[Report 1894] / Medical Officer of Health, Birmingham.

REPORT

ON THE

HEALTH OF THE CITY

OF

BIRMINGHAM,

FOR THE YEAR 1894;

ALSO,

ON THE PROCEEDINGS TAKEN UNDER THE ACTS FOR THE

PREVENTION OF ADULTERATION

OF ARTICLES OF FOOD AND DRINK,

BY

ALFRED HILL, M.D., F.R.S.E., F.I.C.,

Past-President of the Society of Medical Officers of Health; Past-President of the Society of Public Analysts; Late Examiner in Public Health to the University of Aberdeen; Fellow of the Sanitary Institute; Fellow of the College of State Medicine; Fellow of the Incorporated Society of Medical Officers of Health;

MEDICAL OFFICER OF HEALTH AND ANALYST TO THE CITY.

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BIRMINGHAM:
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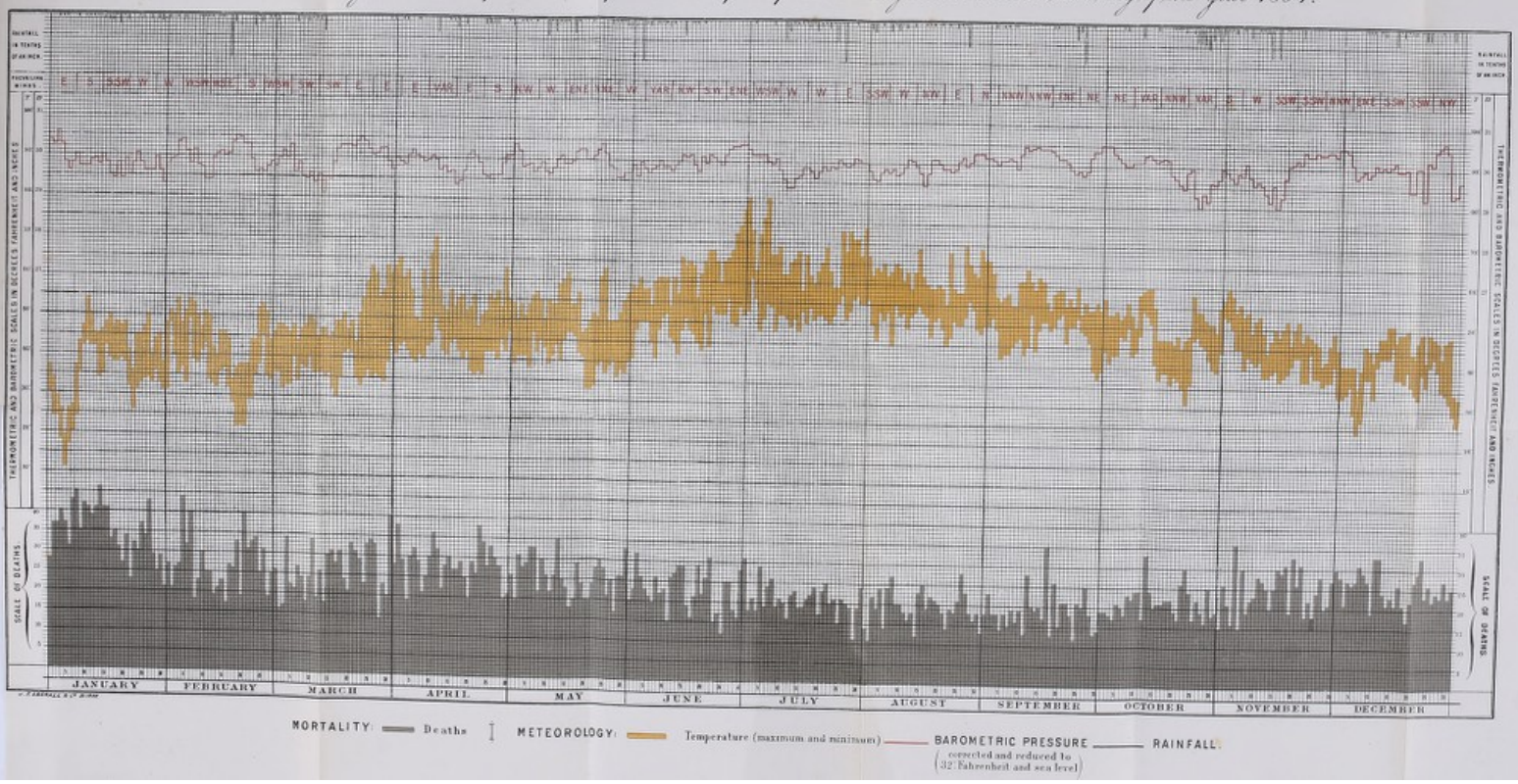
City of Birmingham.

Chart illustrating the relations of the number of deaths to the principal meteorological conditions on each day of the year 1894.



MORTALITY: Deaths | METEOROLOGY: Temperature (maximum and minimum) — BAROMETRIC PRESSURE (corrected and reduced to 32° Fahrenheit and sea level) — RAINFALL

With the

Medical Officer of Health's Compliments.

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HEALTH DEPARTMENT,
THE COUNCIL HOUSE,
BIRMINGHAM,
March 16th, 1895.

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

Introductory Remarks.

In presenting my twenty-second Annual Report as Medical Officer of Health for the City, I wish to make a few general observations upon certain prominent features of the statistics for the year 1894 to which the report refers.

The total death-rate was identical with the lowest rate ever before recorded, the mortality in the second half of the year being particularly small. Atmospheric conditions were largely responsible for this result, the year being characterised by a practical absence of either very hot or very cold weather, each of which extremes invariably exerts an unfavourable influence on the death-rate. The improvement in the rate of mortality occurred principally amongst children under one year of age, and in persons aged forty-five years and upwards.

The zymotic death-rate was one of the lowest I have ever recorded. Smallpox, Measles, and Typhoid Fever caused more deaths than they generally do, but Scarlet Fever, Diphtheria, Whooping Cough, and Diarrhœa were not so fatal as usual.

The epidemic of Smallpox, which commenced in 1893, extended still more widely in 1894, and caused a larger number of cases than in any year since 1874.

Scarlet Fever was more prevalent than it had been since 1890, though much less so than in that particular year. Diphtheria was notified in a rather large number of instances, though a little fewer than in 1893, and much fewer than in 1892. The cases of Typhoid Fever notified were more numerous than in any year since the introduction of compulsory notification, and were nearly twice as many as in 1892, when the prevalence of this disease was but slight.

I. VITAL STATISTICS.

Elevation.

Geological position.

Birmingham stands at a considerable altitude, its highest part being 679 feet and its lowest 261 feet above the mean level of the sea. It is built upon a generally porous soil, of a sandy or gravelly nature, and on an undulating site. These physical conditions afford the town considerable advantages, inasmuch as they expose it to the free movement of the atmosphere, and cause a greater dryness of the soil than is found in places less favourably situated.

Population.

The estimated population of the City at the middle of 1894 was 492,301. This estimate is based on the assumption that the population has increased since 1891 at precisely the same rate as obtained between 1881 and 1891. Such an assumption is, of course, liable to lead to a great discrepancy between the estimated and actual population at any particular time, for it is obvious that from various causes the rate of increase in a given population will be subject to considerable alteration. In the last intercensal period the population of Birmingham was very seriously over-estimated; at the present time it seems probable that it is under-estimated. I am led to this conclusion, first, by the fact that the Building Surveyor's reports show a great increase in the last three years in the number of new houses; and, secondly, by the circumstance that the number of inhabited houses shown on the rate books is larger than seems necessary to meet the requirements of the number of persons supposed to be occupying them. I do not think, however, that the difference between the actual and the estimated population is at present so large as to seriously vitiate the calculation of birth-rates and death-rates, and I therefore propose to use the population as estimated in the ordinary way for the purposes of my report.

Natural Increase.

The estimated population for 1894 showed an increase of 4,404 over that for 1893; the excess of births over deaths which constitutes the natural increase, disregarding migration to and from the town, was 6,559.

Area.

Density.

The City covers an area of 12,705 acres, so that on an average there are 38·7 persons residing on an acre. It must be borne in mind, however, that much of the outlying land in Birmingham has very little building on it, and the number of persons to an acre in such parts of the City is very small indeed. Hence, to bring the average up to 38·7, it is obvious that in the crowded parts of the City every acre of ground must bear a much greater number of persons than this.

In the statement below, the estimated population of Birmingham and its mean density for each of the past nine years is given :—

	Estimated Population at middle of each year.	Average Number of Persons per acre.
1886 ...	458,110 ...	36·1
1887 ...	462,251 ...	36·4
1888 ...	466,430 ...	36·7
1889 ...	470,646 ..	37·0
1890 ...	474,900 ...	37·4
1891 ...	479,193 ...	37·7
1892 ...	483,526 ..	38·1
1893 ...	487,897 ...	38·4
1894 ...	492,301 ...	38·7

Population and Density in certain large towns.

In the course of my report I intend to make comparisons between Birmingham and certain other large towns. It will be interesting, therefore, to see the relative size and density of these towns.

	Estimated Population, 1894.	No. of Persons to an acre.
33 Large Towns ...	10,458,442	34·9
London	4,349,166	58·2
Liverpool	507,230	97·3
Manchester	520,211	40·3
Birmingham ...	**492,301**	**38·7**
Leeds	388,761	18·0
Sheffield	338,316	17·2
Bristol	226,578	50·8
Bradford	223,985	20·8
West Ham	238,184	50·6
Nottingham	223,584	20·4

I have been unable to obtain statistics relating to the whole area at present included in the City for any years prior to 1886, although my own records respecting the old City extend as far back as 1873.

MARRIAGES.

Marriage-rate.

The number of Marriages solemnized in the City in 1894 was 4,241, giving a marriage-rate of 17·3 per 1,000. In 1893 the rate was 16·9, and in 1892 it was 17·9.

BIRTHS.

Births.

The Births recorded during the fifty-two weeks comprised for registration purposes in the year 1894 numbered 15,505, 7,831 being those of males, and 7,674 those of females. They

Birth-rate.

were equal to an annual Birth-rate of 31·6 per 1,000, this being the lowest Birth-rate recorded in the nine years for which I can obtain statistics. The Births and Birth-rates in these nine years are shown below :—

	Number of Births.	Birth-rate per 1,000 persons living.
1886	15,622	34·2
1887	15,315	33·2
1888	15,076	32·4
1889	15,357	32·7
1890	15,487*	32·1
1891	16,166	33·8
1892	16,026	33·2
1893	15,881	32·6
1894	15,505	31·6

* 53 weeks.

Birth-rates in ten large towns.

Low as the Birth-rate was in Birmingham, it was still considerably higher than in some of the other large towns, as may be seen from the following figures :—

	Birth-rate per 1,000.
33 large Towns	30·7
London	30·1
Liverpool	35·4
Manchester	32·0
Birmingham	**31·6**
Leeds	32·2
Sheffield	33·4
Bristol...	28·2
Bradford	26·7
West Ham	34·0
Nottingham	28·6

The thirty-three large towns, taken as a whole, as well as London, Bristol, Bradford, and Nottingham, had lower Birth-rates than Birmingham, that recorded in Bradford being particularly small.

VACCINATION.

Vaccination.

I have received from the different Vaccination Officers returns as to Vaccination for the year which ended on June 30th, 1894. Copies of these returns are given in Table XI.

I find that, taking the whole of the City, the improvement in the amount of Vaccination shown in 1893 was just maintained last year, 86 per cent. of the surviving children having been successfully Vaccinated, while 8·2 per cent. had been lost

sight of, and 5·2 per cent. had either removed to other Vaccination Districts or their Vaccination had been postponed. This will be seen from the table below :— Vaccination (*continued*).

District.	Year.	Percentage of Surviving Children.			
		Successfully Vaccinated.	Insusc'ptible of Vaccination or had Smallpox.	Unaccounted for, from	
				Removal to places unknown ; and not having been found.	Postponement by Medical Certificate ; Removal to other Vaccination Districts, etc.
Birmingham Parish ...	1892	87·9	0·2	8·6	3·3
	1893	90·2	0·4	6·8	2·6
	1894	90·1	0·4	6·6	2·9
Aston Union (within the City) ...	1892	81·3	0·5	12·3	5·9
	1893	81·6	0·5	11·3	6·6
	1894	82·4	0·7	11·0	5·9
King's Norton Union (within the City) ...	1892	83·9	0·4	3·8	11·8
	1893	81·4	0·9	2·9	14·7
	1894	79·6	0·8	6·2	13·4
Whole City...	1892	84·9	0·3	9·6	5·2
	1893	86·0	0·5	8·1	5·5
	1894	86·0	0·6	8·2	5·2

Vaccination was the most widely practised in Birmingham Parish, where the successful Vaccinations reached 90·1 per cent. In this district the figures have improved materially in recent years. In Aston there has been an improvement also, though the percentage of Vaccination is much smaller than in Birmingham Parish. In King's Norton the percentage is the lowest of all, having declined steadily in the last three years. This is very unsatisfactory, and I should be very glad to see an upward movement set in. Birmingham Parish. Aston Union. King's Norton Union.

DEATHS.

The Deaths registered during 1894 numbered 8,946, and comprised those of 4,659 males and 4,287 females. This number gave a Death-rate of 18·2 per 1,000 of the population, which is identical with the lowest figure previously recorded in the City. The average of the Death-rates for the eight preceding years was 20·2, or 2·0 per 1,000 above the rate for 1894. To some, perhaps, this may seem to represent a comparatively slight advance, but when it is remembered that this reduction in the Death-rate means the saving during a single year of 1,000 human lives, not to speak of the long and expensive illnesses and suffering by which death is usually preceded, it will not be denied that the diminished mortality of the past year affords grounds for great satisfaction on the part of all Deaths. Death-rate.

Death-rate (*continued*).

who have the welfare of the community at heart. Some fifteen years ago the late Dr. Farr, of the Registrar General's office, estimated that the "value of the population of the United Kingdom, men, women, and children, is £159 a head; that is, the value inherent in them as a productive, money-earning race." If this estimate still holds good, and if it applies to Birmingham as to the rest of the country, then the present population of this City is worth £159,000 more than it would have been if the mortality in 1894 had been as high as it was in the eight preceding years.

The following table shows the Deaths and Death-rates for the last nine years:—

	Number of Deaths.	Death-rate per 1,000 Persons living.
1886 ...	9,182 ...	20·1
1887 ...	9,225 ...	20·0
1888 ...	8,465 ...	18·2
1889 ...	9,035 ...	19·2
1890 ..	10,329* ...	21·4
1891 ...	10,077 ...	21·1
1892 ..	9,642 ...	20·0
1893 ..	10,445 ...	21·5
1894 ...	8,946 ...	18·2

* 53 weeks.

Comparing last year's statistics with those of the three other years which have elapsed since the extension of the City, I find that the diseases concerned in the reduction of the mortality were those which are intimately associated with climatic conditions. Diarrhœa caused 256 Deaths, against an average of 530 in the three years 1891-93; Phthisis caused 630, against 751; Bronchitis 1,088, against 1,336; Pneumonia 682, against 806. The year was characterised by the almost total absence of either very hot or very cold weather. August and September, two of the great Diarrhœa months, had very low mean temperatures, and were consequently exceptionally free from the heavy Diarrhœal mortality by which they are often marked. On the other hand, the six winter months, in which Respiratory diseases are generally very fatal, were all unusually mild, with the result that the year was free from a large mortality from chest affections. It is obvious from these facts that the City is chiefly indebted to meteorlogical conditions for the happy position it held last year in respect of its general Death-rate, and this conclusion is strengthened by the fact that in the whole of England and Wales a similarly satisfactory Death-rate was recorded.

While, however, the influence of the weather either for good or for evil is clear, it must not be supposed that we are altogether at the mercy of the elements, for it has been shown again and again that it is chiefly through unhygienic conditions, either public or personal, that such influence is exerted. Thus it is well known that the effect of a hot summer on Diarrhœal mortality is greatly reduced by such public measures as will ensure purity and cleanliness of air, of water, of soil, and of

dwellings; as well as such personal means as the avoidance of unwholesome food, especially tainted meat or fish, and unsound or unripe fruit. Again, it is an undoubted fact that Respiratory diseases are far more fatal amongst those who live in damp, badly-ventilated, ill-lighted, and overcrowded houses, or who are exposed with but little protection to the inclemency of the weather; and where these conditions are absent, the effects of frost and rain are greatly reduced. What has to be aimed at, therefore, is the establishment of so perfect a system of both public and personal hygiene as shall render ineffective those atmospheric changes which at present very seriously affect the health of the community.

Death-rate (*continued*).

The Death-rates of ten of the largest English towns are shown in the table below:—

Death-rates of Birmingham and large towns compared

	1894.	1893.	1892.	1891.	1890.
33 large Towns	18·1	21·6	20·7	22·2	22·4
London	17·8	21·3	20·6	21·4	21·5
Liverpool	23·8	27·3	24·7	27·0	27·8
Manchester	20·4	24·9	23·8	26·5	29·7
Birmingham ...	**18·2**	**21·5**	**20·0**	**21·1**	**21·4**
Leeds	17·9	22·3	19·8	22·9	22·7
Sheffield	17·8	22·3	20·8	23·9	25·8
Bristol	17·3	18·9	19·5	20·9	20·2
Bradford	17·0	21·0	18·0	22·2	22·8
West Ham	16·2	18·9	18·6	17·8	19·5
Nottingham...	17·2	18·5	18·7	19·9	19·2

It is rather disappointing to find that, while Birmingham compared very well with its own previous records in the matter of Mortality, its Death-rate did not exhibit so great a diminution as is shown in several other important towns. The Death-rates of the large towns, as a whole, of London, of Leeds, and of Sheffield, all of which are usually above that of Birmingham, were last year lower than ours. While, therefore, these towns are to be congratulated on the favourable positions they occupy, one cannot but feel some regret that Birmingham should now rank only eighth in the above list; a position due no doubt to a great extent to the serious periodic epidemic of Smallpox through which the City has passed.

Discrepancy between Registrar General's and own figures.

The figures relating to Birmingham in the Registrar General's Annual Summary differ slightly from mine, owing to the fact that he includes the deaths of paupers belonging to Birmingham who die in the Aston and King's Norton Work-houses with the deaths actually recorded in the city. I do not follow this plan, because I have reason to believe that the deaths of non-residents which take place in the Birmingham Hospitals are at least as numerous as those just referred to, and to include the one class of deaths without excluding the other, must aggravate rather than modify any error that may arise.

Death-rate in each quarter of the year.

The Mortality in Birmingham in each quarter of the year is shown below:—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.
Total Deaths	2,688	2,338	1,816	2,104	8,946
Males ...	1,397	1,220	942	1,100	4,659
Females ...	1,291	1,118	874	1,004	4,287
Death-rate ...	21·9	19·0	14·8	17·1	18·2

Death-rate in each quarter of the year (*continued*).

The Mortality in the first quarter was fairly satisfactory, although it compared unfavourably with that of the 33 large towns. The Death-rate in the second quarter also was only moderately good, and was 1·7 above that of the large towns. With the advent of the third quarter came a great improvement, the Death-rate being the lowest I have ever recorded in any quarter of any year. This was mainly the result of the slight amount of Summer Diarrhœa and of Wasting Diseases amongst infants, due to the coolness of the weather. In the last three months of the year the Death-rate was the lowest on record for the fourth quarter, Respiratory Diseases having caused an unusually slight mortality, owing, as before pointed out, to the mildness of the season.

Chart.

Appended to my report is a chart showing the recorded Death-rate and the average age at death in each week of the year. With regard to the Death-rate, it will be noticed that only once during the year was there any very exceptional mortality. This was in the first four weeks, when a spell of severe weather caused a great number of deaths from Bronchitis and Pneumonia. In the last half of the year the Death-rates were comparatively very good indeed, the highest being only 20 per 1,000, while in no less than nine weeks the mortality fell below 15 per 1,000.

The line on the chart which represents the average age at death, is an exceptional one, owing to the very slight fluctuations it exhibits. The extreme range in the weekly death-age was only 11 years, the lowest point reached being 21 years, and the highest 32 years. As a contrast to this, I may say that in 1893 the range was just twice as great, being from 16 years to 38 years. The great variations usually found in the average age at death have two principal causes. One of these is the occurrence of a large number of deaths during the winter months, amongst old people who succumb to Respiratory Affections, and cause a great increase in the death-age; the other is the extensive prevalence of Summer Diarrhœa, the mortality from which is almost exclusively confined to children, and has the effect of greatly reducing the age at death. Neither of these conditions was present last year, and hence the average age at death varied but little from week to week.

Death-rates in Wards.

I have always felt that considerable interest would attach to a statement of the mortality in the various wards of the city, but owing to frequent changes in their constitution, I have hitherto been unable to form satisfactory estimates of their populations, and could not therefore calculate their death-rates. The recently published census returns contain information as to the number of inhabited houses, and the population living in them, in each of the different wards as at present constituted, and from these data I have obtained the average number of persons to a house. Through the courtesy of Mr. Burrough, Clerk to the Birmingham Overseers, and Messrs. Johnson, Pritchett, Mason, and Priest, who represent the other parishes in the city, I have been supplied with the number of inhabited

Death-rates in Wards (*continued*)

houses in each ward as shown on the rate books in March, 1894; and by multiplying this number by the average number of persons to a house, I have formed an estimate of the present population of every ward. Of course, this method is open to some objection, inasmuch as it assumes that in a given district the proportion of persons to a house remains constant, whereas, under certain circumstances, and particularly in rapidly-growing communities, the type of house erected, and, consequently, the average number of inmates, may vary considerably. But it must be remembered that the universally accepted method of estimating populations is based on an equally, or I think I may even say a still more, doubtful assumption, viz.: that the rate of increase or decrease in the population in one decennium will continue unaltered throughout the next. In 1891 it was found that this assumption had led to a discrepancy of about 10 per cent. between the estimated and the actual population in Birmingham, while in Liverpool the population had been over-estimated by no less than 20 per cent. I cannot conceive that the plan I have adopted will produce results anything like as bad as these.

