
Bright's Dis: Albuminuria ...	...	2	...	...	2	1	2	10	8	15	9	3	...	52	7	22	19	
Bladder, Prost: (Dis: of).....	...	2	...	...	...	...	...	3	2	1	4	1	...	13	...	6	5	
Urinary Org: (Dis: of) .....	...	...	1	1	1	...	1	...	...	1	...	...	...	5	1	1	...	
9. DIS: OF REPRODUCTIVE SYS:																		
<i>A. Organs of Generation.</i>																		
Male Organs .....	...	1	...	...	...	...	...	...	...	1	...	...	...	2	...	1	...	
Female Organs .....	...	1	...	...	2	2	...	2	4	4	1	...	...	16	2	8	3	
<i>B. of Parturition.</i>																		
Abortion, Miscarriage .....	...	...	...	...	...	...	...	2	...	...	...	...	...	2	2	...	...
Puerperal Convulsions .....	...	...	...	...	1	...	...	1	...	...	...	...	...	2	1	...	...
Plac: Præv: Flooding .....	...	...	...	...	...	...	...	5	1	...	...	...	...	6	6	...	...
Childbirth (other Accid: of)...	...	...	...	...	...	2	14	10	...	...	...	...	...	26	22	4	...	
10. DIS: OF BONES & JOINTS.																		
Caries, Necrosis .....	...	1	2	1	2	...	...	...	1	1	...	...	...	8	...	1	1	
Arthr: Ost: Periostitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bone, Joint, (Diseases of).....	...	2	...	1	1	...	...	...	1	2	2	...	...	9	...	2	3	
11. DIS: OF INTEGUMENT: SYS:																		
Carbuncle, Phleg: Cellulitis...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Integ: Diseases (other).....	5	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...
VII.—Deaths from Violence.																		
1. ACCIDENT OR NEGLIGENCE.																		
Fract: and Contusions	2	5	3	3	2	2	8	8	7	2	6	3	...	51	15	12	9	
Gunshot Wounds .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cut, Stab .....	...	...	...	...	1	...	...	...	...	...	1	...	...	2	...	...	1	...
Burn, Scald	3	13	2	...	...	...	1	...	1	...	1	...	...	20	...	1	1	
Poison .....	...	...	...	...	...	...	...	...	1	...	1	...	...	2	...	1	1	
Drowning	1	2	2	2	...	...	...	...	1	...	...	...	...	8	...	1	...	
Suffocation	22	1	1	1	...	...	1	...	1	...	...	...	...	27	1	1	...	
Otherwise.....	1	...	...	...	...	...	...	...	1	...	...	...	...	2	...	1	...	
2. HOMICIDE.																		
Manslaughter .....	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1	...	...	...
Murder	1	2	2	2	...	...	...	1	...	...	...	...	...	8	...	1	...	...
3. SUICIDE.																		
Gunshot Wound .....	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	...
Cut, Stab .....	...	...	...	...	...	1	1	...	...	1	...	...	...	3	1	1	1	...
Poison .....	...	...	...	1	...	...	3	2	2	...	...	...	...	8	2	4	1	...
Drowning .....	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	...
Hanging .....	...	...	...	...	1	2	1	3	4	1	...	...	...	12	4	5	3	...
Otherwise .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. EXECUTION.																		
Hanging .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VIII.—Deaths from Ill- defined and not specified causes.																		
Dropsy	1	1	...	...	...	...	...	...	...	...	1	...	...	3	...	...	1	...
Atrophy, Debility	196	34	2	...	...	...	...	...	4	2	4	...	...	242	...	5	5	...
Mortification .....	...	...	...	...	...	...	1	...	...	...	...	...	...	1	1	...	...	...
Tumour.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abscess.....	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	...
Hæmorrhage .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sudden Death.....	2	1	...	...	...	1	2	2	4	1	...	...	...	13	2	5	3	...
Found Dead in Bed	20	2	2	...	...	...	...	1	1	3	1	...	...	30	...	1	5	...
Not Specified, Ill-defined	3	...	...	...	...	3	2	...	...	...	...	...	...	8	3	2	...	...

SUMMARY OF TABLE F, 1887 AND 1888.

	No. of Deaths, 1887.	No. of Deaths, 1888.
I.—Specific Febrile, or Zymotic Diseases:		
1. Miasmatic Diseases	647	630
2. Diarrhoeal „	340	185
3. Malarial „ .....	...	...
4. Zoogenous „	1	2
5. Venereal „	27	41
6. Septic „	31	38
II.—Parasitic Diseases	9	4
III.—Dietic Diseases.....	17	20
IV.—Constitutional Diseases	795	797
V.—Developmental Diseases	322	341
VI.—Local Diseases:		
1. Diseases of Nervous System.....	604	574
2. Diseases of Organs of Special Sense	5	4
3. Diseases of Circulatory System	251	224
4. Diseases of Respiratory System	1090	1121
5. Diseases of Digestive System	170	174
6. Diseases of Lymphatic System	2	1
7. Diseases of Gland-like Organs of uncertain use	1	3
8. Diseases of Urinary System.....	72	96
9. Diseases of Reproductive System:		
(a) Diseases of Organs of Generation.....	13	18
(b) Diseases of Parturition	35	36
10. Diseases of Bones and Joints	16	17
11. Diseases of Integumentary System.....	12	5
VII.—Violence:		
1. Accident or Negligence.....	123	112
2. Homicide	3	9
3. Suicide.....	14	25
4. Execution .....	...	...
VIII.—Ill-defined and not specified causes	256	298
TOTAL	4856	4775

TABLE F1.

CAUSES OF DEATH REGISTERED IN EACH OF THE TEN YEARS 1878-87,
IN 1888, AND THE AVERAGE DECENNIAL NUMBER, CORRECTED FOR
INCREASE OF POPULATION.

	1878	1879	1880	1881	1882	1883	1884	1885	1886	1877	Corr'ted Average	1888
All Causes	4336	4495	4799	4000	4265	4287	4486	4283	4672	4856	5050	4775
Small Pox	1	...	...	7	18	...	...	1	...	...	3	8
Measles	76	139	134	38	167	156	100	178	47	320	154	132
Scarlet Fever	185	203	279	84	81	82	144	62	169	155	164	101
Typhus	12	4	20	7	12	3	10	10	1	1	9	7
Whooping Cough	132	144	219	160	152	105	131	129	127	64	155	222
Diphtheria	19	24	22	20	18	24	22	17	12	21	23	61
Ill-defined Fever.....	22	6	26	9	5	6	8	5	5	2	11	3
Enteric Fever	82	52	84	42	46	64	81	48	61	82	73	90
Simple Cholera	4	1	3	4	3	...	3	2	8	1	3	1
Diarrhoea, Dysent:.....	340	141	477	160	237	210	374	244	393	339	331	184
Venereal Affections	45	41	33	21	38	56	53	41	35	27	44	41
Erysipelas.....	11	12	14	15	25	19	15	21	7	14	17	13
Pyæmia	5	3	...	4	7	9	6	1	3	8	5	7
Puerperal Fever	4	7	10	15	13	9	8	11	7	8	10	18
Other Zymotics	60	38	31	11	4	6	5	4	3	4	19	8
Parasitic Diseases .....	...	...	...	2	2	4	4	5	7	9	4	4
Dietic Dis: Intemp:.....	13	13	7	22	26	17	15	21	25	17	20	20
Rheumatic Fever	23	17	14	6	11	15	19	13	20	26	19	20
Cancer	80	66	74	89	77	73	93	96	90	94	94	103
Tabes Mesenterica	75	66	91	76	98	82	74	84	119	98	98	79
Tubercul: Mening:	87	86	90	75	82	96	93	95	95	60	98	75
Phthisis	434	480	459	451	437	489	477	487	489	433	526	446
Scrofula	29	59	33	16	19	27	31	41	70	49	42	35
Constit: Dis: (other) ...	19	17	17	27	23	33	40	28	23	35	29	39
Prem: Birth.....	64	91	85	117	106	97	121	115	144	124	121	113
Devel Dis: & Cong: Def:	11	28	14	9	19	20	20	25	20	23	21	25
Old Age	95	122	143	108	132	144	119	123	145	175	148	203
Apoplexy and Paralysis...	99	121	117	150	150	182	160	161	161	192	162	166
Epilepsy	14	23	22	18	18	27	16	18	16	27	23	18
Convulsions	258	298	246	197	269	171	178	190	189	203	250	217
Brain & Nerv: Dis:(other)	196	173	170	178	212	188	180	162	161	182	205	173
Heart Diseases	172	191	159	192	191	211	194	220	241	251	230	224
Croup	47	48	30	28	46	54	52	36	32	46	48	56
Bronchitis	577	711	583	636	495	544	524	559	629	556	660	569
Pneumonia	285	304	329	292	314	317	317	350	334	416	370	413
Lung&Respir: Dis:(other)	84	87	91	56	49	71	54	54	41	72	75	83
Teething	6	4	4	5	3	13	32	7	1	2	9	2
Diges: Org: Dis: of	132	172	170	142	153	181	168	151	171	169	183	172
Urinary Org: Dis: of.....	56	68	73	64	63	65	75	68	99	72	80	96
Parturition, dis: of	20	27	19	39	48	12	30	33	33	35	34	36
Gener: Orgs: dis: of ...	6	5	11	7	7	11	6	6	7	13	9	18
Locomo: Sys: Dis: of	16	14	16	11	5	19	13	33	43	35	23	30
Accident	115	112	102	86	80	90	91	98	110	123	114	112
Homicide	5	3	3	3	3	3	2	1	1	3	3	9
Suicide	9	12	9	7	8	12	8	7	15	14	11	25
Atrophy	307	244	246	208	187	186	218	174	214	209	249	242
Ill-defined Causes	4	18	20	86	106	84	102	48	49	47	64	56

I.—SPECIFIC FEBRILE OR ZYMOTIC DISEASES.

SECTION III.

Common infectious diseases

Six Miasmatic Diseases.—The following diseases which are included in class I of the New Nomenclature,^o constitute the group which has been designated the six miasmatic or common infectious diseases: small-pox, measles, scarlet fever (or scarlatina), whooping cough, diphtheria and continued fever, the latter term including under it the three forms known as typhus, enteric, and simple continued fever. With the exception of measles, whooping cough and simple continued fever, all the above forms of disease are compulsorily notifiable under the Salford Improvement Act of 1882.

Infectious Cases reported under the Notification Act.—During the year 1888, 1984 cases of dangerous infectious disease were reported at the Salford Health Department, as compared with 1,889 cases in the year 1887, and 1,882 cases in the immediately preceding year. The following table shows the incidence of infectious attacks amongst Salford residents, in each calendar month of last year.

Compulsory notification in Salford

INFECTIOUS CASES REPORTED UNDER THE NOTIFICATION ACT.

YEAR 1888.	Small Pox.		Scarlet Fever.		Diphtheria.		Typhus Fever.		Enteric Fever.		Puerp Fever	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January ...	8	1	119	7	10	2	2	1	43	2	1	-
February...	11	1	110	5	7	4	-	-	23	5	2	1
March.....	7	1	104	11	8	2	5	1	18	1	1	1
April	10	1	85	7	10	6	9	2	14	4	2	2
May.....	10	2	62	8	9	3	4	1	11	3	7	5
June	2	-	60	6	10	4	2	1	6	1	4	4
July.....	1	1	75	4	3	2	6	-	12	5	2	-
August ...	-	-	63	6	6	3	1	-	43	8	1	1
September	2	1	112	9	19	3	-	-	88	8	2	2
October ...	1	-	108	6	11	7	1	1	130	26	1	1
November.	-	-	123	19	45	16	1	-	111	17	-	-
December.	-	-	107	12	37	11	-	-	73	13	3	1

Disease notification in other protected towns.—There are now in Great Britain a large number of towns which possess powers for the compulsory notification of infectious disease. With respect to 41 of these towns, I have been able by the courtesy of the respective Medical Officers of Health, to collect statistics of disease prevalence; and in the following table, the relative incidence on population of these diseases is shewn for each for the last six years. In the middle of the year 1888, the 41 towns included in the table contained an aggregate population of 4,019,772 persons: and amongst these, 25,169 cases of dangerous infectious disease are reported to have occurred during the year, namely, 1,377 cases of small-pox,

In 41 other English Towns

^o Nomenclature of Diseases, by the Royal College of Physicians of London, 1885.