In calculating the Death-rates in wards, I have been met by another difficulty in the fact that a large number of deaths occur not in the wards they properly belong to, but in Public Institutions. I cannot obtain sufficient information to enable me to allot these deaths to the wards in which the deceased persons had actually resided, and have been obliged to distribute them over the wards in proportion to the total mortality actually recorded in the latter. The deaths in the different wards, and the approximate Death-rates obtained by the method I have described, were as follows:—

	Estimated Population.	No. of Deaths.	Approximate Death-rate.
Rotton Park	38,675	489	15·3
All Saints'	38,787	579	18·0
Ladywood	26,782	392	17·7
St. Paul's	16,596	301	21·9
St. George's	21,457	395	22·2
St. Stephen's	23,638	447	22·8
St. Mary's	15,248	332	26·3
St. Bartholomew's ...	26,383	517	23·7
Market Hall	12,462	183	17·7
St. Thomas's	20,288	285	17·0
St. Martin's	25,266	332	15·9
Edgbaston and Harborne ...	29,137	323	13·4
Deritend	26,915	483	21·7
Bordesley	44,002	578	15·9
Duddeston	23,291	390	20·2
Nechells	32,892	556	20·4
Balsall Heath	35,941	451	15·2
Saltley	29,818	364	14·7

St. Mary's Ward had the highest Death-rate, viz., 26·3 per 1,000, or 8 per 1,000 above the rate for the whole City. Next in order came St. Bartholomew's, St. Stephen's, St. George's, St. Paul's, Deritend, Duddeston, and Nechells, all of which had higher rates than the whole town. The lowest mortality was in Edgbaston and Harborne Ward, closely followed by

Death-rates in Wards (*continued*).

Saltley, Balsall Heath, Rotton Park, Bordesley, and St. Martin's. Generally speaking, the older and more crowded parts suffered most, while the more suburban wards, which are largely of newer growth, compare very favourably with the rest of the City.

An examination of the detailed mortality in St. Mary's Ward, which appears to have been the most unhealthy part of the town, shows that the Deaths from almost all causes were more numerous there than in other parts of the City. Certain diseases, however, stand out more prominently than others in this connection. Whooping Cough and Enteritis each caused about three times as many Deaths in St. Mary's as elsewhere; Bronchitis caused twice as many; and Debility half as many again. All these are diseases which are largely dependent, at any rate in their fatal results, upon neglect and want.

Distribution of Deaths amongst the ætal periods.

The next Table shows the Deaths at certain specified age-periods during the last three years:—

	1894.	1893.	1892.
Under 1 year	2,539	3,146	2,664
Between 1 and 5 years	1,441	1,306	1,570
„ 5 „ 15 „	389	334	375
„ 15 „ 25 „	426	436	343
„ 25 „ 45 „	1,285	1,556	1,289
„ 45 „ 65 „	1,561	1,961	1,812
At 65 years and upwards... ..	1,305	1,706	1,589

The year appears to have been a very favourable one for persons over forty-five years of age, the Deaths amongst them having numbered only 2,866 against 3,667 in 1893, and 3,401 in 1892. The Deaths under one year of age were fewer than usual; between one and five years they were about equal to the average number; from five to fifteen, and from fifteen to twenty-five they were rather numerous, while from twenty-five to forty-five the mortality was fairly normal.

Infant Mortality.

The Deaths of Infants under one year old were in the proportion of 164 per 1,000 Births; in other words, one-sixth of the children born failed to reach the first anniversary of their birth. This Infantile Death-rate was lower than the average in the eight preceding years, which was 172. The

Infant deaths per 1,000 births in large towns.

subjoined Table shows the Infantile Death-rates per 1,000 Births in the ten large towns.

	1894.	1893.	1892.	1891.	1890.
33 large towns	152	181	164	—	—
London	143	164	155	154	163
Liverpool...	179	211	181	188	195
Manchester	160	203	179	192	187
Birmingham	**164**	**198**	**166**	**165**	**181**
Leeds	155	206	169	177	172
Sheffield	157	191	171	170	195
Bristol	150	141	147	146	151
Bradford	145	197	155	181	169
West Ham	138	170	153	150	161
Nottingham	174	170	167	169	159

Two of the above towns had higher Infantile Death-rates than Birmingham, viz., Liverpool and Nottingham. In the 33 large towns the rate was much lower than it was here.

The average age at Death during each of the last two years is given below :— Average age at death.

	1894.	1893.
First Quarter ...	27 years and 5 months.	31 years and 7 months.
Second „ ...	25 „ „ 4 „	30 „ „ 3 „
Third „ ...	27 „ „ 0 „	22 „ „ 7 „
Fourth „ ...	28 „ „ 8 „	31 „ „ 8 „
Whole Year ...	27 „ „ 1 „	29 „ „ 0 „

A chart appended to my Report shows the average age at Death in each week of the year. Chart.

SPECIFIED CAUSES OF DEATH.

The Deaths recorded during the year were distributed among the different classes of disease as shown below :— Specified causes of Death.

Class I.—Zymotic Diseases	...	1,367, or 15·3 per cent.	of total mortality.
„ II.—Parasitic Diseases	...	4, or 0·0	„ „
„ III.—Dietic Diseases	...	29, or 0·3	„ „
„ IV.—Constitutional Diseases		1,304, or 14·6	„ „
„ V.—Developmental Diseases		774, or 8·7	„ „
„ VI.—Local Diseases...	...	4,476, or 50·0	„ „
„ VII.—Violent Deaths	...	343, or 3·8	„ „
„ VIII.—Deaths from ill-defined and not specified causes		649, or 7·3	„ „

A detailed statement of the various causes of Death will be found on pages 18 to 21.

CLASS 1.—*ZYMOTIC DISEASES.*

This is a large and important class, including all diseases of a Miasmatic, Diarrhœal, Malarial, Zoogenous, Venereal, and Septic nature. It had 1,367 Deaths allotted to it, giving a Death-rate of 2·8 per 1,000 of the population, against 3·6 in 1893. The chief part of the mortality was due to the Zymotic Diseases.

Seven Principal Zymotic Diseases,

to which 1,196 Deaths were attributed against 1,271, the average in the previous eight years. The Zymotic Death-rate was 2·4 per 1,000, as compared with an average of 2·7 in the same eight years. Only twice in the previous eight years had the Zymotic Death-rate been so low. In the early years of my tenure of office, the figures were sometimes alarmingly high, 5·6, 7·3, and 5·9 being recorded in the three successive years 1873, 1874, and 1875. The great difference between these Death-rates and those recently recorded serves to show how urgent the need for sanitary improvements was at that time, and how fully the introduction of a better sanitary system has been justified by subsequent results. Zymotic Death-rate

Glancing for a moment at the diseases individually, I find that Smallpox, Measles, and Typhoid Fever caused more than the average number of Deaths, while Scarlet Fever, Diphtheria, Whooping Cough, and Diarrhœa were less fatal than usual.

Zymotic Death-rates in large towns.

The Death-rates from the seven principal Zymotic Diseases in the ten large towns are given in the Table below :—

	1894.	1893.	1892.	1891.	1890.
33 large towns	2·4	3·2	2·6	—	—
London	2·7	3·1	2·8	2·3	2·9
Liverpool	3·4	3·9	2·9	3·6	4·7
Manchester	2·4	3·7	3·0	3·1	4·0
Birmingham	**2·4**	**3·0**	**2·6**	**2·0**	**2·9**
Leeds	2·0	3·5	2·2	2·4	2·4
Sheffield	2·3	3·5	3·1	2·7	3·7
Bristol	2·0	1·6	2·1	1·9	2·1
Bradford	1·8	3·4	1·7	2·3	2·3
West Ham	3·2	3·4	2·9	2·3	4·1
Nottingham	2·3	2·6	2·3	2·5	1·9

The Zymotic Death-rate in Birmingham was identical with that of the 33 large towns, and also with that of Manchester; it was a little lower than that of London, and much lower than those of Liverpool and West Ham.

Smallpox.

Smallpox.

The Deaths registered during the year from Smallpox numbered 171, a higher figure than in any year since 1875. In the previous eight years the average number was 10. So large a sacrifice of life to a disease which is almost entirely preventable by efficient vaccination is to be greatly regretted.

Smallpox Death-rate.

The Smallpox Deaths were equal to a rate of ·35 per 1,000, against ·04 in the thirty-three large towns. Particulars as to cases will be found on page 36.

Measles.

Measles.

The year was marked by a rather large mortality from this disease, which caused 316 deaths, against an average of 240. The singular want of uniformity in the mortality from Measles is seen by comparing this high figure with the very low one recorded in the previous year, viz., 48. The rapid fluctuations to which the disease is liable are, however, still better shown by taking the Deaths quarter by quarter:—

	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.
1893	8	9	8	23
1894	77	204	34	1

These figures show that though practically dormant until the end of 1893, in the first six months of 1894 the disease obtained such a hold in the town as to cause in that period 281 deaths; and then it died away as suddenly as it had arisen. How to deal with such a disease is a great difficulty. At present no information reaches this office except when a case terminates fatally, and it is then altogether too late to take any satisfactory steps to prevent the spread of the infection. What is wanted, of course, is the isolation of every patient from the very commencement of the illness, but this cannot be completely carried out, because Measles is infective for at least three days before the characteristic rash appears. Isolation should, nevertheless, be practised as soon as the disease is recognised, for the longer the patient is allowed to mix with others the greater will the spread of infection naturally be. Unfortunately, in the great

majority of houses, even when the nature of the illness is known, isolation from the rest of the family is difficult, if not impossible, owing to want of room. Notification of cases of Measles is in force in some few towns, but I have not been able to discover the advantage of it. The adoption of the notification of Measles in Birmingham would be very costly, and as far as I can judge would be useless to stamp out or even materially mitigate the disease. Measles (*continued*).

The Deaths from Measles are represented on the Map at the end of my report by red crosses. Map.

Scarlet Fever.

The Deaths from Scarlet Fever numbered 75, against an average of 91 in the previous eight years. They give a rate of ·15 per 1,000, compared with ·21 in the thirty-three large towns. Scarlet Fever. Scarlet Fever Death-rate.

The Deaths from Scarlet Fever are indicated on the Map in the Appendix by red spots. Map

Diphtheria.

The Deaths attributed to Diphtheria amounted to 50, or nine less than the average for the eight preceding years. They were equal to a rate of ·10 per 1,000. This was not quite so good as in 1891 and 1893, but better than in any other year. The figures for the last nine years have been as follows:— Diphtheria. Diphtheria Death-rate.

Death-rate from Diphtheria per 1,000 Persons Living.

1886	1887	1888	1889	1890	1891	1892	1893	1894
·17	·14	·10	·13	·14	·09	·14	·09	·10

In the thirty-three largest towns the Death-rate was ·38, or nearly four times as high as in Birmingham.

The streets in which fatal cases of Diphtheria occurred are marked on the Map with blue spots. Map.

Whooping Cough.

This disease caused 219 deaths, against an average of 272, about one-fifth of the total Zymotic mortality being due to it. General sanitary improvements have no effect upon it, and until some special means are taken it will still continue to cause a great part of the Zymotic mortality. Whooping Cough.

Fever.

One hundred and nine Deaths were ascribed to Fever, 105 being Typhoid and four Simple Continued. This was the largest mortality for many years past, the average number of Deaths in the last eight years having been 70. The Deaths were at the rate of ·22 per 1,000, and were a little more numerous than in the thirty-three large towns, where the rate was ·19. Fever. Fever Death-rate

The Fever Death-rates for the past nine years have been as follows:—

Death-rate from Fever per 1,000 Persons Living.

1886	1887	1888	1889	1890	1891	1892	1893	1894
·15	·18	·15	·10	·14	·17	·08	·21	·22

The Deaths from Typhoid Fever are marked on the Map with blue crosses. Map.

Diarrhœa.

Diarrhœa.

Including those set down to Dysentery and English Cholera, there were 256 Deaths attributed to Diarrhœa, or less than half as many as usual. In 1893 the Deaths numbered 828, and last year's figure was the smallest ever recorded in Birmingham.

Death-rates from Smallpox, Scarlet Fever, Diphtheria, and Fever in large towns.

The following table shows the rate of mortality in the thirty-three large towns from Smallpox, Scarlet Fever, Diphtheria, and Fever:—

	Death-rate per 1,000 from			
	Smallpox.	Scarlet Fever.	Diphtheria.	Fever.
33 large Towns	0·04	0·21	0·38	0·19
London	0·02	0·22	0·61	0·15
West Ham	0·21	0·15	0·80	0·19
Croydon	0·00	0·07	0·29	0·06
Brighton	0·00	0·03	0·22	0·09
Portsmouth	0·02	0·09	0·19	0·16
Plymouth	0·06	0·09	0·06	0·13
Bristol	0·07	0·07	0·21	0·10
Cardiff	0·01	0·05	0·46	0·05
Swansea	0·00	0·24	0·11	0·13
Wolverhampton ...	0·06	0·63	0·41	0·20
Birmingham ...	**0·35**	**0·15**	**0·10**	**0·22**
Norwich	0·00	0·14	0·17	0·22
Leicester	0·00	0·16	0·07	0·15
Nottingham	0·01	0·23	0·08	0·28
Derby	0·00	0·15	0·05	0·26
Birkenhead	0·01	0·11	0·39	0·16
Liverpool	0·04	0·45	0·19	0·59
Bolton	0·00	0·08	0·08	0·22
Manchester	0·04	0·22	0·28	0·19
Salford	0·01	0·55	0·31	0·31
Oldham	0·17	0·15	0·28	0·11
Burnley	0·00	0·53	0·30	0·28
Blackburn	0·00	0·07	0·14	26
Preston	0·01	0·11	0·07	0·26
Huddersfield	0·00	0·23	0·22	0·12
Halifax	0·04	0·03	0·13	0·06
Bradford	0·12	0·32	0·08	0·13
Leeds	0·01	0·13	0·20	0·13
Sheffield...	0·00	0·12	0·19	0·19
Hull	0·01	0·18	0·14	0 19
Sunderland	0·00	0 18	0·07	0·60
Gateshead	0·01	0·06	0·23	0·25
Newcastle	0·00	0·14	0·16	0·13

Birmingham had a higher mortality from Smallpox than any other town, but fourteen towns had higher Death-rates from Scarlet Fever, twenty-five had higher rates from Diphtheria, and nine had higher rates from Typhoid Fever.

Disease Map.

Disease Map.

Appended to my report is a Map of the City, on which the Deaths from Scarlet Fever, Measles, Diphtheria, and Typhoid Fever are indicated by marks placed upon the streets in which such Deaths occurred. As far as possible the Deaths in Public Institutions have been shown as if they had occurred at the patients' homes. The Map shows that all four diseases were spread more or less widely over the town, and were by no means confined to particular localities. There is, however, a

serious aggregation of crosses denoting Typhoid Fever Deaths in Pope Street, while in the Brookfields neighbourhood there is a rather unusually large number of marks indicating Deaths from Diphtheria. Disease Map (*continued*).

II.—*PARASITIC*, AND III.—*DIETIC DISEASES.*

The Deaths from Parasitic Diseases numbered 4, and those from Dietic Diseases 29. Parasitic and Dietic Diseases.

IV.—*CONSTITUTIONAL DISEASES.*

These diseases caused 1,304 Deaths, equal to a rate of 2·7 per 1,000, against 3·1 in 1893. The Deaths from Cancer were not quite so many as in the preceding year, though rather more than in 1892. Phthisis showed a great reduction, in which other forms of Tuberculosis also shared. Constitutional Diseases.

V.—*DEVELOPMENTAL DISEASES.*

The Deaths from Developmental diseases numbered 774, giving a rate of 1·6 per 1,000, against 2·0 in 1893. The Deaths from Old Age were 153 fewer than in 1893. Developmental Diseases.

VI.—*LOCAL DISEASES.*

This large and very important class of diseases had 4,476 Deaths placed in it, giving a rate of 9·1 per 1,000, against 10·4 in the previous year. Diseases of the Heart caused fewer Deaths than usual, but the great bulk of the decrease in this class was under the headings Bronchitis and Pneumonia. Local Diseases.

VII.—*VIOLENT DEATHS.*

The Deaths in this class, comprising those from Accident, Negligence, Suicide, Homicide, and Murder, amounted to 343. I am pleased to find that the Deaths from Accidental Suffocation, though above the very low figure for 1893, were still much lower than usual. Violent Deaths.

VIII.—*ILL-DEFINED AND NOT SPECIFIED CAUSES.*

The Deaths from ill-defined and not specified causes numbered 649. Owing to a great reduction in Deaths from Debility, this figure was much lower than in 1893. Deaths from ill-defined and not specified causes.

CERTIFICATION OF CAUSES OF DEATH.

According to the figures given in the Registrar General's Annual Summary, 92 per cent. of the Deaths in Birmingham were registered on the certificates of qualified Medical Practitioners. In the 33 large towns the percentage was 91. Inquests were held respecting 2·9 per cent. of the Deaths, and the remaining 5·1 per cent. were uncertified. Certification of causes of death.

Table of Deaths Registered in the City of Birmingham during the Year ending December 29th, 1894.

1894.	AGES.							WARDS.																		Institutions.	City.
	0–1	1–5	5–15	15–25	25–45	45–65	65 and up.	Rotton Park.	All Saints'.	Ladywood.	St. Paul's.	St. George's.	S Stephen's	St. Mary's.	St. Bartholomew's.	Market Hall	St. Thomas's	St. Martin's.	Edgbaston & Harborne.	Deritend.	Bordesley.	Duddeston.	Nechells.	Balsall Heath	Saltley.		
ALL CAUSES	2539	1441	389	426	1285	1561	1305	489	579	392	301	395	447	332	517	183	285	332	323	483	578	390	556	451	364	1549	8946
I.—Specific Febrile or Zymotic Diseases.																											
1.—Miasmatic Diseases.																											
Small-pox	32	13	8	23	74	15	6	1	1	..	1	1	..	..	1	1	2	..	..	1	..	..	..	..	..	162	171
Measles	62	238	14	2	..	..	..	28	26	15	12	26	28	14	23	3	5	7	2	29	20	15	22	20	7	14	316
Scarlet Fever	4	46	21	3	1	..	..	1	4	1	1	1	1	..	1	1	1	1	1	2	2	..	..	..	2	55	75
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough	89	126	4	..	..	..	..	7	37	15	11	11	13	23	10	3	6	7	4	11	16	9	11	12	10	3	219
Diphtheria	2	27	20	..	1	..	..	1	17	2	6	..	..	..	1	..	1	..	2	5	2	1	2	3	..	7	50
Membranous Croup	5	30	6	..	..	..	..	1	1	..	1	2	2	4	2	..	1	..	..	3	..	2	5	1	3	13	41
Simple Continued, or Ill-defined Fever	1	2	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	1	..	4
Enteric or Typhoid Fever	2	3	22	32	33	12	1	1	5	8	6	2	3	2	5	2	3	3	6	6	9	6	3	4	7	24	105
Influenza	2	1	..	5	5	12	4	4	2	1	1	..	..	1	5	..	..	..	4	2	2	2	1	1	..	3	29
Other Miasmatic Diseases	4	12	2	..	1	..	..	..	4	..	..	3	1	1	..	1	2	..	1	1	..	2	..	..	3	..	19
2.—Diarrhœal Diseases.																											
Simple Cholera..	..	3	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Diarrhœa, Dysentery..	194	23	2	1	3	8	22	26	14	10	8	17	16	11	19	7	8	11	7	18	13	13	24	9	10	12	253
3.—Malarial Diseases.																											
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ague	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
4.—Zoogenous Diseases																											
Cowpox and effects of Vaccination	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases (*e.g.*, Hydrophobia, Glanders, Splenic Fever)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5.—Venereal Diseases.																											
Syphilis	24	2	1	1	2	2	..	3	2	1	1	1	3	1	2	1	1	1	1	2	..	1	2	2	1	6	32
Gonorrhœa, Stricture of Urethra.. ..	..	..	..	..	2	5	3	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	7	10
6.—Septic Diseases.																											
Erysipelas	3	1	..	..	2	4	5	1	..	..	..	1	..	..	1	..	..	..	1	2	2	..	1	..	1	5	15
Pyæmia, Septicæmia	1	..	1	1	2	1	..	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2	6
Puerperal Fever	..	..	..	8	10	..	..	2	1	..	1	..	2	..	..	..	1	..	..	3	..	2	1	4	1	..	18
II.—Parasitic Diseases.																											
Thrush, and other Vegetable Parasitic Diseases	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2
Worms, Hydatids, and other Animal Parasitic Diseases	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*	*q*	*r*	*s*	*t*	*u*	*v*	*w*	*x*	*y*	*z*	*