RATES OF SICKNESS PER 1,000 OF THE RESPECTIVE POPULATIONS, FROM THE
UNDER THE LOCAL

Towns.	Popula- tion in 1888.	Smallpox.						Scarlet Fever.					
		1883.	1884.	1885.	1886.	1887.	1888.	1883.	1884.	1885.	1886.	1887.	1888.
Aberdeen	119,334	...	0'05	...	0'01	0'34	0'03	2'17	1'59	5'78	7'17	5'53	1'69
Accrington	38,000	...	...	...	0'05	...	0'24	3'52	1'32	2'74	2'42	22'13	4'71
Barrow-in-Furness...	50,000	0'02	0'06	0'20	...	...	0'12	0'98	2'12	10'03	2'82	0'52	0'88
Birkenhead	100,093	0'03	1'34	0'26	0'06	...	...	1'91	3'08	5'97	6'58	9'03	3'87
Blackburn	120,000	0'04	...	0'04	0'24	0'35	0'81	2'54	1'91	1'61	3'68	14'30	6'79
Blackpool	20,540	0'19	0'06	0'11	0'05	...	...	2'75	1'68	1'39	5'47	4'56	3'31
Bolton	113,506	0'03	0'12	0'05	...	...	0'11	0'95	2'75	1'69	2'87	5'84	8'20
Bradford (Yorks.) ...	229,721	0'02	0'01	0'04	0'01	0'17	0'07	1'72	2'35	3'67	5'10	5'62	1'81
Burnley	78,000	...	...	0'17	...	...	0'15	...	2'49	4'97	9'33	6'41	10'83
Burton-on-Trent ...	46,513	0'19	...	...	...	...	0'11	2'30	1'93	8'02	4'68	4'41	0'86
Bury	57,776	...	0'06	0'02	0'07	0'23	0'10	...	2'11	2'80	1'84	3'07	1'52
Croydon	95,700	...	...	...	...	0'02	...	...	...	...	1'36	2'50	2'18
Derby	96,241	0'02	0'08	...	...	...	0'22	5'91	4'44	1'87	1'82	0'66	6'49
Dewsbury	33,000	...	...	...	...	0'03	0'48	...	...	...	6'68	5'03	4'73
Dundee	160,619	0'01	...	...	0'01	...	0'03	2'65	2'86	1'23	8'56	26'34	4'04
Edinburgh	262,733	...	...	0'05	0'10	...	...	7'74	5'67	4'34	5'13	9'32	2'35
Greenock	77,015	...	...	0'08	...	...	0'01	2'40	3'03	1'22	1'70	3'76	3'39
Halifax	80,200	0'03	0'01	0'09	0'03	0'04	0'01	2'08	3'52	2'74	1'59	9'07	5'59
Hartlepool	18,550	...	...	8'78	11'78	...	...	...	...	0'72	2'33	2'39	8'03
Heywood	25,000	...	...	...	0'16	0'03	...	...	0'56	0'08	0'32	3'84	9'00
Huddersfield	91,419	0'01	...	0'03	0'44	...	0'15	1'07	4'37	2'87	4'18	5'72	3'51
Jarrow	30,000	1'11	0'14	0'37	...	...	...	5'11	3'14	8'80	3'14	5'77	3'07
Lancaster	21,795	...	0'50	...	...	...	0'14	0'37	0'86	4'84	1'83	5'00	7'11
Leek	13,631	...	...	...	0'15	...	0'44	...	6'96	1'11	0'66	3'41	5'13
Leicester	143,153	0'09	0'01	0'06	0'01	0'06	0'15	6'16	5'28	13'34	5'85	1'90	0'91
Macclesfield	37,620	...	...	...	...	...	0'24	4'97	1'55	1'67	1'12	17'25	5'55
Manchester	378,164	0'03	0'08	0'79	0'02	0'17	0'52	5'03	4'76	2'30	4'30	7'12	4'64
Newcastle-on-Tyne...	159,003	3'30	1'15	0'46	0'03	0'05	...	7'71	14'33	8'00	6'47	7'70	4'71
Norwich	94,510	...	0'01	0'01	...	...	0'01	0'71	0'97	3'06	4'72	4'74	3'14
Nottingham	240,000	0'11	0'05	0'04	0'05	0'01	0'25	2'05	1'75	1'70	1'50	2'50	2'56
Oldham	138,220	0'05	0'01	0'03	0'04	0'02	0'75	2'53	2'32	1'81	3'00	12'84	7'12
Portsmouth	139,575	...	0'01	0'08	0'05	0'15	0'02	...	1'97	2'15	0'52	4'48	3'33
Preston	103,234	0'01	0'03	0'11	0'08	0'01	5'66	2'84	2'58	2'91	1'50	8'43	3'23
Reading	59,079	...	0'04	0'06	0'10	0'02	...	2'77	4'65	9'03	4'89	3'61	1'49
Rotherham	36,150	...	0'11	0'08	...	2'99	0'86	2'58	4'09	8'05	1'49	1'49	3'29
Salford	207,326	0'03	0'03	0'06	...	0'02	0'25	4'34	6'00	3'26	7'75	7'04	5'44
Stafford	21,206	...	0'05	...	...	...	0'14	...	0'98	0'24	0'05	0'05	0'33
Stalybridge	27,700	...	...	0'11	...	...	2'06	1'28	4'97	1'29	0'77	2'35	5'41
Sunderland	131,919	...	...	...	...	...	0'08	...	...	...	2'57	2'01	3'91
Warrington	48,200	0'02	0'09	...	...	...	0'17	2'90	0'49	0'44	0'21	1'43	13'34
York	75,327	...	...	...	0'01	...	0'01	...	...	0'92	1'22	2'86	2'97
Total	4,019,772	0.20	0'12	0'19	0'10	0'08	0'34	3'59	3'81	3'64	4'12	6'90	4'08

SEVERAL INFECTIOUS DISEASES, NOTIFICATION OF WHICH IS COMPULSORY
ACTS OF PARLIAMENT.

Diphtheria.						Typhus Fever.						Enteric Fever.					
1883.	1884.	1885.	1886.	1887.	1888.	1883.	1884.	1885.	1886.	1887.	1888.	1883.	1884.	1885.	1886.	1887.	1888.
0.29	0.77	0.49	0.38	0.22	0.13	0.24	0.51	0.10	0.01	0.23	0.14	0.55	0.91	1.09	0.95	0.72	0.68
0.21	0.18	0.06	0.36	0.34	0.53	...	...	...	...	...	0.03	1.88	1.18	1.17	0.81	0.79	1.63
0.64	0.84	1.42	0.46	0.72	0.42	...	0.12	...	...	...	...	4.15	2.60	1.82	2.20	2.40	0.96
0.21	0.17	0.23	0.24	0.19	0.34	0.47	0.17	0.03	0.16	0.09	...	0.86	0.79	0.41	0.60	1.24	2.53
...	...	...	...	0.01	...	...	...	...	...	...	...	4.07	2.43	1.15	0.92	1.25	1.34
0.50	0.41	0.44	1.38	0.44	1.56	...	...	...	...	...	...	1.44	1.51	1.22	0.92	0.83	2.73
0.08	0.09	0.07	0.16	0.16	0.43	0.08	0.06	...	0.03	0.02	0.01	0.70	1.44	0.52	0.54	0.85	1.60
0.06	0.11	0.20	0.21	1.35	0.12	0.15	0.01	0.01	...	...	0.01	1.04	0.95	0.71	0.73	0.58	0.44
...	0.08	0.10	0.32	0.41	0.26	...	...	...	...	0.01	0.01	...	1.01	1.31	0.63	0.69	0.90
0.59	0.75	1.52	0.79	0.66	0.56	0.05	...	0.02	...	0.04	...	0.28	0.59	0.61	0.55	0.40	0.67
...	0.13	0.09	0.09	0.14	0.12	...	0.07	0.02	...	...	0.02	...	1.52	0.51	0.26	0.24	0.31
...	...	...	0.66	1.45	0.67	...	...	...	...	0.02	...	...	...	...	0.24	0.49	0.35
0.09	0.01	0.01	0.07	0.28	0.23	...	...	...	...	...	...	0.60	3.93	0.55	1.73	1.09	1.62
...	...	...	...	0.12	0.18	...	...	...	...	...	...	...	...	...	0.34	0.94	1.03
0.79	1.15	0.53	0.24	0.20	0.27	0.47	0.19	0.39	0.29	0.49	0.17	1.89	0.79	0.71	0.41	0.72	0.74
0.91	0.73	0.59	0.83	0.97	0.97	0.21	0.17	0.23	0.05	0.14	0.08	1.47	2.36	2.35	0.88	1.26	0.93
0.52	0.45	0.38	0.23	0.41	0.43	0.57	0.44	2.05	0.71	0.35	0.61	0.67	1.27	0.68	0.72	0.96	1.32
0.19	0.05	0.32	0.76	0.32	0.35	0.03	0.01	0.01	...	...	0.02	1.42	0.90	0.72	0.73	0.82	0.41
...	...	0.17	0.22	0.39	0.27	...	...	1.72	6.11	...	...	...	...	3.28	2.55	2.05	1.02
0.08	0.04	...	0.64	0.68	...	...	...	...	...	...	...	...	1.12	1.12	1.08	0.56	0.76
0.09	0.09	0.03	0.33	0.72	0.45	...	...	...	...	...	...	0.48	1.00	0.79	0.50	0.48	0.62
0.07	0.03	0.30	0.63	0.50	0.30	0.04	0.28	0.03	0.07	...	...	1.00	1.38	0.63	0.73	0.40	0.27
...	...	...	...	0.05	0.14	...	0.58	...	...	...	...	0.69	0.72	1.86	1.70	0.92	1.56
...	...	...	...	...	...	...	...	0.07	...	...	...	...	0.45	0.15	0.22	0.58	0.44
0.20	0.36	0.40	0.37	0.57	0.48	...	...	...	...	...	...	0.65	0.90	1.59	1.01	1.55	1.81
0.10	0.24	0.05	0.05	0.21	0.03	0.03	...	...	0.05	...	...	0.64	0.37	0.32	0.53	1.14	0.74
0.26	0.18	0.12	0.29	0.44	0.90	0.15	0.18	0.08	0.11	0.07	0.11	0.73	0.91	0.80	1.23	1.33	1.67
0.19	0.50	0.61	0.47	0.57	0.61	0.60	0.11	0.06	0.01	0.24	0.02	1.45	1.72	1.65	1.32	2.07	0.77
0.04	0.19	0.13	0.27	0.33	0.10	...	0.01	0.02	0.01	...	...	0.39	1.34	6.40	2.85	1.45	1.81
0.60	0.52	1.11	0.30	0.19	0.56	...	...	...	...	...	...	0.76	1.00	1.37	1.31	1.68	1.78
0.13	0.16	0.22	0.34	0.92	0.62	...	...	...	0.08	0.01	...	0.81	0.82	0.46	0.76	0.86	0.77
...	1.22	0.66	1.70	1.79	0.92	...	...	...	...	...	...	...	4.00	5.23	9.17	4.15	2.24
0.22	0.18	0.16	0.23	0.47	0.27	...	...	...	0.01	...	...	2.67	2.18	1.24	2.53	2.92	1.81
0.83	0.63	0.45	0.23	0.14	0.39	...	...	...	...	...	...	0.40	0.52	0.34	0.41	0.22	0.29
0.39	0.14	0.11	0.23	0.06	0.25	...	...	...	...	...	...	2.22	3.82	1.66	5.49	0.97	0.89
0.44	0.52	0.28	0.21	0.41	0.84	0.08	0.18	0.17	0.02	0.03	0.15	1.58	2.22	1.06	1.46	1.81	2.76
...	0.05	0.10	...	0.05	0.28	...	...	...	...	...	...	...	0.39	0.05	0.05	...	0.14
...	0.15	...	...	0.04	0.03	0.04	...	0.04	0.07	...	...	0.68	0.67	0.66	1.36	0.32	0.94
...	...	...	0.17	0.26	0.36	...	...	...	0.31	0.09	0.41	...	...	...	0.83	1.11	1.24
0.18	...	0.13	0.17	0.17	0.21	0.09	0.05	0.07	...	0.04	0.04	0.50	0.81	0.42	0.50	0.77	0.73
...	...	0.01	0.06	0.20	0.19	...	...	...	...	...	0.01	...	...	0.59	3.60	2.46	0.77
0.33	0.39	0.36	0.36	0.46	0.51	0.14	0.10	0.11	0.09	0.07	0.07	1.21	1.55	1.34	1.40	1.29	1.26

SECTION III. 16,403 of scarlet fever, 2,052 of diphtheria, 269 of typhus fever, and 5,068 of enteric fever. These 25,169 reported attacks, calculated on the aggregate population of the 41 towns, are equal to a rate of 6.26 per 1,000, as compared with 5.47, 5.97, 5.64, 6.07, and 8.80 in the years 1883 to 1887.

History of the small-pox epidemic in 1888

Small-pox.—52 fresh cases of small-pox were reported in Salford during the 52 weeks of last year, as compared with 4 in the immediately preceding year. The return on page 38 shows that small-pox was present last year in 33* out of the 41 protected towns included in the list. The disease, however, does not appear to have been seriously prevalent in any of these areas with the exception of Preston and Stalybridge, where the attacks during 1888 corresponded to a rate of 5.66 and 2.06 respectively, per 1,000 of the population. The following figures show the distribution of small-pox mortality throughout the kingdom in 1888, and in recent previous years:—

SMALL-POX.—ANNUAL RATE OF MORTALITY PER 1,000 LIVING.

	1883.	1884.	1885.	1886.	1887.	Mean.	1888.
England and Wales ...	0.04	0.08	0.10	0.01	0.02	0.03	0.04
28 Great English Towns	0.05	0.14	0.12	0.01	0.04	0.07	0.06
London	0.03	0.22	0.22	0.01	0.00	0.10	0.00
Salford	0.00	0.00	0.00	0.00	0.00	0.00	0.04
50 other Towns	0.07	0.03	0.02	0.01	0.03	0.03	0.04
Rural Districts	0.02	0.06	0.10	0.01	0.02	0.04	0.02

The table on the opposite page furnishes a list of the small-pox seizures, which came to the knowledge of the Salford Health Department during the year 1888:—it also gives particulars concerning the ages of the patients and their condition as to vaccination; the termination of illness—whether by recovery, or by death—is also given in each case. It is worthy of note—as showing the insidious manner in which small-pox makes its way from one town to another,—that of the 52 cases known to have occurred in Salford, during last year, four were detected amongst tramps at the Workhouse Pass Ward; six were sent to hospital from the Union Infirmary at Hope; one was discovered in attendance amongst the out-patients at the Salford Royal Hospital; and not less than eleven were removed from crowded Common Lodging Houses, in the poorer parts of Salford. And, with respect to these last, it should be remembered, that it is entirely owing to the promptness with which the Health Department received information of suspicious illnesses, from the keepers of the Common Lodging Houses, that small-pox was prevented from becoming generally epidemic throughout the Borough.

* In the year 1887, small-pox was present in 18 only of the same 41 towns.

CASES OF SMALL-POX, notified in Salford, during the Year 1888.

No.	Initials.	Sex.	Age. Yrs.	Dates of			Condition as to Vaccination.	Result.
				Notific'n.	Rash.	Removal.		
1	M.W.	F.	7	Jan. 5	Jan. 2	Jan. 5	Not vac :	Recov.
2	H.W.†	F.	44	" 14	?	" 14	Vac : 2 scars	Ditto.
3	T.H.*	M.	15	" 16	" 16	" 16	Vac : 1 scar	Ditto.
4	J.W.	M.	12	" 18	" 18	" 18	Not vac :	Died.
5	W.S.†	M.	34	" 26	" 25	" 26	Vac : 1 scar	Recov.
6	M.S.	F.	20	" 28	" 27	" 28	Vac ; 2 scars	Ditto.
7	J.M.†	M.	22	" 29	" 29	" 29	Vac : 2 scars	Ditto.
8	J.L.†	M.	35	" 29	" 28	" 29	Vac : 2 scars	Ditto.
9	E.D.	F.	20	Feb. 2	Feb. 1	Feb. 2	Not vac :	Died.
10	W.A.*	M.	57	" 4	?	" 4	Vac : 1 scar	Recov.
11	W.M.†	M.	19	" 8	" 8	" 8	Vac : 3 scars	Ditto.
12	F.G.†	M.	20	" 10	" 10	" 10	Vac : 3 scars	Ditto.
13	E.B.†	M.	35	" 10	" 10	" 10	Not vacc :	Ditto.
14	J.B.†	M.	38	" 10	" 6	" 10	Vac : 2 scars	Ditto.
15	A.B.	M.	13	" 11	" 11	" 11	Vac : 3 scars	Ditto.
16	J.V.	M.	19	" 15	" 14	" 15	Vac : 4 scars	Ditto.
17	W.P.†	M.	39	" 16	" 16	" 16	Vac : 2 scars	Ditto.
18	M.F.†	F.	46	" 23	" 23	" 23	Vac : 2 scars	Ditto.
19	G.S.	M.	30	" 25	" 24	" 25	Vac : 1 scar	Ditto.
20	J.W.	M.	13	" 29	" 29	" 29	Vac : 2 scars	Ditto.
21	G.L.	M.	17	Mar. 6	Mar. 4	Mar. 6	Vac : 3 scars	Ditto.
22	C.W.	M.	17	" 6	" 6	" 6	Vac : 2 scars	Ditto.
23	E.B.	F.	29	" 6	" 6	" 6	Vac : 2 scars	Ditto.
24	S.G.	F.	23	" 8	" 4	" 8	Vac : 3 scars	Ditto.
25	C.B.	M.	49	" 15	" 15	" 15	Vac : 1 scar	Died.
26	R.C.	M.	18	" 29	" 28	" 29	Not vac :	Recov.
27	M.M.	F.	28	Apl. 7	April 7	April 7	Vac : 3 scars	Ditto.
28	J.B.†	M.	40	" 8	" 7	" 8	Vac : 1 scar	Ditto.
29	J.H.	M.	14	" 9	" 9	" 9	Not vac :	Ditto.
30	A.W.	F.	32	" 17	" 12	" 17	Not vac :	Ditto.
31	H.P.	F.	12	" 18	" 13	" 18	Vac : 3 scars	Ditto.
32	J.B.	M.	29	" 19	" 18	" 19	Not vac :	Died.
33	E.F.	F.	14	" 25	" 25	" 25	Vac : 4 scars	Recov.
34	J.S.*	M.	22	" 26	" 24	" 26	Not vac :	Ditto.
35	J.C.	F.	11	" 28	" 28	" 28	Vac : 4 scars	Ditto.
36	M.P.	F.	18	" 30	" 29	" 30	Vac : 4 scars	Ditto.
37	E.P.	M.	27	May 2	" 29	May 2	Vac : 2 scars	Died.
38	T.C.‡	M.	39	" 12	May 11	" 12	No scars	Died.
39	V.H.‡	M.	20	" 20	" 19	" 20	Vac : 3 scars	Recov.
40	J.T.‡	M.	70	" 20	" 18	" 20	Vac : 5 scars	Ditto.
41	P.F.‡	M.	6	" 19	" 19	" 21	Vac : 3 scars	Ditto.
42	M.O.‡	F.	26	" 20	" 20	" 21	Vac : 5 scars	Ditto.
43	G.R.*	M.	31	" 21	" 20	" 21	Vac : 2 scars	Ditto.
44	H.W.‡	F.	8	" 22	?	" 22	Vac : 3 scars	Ditto.
45	G.A.†	M.	53	" 25	" 23	" 25	Vac : 2 scars	Ditto.
46	W.D.	M.	17	" 29	" 27	" 29	Vac : 2 scars	Ditto.
47	C.J.	F.	20	June 11	June 8	June 11	Vac : 1 scar	Ditto.
48	T.B.	M.	41	" 21	?	" 21	2 v: pr: scars	Ditto.
49	S.H.	F.	49	July 28	July 28	July 29	Not vac :	Died.
50	M.P.	F.	19	Sep. 3	Sep. 1	Sep. 3	Vac : 4 scars	Recov.
51	M.P.	F.	59	" 10	" 8	" 10	Not vac :	Died.
52	J.M.	M.	42	Oct. 8	Oct. 8	Oct. 12	Vac : 3 scars	Recov.

* Signifies from Workhouse; † from Lodging Houses; and ‡ from Hope Union Infirmary.

SECTION III.

Small-pox prevalence in 1888

The first case was reported at a house in St. James' Street, Trafford Road, on January 5th,—the patient, æt 7 years, having probably taken the infection at a house in Higson Street, from which a small-pox patient had been removed about 14 days previously. The child was removed to Monsal on the same day, (Jan. 5th). Neither had this child, nor either of her two brothers, nor her infant sister, been vaccinated; and her mother had been but imperfectly vaccinated in infancy. I at once vaccinated one of the brothers and the sister of this patient, but the other brother, a lad of 12 years old, would not submit to the operation. On January 18th, this boy was also sent to Monsal with small-pox, and died there within a week. On January 14th, a tramp, H.W., æt 44 years, was removed to Monsal, from a common lodging House, in Bury Street,—having worked his way to Salford, from Sheffield, on January 4th. From this latter date, until the 14th, this man was in nightly contact with about 80 common lodgers, in the same lodging house,—with what result will now appear:—On January 26th, W.S., æt 34, who had slept in the next bed to H.W., from the 4th to the 14th of the month, was removed to Monsal, with small-pox; on January 29th, J.M. æt 22 and J.L. æt 35, were removed; on February 8th, W.M., æt 19, on February 10th, F.G., æt 20, and E.B., æt 35 were removed to hospital, with small-pox. After this, no further cases occurred at this address until May 25th, when G.A., æt 53 years, who had been in the house 5 weeks (!) was removed, suffering from small-pox. On February 10th, small-pox broke out in another common lodging house, not far from the last mentioned, where J.B., æt 38 years; and the wife of the lodging house keeper, æt 46, were removed to hospital, within 13 days of each other. This lodging house contained 20 rooms, and accommodated a large number of lodgers, many of whom I found to be unvaccinated. As it was impossible to induce these men to take the trouble of applying to the public vaccinators, I managed to vaccinate six of them, late one night, soon after the removal of the first case. The other lodgers, however, were too careless to accept the offer of vaccination, under any circumstances.

On May 11th, a case of small pox was detected at the Hope Union Infirmary,—the patient being a man, æt 39 years, an inmate of the hospital since February 19th, who had not,—so far as could be ascertained—been in any way exposed to infection. Between this date and May 22nd, five more patients, (including a nurse), were removed from the Infirmary, after which date, no further cases were notified there.

Of the 52 reported cases, 8 died, the mortality, as usual, being mainly confined to unvaccinated persons.

Scarlet Fever.—Information of the occurrence of 1,128 cases of scarlet fever reached the Health Department during the year 1888, as compared with 1,427 cases in the year 1887, and 1,536 in the immediately preceding year. The table on page 37, shows that

Scarlet fever prevalence in 1888

of the 1,128 cases reported last year, just 100 terminated fatally. The proportion of fatal cases to attacks being therefore 8·8 per cent, as compared with 10·3 per cent and 11·5 per cent in the years 1887 and 1886 respectively. The case fatality was the highest in the month of November. On reference to the table on page 56, it will be seen that scarlet fever showed excessive prevalence throughout the whole year.

SECTION III.
Scarlet fever prevalence in 1888

SCARLET FEVER SICKNESS.—RATES PER 1,000 OF POPULATION.

	1883.	1884.	1885.	1886.	1887.	Mean.	1888.		
Salford (Borough)...	4·34	6·09	3·26	7·75	7·04	5·70	5·44		
41 Notification Towns	3·59	3·81	4·64	4·12	6·90	4·61	4·08		
SALFORD DISTRICTS	{	Regent Road ...	4·81	5·33	3·46	8·58	6·64	5·76	4·59
		Greengate	3·42	8·66	4·01	9·38	7·03	6·50	4·04
		Pendleton	5·37	5·04	3·30	3·70	6·77	4·84	6·42
		Broughton	2·80	6·83	2·08	10·02	8·28	6·00	7·12

The table on page 38 gives valuable information as to the prevalence of scarlatina sickness in the protected towns of the kingdom. Within the area represented by these towns, containing an aggregate population of more than four millions, the rate of scarlet fever sickness in 1888 was equal to 3·08 per 1,000 persons living.

Eighteen out of the 41 towns on the list, had individually a rate in excess of the mean.

The following statement, based on the quarterly returns of the Registrar General, gives the annual rate of scarlatina mortality, during each of the last six years, in various parts of the Kingdom.

Scarlet fever mortality

SCARLET FEVER MORTALITY. RATES PER 1,000 OF POPULATION.

	1883.	1884.	1885.	1886.	1887.	Mean.	1888.
England and Wales...	0·47	0·40	0·23	0·21	0·27	0·32	0·22
28 Great English Towns	0·57	0·45	0·24	0·25	0·39	0·38	0·29
London	0·51	0·36	0·17	0·17	0·34	0·31	0·28
Salford (Borough) ...	0·44	0·75	0·32	0·85	0·76	0·62	0·49
50 other Towns	0·55	0·51	0·25	0·26	0·25	0·36	0·22
Rural Districts	0·39	0·34	0·21	0·18	0·21	0·27	0·18

It appears from the above figures that, as compared with previous years, the year 1888 was one of low mortality from scarlet fever. With the exception of the year 1886, the scarlatina mortality in England and Wales was lower in the year 1888 than in any year of the previous five. The death-rate in the 28 great English towns, and in London, was also below the average last year, and the rate obtaining in the rural districts was as low as any which has been observed since the year 1883. In Salford, scarlet fever accounted for a death rate equal to 49 in each 100,000 of the population, against 62, the mean rate obtaining in the five years immediately preceding.

SECTION III.

Diphtheria
prevalence in
1888.

Diphtheria.—During the year 1888, the Health Department received intimation of the occurrence of 175 cases of diphtheria, as compared with 83 cases in the year 1887, and 41 in the immediately preceding year. Of the 175 attacks reported last year, not less than 63, or 36 per cent., terminated fatally; the disease showing marked virulence of type, as well as exceptional prevalence. In addition to the 63 fatal cases referred, in the medical certificates, to diphtheria, there were registered in Salford, during the year, 56 other deaths, which were certified as due to membranous or true croup; but which, for preventive purposes, may be regarded as essentially diphtheritic in character. If, then, we assume for every fatal case of true croup, the same proportion of non-fatal seizures as that obtaining in the case of patients whose deaths were certified as diphtheritic, it is fair to conclude that instead of 175 cases, as stated above, there actually occurred in Salford more than 300 cases of diphtheria during the year under report.

Seasonal
distribution

Reference to the table on page 37 shows that this disease was exceptionally prevalent throughout the year. In the last four months, however, the excess was very marked, and the type of the disease severe; not less than 82 cases—one-third of which were fatal—occurred during the months of November and December.

The following table shows the proportional prevalence of diphtheritic attacks to population in each of the four registration sub-districts of Salford; and in the first two lines of the table, the Salford diphtheria rates are compared with the average rates prevailing in 41 British towns, which possess powers for the notification of infectious diseases. The table indicates that, in the year 1888, diphtheria has shown excessive prevalence, as compared with the mean, not only in Salford, but also in the large area represented by the 41 notification towns; whilst the 1888 rates, in three out of the four Salford districts, were in each case more than double the average.

Prevalence in
other notifica-
tion Towns

		DIPHTHERIA SICKNESS. RATES PER 1,000 OF POPULATION.						
		1883.	1884.	1885.	1886.	1887.	Mean.	1888.
Salford (Borough) . .		0·44	0·52	0·28	0·21	0·41	0·37	0·84
41 Notification Towns		0·33	0·39	0·36	0·36	0·46	0·38	0·51
SALFORD DISTRICTS.	{ Regent Road . . .	0·15	0·53	0·19	0·15	0·32	0·27	0·69
	{ Greengate	0·44	0·38	0·28	0·16	0·09	0·27	0·63
	{ Pendleton	0·57	0·51	0·14	0·22	0·40	0·37	1·05
	{ Broughton	0·89	0·67	0·65	0·36	0·88	0·69	1·09

The rate of diphtheria mortality last year in London, and in the great British towns, was in excess of the average. This will be seen on reference to the statement* in the foot-note.

	* DIPHTHERIA. RATE OF MORTALITY PER 1,000 OF THE POPULATION.		
	Mean		1888.
	1883-87.		
England and Wales	0·16	....	0·17
28 great English towns	0·17	....	0·21
London	0·23	....	0·30
Salford	0·10	....	0·29
50 other towns	0·09	....	0·12
Rural districts	0·16	....	0·16

Typhus Fever.—During the year under present notice, 31 cases of typhus (or gaol) fever were reported to the Health Department, as compared with seven only in the year 1887, and five in the immediately preceding year. In the table on page 46 are given particulars as to dates, and as to the localities affected. All the patients were removed to hospital, where, out of the 31 persons attacked, seven died. The first case of typhus during the year was that of M.G. æt 15, of 9, West Elizabeth Street, who was removed to Wilton Hospital on January 27th; and either from this house, or from 7, Providence Street, hard by, not less than five other members of the same family were removed, suffering from typhus, between that date and April 20th. The father of this family died in hospital, the other members recovered. From 26, Bartram Street, a house in this immediate neighbourhood, another group of six cases were removed during the interval from April 3rd to May 3rd. Two nearly related families lived in this house. The mother of one family died in hospital of typhus, the five remaining patients recovered. And, strange to record, a third group, also of six cases, occurred during the month of July, in a house in the same locality—16, Weaver Street, Hope Street. In this case, the father, mother, and four children, passed safely through the disease, and were discharged cured. In the interval between the end of January and the beginning of November, eight other cases of typhus, probably more or less connected, in origin, with one or other of the before-mentioned, occurred in the old fever haunt known as the "Regent Road Battery"; and within the same period four other sporadic cases were reported in different parts of the borough. These cases present no features of unusual interest. I regret, however, to state that Miss K. F., one of the nurses in attendance on the earlier cases, took typhus whilst in the discharge of her duties at the Wilton Hospital; although, happily, she has since completely recovered.