III.—Dietic Diseases.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	*
Want of Breast Milk, Starvation	4	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	4
Scurvy	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Chronic Alcoholism, Delirium Tremens	..	..	..	1	13	9	1	1	1	..	..	..	..	2	1	2	1	3	1	4	2	1	1	1	..	3	24
IV.—Constitutional Diseases.																											
Rheumatic Fever, Rheumatism of the Heart	..	1	5	9	14	7	..	1	4	4	2	1	1	1	..	3	2	1	..	1	..	3	1	2	4	5	36
Rheumatism	..	..	1	1	..	5	4	..	..	..	..	..	1	..	2	..	..	2	..	1	1	..	..	1	2	1	11
Gout	..	..	..	..	1	4	2	..	..	..	1	..	..	..	..	2	..	..	..	1	1	..	1	..	..	1	7
Rickets	14	21	1	..	..	..	..	2	4	..	..	1	1	1	4	..	1	1	..	2	6	1	3	2	1	6	36
Cancer, Malignant Disease	..	..	..	1	61	171	70	17	11	13	7	10	5	7	13	6	12	14	18	12	25	10	16	14	10	83	303
Tabes Mesenterica	31	14	..	2	..	..	..	9	2	4	3	4	4	..	2	..	2	..	..	1	5	1	4	..	4	2	47
Tubercular Meningitis, Acute Hydrocephalus	15	38	12	3	..	..	..	8	9	2	..	3	1	..	5	1	2	6	4	3	11	..	..	3	1	9	68
Phthisis	4	9	17	105	333	145	17	31	40	28	17	20	25	21	35	16	14	30	18	34	45	27	25	31	27	146	630
Other forms of Tuberculosis, Scrofula	29	34	15	17	11	7	1	5	8	7	9	4	6	2	3	2	2	5	2	6	6	5	9	4	..	29	114
Purpura, Hæmorrhagic Diathesis	3	1	1	1	3	..	..	2	..	..	..	..	1	..	..	..	..	..	1	..	2	..	1	..	1	1	9
Anæmia, Chlorosis, Leucocythœmia	..	..	2	3	3	5	2	..	2	2	..	..	..	1	..	..	1	1	1	..	1	..	..	1	..	5	15
Glycosuria, Diabetes Mellitus	..	..	4	2	5	11	6	2	2	1	1	..	1	1	..	..	..	..	5	..	..	..	1	1	4	9	28
Other Constitutional Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
V.—Developmental Diseases.																											
Premature Birth	345	1	..	..	..	..	..	30	32	18	18	21	27	11	35	4	8	8	15	16	22	16	25	17	17	6	346
Atelectasis	21	..	..	..	..	..	..	1	1	1	2	1	2	1	1	1	1	..	2	..	4	..	1	..	1	1	21
Congenital Malformations	16	2	1	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	4	1	2	..	2	1	6	19
Old Age	..	..	..	..	..	19	369	21	19	26	15	19	12	7	13	10	9	13	33	15	25	14	21	21	12	83	388
VI.—Local Diseases.																											
1.—Diseases of Nervous System.																											
Inflammation of Brain or Membranes	47	60	10	13	16	12	7	10	11	7	7	9	7	2	10	3	4	7	7	9	19	10	10	7	8	18	165
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	..	..	..	2	29	138	137	19	14	12	14	14	10	12	12	12	9	9	21	12	23	12	18	19	13	51	306
Insanity, General Paralysis of the Insane	..	1	2	2	17	9	9	3	1	..	..	..	..	..	1	..	..	..	1	..	1	1	..	1	..	31	40
Epilepsy	1	4	1	6	18	12	..	1	4	..	..	1	..	2	3	1	1	..	..	3	3	2	2	3	..	16	42
Convulsions	158	28	3	..	2	..	..	10	12	6	8	7	12	10	23	4	8	8	9	19	14	5	11	12	7	6	191
Laryngismus Stridulus (Spasm of Glottis)	4	4	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	2	..	2	..	..	1	..	..	8
Disease of Spinal Cord, Paraplegia, Paralysis Agitans	1	..	1	4	4	14	12	1	3	..	2	3	4	1	2	..	..	1	2	1	..	..	1	3	1	11	36
Other Diseases of Nervous System	17	14	10	6	12	10	4	5	6	2	1	1	3	1	4	3	2	..	3	2	9	1	8	4	4	14	73
2.—Diseases of Organs of Special Sense. (*e.g.*, of Ear, Eye, and Nose).	4	5	2	2	1	..	..	..	1	..	..	..	1	..	2	..	1	1	2	..	.	1	..	..	1	4	14
3.—Diseases of Circulatory System.																											
Pericarditis	..	2	4	2	3	1	2	..	1	..	..	..	..	3	..	..	1	..	..	..	1	..	..	1	1	6	14
Acute Endocarditis	..	..	1	1	7	2	..	1	..	1	..	2	1	..	..	1	..	..	..	1	2	..	1	..	..	1	11
Valvular Diseases of Heart	1	..	17	11	27	43	29	8	10	4	5	9	4	5	2	1	4	3	5	4	18	4	3	7	3	29	128
Other Diseases of Heart	16	1	30	24	78	169	115	18	30	22	9	24	8	11	28	13	11	23	29	27	29	19	25	31	23	53	433
Aneurism	..	..	..	..	3	7	1	2	.	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	1	5	11
Embolism, Thrombosis	..	..	..	1	3	4	1	..	..	..	1	..	..	..	1	..	..	3	..	..	1	..	..	..	1	2	9
Other Diseases of Blood Vessels	2	..	..	..	..	1	5	..	..	..	1	..	..	..	..	..	..	..	..	1	2	..	1	..	2	1	8

Table of Deaths Registered in the City of Birmingham during the Year ending December 29th, 1894—(*continued*).

1894.	AGES. 0—1	1—5	5—15	15—25	25—45	45—65	65 and up.	WARDS. Rotton Park.	All Saints'.	Ladywood.	St. Paul's.	St. George's.	St. Stephen's.	St. Mary's.	St. Bartholomew's.	Market Hall.	St. Thomas's.	St. Martin's.	Edgbaston & Harborne.	Deritend.	Bordesley.	Duddeston.	Nechells	Balsall Heath	Saltley.	Institutions.	City.
Local Diseases—*continued.*																											
4.—Diseases of Respiratory System.																											
Laryngitis	7	12	3	..	..	..	1	3	2	..	1	..	..	1	6	..	1	..	1	2	2	1	..	2	1	..	23
Croup	3	11	4	..	..	..	..	..	..	2	1	..	2	..	..	1	..	..	..	3	1	2	6	..	..	..	18
Emphysema, Asthma	..	..	..	..	3	13	5	..	1	1	..	3	1	2	1	..	1	1	1	1	1	1	2	1	..	3	21
Bronchitis	338	204	11	10	61	223	241	56	68	49	34	53	96	68	73	19	54	52	25	67	62	64	95	51	41	61	1088
Pneumonia	140	213	30	20	109	123	47	44	30	32	22	22	36	14	46	12	21	29	23	51	49	35	56	39	34	87	682
Pleurisy	4	11	1	3	10	8	4	1	2	1	1	1	2	1	2	1	1	1	1	3	2	..	1	3	2	15	41
Other Diseases of Respiratory System	33	15	4	2	25	29	10	1	13	4	5	12	..	3	2	7	8	10	4	..	7	13	3	10	7	9	118
5.—Diseases of Digestive System.																											
Dentition	54	35	..	..	..	..	..	3	9	3	4	5	7	2	10	1	5	4	2	5	4	4	7	4	10	..	89
Sore Throat, Quinsy	2	3	5	..	1	..	..	4	..	..	2	..	1	..	..	..	..	..	..	1	..	..	..	1	..	2	11
Diseases of Stomach	34	8	2	7	5	13	11	1	4	2	2	5	5	3	8	1	..	9	2	8	6	5	5	5	4	5	80
Enteritis	93	25	8	4	9	8	1	4	11	3	4	9	14	12	14	3	6	4	2	2	10	3	9	5	3	30	148
Obstructive Diseases of Intestines	6	1	2	3	7	14	12	3	1	4	..	1	4	..	1	1	2	..	3	1	2	3	3	2	1	13	45
Hernia	2	3	..	2	2	12	4	..	1	1	1	..	..	1	1	..	..	2	..	..	1	..	1	1	1	14	25
Peritonitis	1	3	8	4	10	5	4	1	4	2	..	1	3	1	2	..	..	1	1	2	..	1	3	4	..	9	35
Ascites	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cirrhosis of Liver	..	..	..	1	21	49	6	4	2	5	2	2	3	3	4	4	1	2	5	10	4	3	3	7	3	10	77
Jaundice, and other Diseases of Liver	8	1	3	1	9	16	6	1	5	3	..	2	..	..	4	..	3	2	2	2	2	2	3	3	1	9	44
Other Diseases of Digestive System	6	7	..	2	6	4	3	..	2	3	1	..	..	2	..	..	..	3	..	2	1	1	3	..	1	9	28
6 & 7.—Diseases of Lymphatic System and of Ductless Glands.																											
Diseases of Lymphatic System	1	1	..	..	..	3	2	..	..	1	..	..	1	..	..	..	..	..	..	1	1	..	..	..	1	2	7
Diseases of Spleen	..	1	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	3
Bronchocele, Addison's Disease	..	..	2	1	2	1	1	..	..	1	..	..	..	1	..	..	..	..	..	..	2	..	..	..	..	3	7
8.—Diseases of Urinary System.																											
Acute Nephritis	1	7	3	5	8	14	4	1	2	2	..	3	2	5	..	..	2	2	3	1	1	..	1	2	1	14	42
Bright's Disease, Albuminuria	1	2	2	11	34	53	25	8	3	6	2	4	6	3	2	2	6	4	5	2	4	5	4	9	3	50	128
Disease of Bladder or of Prostate	1	..	2	..	..	4	11	..	..	1	2	..	..	..	2	..	..	..	1	1	..	..	..	1	..	10	18
Other Diseases of the Urinary System	..	1	1	2	9	8	6	3	..	2	1	1	..	1	..	1	2	..	1	3	1	..	1	3	1	6	27
9.—Diseases of Reproductive System. (a) Of Organs of Generation.																											
Male Organs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Female Organs	..	..	..	6	18	10	1	2	..	6	2	..	1	2	1	1	..	..	2	2	1	2	..	1	1	11	35
	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	*m*	*n*	*o*	*p*	*q*	*r*	*s*	*t*	*u*	*v*	*w*	*x*	*y*	*z*	*

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	*
(B) Of Parturition.																											
Abortion, Miscarriage	..	..	..	..	5	..	..	1	1	..	..	.	..	..	..	..	..	2	..	..	1	..	..	..	..	..	5
Puerperal Convulsions	..	..	..	2	1	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
Placenta Prævia, Flooding	..	..	..	..	7	..	..	..	1	..	1	..	..	..	1	..	1	..	1	1	..	..	..	1	..	..	7
Other Accidents of Child-birth	..	..	..	4	28	1	..	3	2	..	2	..	3	..	4	..	3	..	..	2	1	2	2	3	5	1	83
10.—Diseases of Bones and Joints.																											
Caries, Necrosis	..	4	..	..	3	3	1	..	1	1	..	..	..	..	..	2	..	1	1	..	..	..	1	..	..	4	11
Arthritis, Ostitis, Periostitis	1	4	3	1	1	1	4	..	..	1	1	..	..	..	..	..	..	..	.	..	2	..	..	1	..	10	15
Other Diseases of Bones and Joints	..	2	7	7	7	4	2	1	3	1	1	1	1	..	2	..	1	1	1	1	4	..	..	1	1	9	29
11.—Diseases of Integumentary System.																											
Carbuncle, Phlegmon	3	..	..	2	1	2	2	..	2	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	1	4	10
Other Diseases of Integumentary System	12	1	..	1	3	2	15	3	2	3	1	1	2	..	1	..	2	2	..	2	..	..	1	3	3	8	34
VII.—Deaths from Violence.																											
1.—Accident or Negligence.																											
Fractures and Contusions	..	3	13	4	23	21	18	2	3	2	..	..	1	..	3	3	1	1	..	..	..	..	..	2	1	63	82
Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2
Burn, Scald	..	27	15	4	6	6	..	1	..	1	1	..	..	..	2	..	..	..	..	1	1	..	..	..	..	51	58
Poison	..	..	..	4	5	2	..	..	1	1	..	..	..	..	1	..	1	1	..	..	2	..	..	..	1	3	11
Drowning	1	2	7	3	5	4	3	3	2	2	..	1	..	2	5	..	..	..	..	2	4	..	1	..	3	..	25
Suffocation	70	1	..	1	..	1	..	5	4	4	2	2	3	6	8	6	1	3	2	5	8	2	8	2	2	..	73
Otherwise	4	3	4	3	3	7	5	..	1	..	..	2	2	..	..	1	..	..	..	1	1	1	4	2	..	14	29
2.—Homicide.																											
Manslaughter	..	..	1	1	2	3	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	6	8
Murder	..	..	1	3	..	1	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	1	5
3.—Suicide.																											
Gunshot Wounds	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	3
Cut, Stab	..	..	..	..	4	5	..	..	2	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	4	9
Poison	..	..	1	1	7	4	3	..	1	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	12	16
Drowning	..	..	..	..	5	1	..	2	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	6
Hanging	..	..	..	1	5	4	1	..	..	1	..	..	3	..	1	1	3	2	..	..	.	..	..	..	..	..	11
Otherwise	..	..	..	1	2	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4
4.—Execution.																											
Hanging	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
VIII.—Deaths from Ill-defined and not Specified Causes.																											
Dropsy	..	1	..	..	1	..	2	..	..	1	1	..	.	..	..	..	..	..	..	..	1	..	1	..	..	..	4
Debility, Atrophy, Inanition, Marasmus	547	58	3	..	..	5	2	38	42	25	28	43	39	34	36	9	26	22	17	32	39	48	68	28	30	11	615
Mortification	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tumour	..	..	..	1	4	4	3	..	..	..	2	..	..	..	..	1	..	..	..	..	1	1	..	..	..	7	12
Abscess	4	2	..	1	..	2	1	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	2	1	2	2	10
Hæmorrhage	2	..	..	..	..	..	1	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3
Causes Ill-defined or not Specified	1	..	..	1	2	1	..	..	2	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	5

METEOROLOGY AND MORTALITY.

Year.

The weather of 1894 was very different from that of 1893, and very much more conducive to the maintenance of life and health. With the exception of one week in January, there was no very severe weather; in fact all the six winter months had mean temperatures above the average. At the same time there was no really hot weather, May, June, August, and September having very low temperatures, while July, though a little warmer than usual, was not associated with any extreme readings such as are sometimes recorded. As a matter of fact, the maximum temperature during the year was only 80°·7, the highest reading previously recorded being 85°·6. The effect of such equable weather was chiefly seen in the great reduction in the mortality from Chest Complaints in the winter months and from Diarrhœa in the summer.

Temperature. January.

During the spell of cold weather in *January*, the maximum temperatures on five successive days were 29°, 26°, 19°, 26°, and 27°, while on the coldest night a temperature of 10°·8 was registered. In the three subsequent weeks, Death-rates of 31·2, 28·4, and 25·5 per 1,000 were recorded. Fortunately in the remaining part of January the weather became much milder, so much so, indeed, that the mean temperature for the whole month was above the average.

February, March, & April.

February, *March*, and *April* all had temperatures greatly in excess of the average; but with the advent of *May* the excess was converted into a deficit. In the latter month the maximum temperature was only 63°, a reading no less than 14° lower than was recorded in the same month in 1892. As late as the 21st of May, a minimum temperature of 32°·8, or just a trifle over freezing point, was observed. The cool weather

May.

June.

July.

August.

September.

continued into *June*, but the deficiency of warmth was less than in May, and was most noticeable in the early part of the month. *July* opened with very warm weather, and the mean temperature for the whole month was fairly high. *August*, however, was distinctly cold. The highest reading recorded was only 69°·8, a temperature which was exceeded no less than fourteen times in August, 1893. The amount of sunshine was only 83 hours, against an average of 137. *September* was equally below the average temperature, and equally poor in sunshiny weather. Under such conditions it was but natural that the Diarrhœal mortality should be as small as it proved to be. Dr. Ballard has stated that extensive Diarrhœal mortality does not begin until the temperature of the earth four feet from the surface has reached 56°. Last year it never rose above 54°·1.

October and November.

October was a little warmer than usual, and *November* was

much more so. *December*, also, was a great deal milder than it generally is, the mean temperature being 40°, against 37°, 40°, 37°, 29°, 39°, 34°, and 39° successively in the seven preceding years. December.

The rainfall for the year was a little above the average. There was a very large excess of rain in July, and also in February and October, while January, April, June, and November had rather more rainfall than usual. August, on the other hand, was very dry. Rainfall.

There were 95 days during the year on which no sunshine was recorded, and the total amount was 113 hours less than the average in the seven previous years. Sunshine.

The following table shows the mean temperature and total rainfall for each month of the year :—

MONTHS.	TEMPERATURE.			RAINFALL.		
	Mean Temperature in Degrees and Parts.	Average for 7 years, 1887–1893 inclusive	Above or below the average.	Rainfall for Month in Inches and Parts.	Average for 7 years, 1887–1893 inclusive.	Above or below the average.
January	36°7	36°4	+ 0°3	1·61	1·53	+ 0·08
February.....	39·9	37·6	+ 2·3	2·05	1·08	+ 0·97
March	42·6	39·5	+ 3·1	1·05	1·49	— 0·44
April	48·5	44·0	+ 4·5	1·62	1·52	+ 0·10
May	47·1	51·7	— 4·6	2·01	2·31	— 0·30
June	55·6	57·7	— 2·1	2·16	1·93	+ 0·23
July.....	59·8	58·9	+ 0·9	3·36	2·31	+ 1·05
August	56·4	59·0	— 2·6	2·12	3·12	— 1·00
September	52·1	55·1	— 3·0	1·70	1·89	— 0·19
October	47·2	47·0	+ 0·2	3·48	2·55	+ 0·93
November	45·1	42·4	+ 2·7	2·48	2·34	+ 0·14
December	40·1	37·0	+ 3·1	1·88	2·05	— 0·17
Year.....	47·6	47·2	+ 0·4	25·52	24·12	+ 1·40

On the next page will be found a table giving certain weekly meteorological data, side by side with the mortality statistics for the same period, and at the beginning of my Report there is a chart showing the relations of the number of Deaths to the principal meteorological conditions on each day of the year.

Meteorology, Births, Deaths, and Mortality from certain Prevalent Diseases for each Week of 1894.