Enteric or Typhoid Fever.—During the year under present notice, 572 attacks by enteric fever were reported under the Compulsory Notification Act. In no previous year since the passing of that Act, have the reported cases approached this number. In the year 1887 the Health Department received intimation of 368 enteric attacks, and of 205 and 258 respectively, in the years 1885 and 1886. As in preceding years, so, also, in the year 1888, by far the heaviest incidence of attack was experienced during the closing months of the year; not less than 241 seizures having occurred in the course of October and November alone.

The accompanying figures, which express annual *rates of sickness* per 1,000 persons living—show, for the last six years, severally—the relative incidence of this disease in Salford, and in other British notification towns. The rates of enteric sickness are also given for the several registration sub-districts of the borough in 1888, and in each of the five preceding years. (see page 47).

SECTION III.
Typhus fever
prevalence in
1888.

Enteric fever in
1888

CASES OF TYPHUS FEVER, NOTIFIED IN SALFORD DURING THE YEAR 1888.

No.	Initials.	Sex.	Age.	Address.	Date of	Date of	Date of	Ter- mina- tion.
					Notific'tn.	Onset.	Removal.	
			Yrs.		1888	1888	1888	
1	M.G.	F.	15	9, W.Elizabeth-street ...	Jan. 26	Jan. 17	Jan. 27	Recov.
2	M.O'T.	F.	14	Cellar, Back Primrose-hill	" 28	" 23	" 28	Died.
3	W.T.	M.	44	16, Providence-street.....	Mar. 1	Feb. 22	Mar. 1	Recov.
4	M.C.	F.	50	78, Phoebe-street	" 5	" 27	" 5	Died.
5	T.G.	M.	30	7, Providence-street	" 6	" 23	" 7	Recov.
6	M.G.	F.	25	Do.	" 6	" 23	" 7	Do.
7	E.T.	F.	30	16, Providence-street ...	" 8	Mar. 5	" 8	Do.
8	C.M.	M.	26	26, Bartram-street.....	April 3	" 26	April 3	Do.
9	J.B.	M.	13	Do.	" 4	" 26	" 4	Do.
10	J.S.	M.	33	3, Providence-street	" 7	" 31	" 7	Do.
11	E.G.	F.	7	9, W. Elizabeth-street ...	" 18	Apr. 18	" 18	Do.
12	M.G.	F.	10	Do.	" 19	" 15	" 18	Do.
13	W.G.	M.	39	Do.	" 21	" 14	" 20	Died.
14	T.C.	M.	18	21, John Wood-street ...	" 21	" 14	" 21	Recov.
15	A.B.	F.	43	26, Bartram-street.....	" 23	" 23	" 23	Died.
16	F.C.	M.	21	Do.	" 28	" 28	" 28	Recov.
17	J.C.	M.	3wks	Do.	May 1	May 1	May 1	Do.
18	R.C.	F.	22y's	Do.	" 1	" 2	" 3	Do.
19	S.D.	F.	28	12, Elizabeth-street	" 18	" 13	" 18	Do.
20	W.P.	M.	47	11, Providence-street ...	" 28	" 23	" 26	Died.
21	K.F.	F.	20	Wilton Hospital	" 29	" 28	June 2	Recov.
22	J.S.	M.	36	11, Providence-street ...	June 21	June 19	" 21	Died.
23	C.R.	M.	39	16, Weaver-street	July 5	" 22	July 5	Recov.
24	A.R.	F.	37	Do.	" 24	July 17	" 21	Do.
25	C.R.	M.	15	Do.	" 24	" 18	" 22	Do.
26	J.R.	F.	9	Do.	" 24	" 17	" 21	Do.
27	J.R.	M.	5	Do.	" 24	" 18	" 21	Do.
28	S.R.	M.	3½	Do.	" 24	" 18	" 27	Do.
29	T.T.	M.	3	46, East Ordsall-lane ...	Aug. 28	Aug. 27	Aug. 21	Do.
30	M.C.	F.	8	11, Nuttall-street	Oct. 1	Sep. 19	Oct. 1	Died.
31	H.G.	M.	25	54, Buckingham-street ...	Nov. 1	Oct. 25	Nov. 2	Recov.

[It is worthy of notice in the above table, that in most cases, a considerable interval elapsed between the onset of the fever, and the Notification of the attack to the Health Department. This is, of course, due to the failure of the relatives to promptly call in medical assistance. It will also be noticed that, in many instances, the patients were actually removed to Hospital a day or two before the receipt by us of the formal notification.—J.T.]

ENTERIC FEVER SICKNESS.—RATES PER 1,000 OF POPULATION. SECTION III.

	1883.	1884.	1885.	1886.	1887.	Mean.	1888.	Enteric fever incidences in 1888	
Salford (Borough)...	1.58	2.22	1.06	1.46	1.81	1.63	2.76		
41 Notification Towns	1.21	1.55	1.34	1.40	1.29	1.36	1.26		
SALFORD DISTRICTS.	{	Regent Road ...	1.51	2.59	1.04	1.94	1.81	1.78	2.57
		Greengate	1.07	1.13	1.19	1.41	2.04	1.37	2.45
		Pendleton	1.85	2.65	1.14	1.17	2.25	1.81	3.83
		Broughton	1.84	1.85	0.87	0.82	1.04	1.28	1.97

Locally, the disease appears to have been most prevalent last year in the district of Pendleton, where the attacks bore to the population the ratio of 3.83 per 1,000. The same statement holds good concerning the exceptional liability of Pendleton to enteric attack, if, instead of comparing the rates of last year only, the average rates for a term of years are contrasted. Thus, the figures in the sixth column of the above table show that in the five years ending with 1887, the mean enteric sickness rate was equal to 1.81 per 1,000, whilst it did not exceed 1.28 in Broughton, and, strange to record, 1.37 in the not very salubrious district of Greengate.

Salford seems to be remarkable among British Notification towns, in having suffered exceptionally from enteric prevalence during 1888. These towns, 41 in number, contain an aggregate population of about four millions, and amongst them the rate of incidence of enteric sickness in the year 1888 has not exceeded 1.26 per 1,000, although the average rate obtaining amongst the same aggregate population in the immediately preceding five years amounted to 1.36 per 1,000. The undue prevalence, therefore, of enteric fever in Salford during last year, would not appear to have been caused by unfavourable meteorological conditions. Of the notification towns included in the list on page 39, not one experienced in 1888, a rate of enteric sickness so high as that of Salford, the other towns showing, in most cases, a considerably lower rate.

Inasmuch as 93 deaths occurred amongst the 572 reported attacks last year, the "case fatality" was equal to 16 per cent. of the attacks, as compared with 21 per cent., the average case fatality in the preceding five years.

The annual rate of mortality last year, attributable to enteric fever, was equal to 0.44 per 1,000 of the estimated population; which exceeds the average rate in the previous five years* by not less than 26 per cent. In London, on the contrary, the rate of mortality from enteric fever did not exceed 0.16 per 1,000, which is less by 0.2 than the average London rate.

ENTERIC FEVER. ANNUAL RATES OF MORTALITY PER 1,000 PERSONS LIVING.

	1883.	1884.	1885.	1886.	1887.	Mean.	1888.	Enteric fever mortality
England and Wales	0.23	0.24	0.17	0.18	0.18	0.20		
London	0.24	0.23	0.14	0.15	0.15	0.18	0.16	
Salford	0.35	0.42	0.25	0.31	0.40	0.35	0.44	

SECTION III.

Ill-defined forms
of fever

Continued Fever.—This unsatisfactory heading includes—in addition to typhus and enteric fevers—the various ill-defined pyrexial ailments sometimes known as “tebricula,” “simple continued fever,” &c. Unfortunately, the Registrar General does not as yet discriminate between the various forms of “fever” in his returns for the 28 great English towns; consequently, we are reduced to the necessity of comparing these towns with Salford on the basis of their “fever rate” merely; although it is notorious that the various forms of disease coming under this designation, have no relation with one another, either as regards their etiology, or, in respect of their sanitary importance. The following figures show the annual rates of mortality from the various forms of continued fever—the “fever” death rate of the Registrar General—in Salford, and in other parts of England and Wales:—

	1883.	1884.	1885.	1886.	1887.	Mean.	1888.
England and Wales ...	0·29	0·27	0·21	0·21	0·20	0·24	0·18
28 Great English Towns	0·35	0·29	0·22	0·23	0·22	0·26	0·20
London	0·27	0·26	0·17	0·17	0·16	0·21	0·17
Salford (Borough) ...	0·40	0·52	0·33	0·34	0·42	0·40	0·48
50 other Towns.....	0·32	0·34	0·24	0·26	0·24	0·28	0·21
Rural Districts	0·26	0·25	0·19	0·19	0·18	0·21	0·17

Mortality from
measles in 1888

Measles.—The severe epidemic of measles, which had visited Salford in 1887, especially during the second quarter of that year, showed a recrudescence in the fourth quarter of the year under present notice. Notification of this disease is not compulsory under our local Act; consequently, the only measure which we possess of its prevalence, is the very rough one afforded by the mortality to which it gives rise. Measles accounted for 132 deaths in the course of the year 1888, as compared with 320 in the immediately preceding year. The intensity of the disease, in recent and previous years, though not its quantitative prevalence, is approximately indicated by the following figures:—

MEASLES. ANNUAL RATE OF MORTALITY PER 1,000 OF THE POPULATION.

	1883.	1884.	1885.	1886.	1887.	Mean.	1888.
England and Wales ...	0·35	0·42	0·51	0·41	0·58	0·45	0·33
28 Great English Towns	0·50	0·60	0·69	0·54	0·79	0·62	0·47
London	0·62	0·55	0·72	0·50	0·69	0·62	0·56
Salford (Borough) ...	0·84	0·52	0·92	0·24	1·58	0·82	0·64
50 other Towns	0·41	0·45	0·75	0·52	0·54	0·53	0·43
Rural Districts	0·23	0·28	0·37	0·33	0·46	0·33	0·24

It thus appears, that measles, which in 1887 had been abnormally prevalent throughout the country generally, was everywhere less prevalent in the succeeding year; the 1888 rates being below the quinquennial means, in all the areas dealt with in the table. That the disease is ordinarily more prevalent, or at any rate, more fatal in large towns than in the country, is shown by the lowest line

in the table, where the rates of mortality are given for the whole of England and Wales, excluding the town districts—, which areas collectively, are here designated “Rural Districts.”

SECTION III.
Mensles in 1888

Whooping Cough.—The deaths from this disease last year amounted to 222, or more than three times the number referred to this cause in the year 1887. As far as can be inferred from the registered deaths due to this disease, whooping cough appears to have been abnormally prevalent throughout the year; but, as in previous years, the type of the disease showed the greatest severity during the spring and early summer months. The following table shows the comparative incidence of whooping cough mortality in Salford, and in other selected areas—

Mortality from whooping cough in 1888

WHOOPING COUGH.	ANNUAL RATE OF MORTALITY PER 1,000 LIVING.						
	1883.	1884.	1885.	1886.	1887.	Mean, 1888.	1888.
England and Wales ...	0.39	0.42	0.44	0.44	0.38	0.41	0.40
28 Great English Towns	0.46	0.64	0.60	0.54	0.62	0.57	0.58
London	0.40	0.79	0.61	0.68	0.70	0.64	0.70
Salford (Borough) ...	0.57	0.68	0.67	0.64	0.32	0.58	1.06
50 other Towns.....	0.37	0.33	0.53	0.42	0.33	0.40	0.41
Rural Districts	0.32	0.27	0.34	0.38	0.25	0.31	0.30

The 222 deaths referred to whooping cough in 1888 are equal to a rate of 1.06 per 1,000 of the population, a proportion which has not been attained in any previous year of the current decade.

Aggregate Mortality from Infectious Diseases.—The rate of mortality in Salford, last year, from the six common infectious (miasmatic) diseases, taken together, was equal to 3.01 per 1,000 of the population at all ages. The mean Salford rate in the preceding five years was equal to 2.53 per 1,000, which is lower by 19 per cent. than the 1888 rate. The following table, which has been deduced from the quarterly returns of the Registrar General, furnishes the means of comparing the Salford rates from miasmatic diseases, with the corresponding rates in other parts of England and Wales :—

Mortality from “six chief miasmatics” in 1888

	1883-87.	1888.	Difference in 1888.
England and Wales ...	1.60	1.34	—16.3%
28 Great English Towns	2.08	1.83	—12.0%
London	2.09	2.01	—3.8%
Salford (Borough) ...	2.53	3.01	+19.0%
50 Other Towns.....	1.70	1.43	—15.9%
Rural Districts	1.32	1.07	—18.9%

Diarrhoeal Diseases.—One hundred and eighty-four deaths were caused by diarrhoeal diseases in Salford during the year 1888, as compared with 340 in the preceding year, the corrected decennial average being 331. The mean temperature of the third quarter

Mortality from diarrhoea

SECTION III. of 1888 did not exceed 56.5° , and the diarrhoea death rate of the year in Salford was so low as 0.89 per 1,000, whereas the mean temperature in the third quarter of the immediately preceding year was 59° , and the diarrhoea death rate accordingly rose to 1.67.

Diarrhoea in 1888

The following figures show the relative incidence of fatal diarrhoea, during recent years in Salford, and in other parts of the country.

DIARRHOEA.—ANNUAL RATE OF MORTALITY PER 1,000 LIVING.

	1883.	1884.	1885.	1886.	1887.	Mean.	1888.
England and Wales ...	0.60	0.97	0.46	0.84	0.69	0.71	0.43
28 Great English Towns	0.77	1.21	0.69	1.16	0.97	0.96	0.60
London	0.67	0.97	0.66	0.95	0.90	0.83	0.52
Salford (Borough) ...	1.13	1.96	1.27	2.02	1.67	1.61	0.89
50 other Towns	0.67	1.09	0.47	0.98	0.74	0.79	0.50
Rural Districts	0.43	0.72	0.34	0.63	0.50	0.52	0.31

The effect of the unusually cold and wet weather which prevailed throughout July and August last year, in *reducing* the mortality from diarrhoea, was equally marked in London, and in the other large towns included in the table, as it was in Salford: and so likewise was the effect of a warm and dry third quarter, in *raising* the death rate from these diseases, in the year 1887.

IV.—CONSTITUTIONAL DISEASES.

Mortality from constitutional diseases

Seven hundred and ninety-seven deaths at all ages, or 17 per cent of the total mortality last year, were referred to this important class of diseases. The annual rate of mortality in Salford, from constitutional diseases, was therefore, equal to 3.8 per 1,000 of the population, as compared with 4.3 per 1,000, the average rate from this class of disease, in the five years ending with 1887. As is usually the case, the "constitutional" rate of mortality was highest last year, namely, 4.9, in the district of Greengate. Of the 797 deaths, referred last year to diseases of the constitutional class, not less than 446 were due to pulmonary consumption, or phthisis; this disease alone giving rise to a death-rate equal to 2.2 per 1,000 of the population. It is satisfactory to note, on turning to table E, on page 31, that although the death-rate from phthisis is still terribly high, nevertheless it is gradually becoming lower as years roll on. Another disease of the constitutional class, which specially deserves mention, is cancer, for this disease appears to be steadily becoming more prevalent year after year, not only in Salford, but throughout the country generally. In the year under report, not less than 103 deaths were attributed to malignant (or cancerous) disease, of one or another form. In no previous year on record, have the deaths from cancer reached this number.

V.—DEVELOPMENTAL DISEASES.

Of the total mortality last year, 341 deaths or 7 per cent were referred to diseases of the developmental class. These deaths are

equal to an annual rate of 1.6 per 1,000 of the population, which is slightly in excess of the average rate * in the preceding five years. On turning, however, to the last two columns of table F1, on page 36, it is satisfactory to note that this increase is due to an excess of deaths from decay of nature in 1888, as compared with recent previous years: the deaths attributed to "old age," numbering 203 last year, as compared with 148, the corrected decennial average.

SECTION III.
Developmental
diseases

VI.—LOCAL DISEASES.

Not less than 2,273 deaths, or 47 per cent of the mortality from all causes, were referred to diseases of this class during the year 1888; these deaths are equal to an annual rate of 11.0 per 1,000, or rather more than the average rate in the preceding five years. As in previous years, so also in the year 1888, the rate of mortality from local diseases, varied widely in the several districts of the borough; for whereas in Broughton it did not exceed 8.0 in each thousand of the population, it was equal to not less than 13.7 per 1,000 in Greengate: these proportions seem to be fairly constant from year to year. Of the diseases included in the local class, which showed excessive fatality in 1888, inflammation of the lungs, or pneumonia, and true croup are the most noteworthy. It is generally held by sanitarians, that the undue prevalence of pneumonia, in any locality, argues the existence therein of insanitary conditions, unless indeed there exist special causes to account for it otherwise; and there is no doubt that certain forms of pneumonia are decidedly infectious. And with respect to membranous or true croup, it is difficult to understand why that disease should find a place in this class at all; for it is certainly nothing more nor less than laryngeal diphtheria, and ought to be included in the same category with that disease. Of the diseases of the local class, which showed in 1888, a less prevalence than the average, may be mentioned bronchitis, which accounted for 569 deaths, in place of 660 the decennial average; and nervous diseases, to which 390 deaths were referred, or 65 less than the average, corrected for increase of population: heart diseases, also, and diseases of the digestive system, were less fatal in 1888, than in recent previous years.†

VII.—VIOLENT DEATHS.

The deaths caused by violence, in one or other of its forms; numbered 146 in the year under notice, and were equal to a rate of 0.7 per 1,000 of the population, as compared with 0.6 in the immediately preceding ten years.

Deaths from
violence

* See table D, page 29.

† See table F1 on page 36.

SECTION III.

VIII.—DEATHS FROM ILL-DEFINED CAUSES.

Unclassified
deaths

The deaths thus described in the Registrars' Returns in 1888, were more numerous than in the immediately preceding year; they numbered 298, and were equal to 6·2 per cent of the total mortality. The deaths classified in this way are those which are returned by the Registrars as due to "dropsy," "atrophy," "debility," "inanition," "mortification," "sudden death," "found dead in bed," &c., or to some other equally indefinite cause. Of the 298 deaths last year, from "ill-defined causes," not less than 222 were those of infants under one year of age, 20 of which were found dead in bed.

Certification of
causes of death

Uncertified Deaths.—Of the forty thousand or so of persons whose deaths were registered in Salford during the nine years ending with 1887, not less than 1,827, or 4·6 per cent. were interred without certificate, either by a medical practitioner or by the coroner, after inquest. The meaning of this is, that one person out of every 22 dying annually in our midst, passes away without the care and assistance which medical science can render. In the year 1888, the proportion of uncertified to total deaths fell to 3·6 per cent., but there is no valid reason why even this proportion of our fellow beings should be allowed to perish without some competent testimony as to the cause of their decease. In London the proportion of uncertified deaths during the year under present notice, did not exceed one per cent.

TABLE G.

CERTIFICATION OF THE CAUSES OF DEATH IN THE BOROUGH OF SALFORD, AND ITS FOUR REGISTRATION SUB-DISTRICTS. IN THE YEAR 1888.

	Total Deaths.	Certified by		Not Certified.	Proportion per cent. of Deaths.		
		Registered Medical Practitioners.	Coroner.		Certified by		
					Registered Medical Practitioners	Coroner.	Not Certified.
Borough	4770	4369	229	172	91.6	4.8	3.6
Regent Road District	2106	1927	107	72	91.5	5.1	3.4
Greengate	883	801	49	33	90.7	5.6	3.7
Pendleton.....	1145	1048	45	52	91.5	3.9	4.6
Broughton	636	593	28	15	93.2	4.4	2.4

CORRESPONDING DATA FOR THE NINE YEARS 1880-87.

Borough	40012	36421	1764	1827	91.0	4.4	4.6
Regent Road District	17079	15547	717	815	91.0	4.2	4.8
Greengate	8483	7547	507	429	89.0	6.0	5.0
Pendleton.....	8975	8213	368	394	91.5	4.1	4.4
Broughton	5475	5114	172	189	93.4	3.1	3.5

TABLE OF DEATHS DURING THE YEAR 1888, IN THE URBAN SANITARY AND SHOWING ALSO THE POPULATION OF SUCH LOCALITIES,

Localities.	Population at all ages.		Registered Births.	Mortality from all causes at subjoined ages.							
	Census, 1881.	Estimated to the middle of 1888		At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.	
Total for Borough, exclusive of Public Institutions	174403	200920	7056	4130	1283	828	202	185	1035	597	
Deaths in Salford Institutions.	Beds.	Beds.									
	Union Infirmary	*	800	...	395	18	10	8	14	152	193
	Workhouse	1369	1369	80	34	5	2	1	2	7	17
	Wilton Fever Hospital .	60	100	...	91	1	33	29	8	19	1
Royal Hospital and Dispensary	60	130	...	95	2	10	12	11	53	7	

The subjoined numbers have also to be taken into account

Deaths occurring outside Salford among persons belonging thereto.	Beds.	Beds.								
	Children's Hospital, Pendlebury	160	160	...	25	1	13	11
Manchester Royal Infirmary	315	298	...	22	...	1	...	...	20	1
Monsal Hospital.....	192	238	...	14	2	2	1	3	6	...
Deaths occurring in Salford among persons not belonging to the town				31	2	1	3	1	17	7

The subjoined numbers are the **Corrected Deaths** in the

	Pop. 1881	Pop. 1888									
Borough of Salford	176233	207326	7136	4775	1310	898	261	222	1275	809	
Registration Sub-Districts.	Regent Road	69716	84378	2884	2115	595	424	124	97	546	329
	Greengate	31867	31867	1198	876	228	147	33	29	280	159
	Pendleton	43117	52472	1820	1142	329	220	64	62	263	204
	Broughton	31533	38609	1234	642	158	107	40	34	186	117

* This institution was not opened until after 1884. In previous reports it has been incorrectly designated

DISTRICT OF SALFORD, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES, AND THE BIRTHS THEREIN DURING THE YEAR.

Mortality from subjoined causes, distinguishing deaths of children under five years of age.

	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Croup.	Whooping Cough.	Typhus.	Enteric or ph'd	Other or Doubtful	Diarrhoea and Dysentery.	Cholera.	Rheumatic Fev.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	Other Diseases.
Under 5...	120	36	23	51	21	11	6	1	172	1	1	5	1	...	...	7	483	4	43	946
5 upwards	5	24	22	5	11	63	1	1	6	...	18	7	5	18	...	376	491	184	68	715	
Under 5...	1	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...	1	...	...	21
5 upwards	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	59	60	20	6	220
Under 5...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	4
5 upwards	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	12	2	1	10
Under 5...	2	24	6	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
5 upwards	...	17	6	...	...	7	18	...	...	...	...	...	...	...	...	...	2	4	...	3
Under 5...	10	2
5 upwards	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	3	10	11	23	34

in judging of the mortality of the Sanitary District.

Under 5...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	...	7
5 upwards	...	...	1	...	...	...	1	...	...	...	1	...	...	...	...	...	1	1	...	6
Under 5 .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
5 upwards	1	...	3	3	14
Under 5...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 upwards	8	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Under 5...	1	2
5 upwards	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	2	3	2	8	11

Borough, and in the four Sub-Registration Districts thereof.

Under 5 .	127	60	32	51	21	11	6	1	177	1	1	5	1	...	...	7	490	5	53	980
5 upwards	8	5	41	29	5	11	784	2	7	...	19	8	6	18	...	439	575	219	93	991
Under 5...	72	20	11	35	100	...	1	1	90	...	...	2	...	...	...	2	237	...	28	420
5 upwards	4	4	21	8	3	3	532	1	2	...	7	3	3	8	...	188	278	90	48	388
Under 5...	25	9	4	5	36	...	1	...	42	1	...	1	...	...	...	...	81	3	9	158
5 upwards	2	...	4	3	1	1	14	...	2	...	1	3	...	1	...	86	141	43	13	186
Under 5...	28	24	14	8	48	...	4	...	22	...	...	1	1	...	...	4	114	2	13	266
5 upwards	1	...	8	13	1	6	226	1	2	...	6	1	2	6	...	99	98	47	27	257
Under 5...	2	7	3	3	27	...	...	...	23	...	1	1	...	...	...	1	58	...	3	136
5 upwards	1	1	8	5	1	...	12	...	1	...	5	1	1	3	...	66	58	39	15	160

"The Hope Hospital."

WORK OF THE HEALTH
DEPARTMENT.

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
ALBANY, N. Y.

WORK OF THE HEALTH DEPARTMENT.

IV.—Summary of action taken during the year—

- (1.) *for limiting the spread of infectious disease :*
- (2.) *for securing the abatement of nuisances.*

(1.) **Compulsory Notification of Infectious Disease.**—SECTION IV.
Further experience of compulsory notification in Salford

Six complete years have now elapsed since the passing of the Salford Compulsory Notification Act; and the accumulating experience of the Health Department tends only to strengthen the conviction I have long entertained as to the great administrative value of the measure as a means of controlling the spread of infection. I do not hesitate to state the opinion that the possession of powers for securing compulsory notification is absolutely necessary, in order to enable a Sanitary Authority to exercise a reasonably efficient guardianship over the health of its people. As I have written fully on this aspect of the question in each of my last three annual reports, I shall not recur to it here: more especially as, since the publication of my last report, the general expediency of equipping with such powers, any Sanitary Authority which desired to possess them, has been affirmed by the passing of the recent "Infectious diseases Notification Act." That this enactment is acceptable to Sanitary Authorities and to the public generally, is shown by the fact that, although the adoption of the Act by any authority outside the Metropolis has from the first been optional, it has nevertheless already been put into force by a very considerable proportion of the Sanitary Authorities of the Country, notwithstanding that the Act was placed on the statute book only so recently as August 30th, 1889.

Adoption of recent General Act, by Sanitary Authorities

During the period which has elapsed since the passing of the Salford Act—nearly ten thousand cases of dangerous infectious disease have been reported to the Health Department; and of this total more than 40 per cent have been removed to hospital. The proportion of cases isolated has increased in recent, as compared with earlier years: for whereas in 1883, the first year of actual work under the Notification Act, only 26 per cent of the notified cases were removed to hospital, the proportion of removals during the last three years has been nearly 50 per cent.

SECTION IV.

New scheme for registration of infectious diseases

National Registration of Infectious Disease.—From the end of the year 1887 up to the beginning of the current year (1889), I was engaged, with the co-operation of 32 of my medical colleagues in other notification towns, in testing the practicability of maintaining a useful system of registration of infectious disease; my hope being, that by a scheme of weekly collection and circulation of returns through the post, each contributing health officer might receive timely warning of any outbreak of infectious sickness occurring in the districts of neighbouring authorities, and might thus take the necessary precautions against its importation into his own district. The practicability of disease registration having been established, and the usefulness of the information thus circulated having been generally acknowledged, I at once took steps to introduce the matter to the notice of the Local Government Board, with the suggestion that they, as the central authority, should take the matter out of my hands, and thus relieve me of a self imposed duty which could fitly be discharged, only by a State Department.

Adopted by the Local Government Board

It may appear invidious to speak of the precautions which the Board thought it necessary to adopt before consenting to undertake what appeared to outsiders, but an obvious duty; suffice it to say that from the month of February of the current year, up to the present time, the Local Government Board have collected, and regularly circulated amongst the contributing authorities weekly returns of infectious sickness occurring in the districts of about 50 Sanitary Authorities in Great Britain. It remains to be seen how the Board will deal with the aggregate of information which they will receive from the vast number of Sanitary Authorities which have already adopted, or which may shortly be expected to adopt, the Infectious Diseases Notification Act of 1889.