Week.		Temperature of the Air.			Temperature of the Ground.		Hours of Sunshine.	Horizontal Movement of Air in Miles.	Mean Humidity, complete Saturation = 100.	Rainfall in inches and parts.	Births.	Deaths at				Deaths from								
Number.	Date of Ending.	Highest during week.	Lowest during week.	Mean Temperature.	1 foot deep.	4 feet deep.						All Ages.	Under 1 year.	1 to 5 years.	Over 65.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhœa.	Phthisis.	Respiratory Diseases.
	1894.	°	°	°	°	°																		
1	Jan. 6	41·7	10·8	26·5	36·2	45·3	2·3	2438	...	0·140	321	225	77	36	30	6	1	...	...	6	1	3	16	79
2	„ 13	53·6	20·3	38·7	36·4	44·3	10·5	2253	90	0·220	356	295	86	41	47	2	2	1	...	2	2	2	19	111
3	„ 20	50·0	34·4	42·2	41·7	43·9	9·3	2791	88	0·700	330	268	85	45	45	6	4	3	2	5	3	2	10	84
4	„ 27	50·0	26·0	38·6	40·1	44·2	9·5	2899	85	0·345	324	241	66	39	41	7	3	3	1	4	3	4	14	72
5	Feb. 3	51·5	31·2	39·9	39·9	44·0	22·4	3267	82	0·425	328	190	58	40	21	5	6	1	...	5	4	3	13	58
6	„ 10	54·4	32·6	44·3	42·2	44·1	14·1	3593	83	0·090	323	211	52	38	39	4	5	2	...	3	6	3	13	56
7	„ 17	50·6	31·6	40·6	40·9	44·5	9·4	2782	78	1·235	268	158	39	20	24	7	3	...	...	5	...	5	13	35
8	„ 24	43·6	21·7	31·8	36·8	43·9	27·4	1725	...	0·390	322	195	47	39	28	4	5	1	...	13	2	2	9	46
9	Mar. 3	53·5	31·8	42·1	40·4	43·2	18·8	3390	84	0·405	322	193	52	28	28	7	6	...	1	7	2	1	15	45
10	„ 10	50·0	33·5	41·6	40·8	43·6	17·7	3330	82	0·340	290	164	41	30	28	2	1	2	1	6	...	2	14	34
11	„ 17	49·5	29·9	40·3	41·1	43·9	25·9	2630	78	0·430	310	170	48	31	23	8	8	1	1	3	2	2	7	35
12	„ 24	55·0	33·1	42·4	41·4	43·9	14·2	1405	85	0·000	297	198	55	31	31	5	13	1	...	5	...	...	17	42
13	„ 31	62·9	34·0	46·8	44·0	44·2	54·8	1213	73	0·085	291	180	34	39	21	3	20	3	2	3	2	5	16	30
14	April 7	64·7	39·0	49·0	47·9	45·5	40·7	1931	78	0·085	358	215	41	49	32	4	19	1	2	4	5	3	13	46
15	„ 14	70·4	40·0	50·7	48·9	46·2	29·0	1633	81	0·430	343	204	49	42	38	3	18	2	1	9	2	3	8	46
16	„ 21	57·4	36·0	47·2	47·7	47·0	28·0	1611	83	0·445	283	188	51	36	25	3	15	4	4	6	2	6	9	34
17	„ 28	56·9	36·3	46·3	47·2	47·0	19·7	1881	84	0·495	310	212	55	50	24	9	21	3	1	7	...	3	13	38
18	May 5	63·0	37·8	47·8	48·2	47·2	16·8	2258	74	0·285	315	177	44	37	14	1	24	...	...	5	4	...	12	41
19	„ 12	57·2	39·4	48·7	48·5	47·4	29·3	2514	79	0·840	318	194	63	43	20	7	18	1	1	15	2	1	15	40
20	„ 19	62·3	40·0	49·4	49·3	47·8	17·7	2588	82	0·450	248	174	36	53	21	3	23	1	...	9	...	3	11	32
21	„ 26	63·0	32·8	45·1	47·8	47·9	45·9	2346	62	0·150	304	173	55	35	14	2	14	...	1	7	...	2	20	26
22	June 2	58·8	35·6	47·2	47·9	47·8	23·1	1735	80	0·635	270	157	39	42	16	3	18	2	...	5	1	4	16	26
23	„ 9	61·4	41·2	52·9	51·3	48·1	13·4	1756	83	1·330	271	194	43	37	36	8	11	1	2	6	1	...	16	30
24	„ 16	66·0	42·3	54·1	52·2	48·9	26·4	2072	75	0·595	261	148	50	23	20	5	9	...	...	9	1	5	11	22
25	„ 23	68·5	43·0	56·4	55·1	49·5	35·5	2017	72	0·055	311	182	53	30	16	3	8	1	1	5	3	5	16	22
26	„ 30	78·5	49·2	60·0	59·4	50·5	50·9	1914	71	0·000	246	120	28	26	18	3	6	...	...	7	1	3	7	14
27	July 7	80·7	48·3	63·6	63·9	52·1	64·2	1937	63	0·095	271	162	46	34	15	...	14	2	2	5	...	9	14	17
28	„ 14	69·2	47·9	57·5	59·8	53·1	25·7	1653	75	0·875	262	158	43	26	22	1	6	2	..	6	2	5	15	27
29	„ 21	69·1	50·0	57·0	56·8	53·0	13·7	2093	81	0·780	287	151	45	23	23	...	3	2	2	5	1	5	9	19
30	„ 28	72·9	50·5	59·7	58·0	53·1	20·2	1489	84	1·615	277	134	36	19	16	4	5	1	1	3	1	4	14	13
31	Aug. 4	74·5	46·5	59·8	59·0	53·8	19·9	2031	82	0·430	274	129	33	17	22	2	1	2	1	3	2	10	12	18
32	„ 11	64·8	45·5	56·9	57·0	54·0	21·6	2144	82	0·675	236	140	45	23	20	1	3	...	...	1	...	12	13	16
33	„ 18	69·5	47·5	56·6	56·0	54·0	21·0	2807	76	0·145	317	117	41	12	23	...	...	...	1	2	1	10	6	16
34	„ 25	68·0	45·0	54·0	54·4	53·7	12·3	2176	85	0·265	309	150	50	14	15	1	...	1	...	3	3	18	17	18
35	Sept. 1	69·8	47·8	57·6	55·1	53·5	20·2	1169	90	0·605	295	142	46	11	23	4	...	...	...	...	3	11	10	9
36	„ 8	62·8	41·8	51·7	52·9	53·5	19·4	1822	77	0·210	265	122	37	16	17	...	...	...	...	1	4	6	10	15
37	„ 15	63·6	42·7	53·8	53·0	53·0	26·2	1785	81	0·000	283	130	34	17	27	3	1	...	...	1	7	6	3	22
38	„ 22	59·5	46·2	53·1	53·2	53·0	0·4	1615	86	0·020	307	131	41	15	23	2	1	3	...	3	2	7	11	29
39	„ 29	60·4	37·5	50·2	51·3	52·8	12·3	1782	85	1·475	258	150	49	13	21	2	.	1	1	2	2	11	18	22
40	Oct. 6	56·8	38·9	48·4	49·5	52·1	1·0	1584	86	0·115	258	122	40	14	15	2	...	1	1	1	1	4	2	14
41	„ 13	60·0	43·4	52·5	51·6	51·8	0·7	939	96	0·335	290	155	45	13	32	2	...	3	...	..	3	11	11	21
42	„ 20	54·9	36·4	42·6	47·3	51·6	7·8	1990	85	0·155	350	153	48	20	21	4	1	4	1	2	1	5	12	27
43	„ 27	58·5	31·5	46·0	46·1	50·5	10·0	2399	87	2·020	278	149	40	20	29	2	..	4	...	2	4	4	14	24
44	Nov. 3	60·0	39·4	49·8	47·9	50·0	7·5	2510	88	1·035	339	138	44	10	18	2	...	...	...	...	3	6	6	32
45	„ 10	55·8	40·3	47·4	47·6	50·1	18·2	2367	86	0·370	359	163	45	16	30	4	...	2	2	3	2	7	7	33
46	„ 17	52·5	37·4	43·0	44·1	49·6	23·9	2574	90	1·710	273	180	53	21	24	2	...	...	3	2	3	6	17	37
47	„ 24	51·9	36·9	44·2	44·8	48·9	4·0	1794	90	0·220	314	181	49	29	32	5	...	4	3	..	2	4	10	41
48	Dec. 1	48·8	33·0	40·2	43·1	48·4	0·7	1681	87	0·000	315	162	54	21	19	3	...	2	4	2	4	3	6	39
49	„ 8	45·6	24·4	36·7	40·7	47·6	0·5	1475	92	0·105	312	192	64	17	27	...	...	3	3	2	4	5	20	45
50	„ 15	51·3	33·1	43·8	43·9	47·0	7·5	2480	91	0·580	354	181	66	27	31	3	...	2	2	2	...	4	11	44
51	„ 22	49·6	33·0	42·0	42·9	47·0	8·8	3533	86	0·625	314	164	49	10	29	1	...	1	1	4	3	7	11	35
52	„ 29	49·0	32·0	41·3	42·5	46·6	3·2	2621	88	0·570	188	164	49	23	31	1	...	1	1	3	2	4	9	36

II. SANITATION.

i.—*Influences affecting or threatening to affect injuriously the public health.*

Closet Accommodation

The Inspector of Nuisances has handed to me an interesting return, made in September last, of the number of houses, ashpits and privies, pans, and water-closets, together with the number of pumps, in each Inspector's District. With the exception of Balsall Heath, these Districts do not coincide with the Wards of the same name; but, generally speaking, each District consists of part of the Ward from which it takes its name, together with certain portions of adjoining Wards :—

	No. of Houses.	Ashpit Privies.		Pan Privies.	Water Closets.	Pumps.
		No. of Pits.	No. of Privies.			
Rotton Park District...	2,810	134	161	689	2,062	13
All Saints' „ ...	8,321	392	581	3,054	2,482	1
Ladywood „ ...	5,928	279	360	2,209	1,910	13
St. Paul's „ ..	3,775	211	309	1,263	1,784	—
St. George's „ ...	8,470	372	524	3,433	1,928	—
St. Stephen's „ ...	8,833	426	560	2,791	1,554	2
St. Mary's „ ...	5,069	85	133	2,109	1,696	—
St. Bartholomew's „ ...	5,194	156	241	2,174	1,473	—
Market Hall „ ...	5,051	105	143	1,503	3,247	2
St. Thomas's „ ...	5,054	145	178	1,947	1,218	3
St. Martin's „ ...	5,454	396	483	1,627	1,555	3
Edgbaston „ ...	1,980	509	518	319	2,072	19
Deritend „ ...	5,694	563	785	2,332	1,790	15
Bordesley „ ...	9,217	597	736	3,297	3,840	47
Duddeston „ ...	5,957	255	363	2,043	1,312	—
Nechells „ ...	5,668	230	314	2,167	1,552	—
Balsall Heath „ ...	7,831	2,219	2,903	—	3,677	250
Saltley „ ...	2,496	712	1,056	4	1,250	60
Harborne „ ...	1,697	990	1,109	11	538	64
City	104,499	8,776	11,457	32,972	36,940	492

Closet Accommodation (*continued*).

When I was appointed Medical Officer of Health in 1873, the midden system of refuse disposal was in almost universal use in the town, the middens being often of immense size, uncovered, badly looked after, and intolerably offensive. At the present time there are over three times as many water-closets as there are ashpit privies, while the number of pans is little short of that of water-closets, so that the ashpit privies now in use do not constitute one-seventh of the total closet accommodation in the town. During the year 1894 as many as 522 midden ashpits, with 696 privies attached to them, were abolished; 129 pan privies were also replaced by water-closets, the total number of water-closets substituted for both ashpit and pan privies being 929, of which 86 were of the waste-water pattern.

I have always been strongly in favour of the water-carriage system as the only really sanitary method of disposing of excretal matters. But it is useless to ignore the fact that more than half the present closet accommodation of Birmingham is on the conservancy system, and that at least for a number of years to come it will be impracticable to do away with the system altogether. The abolition of the worst of the ashpit and pan privies must, of course, be steadily proceeded with, but in the meantime I think it very desirable that attention should be directed to keeping clean and in order such privies as are either on the ashpit or pan principle, so that they may be in as sanitary a condition as possible. To this end the buildings themselves should be maintained in sound condition. They should also be kept clean by frequent swilling of the floor, which ought always to be paved, particular attention being paid to the parts underneath and around the pan. It would be a great advantage if during the emptying of privies and the removal of pans greater care were taken to prevent excretal matters from being dropped about the yards and passages, and if matters so dropped or spilt were carefully removed and the soiled surfaces efficiently swept and swilled. If these points were more fully attended to there would be far less annoyance from a system which, though bad in principle, might by these means be rendered much less offensive than it is.

Complaint of sewer openings corner of Highgate Road and Kyrwick's Lane

In September I received a complaint, which was strengthened by a medical opinion, that the sewer openings at the corner of Highgate Road and Kyrwick's Lane were causing sore throat, diarrhœa, and other symptoms of ill-health in the family residing at the corner shop. There was a street gully on either side of the shop door, a sewer ventilator in the middle of the road, and three more gullies at the opposite corner of Larches Street. The smell was very offensive, and there seemed no doubt that it was causing injury to health. I communicated with the City Surveyor, who told me that negotiations had been commenced some time before for the trapping of the gullies and the erection of a ventilating shaft. The owner of the property had not, however, given his

permission for the erection of the shaft. The necessary formalities have since been gone through, and the trapping and ventilation of the sewer at this point have been effected. Complaint of sewer openings, etc. (*continued*).

As usual, a large amount of attention was paid to the prevention of contamination of the air by the emission of dense smoke from factory chimneys. Four Inspectors are engaged in this work, and they made 5,002 observations, in the course of which 168 breaches of the regulations were discovered. In 115 cases the offenders had not been reported before, at any rate for a considerable length of time, and letters were sent to them cautioning them not to repeat the offence. In the other 53 cases such letters had already been sent, and legal proceedings were therefore taken. Convictions were obtained in all cases, the penalties enforced amounting to £28 5s. 0d. and the costs to £20 4s. 6d. Smoke.

On May 8th I made the following Report to your Committee :— Paving of Courts.

> "With regard to the paving of courts, about which there has hitherto been considerable difficulty, I find from a Report from the Town Clerk that, by the Public Health Act, 1875, and also by the Corporation Consolidation Act of 1883, courts are defined to be streets, *i.e.*, private streets, within the meaning of these Acts. Under these Acts, I am informed the provision for the lighting of courts has been insisted upon by the Corporation, and the Inspector of Nuisances tells me that at the present time the Public Works Committee, in default of the owner, have introduced such provision for lighting, and are actually collecting the rents of the property to indemnify themselves for the outlay. Now it appears to me that these Acts apply to the paving just as much as to the lighting of the courts, and I therefore beg to suggest that where courts are deemed in the interests of public health to require paving, the power above referred to be put into operation in this regard. I consider it indispensable for the improvement of court property that the yards should be thoroughly well paved with bricks laid in cement, after which the tenants might be very properly held responsible for their condition ; but so long as the courts remain unpaved they are necessarily filth-sodden and unwholesome, and it is, moreover, impossible to keep them clean."

In consequence of a letter received from Mr. Brice, in which he attributed the death of a patient from Typhoid Fever to the condition of Market Street, I visited the latter thoroughfare, which is a small, narrow street connecting Upper Dean Street and Bromsgrove Street. I found that the pavement was defective, lodging wet ; and there was a most offensive smell arising from manure and other decomposing organic refuse scattered about the surface. The street required more attentive Complaint of condition of Market Street.

Complaint of condition of Market Street (*continued*).

scavenging, the surface needing to be swept every day. It appeared that the street had not been taken to by the Corporation, and the Inspector of Nuisances therefore waited upon the owners and tenants, who undertook to subscribe and pay for the cleansing and lighting of the street.

Nuisance at Allotment Gardens at Saltley.

During the year my attention was called to a nuisance caused by the water in a water-course running at the bottom of the Allotment Gardens situated in Alum Rock Road, Saltley. I visited the spot on the 4th of April in the company of the Inspector of Nuisances, when it was evident that the water was seriously polluted. It was white and milky in appearance and evolved Sulphuretted Hydrogen gas, which I need not say is very offensive. I took two samples of the water, one from the point at which it enters the Allotments after running under the road; the other from the far side of the Allotments, where it forms a small pond. The latter sample differed from the former in being more milky in appearance, and having lost its offensive odour. The water-course was evidently contaminated by the liquid escaping from a disused clay pit, near to Saltley Training College, into which gas lime and other refuse products had been thrown. I had examined a sample of this liquid on June 2nd, 1893. I also examined a sample of water from the water-course on September 6th, 1893, when its physical and chemical properties were similar to those which it presented in April, 1894. Its smell was objectionable, and was in this respect a nuisance. It was complained of by the owner of the adjoining land, because it caused his tenants to leave the Allotments, and prevented other tenants taking them. I was informed that the deposit of gas refuse in the disused clay pit mentioned, which caused the pollution of the water, had been discontinued, but it must necessarily be a long time before the nuisance produced by it will cease.

Housing of the Working Classes Act.

During the year I made representations under the Housing of the Working Classes Act, 1890, that 82 houses were in a state so dangerous to health as to be unfit for human habitation. These houses were situated in:—

2 Court, Woodcock Street.
3 Court, Duddeston Row.
4 Court, Duddeston Row.
24 Court, Lancaster Street.
2 Court, Barford Street.
36 Court, High Street, Deritend.
11 Court, Lombard Street.
21 Court, Lancaster Street.
16 Court, Lancaster Street.
Rear of 56, 57, 58, and 59, Holt Street.
11, 12, 13, and 14, Summer Hill Street.
13 Court, St. George's Street.
7 Court, Birchall Street.
28 Court, Bishop Street.
13 Court, Lombard Street.
15 and 16 Courts, Great Barr Street.

Housing of the Working Classes Act (*continued*).

I do not propose to describe here the condition of all the houses individually, but will give a description of the first property only on the list, as the structural defects were much alike in all.

2 Court, Woodcock Street.—The surface of the yard was only partially paved, and the paving and surface gutter were defective. The D trap was badly set and had no grid. The two water-closets had defective floors and seats; one of them had no water supply owing to the mechanism being out of order, and in the other the basin and seat were broken, causing splashing of the flush water and wetness of the whole closet; the walls of the closet bulged. The washhouse had neither door nor window; and the floor, walls, and sink were defective.

The first house in the court, occupied by Daniel Bryan, consisted of two stories. The living room was dark and low, being only about 7 feet high. The roof was defective, causing dampness of the structure and partial destruction of the ceilings. There was no spouting. The casement windows were defective, and could not be opened. There were three broken panes in the kitchen, and seven in the bedroom. The walls were defective, filthy, and damp from want of a damp course. The ceilings were defective and filthy. The floor quarries were broken and partly removed, and the floor was damp owing to the quarries being in contact with the damp earth, instead of being imbedded in cement.

The second house from the top, occupied by Joseph Foster, consisted of two stories. The living room was dark and low, being only about 7 feet high. The roof rained in, so that the bedroom was said to be sometimes like a pool of water. The spouting was defective. The window cords and sashes were defective; two panes were broken in the kitchen, and four in the bedroom, and it was necessary to put up the lower shutter to keep out the wind. The walls were defective, filthy, and damp, from want of a damp course. In the living room the back wall was boarded up to hide the dampness. The ceilings were defective and in bad condition. The floor quarries were much broken and damp from being in contact with the earth instead of being set in cement. There was no door to the bedroom.

Number 3 in the same court consisted of two stories, and the living room was dark and low, being only about 7 feet high. The roof and spouting were defective, causing dampness of the structure. The window sashes were broken, also one of the panes in the bedroom. The plastering of the walls was in bad condition, and the walls themselves were damp. The kitchen floor was defective, the quarries being broken and partly removed. The floor was damp, owing to the quarries being in contact with the earth, instead of being imbedded in cement.

Housing of the Working Classes Act (*continued*).

The bedroom floor was defective. The stairs and door were broken, and the chimney smoked badly.

Number 4 in the same court consisted of two stories. The living room was fairly high (9 feet 3 inches). The floor and spouting were defective, causing dampness. The windows had broken sash cords and casements; they opened at the bottom only, and six panes were broken. The walls were defective and damp, so that the paper would not adhere to them. The floors both in the kitchen and the bedroom were in very bad condition. The stairs were so defective as to be dangerous; the chimney was also out of repair, and smoked badly.

Number 5 in the same court consisted of two stories. The living room was low and dark, its height being only about 7 feet. The roof and spouting were defective, causing dampness of the structure. The windows were broken, and the casement of one of them was defective. There was an accumulation of filth near the back window. The walls were filthy, damp from want of a damp course, and perished. The ceilings were defective, the floor quarries were broken and partly removed, and the floor was damp owing to the quarries being in contact with the damp earth. The bedroom floor was defective and decayed. The stairs, cupboard doors, and shutters were broken. The house was dilapidated to such an extent as to be a dangerous structure. It was said to be often flooded with storm-water, being at the bottom of a steep incline occupied by the yard.

Number 6 in the same court consisted of two stories. The living room was dark and low, being about 7 feet high. The roof was so defective as to let in the light. The chimney was dangerous. The spouting was defective. The window sashes, beadings, cords, and five panes of glass were broken. The walls were damp from want of a damp-course, and defective. The gable end had had to be propped up. The ceilings were damp and defective. The floor of the kitchen was much broken, and was damp owing to the quarries being in contact with the earth instead of being imbedded in cement. The house was said to be often flooded with storm-water, owing to the steepness of the yard.

The above descriptions will suffice to show the general condition of the properties dealt with, and the urgent necessity for their repair or permanent closure. As a result of my representations, notices were served on the owners calling on them to put the houses into habitable condition. If such notice was not complied with in the specified time, application was made to the magistrates for a closing order. Up till the end of the year, 42 houses had been compulsorily closed by order of the magistrates, and 10 others had been voluntarily closed by the owners without legal proceedings; while the remaining 30 were still in hand, the time allowed for putting them in repair not having expired.

In addition to the foregoing properties, I examined several others which were dealt with under the Public Health Act. Insanitary Property.

Numbers 61, 63, and 65, in front, and 1 to 16, in 13 Court, Church Street.—With the exception of No. 61, these houses were all damp, the walls in some cases being match-boarded to hide their dampness. Speaking generally, they were in bad repair. The back houses had no spouting, and the roofs of two front houses and one back house were defective. Many of the windows had been broken and filled up with paper, etc. The front wall of No. 3 bulged out in such a way as to be dangerous. The yard was in very bad condition, the defectively-set bricks and pebbles allowing lodgments of liquid filth. The privies were defective, and the washhouses were dilapidated and in some cases dangerous. Moreover, the privies and washhouses obstructed the light and ventilation of Nos. 6 to 12 inclusive. The houses were quite unfit for habitation, and I recommended that the owner be called upon to close them, and not to allow them to be tenanted again unless they were first put into habitable condition. The property was closed accordingly, but it was subsequently re-leased to a fresh tenant, who made certain alterations in it and then asked me to examine it again. I did so; and found that he had paved the yard with blue bricks, but had not laid them in cement, as he should have done. He had removed the obstructive washhouses and privies from the centre to the top of the yard, and had converted the top house on the right into a washhouse. He had also repaired the houses by patching the plaster of the walls and ceilings, supplying new doors and window shutters, and making certain other minor improvements. Some of the most serious defects still remained, however, particularly the dampness of the walls and floors. The walls were to a great extent old, porous, and badly pointed, and at my suggestion damp-courses were put in where necessary; a cavity wall was built to prevent contact between the damp earth and the back wall of the houses; and the back wall itself was coated with tar. These improvements have made the property fairly satisfactory, and the houses may now be tenanted again.

Back of 43, Holloway Head.—This was a very bad property, in which there had been two cases of Diphtheria, and the children were constantly ailing. The house was dirty and damp, particularly the side wall of the living-room, which was also mouldy; the dampness apparently proceeding from a gutter on the premises in the next yard. Moreover, there was no damp-course, and the brickwork was perished. The ceiling of the bedroom was saturated with wet, from rain coming through the defective roof. The living-room was narrow, dark, and low; and the window did not open. The state of repair generally was exceedingly bad, and the yard was for the most part unpaved, irregular, and dangerous. The pan privy was contiguous to the washhouse; it was very

Insanitary Property (*continued*).

defective and a nuisance, which was perceptible both in the washhouse and the house. Notice was served upon the owner to close this house until it had been put into habitable order. The floor of the house has since been relaid in concrete, the roof, plastering, and internal fittings have been repaired, and the house has been thoroughly cleansed.

On December 3rd I received a note from Dr. Robertson stating that "the house *back of 42, Bread Street* is unfit for habitation. The whole of one bedroom wall and a part of the floor soak with water, and the inmates have to mop it up. Fungoid masses grow from the ceilings." The Inspector of Nuisances made an inspection of the house, which was in very bad condition, and Messrs. Grimley and Son, the agents for the owner, promised to close it, which they have since done.