Local experience of disease registration

One of the most interesting as well as valuable, of the indirect uses of disease registration, is the insight which an observer is enabled to gain into the natural history of infectious disease. That this is so, may be shown by recent experience in Salford. It has before been mentioned that, in the course of the last six years, between nine and ten thousand cases of the most familiar kinds of infectious disease have been reported to the Salford Health Department. Very shortly after the passing of the Salford Notification Act, it occurred to me that the information which the Medical Officer of Health received under that statute, besides being utilized for its primary and most obvious purpose of checking the spread of disease amongst the community—might readily be made to serve a valuable ulterior and scientific purpose, which might eventually be turned to account, even by busy practitioners of medicine. Ever since the beginning of the year 1883, therefore, I have kept a register, in which are entered particulars of the age, sex, and disease of each patient reported under the Act, and of course the result of treatment, whether by recovery or by death, has been duly recorded in each case. In this way I have been

able, with comparatively little trouble, to collect the data from SECTION IV. which the following tables have been constructed, which show the fatality—at several successive ætal periods,—of three of our commonest miasmatic diseases. And if the detailed information here presented, should prove in any degree serviceable or interesting to my medical brethren practising in Salford, I shall feel gratified in being thus able to offer them some small return for the disinterested and always cordial assistance which they have rendered me for so many years in connection with the notification of infectious disease.

True case
fatality of com-
mon infectious
diseases

I. SCARLET FEVER. SALFORD. 1883—1888.

Showing the true case fatality, or per centage mortality—at several groups of ages,—amongst 6,682 completed cases of Scarlet Fever.

Ages in Years.	Attacks.	Deaths.	Fatality per cent.
Under 1	138	34	24.63
1 to 2	394	104	26.39
2 " 3	630	102	16.19
3 " 4	797	101	12.67
4 " 5	850	116	13.64
5 " 6	762	86	11.28
6 " 7	642	47	7.32
7 " 8	565	35	6.19
8 " 9	428	28	6.54
9 " 10	350	15	4.28
10 " 11	237	10	4.22
11 " 12	206	10	4.85
12 " 13	154	5	3.24
13 " 14	104	1	0.96
14 " 15	90	1	1.10
15 " 20	146	4	2.73
20 " 30	124	6	4.83
30 " 40	48	2	4.16
over 40	17	1	5.88
All ages	6,682	708	10.59

II. ENTERIC FEVER. SALFORD. 1883—1888.

True case fatality, at several groups of ages, amongst 2,148 completed cases of Enteric Fever.

Ages in Years.	Attacks.	Deaths.	Fatality per cent.
Under 1	2	1	50.00
1 to 2	10	2	20.00
2 " 3	42	13	30.95
3 " 4	50	13	26.00
4 " 5	63	5	7.93

SECTION IV.

True case
fatality amongst
2148 completed
cases of enteric
fever

ENTERIC FEVER.—*Continued.*

Ages in Years.	Attacks.	Deaths.	Fatality per cent.
5 „ 6	67	11	16·41
6 „ 7	65	9	13·84
7 „ 8	71	12	16·90
8 „ 9	90	8	8·80
9 „ 10	71	8	11·26
10 „ 11	69	6	8·69
11 „ 12	81	10	12·34
12 „ 13	88	9	10·22
13 „ 14	78	11	14·10
14 „ 15	106	12	11·32
15 „ 20	371	82	22·10
20 „ 30	457	95	20·78
30 „ 40	215	55	25·62
over 40	152	60	39·40
All ages	2,148	422	19·64

III. DIPHTHERIA. SALFORD. 1883—1888.

True case fatality, at several groups of ages, amongst 533 completed cases of Diphtheria.

Ages in Years.	Attacks.	Deaths.	Fatality per cent.
Under 1	11	11	100·00
1 to 2	26	18	69·23
2 „ 3	34	23	67·64
3 „ 4	48	26	54·16
4 „ 5	49	21	42·85
5 „ 6	47	18	38·29
6 „ 7	42	13	30·95
7 „ 8	26	5	19·23
8 „ 9	17	4	23·63
9 „ 10	25	4	16·00
10 „ 11	21	5	23·81
11 „ 12	13	4	30·77
12 „ 13	6	1	16·60
13 „ 14	5	0	0·0
14 „ 15	14	0	0·0
15 „ 20	37	3	8·10
20 „ 30	60	0	0·0
30 „ 40	31	2	6·45
over 40	21	1	4·76
All ages	533	159	29·83

Hospital Isolation of Infectious Disease.—During the 52 weeks of the year under report, nine hundred and forty-six patients suffering from infectious disease were isolated at the expense of the ratepayers, for the protection of the public health. Of this number, 100 were patients already in hospital at the commencement of the year, 846 were admitted to the wards in the course of the year, and 107 still remained in hospital at the close of December. Of the total admissions last year, 731 were accommodated at the Wilton Hospital, and the remaining 115, either at Monsal or at Pendlebury—both of which institutions are outside the Salford boundary. On admission, 52 of the patients were found to be suffering from small-pox, 490 from scarlet fever, and 162 from enteric fever. The number of admissions for the two latter of these diseases in the year 1887, being 703 and 153 respectively.

SECTION IV.
Admissions and discharges of fever patients during 1888

From the opening of our Fever Hospital in 1876, down to the end of 1888, not less than 5,967 patients have been maintained and treated in hospital by the Salford Health Committee for the protection of the health of the community:—of these 5,482 have been accommodated at Wilton Hospital, and the remainder, either at Monsal or at Pendlebury.

The following table kindly furnished by the Borough Treasurer, shows the cost of maintenance of patients at Wilton Hospital during the year ending December 29th, 1888:—

Cost of maintenance in Wilton hospital, during 1888

	£	s.	d.
Salaries of Resident Medical Officer and Matron ...	250	0	0
Wages of Nurses, &c.....	817	15	0
Rent, Rates, Taxes, and Insurance	507	8	1
Coal, Gas, Water, and Cleaning Materials	213	6	3
Meat, Provisions, Groceries, &c.	964	6	6
Medicine and Stimulants	487	17	6
Repairs and Alterations.....	102	16	1
Provender and Farriery.....	104	18	9
Printing, and Stationery	22	0	7
Collecting Hospital Charges	19	14	2
Clothing, Bedding, Surgical Instruments, &c.....	95	7	8
Stamps and Sundries	106	8	7
	<hr/>		
	3691	19	2
Maintenance of Patients in Monsall Hospital.....	601	1	6
	<hr/>		
	4293	0	8
Amount Received for Fees (Guardians)	583	0	6
	<hr/>		
	£3710	0	2
	<hr/>		

(52 Weeks ending December 29th, 1888.)

	WILTON HOSPITAL.				MONSAL & PENDLEBURY HOSPITALS				Total.
	Males.		Females.		Males.		Females.		
	Under 5	Over 5	Under 5	Over 5	Under 5	Over 5	Under 5	Over 5	
A.—Patients remaining in Hospital on Dec 31st, 1887, affected with									
Small Pox .....	...	...	...	...	...	1	...	...	1
Measles .....	...	...	...	...	...	...	...	...	...
Scarlet Fever	16	20	12	32	...	...	...	...	80
Diphtheria .....	...	...	...	...	...	...	...	...	...
Typhus Fever .....	...	...	...	...	...	...	...	...	...
Enteric Fever .....	...	...	...	...	...	4	...	10	14
Other Acute Diseases .....	...	3	...	2	...	...	...	...	5
Total	16	23	12	34	...	5	...	10	100
B.—Admitted during the 52 Weeks ending Dec. 29th, 1888, affected with									
Small Pox .....	...	...	...	...	...	33	...	19	52
Measles	8	...	4	...	6	...	3	...	21
Scarlet Fever	68	155	84	183	...	...	...	...	490
Diphtheria	3	9	3	6	5	6	1	6	39
Typhus Fever	2	13	...	12	1	1	...	2	31
Enteric Fever	2	70	3	58	3	12	...	14	162
Other Acute Diseases	6	12	2	28	...	3	...	...	51
Total	89	259	96	287	15	55	4	41	846
Total under Treatment	105	282	108	321	15	60	4	51	946
C.—Of the above there were discharged recovered from									
Small Pox .....	...	...	...	...	...	29	...	16	45
Measles .....	...	...	...	...	1	...	...	...	1
Scarlet Fever	69	145	77	181	...	...	...	...	472
Diphtheria .....	...	5	...	4	1	2	...	4	16
Typhus Fever	2	10	...	8	1	1	...	2	24
Enteric Fever	2	46	3	41	3	14	...	21	130
Other Acute Diseases	5	11	...	23	...	3	...	...	42
Total	78	217	80	257	6	49	...	43	730
D.—Died from									
Small Pox .....	...	...	...	...	...	5	...	3	8
Measles	3	...	...	...	...	...	2	...	5
Scarlet Fever	11	9	13	7	...	...	...	...	40
Diphtheria	3	4	3	2	2	...	1	1	16
Typhus Fever .....	...	3	...	4	...	...	...	...	7
Enteric Fever .....	...	11	...	8	...	1	...	2	22
Other Acute Diseases .....	...	4	2	5	...	...	...	...	11
Total	17	31	18	26	2	6	3	6	109
E.—Remaining in Hospital on Dec. 29th, 1888, affected with									
Small Pox .....	...	...	...	...	...	...	...	...	...
Measles	5	...	4	...	5	...	1	...	15
Scarlet Fever	4	21	6	27	...	...	...	...	58
Diphtheria .....	...	...	...	...	2	4	...	1	7
Typhus Fever .....	...	...	...	...	...	...	...	...	...
Enteric Fever .....	...	13	...	5	...	1	...	1	24
Other Acute Diseases	1	...	...	2	...	...	...	...	3
Total	10	34	10	38	7	5	1	2	107
Total under Treatment in 1888.	105	282	108	321	15	60	4	51	946

Disinfection and Destruction of Infected Clothing.— SECTION IV.

During the year under notice, 1,075 parcels of infected bedding and clothing were disinfected by means of high pressure steam, at the Wilton Hospital, and 38 lots of filthy or worn out clothing which had been in contact with infective persons, were destroyed by the disinfecting staff. All these infected articles were removed from the homes of the people, and disinfected by the Health Committee, at their own cost. Inasmuch as this important boon is gratuitously offered to the public, it is much to be regretted that they do not avail themselves more fully of the means of protection thus placed at their disposal.

Washington
Lyons' High
Pressure Steam
Disinfector

Preventive Measures, as applied to Elementary Schools.—The information which we receive under the Compulsory Notification Act enables us to exercise very salutary control over the spread of infectious disease through the medium of school attendance. In the course of last year, either scarlet fever or diphtheria has been discovered to exist in 883 families, some members of which have been at the same time in attendance at school. In each of these instances therefore, intimation has been sent by letter to the school authorities, warning them of their danger, and recommending them, in no case to receive pupils from an infected house, until they have obtained from the Health Department an assurance that they may do so with safety.

School attend-
ance and infect-
ious diseases

The year 1888 therefore, which, like its immediate predecessor was one of considerable epidemic prevalence, lends further proof to the contention, that under the powers of the Compulsory Notification Act, and with the willing co-operation of the Masters and Mistresses of schools, it is practicable to avoid the necessity of closing schools by the simple expedient of promptly isolating individual infective children.

Exposure of Infective persons: Concealment of the Sick.—After so many years of constant work amongst the poor, it is disappointing to note how careless people continue to be in exposing their children suffering from scarlet fever and other infectious diseases. So long as this culpable recklessness prevails amongst the homes of the poor, it is obvious, that, whatever energy the Health Department may expend on the isolation of infectious cases, and in the disinfection of dwellings and clothing, that energy will to a great extent, fail to effect its purpose. It therefore becomes necessary again to warn the public that the provisions of the 124th section of the Public Health Act will be put in force against any person in charge of an infective patient, who exposes that patient in the street, or in any public conveyance; such exposure being expressly forbidden by the Act.

Dangers of
exposing
infective
persons

It is further my duty to repeat the warning previously given in my annual reports, against the concealment of the fact of the existence of infectious disease; for such concealment is clearly a breach of the provisions of the Compulsory Notification Act.

SECTION IV. This Act provides that *any person*, whether parent or guardian, who has in his house a person suffering from scarlet fever, diphtheria, small-pox, or other dangerous infectious disease, is bound himself to report the fact forthwith to the Medical Officer of Health. And the Act further provides that anyone who wilfully conceals the existence of infectious disease in his house, shall be liable to a heavy penalty.

Exposure of
infective
persons

2.—ACTION TAKEN IN 1888 FOR SECURING THE ABATEMENT OF NUISANCES.

Nuisance
inspection and
abatement

Systematic Inspection.—At page 79 the usual table is inserted, giving a detailed account of the work done by the Salford Health Department during the year under report. This table shows that more than thirty-four thousand visits have been paid during the year, by the sanitary staff; and that, in consequence of their action, between seven and eight thousand nuisances, in most cases probably injurious to health, have been removed from among us. The table further shows that *under the direct supervision in every case* of the sanitary inspectors, 840 patients suffering from infectious disease have been removed to the fever hospital, from the homes of the people; that 1,075 parcels of infected bedding or clothing belonging to these patients or their relatives, have been disinfected at the hospital, and that 1,070 houses have been thoroughly disinfected, after the occurrence in them, of infectious disease.

In my last annual report, I made a special appeal to the Health Committee for an addition to the number of inspectors at that time, (1887), in the employ of the Committee; my appeal being supported by the argument that an inspecting staff of no greater numerical strength than that which was required in Salford twenty years ago, when the population was less by 100,000, and the sanitary work of the borough was comparatively light, could scarcely be reasonably expected to fulfil the duties required by a population which is now almost double that of the year 1868,—even on the assumption that no fresh duties had been imposed on the sanitary staff of the present day, by the recent advancement of public opinion in matters concerning the health of the people.