In company of the Chairman of your Committee and the Inspector of Nuisances I visited *6 Court, Moor Street*, with a view to seeing if it was possible for the property to be opened for human habitation. I found every sanitary appliance out of order, and as a result the following letter was addressed by your Chairman to the owners of the property:—

"September 19th, 1894.

"Thomas Horton, Esq.,
"Clerk to Lench's Trust,
"Newhall Street.

"Dear Sir,

Lench's Trust Property, 6 Court, Moor Street.

"I visited this property in company of the Medical Officer of Health and Inspector of Nuisances. It is in a very dilapidated state, and without very extensive alterations could not be made fit for human habitation. The sanitary arrangements are generally very defective, the water-closets would require to be re-built and flush closets introduced, and new drainage would have to be provided. In the case of any attempt to patch up the property merely, the Health Committee would be compelled to apply for a closing order. Altogether, the condition of the property is such that, in my opinion, it would be unwise to spend any money upon it.

"I shall be glad to hear what course is decided upon.

"Yours faithfully,
"WILLIAM COOK,
"*Chairman of the Health Committee.*"

In accordance with the advice given in the above letter, no further effort has been made to re-open the property.

ii.—*Examination of and action in regard to Suspected, Diseased, and Unwholesome Food.*

Unwholesome Food.

The returns made by Mr. Edwards, Superintendent of Markets, show that 1,378 voluntary surrenders and 7 seizures of bad meat were made during the year. The total quantity destroyed was over 164 tons in weight. Three persons were fined during the year, the penalties amounting to £26.

The surrenders of fish, game, poultry, rabbits, etc., amounted to 421 and the seizures to 8, the quantity destroyed being 55 tons. One dealer was fined £2.

The amount of unsound fruit, etc., given up to the Inspectors was 27 tons.

iii.—*Duties under Sanitary Bye-laws and Regulations.*

Lodging Houses.

Lodging Houses.

At the end of the year there were 79 Common Lodging Houses, accommodating 1,766 lodgers; and 83 houses let in lodgings, registered for holding 473 lodgers. The houses let in lodgings, showed a decrease of 18 during the year, while the number of Common Lodging Houses was unaltered. All these houses are kept under systematic supervision by a special Lodging House Inspector, assisted by the district Inspectors. Last year 13,132 visits were paid by day and 1,133 by night. Three prosecutions for offences against the byelaws were instituted. One case was dismissed, one defendant was ordered to pay the costs, amounting to 5s., and the other was fined 20s. and 8s. costs.

Slaughterhouses.

Slaughter Houses.

The officers of the Markets and Fairs Committee paid 10,483 visits to Slaughterhouses during the year, and ordered 32 of them to be cleansed.

Dairies, Milkshops, and Cowsheds.

Dairies, Milkshops, and Cowsheds.

Under the Dairies, Cowsheds, and Milkshops Orders of 1885 and 1886 a register has to be kept of all persons and places concerned in the milk trade. At the end of 1894 there were on this register 23 dairies, 1,934 milkshops, 75 cowsheds, and 59 purveyors of milk. During the year 409 applications to be placed on the register were made, but 133 of them were refused owing to the unsuitability of the premises. The visits paid to dairies numbered 202, to cowsheds 2,328, and to milkshops 4,479.

Dairies, Milkshops, and Cowsheds (*continued*).

Fifty-two shops, 99 cellars, and 36 pantries, used for storage and sale of milk, were limewashed. The sale of lamp oil was stopped in 50 cases, of tripe in 23, of fish in 23, and of vinegar and pickles in 98. Dirty milk vessels were found in 11 instances.

Twenty-three cases of Smallpox, 16 of Scarlet Fever, 3 of Typhoid Fever, 3 of Diphtheria, and 1 of Puerperal Fever occurred at places connected with the milk trade. In each case the stock of milk was destroyed and business suspended until after disinfection had been carried out.

Pleuro-Pneumonia.

No case of Pleuro-pneumonia in cows was discovered.

Bakehouses.

Bakehouses.

The visits paid to Bakehouses numbered 1,046. In most cases they were found to be in good order. Limewashing was, however, required in 176 instances, and in 8 cases accumulations of refuse were found on the premises and were removed. Information was sent to H.M. Inspectors of Factories of the employment of 61 youths in bakehouses.

Workshops.

Workshops.

Under the Factory and Workshops Act, 1891, 9,400 visits were paid to Workshops, and as a result 1,182 improvements were effected in their condition. The latter included the limewashing of 989 shops, the provision of 15 urinals and 81 water-closets, the putting in order of 41 other water-closets, the removal of 7 ashpits and 5 pan-privies from under workshops, the provision of better ventilation in 17 instances, etc. Nine hundred and eighty-six shops were fumigated because workpeople suffering from Smallpox had been engaged in them.

Canal Boats Acts, 1877 and 1884.

Canal Boats Acts.

During the year 566 boats, containing 917 men, 335 women, and 391 children, were examined by your Inspector. Sixty breaches of the regulations were discovered, and in all cases they were attended to without recourse to legal proceedings. The improvements made included the repairing of 5 defective cabins, the painting of one other, the provision in 7 instances of suitable storage for at least 3 gallons of water. Seven cases of overcrowding were remedied, and 11 contraventions of the rules regarding the separation of unmarried males and females. Sixteen boats were not properly marked and numbered according to regulation, while 7 were not registered at all, and 6 others, though registered, were not carrying their certificates of registration as they should have done.

Canal Boats Acts (*continued*).

On October 15th a boat arrived in Birmingham from which a case of Smallpox had been removed. The master stated that his boat had been disinfected, but he had no certificate to this effect; your Inspector therefore disinfected the boat himself, and supplied the master with a certificate signed by me, after which he was allowed to proceed on his journey.

Twenty-six boats were registered during the year, and ten re-registered after structural alterations. Twenty-two certificates were cancelled, and at the end of the year there were 399 boats on the register.

iv.—*Offensive Trades.*

Offensive Trades.

No complaint was made to me of any nuisance in connection with the various offensive trades carried on in the City, and no application was received for permission to establish such trades.

v.—*Fortnightly Reports of the Medical Officer of Health to the Health Committee.*

Fortnightly Reports of the Medical Officer of Health.

I have from time to time reported to your Committee on various questions, including the following:—

1. The general health of the City, as shown by the total Death-rate, Zymotic Death-rate, and Mortality from special diseases.
2. The occurrence of Infectious Disease, and the results of the investigations of certain of the most dangerous cases.
3. The Waters supplied by the Corporation, and from other sources.
4. Articles of Food, Drink, and Drugs, obtained for analysis, and the analysis of articles of a miscellaneous character.
5. Diseased and unwholesome food.
6. Reports on special questions in pursuance of resolutions, instructions, and otherwise.

vi.—*Outbreaks and Prevalence of Infectious Diseases.*

Prevalence and Distribution of Infectious Diseases.

The year was more marked by a prevalence of Notifiable Infectious Diseases than any since the passing of the Infectious Disease (Notification) Act. The total number of cases notified was 5,600, against 4,404 in 1893, and 2,853 in 1892. This state of affairs was chiefly due to the greatly extended prevalence of Smallpox, which alone caused no fewer than 2,074 cases, against 979 in the previous year.

Prevalence and Distribution of Infectious Diseases (*continued*).

The following table shows the distribution of the more important diseases over the Wards of the City. Full particulars of all the cases notified are given in Tables VIII. and IX. in the Appendix :—

WARDS	Cases Notified.					Case-rates per 1,000.				
	Smallpox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Erysipelas.	Smallpox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Erysipelas.
Rotton Park ...	329	250	22	39	58	8·5	6·5	0·6	1·0	1·5
All Saints' ...	560	228	58	16	55	14·5	5·9	1·5	0·4	1·4
Ladywood ...	127	151	41	31	37	4·7	5·7	1·5	1·2	1·4
St. Paul's ...	138	93	21	45	14	8·3	5·6	1·3	2·7	0·8
St. George's ...	118	79	17	21	29	5·5	3·7	0·8	1·0	1·4
St. Stephen's ...	121	43	14	40	42	5·1	1·8	0·6	1·7	1·8
St. Mary's ...	67	41	3	14	20	4·4	2·7	0·2	0·9	1·3
St. Bartholomew's...	59	74	12	33	68	2·2	2·8	0·5	1·3	2·6
Market Hall ...	39	30	6	9	16	3·1	2·4	0·5	0·7	1·3
St. Thomas's ...	61	61	10	14	44	3·0	3·0	0·5	0·7	2·2
St. Martin's ...	48	69	7	21	54	1·9	2·7	0·3	0·8	2·1
Edgbaston and Harborne ...	31	85	12	21	30	1·1	2·9	0·4	0·7	1·0
Deritend ...	44	82	18	34	66	1·6	3·1	0·7	1·3	2·5
Bordesley ...	44	167	22	38	39	1·0	3·8	0·5	0·9	0·9
Duddeston ...	57	30	6	41	29	2·4	1·3	0·3	1·8	1·2
Nechells ...	87	38	12	25	41	2·6	1·2	0·4	0·8	1·2
Balsall Heath ...	33	173	24	42	71	0·9	4·8	0·7	1·2	2·0
Saltley ..	22	74	10	19	36	0·7	2·5	0·3	0·6	1·2
Institutions ...	89	20	1	8	23	—	—	—	—	—
City	2074	1788	316	511	772	4·2	3·6	0·6	1·0	1·6

Smallpox

The *Smallpox* epidemic which had existed all through 1893 manifested increased severity in 1894, more particularly in the first part of the year. All Saints' Ward suffered far more than any other part of the town, the cases there being equal to the very high rate of 14·5 per 1,000 of the population. Next in order came Rotton Park with 8·5, St. Paul's with 8·3, St. George's with 5·5, and St. Stephen's with 5·1. In the southern and eastern parts of the town the rates were quite insignificant in comparison with those just quoted, being 1·1 in

Edgbaston and Harborne, 0·9 in Balsall Heath, 1·0 in Bordesley, and 0·7 in Saltley; in fact the disease was almost confined in its epidemic character to the north-west corner of the City, the neighbourhood in which the Smallpox Hospital is situated. Small Pox (*continued*).

The following table shows the number of cases and deaths from Smallpox in the last twenty-three years. The figures for 1872-1891 apply to the City as constituted prior to its extension :— Smallpox in years 1872-1894.

DATE.	Cases Notified.		Deaths Registered.	
1872.				
1st Quarter	798		96	
2nd "	632		92	
3rd "	355		67	
4th "	192		44	
Total		1,977		299
1873.				
1st Quarter	171		29	
2nd "	246		37	
3rd "	124		18	
4th "	253		38	
Total		794		122
1874.				
1st Quarter	757		123	
2nd "	1,303		196	
3rd "	1,059		165	
4th "	672		153	
Total		3,791		637
1875.				
1st Quarter	366		85	
2nd "	347		72	
3rd "	95		14	
4th "	16		2	
Total		824		173
1876.				
1st Quarter	2		0	
2nd "	2		0	
3rd "	2		0	
4th "	5		0	
Total		11		0
1877.				
1st Quarter	7		1	
2nd "	20		3	
3rd "	20		3	
4th "	3		1	
Total		50		8
1878.				
1st Quarter	3		0	
2nd "	4		0	
3rd "	10		2	
4th "	10		3	
Total		27		5
1879.				
1st Quarter	1		0	
2nd "	0		0	
3rd "	3		0	
4th "	0		0	
Total		4		0

Smallpox in years 1872-1894 (*continued*).

DATE.	Cases Notified.		Deaths Registered.	
1880.				
1st Quarter	2		0	
2nd "	5		1	
3rd "	8		1	
4th "	3		0	
Total	——	18	——	2
1881.				
1st Quarter	5		5	
2nd "	9		1	
3rd "	2		0	
4th "	0		0	
Total	——	16	——	6
1882.				
1st Quarter	0		0	
2nd "	43		6	
3rd "	33		9	
4th "	13		2	
Total	——	89	——	17
1883.				
1st Quarter	48		7	
2nd "	152		9	
3rd "	567		54	
4th "	435		40	
Total	——	1,202	——	110
1884.				
1st Quarter	384		54	
2nd "	64		8	
3rd "	13		1	
4th "	10		1	
Total	——	471	——	64
1885.				
1st Quarter	69		12	
2nd "	4		0	
3rd "	9		0	
4th "	2		0	
Total	——	84	——	12
1886.				
1st Quarter	1		0	
2nd "	1		0	
3rd "	0		0	
4th "	0		0	
Total	——	2	——	0
1887.				
1st Quarter	0		0	
2nd "	1		1	
3rd "	1		0	
4th "	10		1	
Total	——	12	——	2
1888.				
1st Quarter	13		0	
2nd "	4		0	
3rd "	1		0	
4th "	0		0	
Total	——	18	——	0
1889.				
1st Quarter	0		0	
2nd "	0		0	
3rd "	0		0	
4th "	0		0	
Total	——	0	——	0
1890.				
1st Quarter	0		0	
2nd "	0		0	
3rd "	0		0	
4th "	0		0	
Total	——	0	——	0

DATE.			Cases Notified.		Deaths Registered.	
1891.						
1st Quarter	...	...	1		0	
2nd "	...	...	15		0	
3rd "	...	...	23		2	
4th "	...	...	8		5	
		Total	—	47	—	7
1892.						
1st Quarter	...	...	0		0	
2nd "	...	...	20		0	
3rd "	...	...	5		0	
4th "	...	...	2		0	
		Total	—	27	—	0
1893.						
1st Quarter	...	...	35		0	
2nd "	...	...	245		18	
3rd "	...	...	116		9	
4th "	...	...	583		43	
		Total	—	979	—	70
1894.						
1st Quarter	...	...	717		66	
2nd "	...	...	651		54	
3rd "	...	...	305		20	
4th "	...	...	401		31	
		Total	—	2,074	—	171

Smallpox in years 1872-1894 (*continued*).

These figures show that the present epidemic has been much more severe than that of 1883-4, but less so than the one which culminated in 1874. I am pleased to say, however, that towards the end of the year a diminution in the number of cases set in, and at the time of writing the disease had practically died out, only twenty-two known cases existing in the City.

Smallpox, Precautions against

With twenty-five exceptions, the patients were removed to the City Hospital. After removal, or, if the patient remained at home, after recovery or death, the house was fumigated and the walls stripped of paper and lime-washed. The bedding and clothing were taken to the disinfecting station and purified. If there were any children of school age in the house they were kept at home for a fortnight after disinfection had been carried out, but it was usual to allow adult members of the household to return to work as soon as the house had been cleansed and purified. Vaccination and re-vaccination were urged upon persons who had been in danger of infection, special arrangements being made by the Poor-Law Authorities for enabling all who wished to do so to avail themselves of this safeguard.

Smallpox and Vaccination.

Of the 2,074 cases notified during the year, 1,769 were vaccinated, 224 unvaccinated, and 81 doubtful as to vaccination. Either during the year or after its close there were 165 deaths amongst them, the mortality being distributed among the three classes as follows :—

	No. of Cases.	No. of Deaths.	Proportion of Deaths to Cases.
Vaccinated	1769	77	4·4 per cent.
Unvaccinated	224	75	33·5 "
Doubtful	81	13	16·0 "

Smallpox and Vaccination (*continued*).

These figures show that the mortality was eight times as high amongst the unvaccinated, and four times as high amongst the doubtful, as it was amongst the vaccinated cases.

The following table shows the incidence of the disease at different age periods amongst the three classes of patients :—

AGES.	Vaccinated.			Unvaccinated.			Doubtful.		
	Cases.	Deaths.	Case Mortality per cent.	Cases.	Deaths.	Case Mortality per cent.	Cases.	Deaths.	Case Mortality per cent.
Under 1 year	0	0	—	41	32	78	0	0	—
Between 1 and 5 years ...	5	0	—	38	13	34	6	0	—
" 5 and 15 " ...	236	1	0	73	6	8	14	1	7
" 15 and 25 " ...	707	13	2	38	8	21	19	1	5
" 25 and 45 " ...	689	52	8	25	12	48	28	8	29
" 45 and 65 " ...	119	9	8	7	2	—	12	2	17
At 65 years and upwards ...	13	2	15	2	2	—	2	1	—

I have not calculated any percentages on less than ten cases, as conclusions based on a very small number of observations are of no value, and indeed are misleading.

The chief point to be noted in the above figures is the different incidence of the disease upon vaccinated and unvaccinated subjects. Amongst the vaccinated less that one-seventh of the attacks were in children under fifteen, or in other words, amongst those who had been vaccinated within the last fifteen years. On the other hand, of the total number of unvaccinated persons who were attacked by Smallpox no less than two-thirds took the disease before reaching the age of fifteen years. Amongst the 241 vaccinated patients under fifteen years of age only one died, this being a boy who was suffering from Scarlet Fever at the time he contracted Smallpox. But amongst the 152 unvaccinated cases at the same age period there were 51 deaths; in other words, while less than ·5 per cent. of the vaccinated children died, amongst the unvaccinated the mortality was 33 per cent., or 66 times as great.

Concealment of Smallpox.

During the year a case of concealment of Smallpox came to light. Information was received on August 7th that there was a suspicious case of illness in the person of Mrs. Rice, 70, Icknield Street. The Inspector visited the house, and having

reason to think the case was really one of Smallpox, he called in Dr. Pogson, who immediately certified it as such. On the 9th instant I visited the house and saw the patient's husband. He told me that she had been visiting at Sutton and after being at home for some days she was taken poorly on July 29th, and was attended the next day by a man named Benjamin Hall, a gun filer, living at the back of 40, St. George's Place. Mr. Rice said that the man was in the habit of attending sick cases, and that he paid him for the medicines. He admitted to me that he knew the case was one of Smallpox, but that he did not report it because he was afraid of injury to his business. The business was that of a tobacconist and out-door beer retailer, so that there was great danger of the spread of infection far and wide by means of the customers. The case was a very serious one, and legal proceedings were taken against Mr. Rice under the Infectious Disease (Notification) Act. He was convicted of having failed to notify the fact of his wife's illness, and was fined £1 and costs. A practical illustration of the danger of his offence was afforded by the fact that during the magisterial hearing, as he stood in the Police Court, I noticed papules of Smallpox on his face, and had him removed at once from the Court to the City Hospital.

Concealment of Smallpox (*continued*).

I brought the position of the man Hall, who of course was unqualified, and could not therefore legally treat the case, under the notice of the Society of Apothecaries; but owing to a want of sufficient evidence to ensure the conviction, the Society did not institute legal proceedings.

The notified cases of *Scarlet Fever* numbered 1,788, against 1,614 in 1893, and 1,418 in 1892. So extensive a prevalence of Scarlet Fever occurring at the same time as an epidemic of Smallpox naturally caused a great increase in the work of the Health Department. The steps taken to prevent the spread of Scarlet Fever comprised the removal of the patient to the Hospital, if willing; the fumigation, stripping, and lime-washing of the whole or a part of the house, and the prohibition of school attendance for a fortnight after disinfection had been carried out.

Scarlet Fever

The disease was spread widely over the town. Its prevalence was greatest in Rotton Park Ward, with 6·5 cases per 1,000 of the population, and least in Nechells, with 1·2 per 1,000.

The notifications of *Diphtheria* amounted to 316, a smaller number than in 1893 or 1892, when the figures were 322 and 456 respectively. By far the largest number of cases occurred in All Saints', Ladywood, and St. Paul's Wards. Towards the close of the year a rather large number of cases occurred in children attending Camden Street Board Schools. I visited the School, and was unable to discover anything likely to favour Diphtheria in the building itself; but a drain in the

Diphtheria.

Diphtheria at Camden Street Schools.

Diphtheria at Camden Street Schools (*continued*)

playground, underneath the windows of the Infants' Schoolroom, which were used purposely for ventilation, had been under repair, and had been found to be offensive for some time previously. It is very possible that this condition of the drain was a cause of the extent of the outbreak, if not of its inception. I requested the Head Mistress to be specially careful to send home all children showing any symptoms, however mild, of sore throat; and after the close of the Schools for the Christmas recess the whole of the school buildings, which were very clean, were fumigated.

Membranous Croup.

The cases of *Membranous Croup* numbered 90, a rather larger number than in the two previous years.

Typhoid Fever.

Typhoid Fever, whether judged by cases or by deaths, appears to have been more prevalent than in any other recent year. The notified cases amounted to 511, against 489 in 1893, and 260 in 1892. By far the greatest prevalence was in St. Paul's Ward, where a comparatively severe though circumscribed outbreak of the disease occurred in Warstone Lane and Pope Street. The first case in this connection was notified on April 18th, the patient being Thomas Davis, aged 30, living at 10, Warstone Terrace, Warstone Lane. On May 8th, five more cases were reported in the same terrace, two being at number 14, and one each at numbers 11, 13, and 23. On May 31st the disease appeared at number 7, and on June 22nd a third case occurred at number 14, making eight cases in this one terrace within two months. On visiting I found that the property consisted of 23 houses, situated in a large open yard, part of which was paved, while another portion was laid out for cultivation, the remainder consisting of unpaved waste ground. There was a row of nine pan-privies on one side of the yard, and four more in another part of the terrace. Complaint was made to me by the tenants of the smell from these closets in hot weather, and also of the carelessness of the night-soil men in slopping over the contents of the pans while carrying them down the yard, and in sometimes emptying them down the drain. One of the traps of the drain at the time of my visit was defective in its setting. The houses were back-to-back, but had plenty of air space in front, and they were supplied with tap water. I recommended that the waste ground in the terrace should be paved, and that the pan-privies should be replaced by water-closets, but this work has not been done.