My appeal to the Committee was so far successful that the staff has been increased by one inspector. I cannot help thinking however, that on further consideration, the Committee will see fit to make further and substantial additions to the inspecting staff.

V. An account of supervision exercised, and of action taken with regard to places and houses which the Sanitary Authority has power to regulate.

SECTION V.
Sanitary
supervision

Supervision of Common Lodging Houses.—Chief Sanitary Inspector Wilkinson reports, that at the close of 1887 there were 46 common lodging-houses on the register, but that during the

year 1888 considerable changes took place in the proprietorship of the dwellings set apart for the accommodation of this class of lodgers. Thus, in the course of the year under notice not less than fifteen previously registered lodging-houses were discontinued; whilst twenty-five common lodging-houses were newly placed upon the register. There are now, therefore, 56 common lodging-houses* in the borough, which are capable of accommodating 1,417 persons nightly. During the year 1888 the sanitary inspectors paid 905 visits at night to the common lodging-houses of the borough. The houses have in most cases been found to be well conducted, and kept in a healthy condition. Nineteen cautions for minor offences were given during the year, but in no case were lodging-house keepers proceeded against for breach of the regulations. Eighteen cases of dangerous infectious disease, namely, 12 of small-pox, 2 of scarlet fever, and 4 of enteric fever occurred in seven of the common lodging-houses during the year. The attacks were in every case promptly reported to the Health Department, and the patients were removed to hospital. No spread of the disease took place in either of these instances. The weekly average number of persons who availed themselves of common lodging-house accommodation in Salford last year was 308 male and 45 female *regular lodgers*; and 1372 male, and 248 female *casual lodgers*. All the common lodging-houses have been regularly cleaned and lime-washed during the year, according to regulations, and in five cases new bedsteads and bedding have been provided in lieu of old and defective beds which have been done away with.

SECTION V.
Supervision of
common lodging
houses

Houses Sub-let in Lodgings.†—At the close of the year 1888 there were on the register 460 houses sub-let in lodgings, which are to a small extent amenable to regulation under the Act. In the course of the year 35 previously registered persons discontinued the sub-letting of lodgings, and the names of 47 persons were placed on the register during the year. In the course of their inspections, 55 of which were made at night, the sanitary inspectors were able, as in past years, to detect and punish many breaches of the regulations with respect to the overcrowding of rooms, the letting of lodgings without registration, &c.; but our

Registration of
sub-let lodging
houses

* Common lodging-houses on register, end of 1888:—

District.	No. of houses.	No. of rooms.	Persons accommodated
Regent Road.....	24	82	390
Greengate	24	123	940
Pendleton	8	19	87
Broughton	0	0	0
Borough	56	224	1417

† SUB-LET HOUSES ON REGISTER AT END OF 1888.

	Borough.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.
Number on Register, end of 1887	448	245	149	54	—
Registered in 1888	47	33	13	1	—
Discontinued during the year	35	25	8	2	—
Remaining on Register, end of 1888.....	460	253	154	53	—

SECTION V.
Registration of
houses sublet as
lodgings

experience of 1888 agree with that of previous years in convincing us that the supervision which we are enabled to exercise over lodging-houses of this class is of a most inadequate character, and that the sub-let houses of Salford are a constant source of danger to the public health. In the course of the year under notice, twenty-eight persons were found to be illegally sub-letting lodgings without registration under the Act. On remonstrance by the inspectors, three of the delinquents at once applied to be registered, and the other twenty-five have since discontinued the practice of letting lodgings.

Infectious
sickness
therein

The following table shows the number of sub-let lodging-houses which became infected during the year 1888, together with particulars of cases of infectious sickness found therein.

DISTRICT	Number of Infected Houses.	Number of Cases of Sickness.					
		Total in Houses.		Scar-let Fever.	Diph-theria.	En-teric Fever.	Ty-phus Fever.
		Regis-tered.	Un-regis-tered.				
Regent Road	24	18	26	26	1	13	4
Greengate	9	4	7	9	—	2	—
Pendleton	6	0	8	6	—	2	—
Broughton	—	0	0	—	—	—	—
Borough Total	39	22	41	41	1	17	4

Of the total of 63 cases detected in sub-let lodging-houses during the year, 40 were removed to hospital, and the houses, together with the bedding, clothing, &c., which had been in contact with the infected persons were thoroughly disinfected by the officers of the Health Department.

Further experi-
ence of section
90 of Salford
Improvement
Act

Registration of Lodging-houses under Section 90 of the Salford Improvement Act.—Of the 73 houses hitherto registered under this section, four have been rearranged so as to form a single common lodging-house, which has been registered under the Act. The remaining 69 houses continue to receive the unremitting attention of the sanitary inspectors. Fifteen notices have been served for the re-numbering of doors, and eight for the abatement of overcrowding. In five of these cases summonses were subsequently issued, but in the three remaining ones the circumstances were referred to the relieving officer, on account of the extreme poverty of the tenants. As regards cleanliness,

the inspectors have had little to complain of in the condition of these houses, but the tenants are of exceedingly destructive habits, and are in the habit of making havoc of the woodwork and fittings of the rooms which they inhabit. In the course of the year under notice, a limited epidemic of typhus fever occurred in these houses, infecting six of them, and resulting in the removal to hospital of sixteen cases in all. The district in question is a well known fever den which has furnished several epidemics of typhus in years gone by.

SECTION V.
Further experi-
ence under sec.
90 of Salford
Improvement
Act

Caravans, Tents, &c., used as Dwellings.—In the course of the year under notice, 121 vans, used for human habitation, have come under the supervision of the sanitary inspectors under the powers of the 9th section of the Housing of the Working Classes Act, of 1885. Of the 121 vans inspected, only 15 belonged to *bona fide* gypsies, the remaining 106 being tenanted by travelling showmen or tradesmen who could not properly be considered gypsies.

Registration of
Vans, Tents, &c.
used for human
habitation

On inspection, the vans have been generally found to be in a fairly clean condition. Five notices have been issued during the year for the abatement of nuisances in connection with these structures. Inspector Wilkinson reports that four of the vans were in a dangerous condition for want of ventilation. They were merely long boxes on wheels, without any provision whatever for securing due interchange of air. The wonder is that the inmates were not suffocated during sleep: an accident which probably would have occurred but for the generally rickety condition of the vans, which rendered possible some little escape of the foul air. Notices were promptly served for the proper ventilation of these caravans; but instead of complying with our requirements, the owners at once "moved on" to another district, where they would probably receive less "persecution" than that with which they were tormented in Salford! No case of infectious disease was reported as occurring in any van during the year under notice.

Canal Boats Act.—Mr. Henry Ryder, the Canal Boats Inspector, has done good work during the year 1888, and has justified the prediction which I ventured to make at the time of his appointment—namely, that the inspector would find plenty of work under the Act, wherewith to occupy the moiety of his time which he was authorised to devote to the inspection of canal boats. In a recently presented report, Inspector Ryder remarks, that during last year a considerable portion of the boat traffic was diverted from the river into other channels, in consequence of some interference with the continuity of the towing path for ship canal purposes. Conveyance by horse power was therefore suspended on certain portions of the river, and it has been found impracticable to substitute steam tugs for horses as a motive power, because of the excessive cost of the former. With reference to the condition of the canal boat

SECTION V.
Canal Boats'
inspection

population, the inspector notes a marked and gradual improvement. The cabins are now better kept than formerly; fewer women and children inhabit the boats, and as a result, less infectious disease is met with at the present time, than before the boats became amenable to this section. In fact, not a single case of dangerous infectious disease has occurred on any boat within the district of Salford during the past year. In all cases where children of school age have been found on board the boats, reports have been sent to the Clerk of the School Board.

The number of boats examined during 1888, was 1,510 (against 1,466 in the previous year) of which number 171 were found to be defective, and to require the attention of the owners. The defects in the 171 faulty boats were as follows:—

Cabins requiring re-painting.....	26
Dirty cabins.....	76
Errors in certificates.....	15
Registered numbers on boats indistinct.....	45
Bilge water under cabin floors.....	9

Generally speaking, Inspector Ryder has found both the owners and the crews of the boats willing to remedy any defects pointed out to them, and otherwise to assist the department in carrying out the Act.

Registration of
Dairies and
Milkshops

Dairies and Milkshops.—The registers of dairies and milkshops have been re-written since last year, and a separate register has been provided for each district. I am pleased to find that under the salutary operation of registration, the increase in the number of milkshops noticed in my last report has ceased, and that a decided diminution has taken place instead. The undue multiplication of small depositories for the storage and sale of milk, even if of unobjectionable construction, would in any event be undesirable, as offering dangerous facilities for the contamination of the milk. In the course of last year, fifty-three milkshops have been placed on the register, and eighty-seven have been removed from it, leaving on the register at the end of the year 540 houses, in place of 574 at the beginning of the year. The dairies and milk shops have been regularly visited during the year, and sixty notices have been served requiring compliance with the regulations.

Nine of the registered milkshops became infected during the year 1888. Five cases of scarlet fever, three of enteric fever, and one of diphtheria having been reported in as many separate houses. Two of the scarlet fever patients were removed to hospital, and the houses were promptly freed from infection; the remaining seven cases were treated at home, two of them proving fatal; the milk business, however, was in every case stopped, or was removed to other and non-infected premises.

SECTION V.

Registration of
Dairies and
Milkshops

The following is a summary of the milkshops on the register.

	Borough.	Regent Road.	Green- gate.	Pendle- ton.	Brough- ton.
Number on Register, } end of 1887	574	276	95	93	110
Registered in 1888	53	16	6	17	14
Discontinued during } the year... ..	87	51	19	11	6
Remaining on Register } end of 1888	540	241	82	99	118

Cowsheds and Shippons.—At the end of the year under report, there were 35 cowsheds and shippons on the register, as compared with 31 at the beginning of the year. Inspector Fordham has kept these establishments under careful supervision during the year, and he reports favourably on their condition.

Private Slaughter Houses.—At the end of 1888, there were 51 private slaughter houses in the borough, or one more than in 1887. These have been frequently inspected by Mr. Fordham, M.R.C.V.S., of the Health Department, who, as in former years, has done his best to secure compliance with the requirements of the local act relating to these establishments.

It is greatly to be desired that the Corporation should resolutely face the question of the establishment of public abattoirs, with a view to the ultimate abatement of the private slaughter house nuisance. Again and again, in the course of the last dozen years, the Medical Officer of Health has directed the attention of the Health Committee to this serious blot on the sanitary reputation of the borough. He would fain believe that this, his last appeal, against the further continuance of an intolerable and wholly unjustifiable nuisance, may be more effectual than his previous ones have been.

The private
slaughter house
nuisance. _____

Seizure of Unwholesome Food.—The following quantities of bad meat, and other unwholesome commodities, have been seized by the meat inspector, during the year under notice, and dealt with according to the Act.

SECTION V. Supervision of food supply	UNWHOLESOME MEAT SEIZED AND DESTROYED IN 1888.						
	No. of Seizures.		Weight.				
			Tons.	Cwts.	Qrs.	Lbs.	
Beef.....	35	.....	10	7	3	22
Mutton	45	.....	2	19	3	18
Veal	50	.....	1	6	1	4
Pork and Bacon.....	9	.....	1	5	0	21
Fish	2	.....	0	14	0	0
Rabbit.....	2	.....	0	0	2	20
Horse-Beef.....	3	.....	0	6	2	13
	<u>146</u>		<u>17</u>	<u>2</u>	<u>0</u>	<u>14</u>	

Proceedings under the Adulteration Act.—During the year 1888, Mr. Joseph Carter Bell, F.I.C., the public analyst for Salford, has examined 883 samples of food and drugs submitted to him by the food inspector; of these samples, 56, or 6·3 per cent were found to be adulterated; the proportion of adulteration discovered last year being 8·7.

As in past years, a table is here inserted giving particulars of the articles examined, and of the proportions of the several articles found to be adulterated (see page 73).

Of the total number of samples taken for analysis, 341 were taken in the district of Regent Road, 186 in Greengate, 146 in Pendleton, and 210 in Broughton.

As in recent previous reports, a table is herewith published, giving particulars of the examinations of milk, taken by the Inspector at the Railway Stations, before coming into the possession of the Salford retailers (see page 74).

Supervision of Bakehouses.—At the close of 1887, the bakehouses on the Salford Register, numbered 101; during the year 1888 there were registered 31 new bakehouses, whilst 14 have been either closed or pulled down.

PARTICULARS AS TO BAKEHOUSES IN SALFORD AT THE END OF 1888.

Districts.	No. of Bake- houses	Ovens.			Number of Persons employed.		
		No.	Description.		Men.	Women.	Boys.
			Flue.	Waggon			
Regent Road.	56	74	26	48	110	20	17
Greengate ...	11	15	3	12	23	1	8
Pendleton ...	19	30	11	19	32	9	10
Broughton ...	17	24	8	16	26	7	4
Boro' Total .	103	143	48	95	191	37	39

SAMPLES COLLECTED BY THE INSPECTOR UNDER THE "SALE OF FOOD
AND DRUGS ACT," FROM 1875 TO 1888.

	Total.	Milk.	Butter.	Bread and Flour.	Drugs.	Gro- ceries.	Beer and Porter.	Wines and Spirits.	S'ndries
1875...	60	37	1	1	1	...	7	4	9
1876...	119	43	2	18	34	17	...	...	5
1877...	390	114	7	159	22	30	18	37	3
1878...	418	197	10	35	31	25	24	70	26
1879...	518	306	16	130	15	28	10	13	...
1880...	506	269	12	48	5	52	71	18	31
1881...	478	376	11	1	...	61	...	8	21
1882...	465	300	7	47	13	3	58	20	17
1883...	497	436	1	29	1	12	...	2	16
1884...	507	359	10	35	7	...	64	11	21
1885...	478	399	21	14	4	13	21	...	6
1886...	483	361	6	21	...	36	1	22	36
1887...	472	355	2	...	...	25	42	43	5
1888...	883	701	6	...	30	83	...	9	54

PERCENTAGE OF ARTICLES RETURNED AS ADULTERATED.

	Total.	Milk.	Butter.	Bread and Flour.	Drugs.	Gro- ceries.	Beer and Porter.	Wines and Spirits.	S'ndries
1875..	66.6	62.1	100.0	0.0	0.0	...	100.0	75.0	66.6
1876...	40.3	55.8	50.0	27.8	35.3	17.6	...	...	60.0
1877...	27.4	40.3	28.6	11.3	13.6	6.7	0.0	97.3	0.0
1878...	29.9	29.4	10.0	2.9	51.6	4.0	4.2	67.1	0.0
1879...	12.0	13.1	25.0	5.4	26.6	10.7	10.0	2.3	...
1880...	20.2	25.2	75.0	6.3	0.0	17.3	11.3	11.1	9.7
1881...	16.3	18.1	9.1	0.0	...	1.6	..	37.5	23.8
1882...	15.5	19.0	14.3	2.1	53.8	0.0	1.7	10.0	17.6
1883...	6.6	6.7	0.0	3.4	0.0	8.3	...	50.0	6.3
1884...	7.1	2.8	40.0	5.7	57.1	...	0.0	27.3	61.9
1885...	5.2	4.8	4.8	7.1	0.0	15.4	0.0	...	33.2
1886...	3.9	1.1	50.0	0.0	...	25.0	0.0	0.0	8.3
1887...	8.7	9.9	0.0	...	...	8.0	2.4	7.0	0.0
Average,									
1878-87	12.5	13.0	22.8	3.7	27.0	10.0	3.7	23.6	17.9
1888...	6.3	2.8	100.0	...	26.6	13.3	...	0.0	20.4

Particulars of Milk consigned to Salford Dealers by Farmers living outside the Borough, showing the number of samples taken at the Railway Stations before delivery, by the Salford Inspector, and the Analyst's Report on the quality of the Milk.

No.	Name and Address.	Result of Analysis.	Place of Delivery.
1	P. J., Woodside,, Whaley Bridge.	Pure	London Road. Station
2	R. J., Ashbourne.....	Do.	" "
3	R. J., Ashbourne.....	Do.	" "
4	R. J., Ashbourne.....	Do.	" "
5	H. E., Ince, Cheshire.....	1% added water	Ordsall Lane
6	H. E., Ince, Cheshire	Pure	" "
7	D. J., Ince, Cheshire	Do.	" "
8	G. W., Helmshore	8% added water	Exchange
9	L. A., Preston Brook	Pure	Ordsall Lane
10	L. A., Preston Brook	Do.	" "
11	H. J. Davenham	5% cream gone	Old Trafford
12	B. J., Plumbley, Northwich	Pure	Central
13	B. J., Plumbley, Northwich	Do.	" "
14	B. R. C., Winsford, Cheshire.....	Do.	Exchange
15	B. R. C., Winsford, Cheshire.....	Do.	" "
16	B. R. C., Winsford, Cheshire.....	Do.	" "
17	B. R. C., Winsford, Cheshire.....	Do.	" "
18	B. R. C., Winsford, Cheshire.....	Do.	" "
19	B. R. C., Winsford, Cheshire.....	Do.	" "
20	B. R. C., Winsford, Cheshire.....	Do.	" "
21	B. R. C., Winsford, Cheshire.....	Do.	" "
22	M. J., Knutsford, Cheshire	Do.	Old Trafford
23	M. J., Knutsford, Cheshire	Do.	" "
24	J. F., Young's Farm	Do.	Bury Old Road
25	C. H., Snow Hill Farm	7% added water	Higher Broughton.
26	C. H., Snow Hill Farm	Pure	" "
27	T. W., Cuddington	Do.	Pendleton Station.
28	T. W., Cuddington	Do.	" "
29	T. W., Cuddington	Do.	" "
30	B. J., Lostock	Do.	" "
31	B. J., Lostock	Do.	" "
32	T. G., Yew Bank Farm	Do.	Lower Broughton.
33	B. J., Northwich	Do.	Central Station.
34	B. J., Northwich	Do.	" "
35	D. S., Hough Lane Farm	Do.	Lower Broughton.
36	G. H. W., Kersal Cells Farm.....	Do.	Higher Broughton.
37	P. J., Moor Lane Farm	Do.	" "
38	T. J. J., Kersal Farm	Do.	" "
39	T. W., Cuddington	Do.	Pendleton Station.
40	B. J., Lostock	Do.	" "
41	B. J., Lostock	Do.	" "
42	B. J., Lostock	Do.	" "
43	H. R., Helmshore.....	Do.	Victoria Station.
44	D. A., Leek	Do.	London Road Station.
45	F. F. A., Pipe Gate	Do.	" "
46	W. A., Norton-in-Hales	Do.	" "
47	A. B., Stone	Do.	" "
48	P. C., Ellesmere, Shropshire	Do.	" "
49	P. C., Ellesmere, Shropshire	Do.	" "

Particulars of Milk consigned to Salford Dealers by Farmers living outside the Borough, showing the number of samples taken at the Railway Stations before delivery, by the Salford Inspector, and the Analyst's Report on the quality of the Milk.—Continued.

No.	Name and Address.	Result of Analysis.	Place of Delivery.
50	F. S. J., Gnosall, Stafford	Pure	London Road Station.
51	F. S. J., Gnosall, Stafford	Do.	" " "
52	D. T., Grove Farm, Ince	Do.	Ordsall Lane "
53	W. G., Wrenbury	Do.	London Road "
54	G. T., Wrenbury	Do.	" " "
55	G. T., Wrenbury	Do.	" " "
56	R. T., Knutsford	Do.	Old Trafford "
57	W. P., Thelwall	Do.	" " "
58	L. J., Congleton	Do.	London Road "
59	C. G., Alsagar	Do.	" " "
60	K. G., Congleton	Do.	" " "
61	W. W., Nantwich	Do.	" " "
62	C. J., Whitechurch	Do.	" " "
63	C. J., Whitechurch	Do.	" " "
64	B. W., Gosworth	Do.	Ordsall Lane "
65	B. W., Macclesfield	Do.	" " "
66	D. P., Preston Brook	Do.	" " "
67	D. P., Preston Brook	Do.	" " "
68	B. J., Macclesfield	Do.	" " "
69	C. S., Basley	Do.	London Road "
70	L. S., Oakleigh	Do.	Higher Broughton.

VI.—An account of action taken by the Medical Officer of Health, or on his advice, during the year, in regard to Offensive Trades, and to Factories and Workshops.

Smoke Nuisance.—During the year 1888, Inspector Thompstone reports that there have been 1,174 observations taken of the smoke emitted from the factory chimneys of the borough; and as a result eleven persons have been summoned before the magistrates for negligently using furnaces, or for using furnaces which were not constructed to consume their own smoke.

SECTION VI.
Supervision of
the smoke
nuisance

The following table gives the number of steam boilers and furnaces in use within the four districts of the borough, at the end of the year 1888, together with particulars as to notices served under the Public Health Act, and our Local Act.

Inspector Thompstone assures me that our manufacturers evince a growing desire to take advantage of the improvement in trade, and in several instances have, during the past year, taken out old and worn-out steam boilers, and substituted new ones to work at higher pressures, constructed to consume their own smoke.

SECTION VI. NUMBER OF BOILERS AND FURNACES IN USE WITHIN THE FOUR DISTRICTS OF THE BOROUGH AT THE END OF 1888.

Supervision of the smoke nuisance

Registration Sub-Districts.	Boilers and Furnaces in use.		Notices to Properly Construct Furnaces.	
	Properly Constructed.	Improperly Constructed.	Number Served.	Number complied with.
Regent Road ...	124	89	75	27
Greengate.....	140	64	63	42
Pendleton.....	189	55	52	28
Broughton	27	19	23	8
Borough Total.	480	227	213	105

NUMBER OF BLACKSMITHS' FORGES IN SALFORD AT THE END OF 1888.

	Borough Total.	Regent Road.	Greengate.	Pendleton.	Broughton
Blacksmiths' Forges	66	24	18	13	11

During the year 1888, the inspector has personally cautioned 93 stokers and others, for negligently using their furnaces, 13 owners and occupiers of bakeries and confectioners, have been served with notices, under the Public Health Act, which have been complied with, to raise the chimneys in connection with their ovens.

Brick Burning.—There are nine brick making places in the Borough, which have come under observation during the year, viz. : one in Broughton, one in Regent Road, and seven in Pendleton ; complaints have been made of several brick kilns, situate in Weaste, but on inspection there has been no smoke nuisance, and the kilns have been found beyond the required distance from dwelling houses.

General Supervision of Noxious or Offensive Trades.

SECTION VI
Registration of
offensive trades

—There are 61 noxious trades on the register, as compared with 69 in 1887. This shews a decrease of 8 on the number on the register at the end of last year.

Three notices have been issued for the abatement of nuisances, and several verbal cautions have been given, which have been promptly attended to.

OFFENSIVE TRADES, END OF 1888.

Nature of Works,	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton
Soap Works	1	1	1	0
Tripe Dressing Works	12	4	3	0
Oil and Tallow Works	2	4	1	0
Tanneries	1	1	1	0
Varnish or Tar Distilleries.....	1	3	1	0
Chemical Works	3	2	2	0
Telegraph Cable Works... ..	0	2	0	0
Rop Cleaning Works	4	0	0	0
Albumen Works.....	0	0	0	1
Paper Works	1	0	1	1
Floor Cloth Works.....	1	2	0	0
Rubber Works	1	2	1	1
Potted Meat or Brawn Manu- facturers	3	0	1	1
Borough	27	21	11	2

Record of Cases taken before the Magistrates during 1888, with the result of proceedings.

Particulars of Complaint.	No. of Cases.	How Disposed of.	Amount of Fines.
			£ s. d.
Adulteration of Food	9	{ Six fined, in all £2 13 6, one } { withdrawn, two dismissed.. }	2 13 6
Exposing Margarine without } being labelled		{ Two fined, in all £1; one } { dismissed	1 0 0
Exposing diseased meat for sale.	6	Six fined, in all £23 11 0	23 11 0
Using a stable as a cowshed	1	One Fined £1	1 0 0
Negligently using furnances } constructed to consume their } own smoke	11	Eleven Fined, in all.....	20 3 6
Letting houses in Lodgings } without being registerep... }	5	Five Fined, in all £0 18 6	0 18 6
Overcrowding registered lodge- } ing-house	4	Four Fined, in all £0 18 6	0 18 6
Neglecting to comply with } lodging house regulations ... }	4	Four Fined, in all £0 17 6	0 17 6
Neglecting to keep houses in } a clean condition..... }	6	{ Two Fined, in all 5s., four } { withdrawn..... }	0 5 0
Neglecting to keep bakehouse } clean	1	Fined 10s.....	0 10 0
Premises in such a state as to } be a nuisance	13	{ Seven orders to Abate made, } { six withdrawn	
Disobeying order to abate.....	1	Fined 10s.....	0 10 0
Obstructing Inspector in ex- } ecution of his duty..... }	1	Fined £1	1 0 0
Depositing offensive matter } on land	1	Fined £3	3 0 0
	63		56 7 6

PRICES OF COAL, FLOUR, POTATOES, AND BUTCHER'S MEAT, AND THE
NUMBER OF PAUPERS RELIEVED IN SALFORD—1873 TO 1888.

	AVERAGE PRICES OF FOOD AND FUEL.				PAUPERISM.		
	Coal, per ton.	Flour, per stone.	Potatoes, per load.	Butchr's Meat, per lb.	Weekly number of Paupers relieved.		
					Indoor.	Outdoor	Proportion to Population
	£ s. d.	£ s. d.	£ s. d.	d.			
1873	0 15 9 $\frac{3}{4}$	0 2 3	0 13 0 $\frac{1}{4}$	7 $\frac{3}{4}$	817	1711	1 in 53
1874	0 16 1 $\frac{3}{4}$	0 2 2	0 11 4	7 $\frac{1}{2}$	853	1842	1 in 52
1875	0 12 4	0 1 7 $\frac{1}{2}$	0 10 6 $\frac{3}{4}$	7 $\frac{1}{2}$	872	1652	1 in 57
1876	0 11 6	0 1 9 $\frac{1}{4}$	0 10 7 $\frac{1}{2}$	7 $\frac{1}{2}$	944	1409	1 in 64
1877	0 10 5	0 2 1 $\frac{1}{2}$	Various.	7 $\frac{1}{4}$	1037	1662	1 in 57
1878	0 9 10	0 1 7 $\frac{1}{2}$	Various.	7 $\frac{3}{4}$	1146	2326	1 in 46
1879	0 7 5	0 1 11 $\frac{1}{2}$	0 14 0	6 $\frac{3}{4}$	1442	4023	1 in 30
1880	0 7 11	0 2 5 $\frac{3}{4}$	0 10 0	7 $\frac{1}{8}$	1559	3488	1 in 34
1881	0 7 8	0 1 8 $\frac{3}{4}$	0 10 0	7 $\frac{1}{4}$	1640	3039	1 in 38
1882	0 7 7	0 1 7 $\frac{1}{4}$	0 12 0	7 $\frac{1}{8}$	1379	2300	1 in 56
1883	0 7 7 $\frac{1}{2}$	0 1 6 $\frac{3}{4}$	0 7 0	6 $\frac{3}{4}$	1690	2237	1 in 49
1884	0 7 8 $\frac{1}{2}$	0 1 4 $\frac{1}{2}$	0 5 9	5 $\frac{1}{2}$	1645	2250	1 in 51
1885	0 7 7	0 1 3 $\frac{1}{4}$	0 6 4 $\frac{1}{2}$	4 $\frac{1}{4}$	1573	2297	1 in 50
1886	0 7 5	0 1 3	0 7 3	5 $\frac{1}{2}$	1624	2412	1 in 49
1887	0 7 6	0 1 2 $\frac{1}{2}$	0 9 10	5	1669	2016	1 in 55
1888	0 7 3	0 1 3 $\frac{1}{4}$	0 5 6	4 $\frac{1}{2}$	1071	1799	1 in 72

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