Typhoid in Warstone Lane and Pope Street.

On June 21st the wife of the first of the patients in Warstone Terrace was taken ill at 43, Pope Street, where she had gone to live. Three more cases subsequently occurred at the same address, and two days later the disease invaded the next house, number 42. These two houses, in which five cases occurred, had a common yard, and used the same ashpit-privies. The disease next appeared at the back of 44, where a case occurred on July 19th, and three others on August 13th. Then there was a case at the back of 46, followed by three at 46 and

Typhoid in Warstone Lane and Pope Street (*continued*).

one at the back of 47. The last four houses, numbers 46 and back of 44, 46, and 47, which had altogether nine cases in them, opened into one yard and used the same set of ashpit-privies. The premises were generally in very fair order, and suspicion pointed very strongly to the ashpit-privies as the cause of the spread of the Typhoid infection. I am pleased to say that the two midden ashpits implicated, and two others in adjoining yards, with the ten privies attached to them, have been replaced by water-closets and dry ashpits, and no further cases of Typhoid have occurred in this particular locality.

I have as far as possible obtained information respecting the closet accommodation at the houses in which Typhoid Fever occurred during 1894. I find that out of 435 houses invaded by the disease 225 were provided with pan-privies, 155 with water-closets, and 55 with ashpit-privies. I do not know the exact number of houses using the various forms of closet accommodation, but judging from the figures on page 25 it would seem that those supplied with pan-privies and those using water-closets are nearly equal in number. If this be so the figures given above would seem to show that the incidence of Typhoid Fever was nearly half as great again upon houses provided with pan-privies as it was upon those which use water-closets. I find, moreover, that a second case occurred at one out of every seven houses where there were ashpit-privies, one out of 14 where there were pans, and at one out of 22 where there were water-closets.

Simple Continued Fever Puerperal Fever Erysipelas.

Seven cases of *Simple Continued Fever*, 42 of *Puerperal Fever*, and 772 of *Erysipelas* were notified during the year. I wish to call the attention of your Committee to the question of the notification of the latter disease. The term Erysipelas is applied to a variety of inflammatory affections which differ very greatly in their intensity, and there is much diversity of opinion as to which really constitutes the disease, some of the cases notified being of a very trivial nature. The extent of its connection with external insanitary conditions is uncertain, and its degree of infectiveness is but slight. Under these circumstances it is difficult to see what substantial advantage notification of the disease affords to Sanitary Authorities in return for the large expenditure of money and of labour which it involves. I find that since the introduction of compulsory notification, 2,955 cases of Erysipelas have been notified in Birmingham. Assuming that all of them were reported by medical practitioners in private practice, the fees payable for the notifications would amount to £370, a large sum to be paid for information which is of very doubtful value. Moreover, in thirty-five of the towns in which the Infectious Disease (Notification) Act has been adopted—including Manchester, Nottingham, West Ham, Croydon, Sunderland, Newcastle, Blackburn, Oldham, and Norwich, all of which have populations of over 100,000—Erysipelas is not amongst the diseases

Erysipelas (*continued*).

required to be notified, a clear proof that the advantages of its notification are not very appreciable. Under all the circumstances, I think it very doubtful whether the notification of Erysipelas is in any sense worth the time and the money which is spent upon it, and your Committee might well consider the advisability of removing it from amongst the notifiable diseases.

City Hospital.

City Hospital.

During the Registration year, which differs a little from the Calendar year, 2,050 cases of Smallpox and 1,539 of Scarlet Fever, one or two of which did not belong to Birmingham, were removed to the City Hospital. The number of cases admitted in each year since 1874 is shown in the following table :—

Year.	Smallpox.	Scarlet Fever.	Total Cases.
1874 ...	194	—	194
(2nd of November to the end of the year.)			
1875 ...	420	20	440
1876 ...	11	38	49
1877 ...	38	43	81
1878 ...	20	424	444
1879* ...	4	184	188
1880 ...	16	170	186
1881 ...	17	333	350
1882 ...	105	627	732
1883 ...	1090	638	1728
1884* ...	437	360	797
1885 ...	81	204	285
1886 ...	2	428	430
1887 ...	10	438	448
1888 ...	18	528	546
1889 ...	0	1801	1801
1890* ...	0	2525	2525
1891 ...	44	1225	1269
1892 ...	24	1131	1155
1893 ...	963	1339	2302
1894 ...	2050	1539	3589

* 53 weeks.

It will be seen that the number of patients was much larger than in any previous year. By far the greater number of the Smallpox cases occurred in the first half of the year, so that during the last six months it was found possible to vacate the stoneyard in Norman Street belonging to the Board of Guardians, and also to make arrangements for terminating, early in 1895, the tenancy of Winson Green House, which had been taken for the reception of female convalescent Smallpox patients.

Disinfecting Station.

Disinfecting Station.

As might be expected, the number of articles disinfected at Bacchus Road Station was very large. It comprised 4,379 beds, 4,182 mattresses, 4,009 counterpanes, 5,381 blankets, 5,855 sheets, 3,448 bolsters, 6,764 pillows, 3,063 carpets, 25,309 garments, and 3,945 other articles, making a total of 66,335.

Mortuaries.

Mortuaries.

The Chief Constable, Mr. Farndale, has supplied me with returns showing that 130 bodies were deposited in the Public Mortuaries during the year, 14 being taken to Moor Street, 8 to Ladywood Road, 40 to Kenyon Street, 31 to Duke Street, and 37 to Moseley Street.

Water Supply.

Water Supply

Analyses of the Corporation Water Supply were made each month as usual. The average quality was much the same as in recent years, except that the Organic Nitrogen and Chlorine which have for several years shown an increase, exhibited a still further rise. The hardness was much the same as in the three preceding years, though somewhat higher than previously.

Analyses for Water Committee.

For the Water Committee I made analyses of 157 samples derived from the various sources of supply, namely, streams and deep wells, the results of which were duly reported to the Committee each month.

Well Water.

I also examined samples of water from ten shallow wells, all of which were seriously polluted. During the year five wells were closed. Four of the owners agreed to close their wells without recourse to legal proceedings, but one refused to do so until a summons had been issued, of which he had to pay the costs.

Miscellaneous Analyses.

Miscellaneous Analyses.

During the year I analysed the following articles, which were sent to me from various Corporation Departments :—

Water or Sewage	69 samples.
Poudrette	5 „
Milk	3 „
Mortar	3 „
White Lead	3 „
Beef Tea	2 „
Soap	2 „
Wax	2 „
Other Articles	8 „
Total ...	97

Reports upon the results were made to the different Committees concerned.

Public Baths.

Public Baths.

The following table shows the number of bathers at the Corporation Baths in each of the last ten years :—

	Men.	Women.	Total.
1885	328,825	19,519	348,344
1886	320,303	18,712	339,015
1887	337,802	18,830	356,632
1888	284,173	16,669	300,842
1889	328,577	18,676	347,253
1890	327,936	18,816	346,752
1891	321,530	19,681	341,211
1892	311,527	20,367	331,894
1893	406,433	23,842	430,275
1894	307,536	21,065	328,601

Sewerage Works.

Sewerage Works.

I am informed by the City Surveyor that at the end of March, 1894, the sewers under the charge of the City Council measured 263½ miles, and that the total length of

Streets and Roads

Streets and Roads.

on March 31st, 1894, was 259¾ miles; comprising 253 miles of declared highways, and 6¾ miles of undeclared highways, private roads, and passages.

Nightsoil and Refuse Disposal.

Nightsoil and Refuse Disposal.

The contents of 1,828,154 pans were collected during the year, together with 72,101 loads of refuse from ashtubs. The ashes removed from premises using water-closets amounted to 33,506 loads, and the nightsoil from ashpit-privies to 47,553 loads.

Sanitary Work.

Sanitary Work.

The return made by Mr. Parker, Inspector of Nuisances, which is given in Table V., shows that 18,939 nuisances were abated during the year. The work done included the disinfection of 3,500 houses, the cleansing of 1,541 and the repairing of 1,304. Untrapped drains were put in order in 1,877 instances, and 3,813 obstructed drains were cleansed. In 190 cases drain openings in cellars were either abolished or disconnected from the sewer, and 212 sink drains were similarly treated. Three hundred and sixty-one privies were cleansed, 1,024 were converted to water-closets, and 1,686 ashpits and privies were repaired. The urinals put in order numbered 589, and the back yards completely or partially paved 476. In addition to this work, 1,181 dangerous premises were reported to the City Surveyor and rendered safe, and 810 defective water taps were notified to the Water Department.

I remain,
Mr. Chairman and Gentlemen,
Your obedient Servant,

ALFRED HILL, M.D.,
Medical Officer of Health.

III. APPENDIX.

(TABLES, MAP, AND CHART.)

TABLE I.

Population, Births, and Deaths in the Nine Years 1886–1894.

Year.	Estimated Population.	Births.	Total Deaths.	Deaths.			
				Of Infants under One Year old.	Of Children under Five Years old.	From Seven chief Zymotic Diseases.	In Public Institutions.
1886 ...	458,110	15,622	9,182	2,712	4,244	1,462	1,239
1887 ...	462,251	15,315	9,225	2,670	4,137	1,424	1,259
1888 ...	466,430	15,076	8,465	2,293	3,652	924	1,195
1889 ...	470,646	15,357	9,035	2,579	4,096	1,270	1,320
1890 ...	474,900	15,487*	10,329*	2,798*	4,504*	1,391*	1,600*
1891 ...	479,193	16,166	10,077	2,673	4,015	976	1,650
1892 ...	483,526	16,026	9,642	2,664	4,234	1,244	1,411
1893 ...	487,897	15,881	10,445	3,146	4,452	1,480	1,631
1894 ...	492,301	15,505	8,946	2,539	3,980	1,196	1,549
Average of 8 years prior to 1894.	472,869	15,616	9,550	2,692	4,167	1,271	1,413

* 53 weeks.

1.—Population at Census 1891, 478,116.
2.—Number of Inhabited Houses at Census 1891, 95,516.
3.—Average number of Persons in each House at Census 1891, 5·0.
4.—Area of the City, in acres, 12,705.

TABLE II.

Birth-rates and Death-rates in the Nine Years 1886–1894.

Year.	Birth-rate per 1,000 persons living.	Death-rate per 1,000 persons living.	Death-rate in Infants under One Year per 1,000 Births.	Death-rate in Children under Five Years per 1,000 Children living.	Death-rate from Seven chief Zymotic Diseases.	Deaths in Public Institutions; Percentage on total deaths.
1886	34·2	20·1	174	70	3·2	13·5
1887	33·2	20·0	174	69	3·1	13·6
1888	32·4	18·2	152	61	2·0	14·1
1889	32·7	19·2	168	69	2·7	14·6
1890	32·1	21·4	181	75	2·9	15·5
1891	33·8	21·1	165	69	2·0	16·4
1892	33·2	20·0	166	73	2·6	14·6
1893	32·6	21·5	198	77	3·0	15·6
1894	31·6	18·2	164	70	2·4	17·3
Average of 8 Years prior to 1894.	33·0	20·2	172	70	2·7	14·7

TABLE III.

SHOWING THE NUMBER OF DEATHS IN THE EIGHT YEARS, 1886 TO 1893, FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES, AND THE NUMBER IN 1894.

	1886.	1887.	1888.	1889.	1890.*	1891.	1892.	1893.	Annual Average of 8 years, 1886-1893.	Proportion of deaths to 1,000 deaths in 8 years, 1886-1893.	1894.	Proportion of deaths to 1,000 deaths in 1894.
Smallpox	0	2	0	0	0	7	0	70	10	1·0	171	19·1
Measles	402	251	202	214	354	107	340	48	240	25·1	316	35·3
Scarlet Fever ...	42	37	40	162	218	95	68	68	91	9·6	75	8·4
Diphtheria	80	67	48	59	66	43	67	43	59	6·2	50	5·6
Whooping Cough ...	99	403	248	297	224	303	285	321	272	28·5	219	24·5
Fever — Typhus	0	0	0	0	0	0	0	0	0	0·0	0	0·0
Fever — Typhoid or Enteric	63	77	64	45	64	80	39	94	66	6·9	105	11·7
Fever — Continued	6	8	5	4	2	1	2	8	4	0·5	4	0·5
Diarrhœa	770	579	317	489	463	340	443	828	529	55·3	256	28·6
TOTAL	1,462	1,424	924	1,270	1,391*	976	1,244	1,480	1,271	133·1	1,196	133·7

* 53 weeks.

TABLE IV.

Deaths from certain causes in the years 1891–1894.

DEATHS FROM	1891	1892	1893	1894
Cancer	324	293	313	303
Phthisis	815	716	775	630
Other Tubercular Diseases ...	266	265	270	229
Premature Birth	295	345	359	346
Old Age	435	348	541	388
Bronchitis, Pneumonia, and Pleurisy	2,469	2,100	2,188	1,811
Diseases of Nervous System ...	902	864	915	861
Diseases of Heart	673	684	584	586
Diseases of Digestive System	570	597	712	582
Diseases of Urinary System	222	225	256	215
Accident or Negligence ...	356	292	296	280
Debility, Atrophy, Inanition, and Marasmus	593	592	750	615

TABLE V.

HEALTH DEPARTMENT.

SUMMARY OF NUISANCES ABATED AND OTHER WORK DONE DURING THE YEAR 1894.

(RETURN MADE BY MR. PARKER, *Inspector of Nuisances.*)

No of Drains opened and cleared from obstruction	3,813
,, Drains efficiently trapped	1,877
,, Drains in cellars disconnected from the sewer or removed...	190
,, Drains removed from inside Dwelling Houses	3
,, Drains removed from inside Slaughter Houses	1
,, Drains removed from Stables	3
,, Sink Drains disconnected from the sewer	212
,, Sink Bend Pipes affixed or repaired	185
,, Overflow Pipes from Water Cisterns disconnected	21
,, Premises supplied with drains	109
,, Houses disinfected, cleansed, and purified, after infectious disease	3,500
,, Houses cleansed and whitewashed	1,541
,, Houses repaired	1,304
,, Houses supplied with wholesome water	7
,, Houses rendered fit for human habitation or closed ...	204
,, Houses provided with efficient ventilation	34
,, Cases of overcrowding of houses remedied	50
,, Accumulations of water in cellars removed	223
,, Spouts repaired	364
,, Soilpipes removed from inside dwelling houses	53
,, Privies cleansed	361
,, Ashpit Privies converted to water closets	905
,, Pan Privies converted to water closets	119
,, Additional water closets provided	28
,, Ashpits and Privies repaired	1,686
,, Urinals cleansed, repaired, or re-constructed	589
,, Back Yards paved or repaired...	476
,, Premises from which fowls have been removed	196
,, Nuisances from swine and swine styes abated	79
,, Accumulations of wash, manure, etc., removed	806
,, Premises reported to the City Surveyor's Department as dangerous, and rendered safe	1,181
,, Defective Water Fittings reported to the Water Department, and repaired	810
Total	20,930

Number of Notices issued for the abatement of Nuisances ...	19,461	
Number of Cases Summoned	44	
,, Withdrawn	0	
,, Convicted	44	
Amount of Costs	£4	14 6
,, Penalties		

SMOKE NUISANCES.

No. of Observations made by the Inspectors	5,002	
,, Manufacturers Reported for the emission of dense smoke ...	168	
,, ,, Cautioned	115	
,, ,, Summoned	53	
Amount of Penalties	£28	5 0
,, Costs	£20	4 6

WORKSHOPS.

No. of Visits to Workshops	9,400
,, Sanitary Defects and Contraventions of Regulations Remedied	1,182

DAIRIES, COW SHEDS, AND MILKSHOPS.

No. of Visits to Cow Sheds	2,328
,, Visits to Dairies	202
,, Visits to Milk Shops and Milk Stores	4,479
,, Sanitary Defects and Contraventions of Regulations Remedied	392

BAKEHOUSES.

No. of Visits to Bakehouses	1,046
,, Sanitary Defects and Contraventions of Regulations Remedied	184

COMMON LODGING HOUSES.

No. of Registered Common Lodging Houses	79
,, Lodgers allowed	1,766
,, Houses Registered under the Public Health Act, 1875 ...	83
,, Lodgers allowed	473
,, Visits by day	13,132
,, Visits by night	1,133
,, Lodgers found occupying the Houses	21,902
,, Persons Summoned	3

THE CANAL BOATS ACTS, 1877 AND 1884.

No. of Canal Boats inspected	566
,, Canal Boats registered	26
,, Contraventions of Regulations Remedied	60
,, Persons Summoned	0

SLAUGHTER HOUSES.

(Return made by MR. EDWARDS, *Superintendent of the Markets.)*

No. of Visits	10,483
Voluntary Surrenders of Meat	1,378
Seizures of Bad Meat...	7
Weight Destroyed	164 tons
Voluntary Surrenders of Fish, &c.	421
Seizures of Fish, &c.	8

CONTAGIOUS DISEASES (ANIMALS) ACT.

(Return made by MR. EDWARDS, *Superintendent of the Markets.)*

No. of Visits to Railway Stations	716
No. of Visits to Cow Houses	84

TABLE VI.

Meteorological Condition of the Air, Temperature of the Ground, Hours of Sunshine, and Amount of Rainfall for the Year ending December 31st, 1894.

Observed at the Birmingham and Midland Institute Observatory, Edgbaston, by Mr. Alfred Cresswell.

1894. Months.	Pressure of Air. Barometer Mean Monthly Reading, reduced to 32° F. and sea level.	Temperature of the Air. Highest in Shade.	Temperature of the Air. Lowest in Shade.	Temperature of the Air. Mean Temperature in the Month.	Temperature of the Ground. 1 foot deep.	Temperature of the Ground. 4 feet deep.	Degree of Humidity. Complete Saturation=100	Horizontal Movement of the air in miles.	Hours of Sunshine.	Rainfall. Amount deposited in inches.	Rainfall. Number of Days on which Rain fell.
January ...	29·812	53°6	10°8	36°7	38°9	44°3	86	11,823	44·7	1·61	21
February ...	29·974	54·4	21·7	39·9	40·1	44·0	82	11,749	65·8	2·05	16
March ...	29·934	63·3	29·9	42·6	41·6	43·9	80	9,946	125·7	1·05	11
April ..	29·853	70·4	36·0	48·5	48·0	46·5	82	7,526	120·4	1·62	14
May ...	29·945	63·0	32·8	47·1	48·1	47·7	75	10,354	124·7	2·01	19
June ...	30·007	78·5	41·2	55·6	54·2	49·2	75	8,376	131·4	2·16	13
July ...	29·884	80·7	47·9	59·8	59·6	52·9	76	7,860	132·3	3·36	19
August ...	29·912	69·8	45·0	56·4	56·0	53·8	83	9,488	83·2	2·12	18
September...	30·168	65·7	37·5	52·1	52·5	53·1	82	7,351	65·8	1·70	10
October ...	29·907	60·0	31·5	47·2	48·2	51·3	89	8,050	23·7	3·48	17
November ...	29·928	60·0	33·2	45·1	45·6	49·3	88	9,525	50·2	2·48	13
December ...	29·982	51·3	24·4	40·1	42·2	47·0	89	11,362	25·6	1·88	16

Prices of Coal, Flour, Potatoes, and Butchers' Meat, and the Number of Paupers Relieved in the Parish of Birmingham during each of the Five Years ended Michaelmas, 1890-1894.

Years.	Average Prices of Food and Fuel. Coal per ton.	Flour per 224lbs.	Potatoes per ton.	Butchers' Meat per lb.	Pauperism. Weekly Average of Paupers relieved during the Year. In-door.	Out-door.
1894	9/–	14/–	60/–	Beef -/4½ Mut'n -/6¾	2,716	893
1893	9/3	16/9	60/–	Beef -/4¼ Mut'n -/6¾	2,652	725
1892	9/2	22/3	75/–	Beef -/4½ Mut'n -/7	2,627	834
1891	9/7	22/9	80/–	Beef -/4½ Mut'n -/7¼	2,688	1,058
1890	9/8	20/–	60/–	Beef -/4¾ Mut'n -/8	2,680	1,138

TABLE VII.

TEMPERATURE AND RAINFALL IN EACH MONTH AND YEAR FROM 1887 TO 1894.

MONTH.	TEMPERATURE.									RAINFALL.								
	1887	1888	1889	1890	1891	1892	1893	Average for seven years 1887-1893.	1894	1887	1888	1889	1890	1891	1892	1893	Average for seven years 1887-1893.	1894
	°	°	°	°	°	°	°	°										
JANUARY ...	35·2	37·2	36·8	41·1	34·4	35·2	35·1	36·4	36·7	1·19	0·50	0·59	2·80	1·92	1·98	1·75	1·53	1·61
FEBRUARY ...	38·3	34·8	36·5	36·8	40·2	37·3	39·2	37·6	39·9	0·62	0·11	1·66	0·52	0·69	1·41	2·56	1·08	2·05
MARCH ...	37·6	36·9	39·5	42·6	38·8	35·6	45·3	39·5	42·6	1·38	2·41	2·64	1·47	1·22	0·85	0·50	1·49	1·05
APRIL	41·6	42·1	43·7	44·0	42·4	44·9	49·6	44·0	48·5	1·47	1·89	2·91	0·69	2·13	1·23	0·33	1·52	1·62
MAY	47·6	51·1	54·3	52·7	48·4	53·2	54·5	51·7	47·1	1·88	0·83	4·00	2·12	3·38	1·85	2·08	2·31	2·01
JUNE	59·9	55·2	59·0	57·1	57·4	56·5	59·0	57·7	55·6	2·17	2·16	0·49	1·62	3·27	2·74	1·08	1·93	2·16
JULY	63·9	55·9	59·0	57·6	58·0	56·8	61·0	58·9	59·8	0·93	5·11	1·53	2·39	2·08	2·52	1·64	2·31	3·36
AUGUST ...	60·2	57·4	58·6	57·5	56·9	59·2	63·2	59·0	56·4	2·38	3·27	2·92	3·74	3·56	3·73	2·25	3·12	2·12
SEPTEMBER ...	52·5	53·7	55·1	58·6	57·2	54·0	54·8	55·1	52·1	2·31	1·20	2·17	1·26	1·63	2·97	1·72	1·89	1·70
OCTOBER ...	44·4	46·6	46·8	49·2	48·4	44·5	48·8	47·0	47·2	2·11	0·32	3·19	1·56	5·36	2·84	2·45	2·55	3·48
NOVEMBER ...	40·1	45·5	44·0	42·5	41·3	43·2	39·9	42·4	45·1	1·78	4·41	1·04	3·22	2·74	1·79	1·38	2·34	2·48
DECEMBER ...	37·3	40·3	37·9	29·8	39·2	34·7	39·5	37·0	40·1	1·58	2·41	1·80	0·71	3·16	1·69	3·02	2·05	1·88
YEAR ...	46·5	46·4	47·6	47·5	46·9	46·3	49·2	47·2	47·6	19·80	24·62	24·94	22·10	31·14	25·60	20·76	24·12	25·52

TABLE VIII.

Number of Cases Reported under the Infectious Disease (Notification) Act, 1889, during each Week of the Year 1894.

Week. Number.	Week. Date of ending.	Smallpox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Typhus Fever	Typhoid Fever.	Simple Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Total.
	1893.												
1	January 6th	26	25	6	1	...	8	...	...	1	...	18	85
2	„ 13th	47	13	4	3	...	10	...	...	1	...	16	94
3	„ 20th	48	30	3	2	...	14	...	...	...	...	23	120
4	„ 27th	44	24	3	3	...	8	...	..	...	...	9	91
5	February 3rd	65	24	4	3	...	11	...	...	...	...	20	127
6	„ 10th	92	27	3	1	...	16	...	...	2	...	15	156
7	„ 17th	48	20	4	5	...	10	...	..	1	...	10	98
8	„ 24th	51	20	8	3	...	14	..	...	...	...	14	110
9	March 3rd	61	22	4	2	...	6	...	...	2	...	20	117
10	„ 10th	47	36	7	1	...	11	...	...	1	...	20	123
11	„ 17th	44	31	4	2	...	6	...	...	...	...	14	101
12	„ 24th	76	26	1	2	...	8	1	...	1	...	11	126
13	„ 31st	68	25	6	4	...	8	...	...	...	...	14	125
14	April 7th	67	34	3	5	...	7	...	...	1	...	13	130
15	„ 14th	84	27	9	1	...	9	...	...	...	...	14	144
16	„ 21st	72	22	4	3	...	4	...	...	...	...	15	120
17	„ 28th	47	34	5	6	...	3	...	...	...	...	13	108
18	May 5th	52	34	1	2	...	5	1	...	1	...	8	104
19	„ 12th	46	42	5	2	...	8	...	...	...	...	13	116
20	„ 19th	37	38	7	...	...	3	1	...	2	...	11	99
21	„ 26th	45	33	7	1	...	6	...	...	...	...	14	106
22	June 2nd	56	25	4	4	...	12	..	...	...	...	16	117
23	„ 9th	36	25	5	...	...	8	...	...	3	...	19	96
24	„ 16th	52	27	5	1	...	3	...	...	1	...	12	101
25	„ 23rd	25	21	3	4	...	13	...	...	2	...	21	89
26	„ 30th	32	25	6	2	...	7	...	...	...	...	12	84
27	July 7th	21	42	4	...	...	8	...	...	...	...	11	86
28	„ 14th	15	45	7	1	...	6	...	...	2	...	17	93
29	„ 21st	18	39	11	2	...	14	...	...	1	...	14	99
30	„ 28th	17	34	4	...	...	6	..	...	1	..	13	75
31	August 4th	17	25	5	1	...	7	...	...	...	...	10	65
32	„ 11th	22	30	1	1	...	7	...	...	...	...	8	69
33	„ 18th	6	28	6	...	...	9	2	...	...	...	9	60
34	„ 25th	31	31	2	3	...	8	...	...	...	...	12	87
35	September 1st	16	30	4	...	...	18	...	...	2	...	12	82
36	„ 8th	44	46	12	...	...	13	...	...	...	...	15	130
37	„ 15th	22	72	6	...	...	11	...	...	...	...	14	125
38	„ 22nd	39	51	9	...	...	13	...	...	...	...	14	126
39	„ 29th	37	44	2	...	...	6	...	...	...	...	16	105
40	October 6th	24	52	4	1	...	10	...	...	1	...	15	107
41	„ 13th	28	47	13	3	...	14	...	...	...	...	16	121
42	„ 20th	42	39	6	1	...	10	...	...	...	...	14	112
43	„ 27th	27	51	5	...	...	17	...	...	1	...	21	122
44	November 3rd	70	48	8	1	...	10	...	...	4	...	19	160
45	„ 10th	52	60	10	1	...	12	2	...	2	...	15	154
46	„ 17th	19	50	11	2	...	22	...	...	1	...	14	119
47	„ 24th	26	53	13	1	...	19	...	...	1	...	18	131
48	December 1st	32	45	7	3	...	13	...	...	1	..	15	116
49	„ 8th	19	35	19	2	...	8	...	...	1	...	18	102
50	„ 15th	30	37	11	...	...	12	...	...	2	...	18	110
51	„ 22nd	17	20	6	1	...	5	...	...	2	...	19	70
52	„ 29th	15	24	9	3	...	15	...	...	1	...	20	87
	Totals ...	2074	1788	316	90	...	511	7	...	42	...	772	5600

TABLE IX.

Cases of Infectious Disease Notified during the Year ending December 29th, 1894.

Classified according to ages and localities.

DISEASES.	AGES.							WARDS.																			CITY.
	0 to 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and up.	Rotton Park.	All Saints'.	Ladywood.	St. Paul's.	St. George's.	St. Stephen's.	St. Mary's.	St. Bartholomew's.	Market Hall.	St. Thomas's.	St. Martin's.	Edgbaston and Harborne.	Deritend.	Bordesley.	Duddeston.	Nechells.	Balsall Heath.	Sa tley.	Institutions.	
SMALLPOX	41	49	323	764	742	138	17	329	560	127	138	118	121	67	59	39	61	48	31	44	44	57	87	33	22	89	2074
SCARLET FEVER ..	18	489	1081	160	38	2	..	250	228	151	93	79	43	41	74	30	61	69	85	82	167	30	38	173	74	20	1788
DIPHTHERIA	3	73	104	62	62	12	..	22	58	41	21	17	14	3	12	6	10	7	12	18	22	6	12	24	10	1	316
MEMBRANOUS CROUP.	10	67	12	1	..	..	..	3	7	4	2	8	8	14	7	..	6	..	1	5	2	6	9	2	6	..	90
TYPHUS FEVER.. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TYPHOID FEVER ..	2	30	167	145	136	27	4	39	16	31	45	21	40	14	33	9	14	21	21	34	38	41	25	42	19	8	511
SIMPLE CONTINUED FEVER	..	1	3	3	..	..	..	..	..	..	..	..	2	..	..	2	2	..	..	1	..	..	..	..	..	..	7
RELAPSING FEVER ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
PUERPERAL FEVER ..	..	..	..	15	27	..	..	5	3	2	1	..	3	..	2	2	2	1	..	3	2	2	3	10	1	..	42
CHOLERA..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ERYSIPELAS	25	40	77	123	251	187	69	58	55	37	14	29	42	20	68	16	44	54	30	66	39	29	41	71	36	23	772
Totals ..	99	749	1767	1273	1256	366	90	706	927	393	314	272	273	159	255	104	200	200	180	253	314	171	215	355	168	141	5600

TABLE X.—WATER: RESULTS OF ANALYSES

Date of Receipt of Samples.	DESCRIPTION.	Temp. C.	Total Solid Impurity	Organic Carbon.	Organic Nitrogen.
1894.	**CORPORATION SUPPLY.**				
Jan. 8th	Terrace, between 6 and 7, Barrack Street	2·8	28·4	·171	·036
Feb. 12th	Clifton Terrace, Darwin Street	8·3	26·8	·145	·018
Mar. 7th	23 and 24, Ruston Street	7·2	28·2	·131	·020
April 10th	22 Court, Sherlock Street	10·6	32·2	·139	·026
May 15th	4 Court, Princip Street	11·7	29·6	·149	·036
June 6th	Rear of 12 and 13, Bellis Street	13·3	33·3	·145	·041
July 4th	97 and 99, Vittoria Street	16·7	31·2	·198	·041
Aug. 9th	1 Court, Heath Mill Lane	15·6	25·5	·283	·068
Sept. 11th	Court between 136 and 137, Aberdeen Street	14·0	32·7	·146	·029
Oct. 10th	4 Court, Coventry Street	12·2	31·3	·290	·040
Nov. 8th	3 Court, Gough Street	10·6	32·2	·240	·045
Dec. 10th	Ryland Grove, Coplow Street	8·3	31·7	·050	·150
	Average Results ... 1894...	10·9	30·3	·174	·046
	,, ,, ... 1893...	10·6	30·1	·186	·037
	,, ,, ... 1892...	10·1	28·1	·185	·028
	,, ,, ... 1891...	10·2	29·3	·195	·028
	,, ,, ... 1890...	11·4	28·0	·164	·024
	WELL WATER.				
April 5th	1, 2, 3, and 4, West View, Washwood Heath Road	...	146·0	...	...
,, 5th	33, 35, and 37, Havelock Road	...	113·0	...	...
,, 24th	13, 14, 15, 16, and 17, Branston Place, Sherbourne Road	...	160·0	...	...
May 2nd	Alum Rock Farm, Alum Rock, Saltley	...	108·0	...	...
Oct. 5th	194, Hagley Road	...	52·0	...	...
Dec. 13th	Back 256, Duddeston Mill Road	...	65·0	...	...
,, 13th	Back 177, Adderley Road	...	66·0	...	...
,, 13th	Adderley Park Brick Works, Bordesley Green Road	...	159·0	...	...
,, 19th	Bath Walk, Edwardes Street	...	139·0	...	...
,, 27th	188, Mary Street, Balsall Heath	...	143·0	...	...

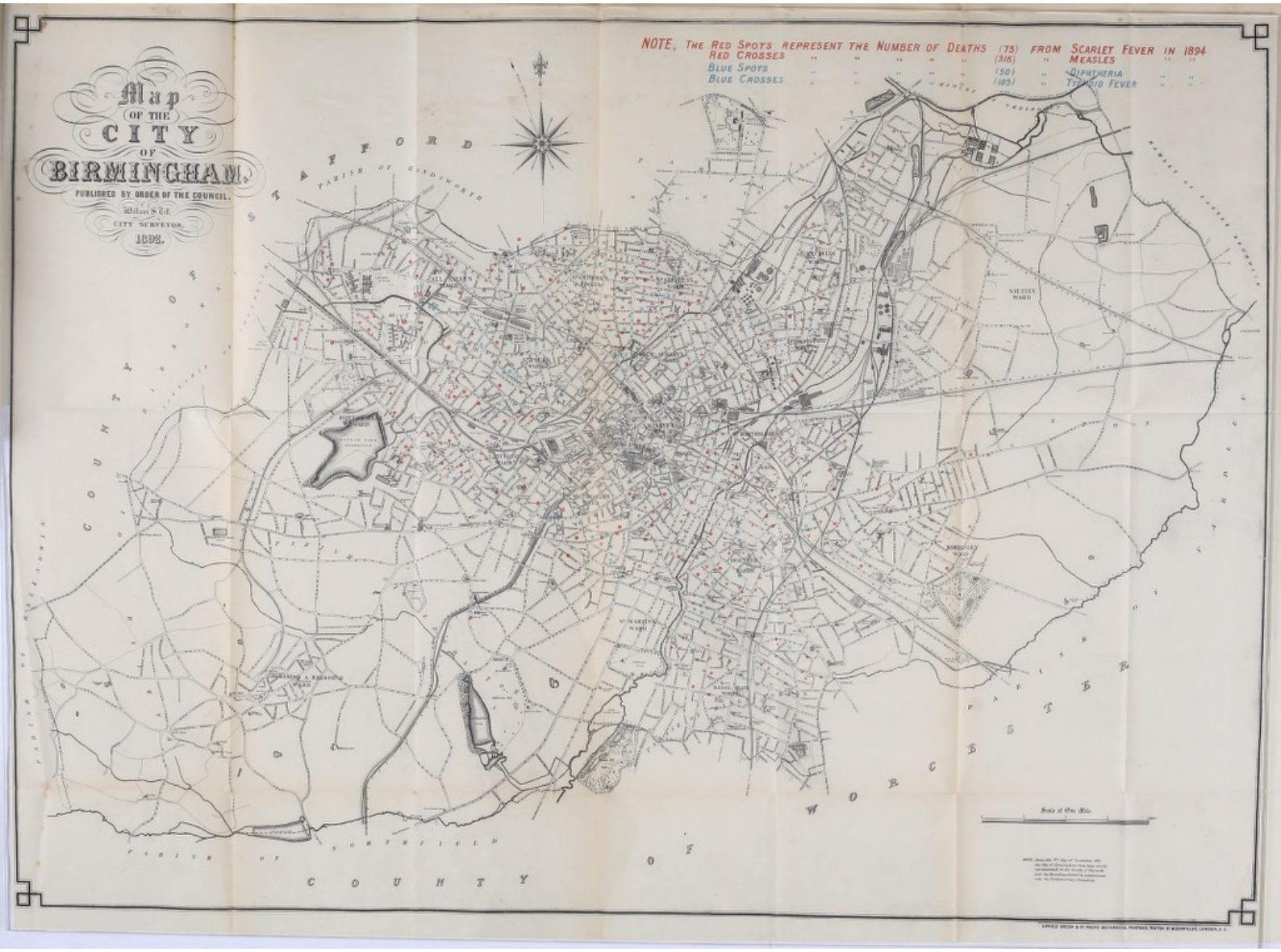
EXPRESSED IN PARTS PER 100,000.

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated.)	Chlorine.	Hardness.			REMARKS
					Temporary.	Permanent.	Total.	
none	·275	·311	2,430	2·3	7°8	12°1	19°9	Clear; green
none	·176	·194	1,440	1·9	7·8	12·4	20·2	Clear; green
·001	·264	·285	2,330	2·0	7·4	13·6	21·0	Very slightly turbid; green
none	·297	·323	2,650	2·8	5·8	13·8	19·6	Clear; green
none	·187	·223	1,550	2·0	6·1	13·0	19·1	Very slightly turbid; green
none	·242	·283	2,100	2·0	6·8	14·7	21·5	Very slightly turbid; green
none	·220	·261	1,880	2·8	5·8	13·3	19·1	Clear; green
none	·066	·134	340	1·7	6·0	9·6	15·6	Very slightly turbid; yellowish green
·001	·209	·239	1,780	2·5	7·7	13·3	21·0	Very slightly turbid; green
·001	·066	·106	350	1·8	7·0	14·5	21·5	Clear; pale green
·001	·286	·332	2,550	2·1	7·6	13·6	21·2	Very slightly turbid; green
none	·275	·325	2,430	2·2	8·4	13·3	21·7	Clear; green
·000	·214	·251	1,820	2·2	7·0	13·1	20·1	
·001	·267	·304	2,350	2·1	7·5	13·2	20·7	
·001	·263	·291	2,320	1·9	8·0	12·2	20·2	
·001	·214	·243	1,820	2·0	6·2	14·4	20·6	
·001	·234	·259	2,030	1·8	6·6	9·8	16·4	
·002	9·90	...	98,700	12·4	...	...	...	Slightly turbid; minute floating particle
none	3·85	...	38,200	6·7	...	...	...	Slightly turb floating fibrous particles
none	5·15	...	51,100	10·8	...	...	...	Very slightly turbid; green
·001	3·19	...	31,600	7·9	...	...	...	Very slightly turbid: green
·001	2·14	...	21,140	3·8	...	...	...	Clear; pale green; light brown floculent particles and one or two moving organisms
·001	1·65	...	16,200	5·8	...	...	...	Clear; pale green
none	·93	...	9,000	5·2	...	...	...	Very slightly turbid; pale green
·001	1·70	...	16,700	7·0	...	...	...	Clear; pale green
·001	3·57	...	35,400	10·7	...	...	...	Almost clear; pale green
·002	5·17	...	51,400	8·6	...	...	...	Almost clear; pale green

TABLE XI.

RETURN FOR THE PERIOD 1ST JULY, 1893, TO 30TH JUNE, 1894, RESPECTING THE VACCINATION OF CHILDREN WHOSE BIRTHS WERE REGISTERED IN THE CITY DURING THE SAID PERIOD.

	Number of Births returned in the "Birth List Sheets" as Registered.	Number of these Births duly entered in Columns 10, 11, and 13 of the "Vaccination Register" (Birth List Sheets), viz.:				Number of these Births which remained unentered in the "Vaccination Register" on account (as shown by Report Book) of			Number of these Births remaining neither duly entered in the "Vaccination Register" (cols. 3, 4, 5, and 6 of this Return) nor temporarily accounted for in the "Report Book" (cols. 8, 9, and 10 of this Return).
		Col. 10.	Col. 11.		Col. 13.				
		"Successfully Vaccinated."	"Insusceptible of Vaccination."	"Had Smallpox."	"Dead, Unvaccinated."	Postponement by Medical Certificate.	Removal to Districts the Vaccination Officer of which has been duly apprised.	Removal to places unknown or which cannot be reached; and cases not having been found.	
1	2	3	4	5	6	8	9	10	11
Birmingham Parish ...	7,926	6,245	26	5	996	79	63	456	56
Aston Union (within the City)	6,081	4,380	38	1	766	131	22	583	160
King's Norton Union (within the City) ...	1,642	1,180	12	—	159	14	23	92	162
Total	15,649	11,805	76	6	1,921	224	108	1,131	378

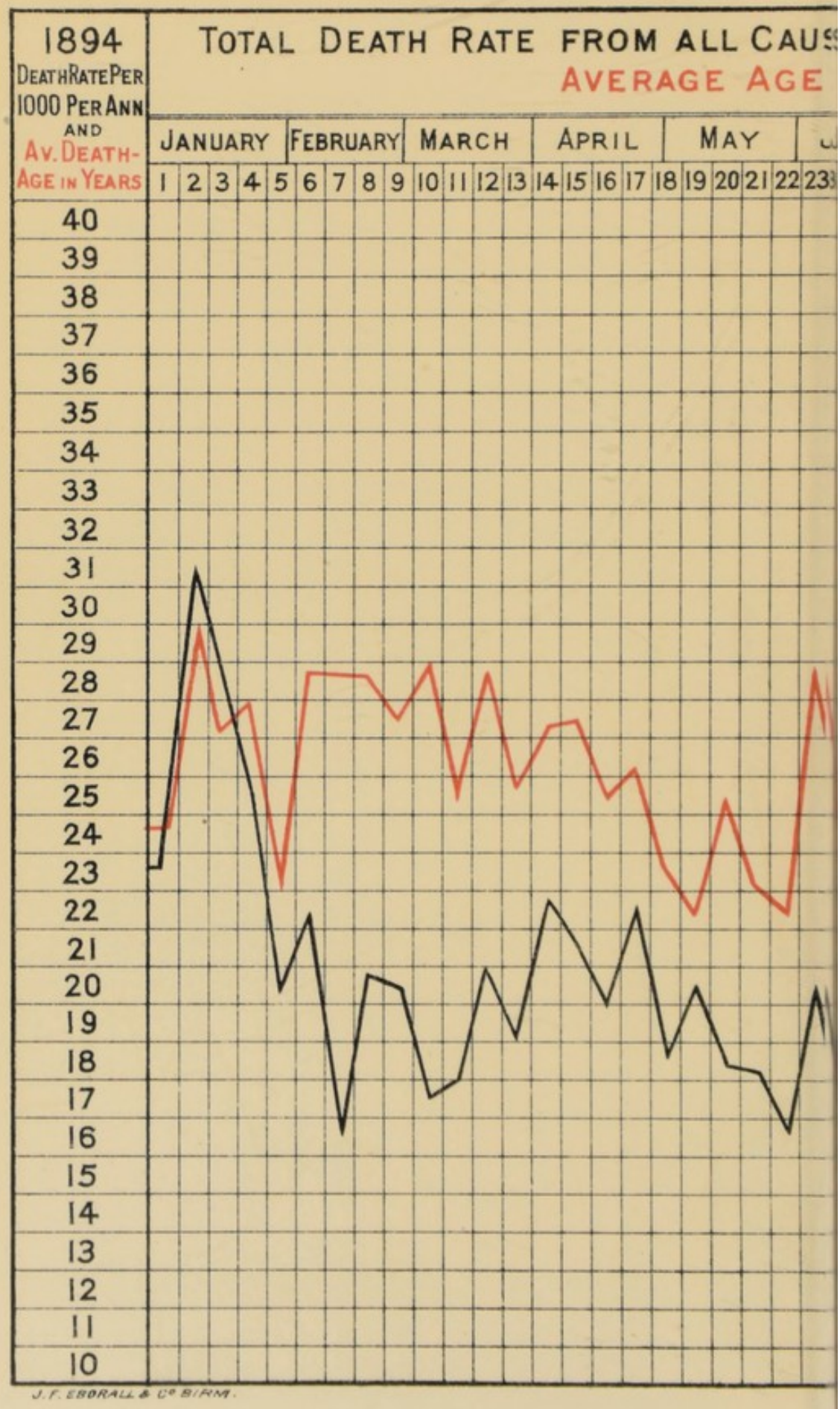

Map
OF THE
CITY
OF
BIRMINGHAM.
PUBLISHED BY ORDER OF THE COUNCIL.
CITY SURVEYOR.
1892.
NOTE. THE RED SPOTS REPRESENT THE NUMBER OF DEATHS (75) FROM SCARLET FEVER IN 1894
RED CROSSES " " " " " (316) " MEASLES " "
BLUE SPOTS " " " " " (50) " DIPHTHERIA " "
BLUE CROSSES " " " " " (105) " TYPHOID FEVER " "
STAFFORD
COUNTY OF
PARISH OF SANDWORTH
PARISH OF NORTHFIELD
COUNTY OF WORCESTER
SALTLEY WARD
NORDSLEY WARD
WARDS
Scale of One Mile.

MAP
OF THE
CITY
OF
BIRMINGHAM

PUBLISHED BY ORDER OF THE COUNCIL

William S Gill
CITY SURVEYOR.

1892.


1894
Death Rate Per 1000 Per Ann and Av. Death-Age in Years
TOTAL DEATH RATE FROM ALL CAUS
AVERAGE AGE
JANUARY
FEBRUARY
MARCH
APRIL
MAY
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
J. F. EBORALL & Co BIRM.

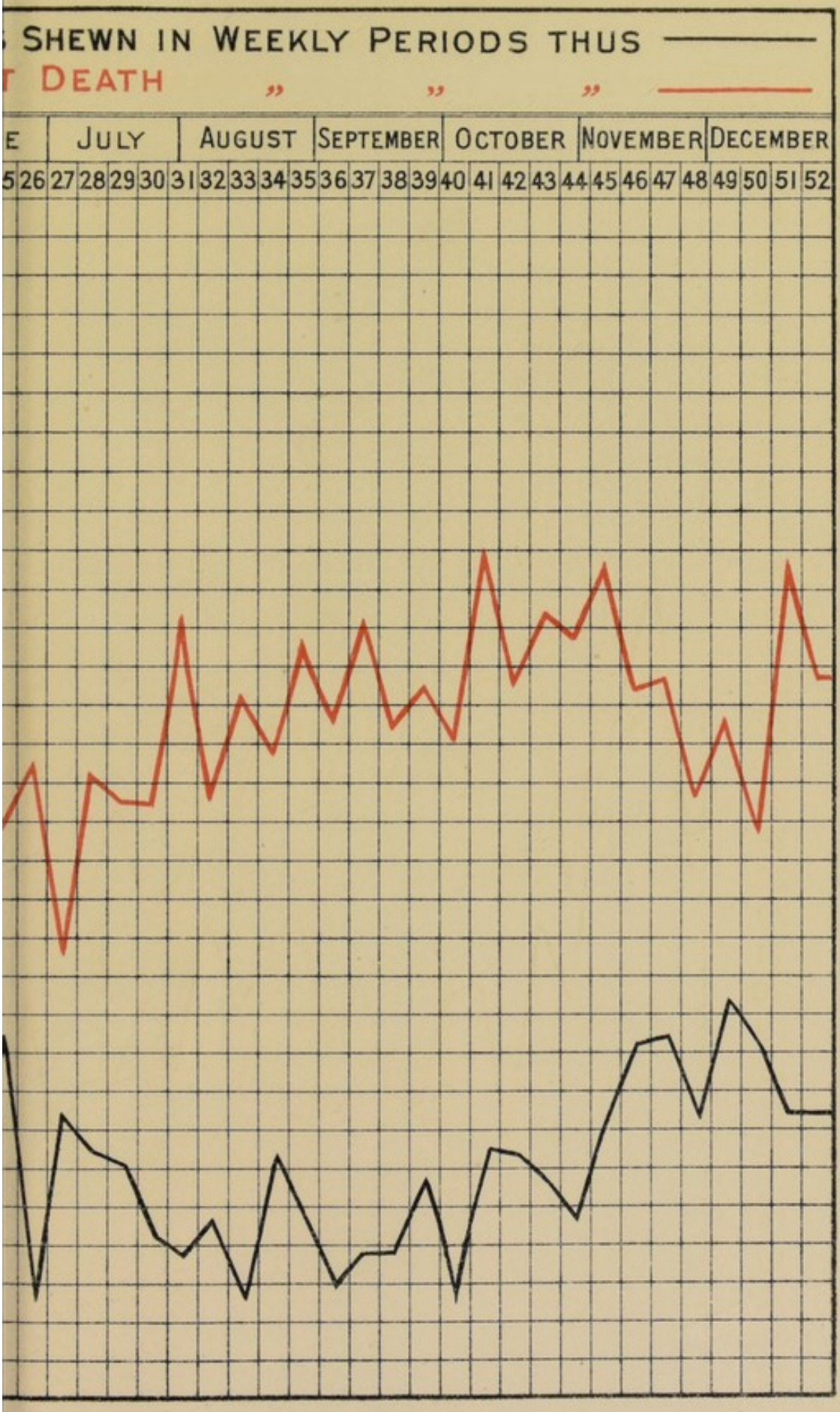

SHEWN IN WEEKLY PERIODS THUS
T DEATH „ „ „
E
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
5 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

Table of the Number of Deaths occurring in each Street in the City of Birmingham during the Year 1894.

STREETS.	Zymotic Diseases.	Other Diseases.
A		
A B Row		2
Abberley Street ..		
Abbey Street, All Saints'	1	9
Abbey Street, Harborne		
Aberdeen Street ..	3	6
Ada Street		1
Adams Street	6	22
Adderley Road ..	2	15
Adderley Street ..	1	8
Addison Road ..	1	1
Adelaide Street ..	2	4
Albany Road		
Albert Road		
Albert Street		
Albion Street		1
Alcester Street ..	3	25
Alder Drive		
Alder Road		
Alexandra Road ..		2
Alexandra Street ..	1	11
Alfred St., Balsall Heath		4
Alfred Street, St. Paul's		1
Algernon Road ..		2
Allcock Street ..	1	6
Allen's Road	1	3
Allesley Street ..	2	11
Allison Street	4	13
Allport Street.. ..		
All Saints' Road ..		4
All Saints' Street ..		
Alma Crescent ..		5
Alma Street		
Alston Street	1	9
Alum Rock Road ..	1	9
Ampton Road ..		1
Anderton Road ..		11
Anderton Street ..	2	13
Andover Street ..		
Angelina Street ..	3	20
Anthony Road ..		
Arden Road	1	5
Argyle Street	1	14
Armoury Road ..		
Arsenal Street ..		4
Arthur Road, Edgbaston		
Arthur Road, Saltley ..		5
Arthur Street	4	34
Artillery Street ..	1	3
Ashford Street ..	1	4
Ashley Street	1	9
Ashted Row	4	14
Aston Road	6	30
Aston Street	2	2
Aston Brook Street ..	1	8
Aston Church Road ..		
Asylum Road	1	10
Athole Street		
Atlas Road		4
Auckland Road ..	3	4
Augusta Street ..		1
Augustus Road ..		4
Austin Street		4
Avenue Road		
B		
Bacchus Road		6
Bagot Street . ..	6	6
Bailey Street	1	1
Baker Street	1	5
Balsall Heath Road ..	4	19
Banbury Street ..	1	3
Barford Road	1	4
Barford Street ..	5	26
Barker Street		4
Barlow's Road ..		
Barn Street	1	13
Barnsley Road ..		
Barr Street	4	26
Barrack Street ..		1
Bartholomew Row ..		2
Bartholomew Street ..		7
Barwell Road.. ..		4
Barwick Street ..		
Baskerville Passage ..		
Baskerville Place ..		
Bath Passage		3
Bath Row	2	5
Bath Street		8
Beach Street	1	5
Beak Street		6
Beaufort Road ..		
Bedford Road.. ..		2
Beech Lanes		
Beechfield Road ..	1	3
Belcher Lane		
Belgrave Road ..		6
Belgrave Street ..	4	18
Bell Street		
Bell Barn Road ..	4	25
Bellefield Road ..		4
Bellis Street		6
Belmont Passage ..		5
Belmont Row		6
Benacre Street ..	1	14
Bennett's Hill ..		
Berkley Street ..		1
Berners Street ..	1	6
Berry Street ..		2
Bertram Road ..		1
Betholom Row ..		
Birchall Street ..		3
Birchwood Road ..		2
Bishop Street.. ..	1	8
Bishop Street South ..		
Bishopsgate Street ..	1	16
Bissell Street	4	11
Black Pit Lane ..		
Blake Lane		1
Blakeland Street ..		3
Blews Street	1	10
Blews Street West ..	1	10
Bloomsbury Street ..		24
Blucher Street ..		12
Blythe Street		8
Bolton Road	4	36
Bolton Street		
Bond Street		
Bordesley Green ..	3	15
Bordesley Green Road		5
Bordesley Park Road ..	4	29
Bordesley Street ..	2	17
Bow Street		7
Bowyer Street ..		1
Bowyer Road		
Bracebridge Street ..		22
Bradford Street ..	6	16
Braithwaite Road ..		
Branston Street ..	1	9
Brass Street	1	6
Brasshouse Passage ..		
Bread Street	1	4
Brearley Street ..	15	55
Brewery Street ..	1	5
Brickiln Street .		
Bridge Road		1
Bridge Street		
Bridge Street West ..	10	32
Brighton Road ..		10
Bristol Road	1	14
Bristol Street		20
Broad Street		20
Bromford Lane ..		
Bromsgrove Street ..	3	13
Brook Road		
Brook Street		
Brookfield Road ..	4	3
Broom Street		2
Browning Street ..	1	5
Brueton Street ..		
Brunswick Road ..		16
Buck Street		9
Buckingham Street ..	1	10
Bull Ring		
Bull Street, Harborne..		
Bull Street, Market Hall		1
Bullock Street.. ..	3	6
Burbury Street ..	3	7
Burlington Passage ..		
Burney Lane		
Butler Street		5
Butler Street South ..	1	2
Butlin Street	1	5
Byron Road		
C		
Calthorpe Road ..		3
Cambridge Crescent ..		1
Cambridge Street ..		1
Camden Drive ..		
Camden Grove ..		
Camden Street ..	6	45
Camp Hill		9
Camp Street		1
Canal Street	1	2
Cannon Street ..		
Cannon Hill Road ..		
Cape Lane		
Cape Street		
Cardigan Street ..	1	6
Carlisle Street ..	1	1
Carlton Road		5
Carlyle Road		1
Carnarvon Road ..		
Caroline Street ..		1
Carpenter Road ..		3
Carrington Road ..		1
Carr's Lane		
Cartland Road ..	1	1
Carver Street	4	19
Castle Street	1	1
Cathcart Street ..	1	3
Cato Street		10
Cato Street North ..		4
Cattell Road	3	26
Cattell Grove ..		4
Cavendish Road ..		3
Cecil Street	7	13
Chad Road		1
Chandos Road ..	1	1
Chapel Street		2
Chapel House Street ..	1	
Chapman Road ..		3
Charles Road	1	7
Charles Arthur Street ..	3	9
Charles Henry Street ..	3	36
Charlotte Road ..		2
Charlotte Street ..	1	4
Chattaway Street ..		3

STREETS.	Zymotic Diseases.	Other Diseases.
Cheapside .. .	4	43
Cheatham Street ..		2
Chequers Walk ..		1
Cherry Street		
Cherry Wood Road ..	3	9
Chester Street.. ..	1	5
Chesterton Road ..		2
Cheston Road ..		4
Chicheley Street ..		4
Chiswell Road ..		3
Christ Church Passage		
Church Lane		1
Church Road, Edgbaston		3
Church Road, Harborne		
Church Road, Nechells..	1	6
Church Road, Saltley ..		5
Church Street.. ..		1
City Road		1
Claremont Road ..		
Clarence Road ..		1
Clarendon Road ..		
Clark Street	5	6
Claverdon Street ..	3	11
Claybrook Street ..		1
Clayton Road	1	1
Clement Street ..	1	9
Cleve Terrace ..	1	2
Clevedon Road ..		9
Clifton Road	3	18
Clissold Street ..		5
Clive Passage.. ..		
Cliveland Street ..		6
Clyde Street ..	1	5
Coleman Street ..	1	16
Coleshill Street ..		12
College Road		2
College Street		5
Colmore Row		4
Colville Road.. ..	2	7
Commercial Street ..		
Common Lane.. .		
Communication Row ..	1	5
Congreve Street ..		
Constance Road ..		
Constitution Hill ..	1	9
Conybere Street ..	2	9
Cook Street	2	3
Cooksey Road ..	3	16
Cope Street		11
Coplow Street ..	2	12
Coralie Street ..	3	1
Cornwall Street ..		
Corporation Street ..		
Cotterill's Lane ..		2
Couchman Road ..		1
Court Road		
Court Oak Road ..		
Coventry Road ..		28
Coventry Street ..		18
Cowper Street ..		7
Cox Street		9
Cox Street West ..	1	13
Coxwell Road ..	1	4
Crabtree Road ..	3	5
Cranemore Lane ..		2
Cranemore Street ..		3
Cregoe Street	4	24
Crescent		9
Crompton Road ..		1
Cromwell Passage ..		
Cromwell Street ..	7	41
Crooked Lane		
Cuckoo Road	1	12
Cumberland Street ..		1
Curzon Street	1	7
Cuthbert Road ..	1	6
Cyril Road	1	4

STREETS.	Zymotic Diseases.	Other Diseases.
D		
Dale End	1	6
Dalton Street	1	
Darnley Road ..		1
Dart Street		
Dartmouth Street ..	1	18
Darwin Street ..	7	25
Dawson Street ..		2
Dean Street		5
Dearman Road		4
Defford Road	1	1
Denbigh Street ..		2
Derby Street . ..		6
Devon Street	3	13
Devonshire Street ..	1	5
Digbeth		12
Digby Street		
Dixon Road		2
Doe Street	1	
Dolman Street ..	1	10
Dolobran Road ..	2	6
Don Street		1
Dora Road		1
Dorset Road		
Dover Street	1	
Dr. Johnson Passage ..		
Drury Lane		1
Dryden Road		
Duchess Road.. ..		
Duddeston Row ..	1	5
Duddeston Mill Road ..		12
Dudley Road		10
Dudley Street		3
Dugdale Street ..	1	4
Duke Street	2	12
Dymoke Street ..	1	19
E		
Earl Street		
Eastern Road		
Easy Row		1
Eden Place		
Edgbaston Road ..		1
Edgbaston Park Road..		1
Edgbaston Street ..		4
Edmond Road.. ..		
Edmund Street ..		2
Edward Road		
Edward Street ..	3	22
Edwardes Street ..	1	17
Eldon Road		
Elkington Street ..		1
Ellen Street		14
Ellis Street		1
Elvetham Road ..		2
Emily Street	4	11
Emmeline Street ..		
Enfield Road		
Erasmus Road ..	1	5
Ernest Street		
Erskine Street.. ..	1	3
Essex Street	1	7
Essington Street ..	2	10
Ethel Road		
Ethel Street		
Eva Road		4
Eversley Road ..	1	11
Exeter Street		
Eyre Street		1
F		
Factory Road .. .		2
Falconer Road .	1	

STREETS	Zymotic Diseases.	Other Diseases.
Farm Road		2
Farm Street	9	36
Farquhar Road ..		1
Farquhar Road East ..		
Fazeley Street ..	1	3
Fellows Lane		
Fisher Street		6
Fleet Street		
Floodgate Street ..	1	7
Florence Street ..		4
Ford Street	5	14
Fordrough Lane ..		
Fordrough Street ..		
Fordroughs		
Forge Street		
Forster Street.. ..		3
Foundry Road ..	1	6
Fowler Street		1
Fox Street		2
Francis Road		6
Francis Street ..	2	23
Frank Street		2
Frankfort Street ..	5	13
Franklin Street ..	2	5
Frederick Road ..		2
Frederick Street ..		1
Freeman Road ..		4
Freeman Street ..		
Freeth Street	3	16
Friston Street ..	4	7
Fulham Road		1
G		
Galton Street		1
Garbett Street ..	3	15
Garrison Lane ..	3	20
Garrison Street ..	1	17
Gas Street		
Gate Street		
Geach Street		8
Gee Street		4
Gem Street		1
George Road		3
George St., Balsall H'th	1	8
George Street, St. Paul's		3
George Street West ..	7	12
Gibb Street		3
Gillhurst Lane ..		
Gillott Road		3
Gladstone Road ..		4
Glebe Street		2
Gloucester Street ..		
Glover Road ..	1	6
Glover Street ..	4	10
Godwin Street.. ..		6
Golden Hillock Road ..		5
Gooch Street	1	14
Goode Street	1	5
Goodman Street ..		
Goodrick Street ..		3
Gopsall Street ..	1	8
Gordon Road		
Gordon Street	1	6
Gosta Green		1
Gough Road		6
Gough Street	1	4
Grace Road	1	5
Grafton Road		1
Graham Street ..	1	4
Grange Rd., Bordesley	2	8
Grange Rd., Harborne		
Grant Street	1	11
Grantham Road ..		2
Granville Street ..		7
Gray Street		3
Gray's Road		
Great Barr Street ..	1	18
Great Brook Street ..	2	16
Great Charles Street .		5

STREETS.	Zymotic Diseases	Other Diseases
Great Colmore Street ..	4	29
Great Francis Street ..	9	35
Great Hampton Row ..	2	14
Great Hampton Street..		7
Great King Street ..	4	18
Great Lister Street ..	1	11
Great Russell Street ..	4	23
Great Tindal Street ..	5	14
Green Lane	4	19
Green St., Deritend ..	1	2
Green Street, Saltley ..		
Greenfield Crescent ..		2
Greenfield Road ..		6
Greenway Street ..	2	18
Grosvenor Road ..		
Grosvenor Row .		
Grosvenor Street ..		
Grosvenor Street West	3	19
Grove Lane		
Grove Street ..		
Guest Street ..		7
Guildford Street ..		9
Guthrie Street ..	1	
H		
Haden Street		2
Hadley Street.. ..	3	2
Hagley Road	2	11
Halberton Street ..		3
Hall Road		2
Hall Street	1	6
Hampden Street ..		2
Hampton Street ..	1	9
Handsworth New Road		
Hanley Street ..	4	8
Hanover Street ..	1	3
Harborne Lane ..		
Harborne Road ..		5
Harding Street ..	1	1
Harford Street ..		2
Harold Road		
Harrison's Road ..		
Hatchett Street ..	1	12
Havelock Road ..		3
Hawkes Street ..	1	4
Hawthorn Road ..		
Heath St., All Saints ..	6	21
Heath St., Balsall H'th	2	6
Heath Street South ..		1
Heath Mill Lane ..	1	18
Heaton Street	1	13
Helena Street		
Henegage Street ..	2	38
Henley Street		7
Henn's Walk		
Henrietta Street ..		
Henry St., Balsall H'h..		
Henry St., Duddeston..	1	10
Herbert Road	2	34
Hermitage Road ..		1
Hertford Road ..	1	3
Hick Square		2
Hick Street	3	11
Hickman Road ..		4
High Street	2	2
High Street, Bordesley..		1
High Street, Deritend ..	4	13
High St., Harborne ..		18
High St., Saltley ..		5
Highfield Rd., Edgb'n..		1
Highfield Rd., H'borne..		2
Highfield Rd., Saltley..	1	7
Highgate Place ..		
Highgate Road ..	1	16
Highgate Square ..		
Highgate Street ..	3	23
High Park Street ..		5
Hill Street		3
Hinckley Street ..		
Hingeston Street ..	3	22
Hobmoor Road .		
Hockley Hill	1	12
Hockley Street ..	2	7
Holborn Hill		3
Holland Street ..	5	3
Holliday Street ..	2	3
Hollier Street	3	6
Holloway Head ..	1	14
Holly Road		
Holt Street		8
Homer Street		1
Hooper Street.. ..		1
Hope Street	5	21
Horse Fair	1	4
Hospital Street ..	8	51
Howard Street ..	1	1
Howe Street		10
Hubert Street ..		1
Humpage Road ..	1	3
Hunter's Road ..		1
Hunter's Vale	1	
Hurst Street	2	4
Hutton Road		
Hutton Street		5
Hyde Road		4
Hylton Street		
I		
Icknield Square ..	5	9
Icknield Street ..	1	14
Icknield Port Road ..	2	33
Inge Street	1	9
Ingleby Street ..	1	2
Inkerman Street ..	2	6
Irving Street	1	24
Islington Row.. ..	1	3
Ivy Lane		
J		
Jakeman's Road ..		6
Jakeman's Walk ..	2	3
Jamaica Row		2
James Street		
James Turner Street ..	2	7
James Watt Street ..		2
Jenkins Street ..		2
Jennens Row		5
John Bright Street ..		3
John's Road		1
Johnson Street ..		2
Johnstone Street ..		2
K		
Keeley Street		3
Kelynge Street ..	2	15
Kendall Road		1
Kent Street		6
Kent Street North ..	2	4
Kenyon Street ..	1	3
Key Hill	2	8
King St.,Balsall Heath		1
King Street,Bordesley..		1
King Alfred's Place ..		1
King Edward's Place ..		
King Edward's Road ..		24
Kingscote Road.. ..		1
Kingsley Road ..	1	1
Kingston Road ..		5
Kingswood Road ..	1	1
Knutsford Street ..	1	3
Kyott's Lake Road ..		2
Kyrwick's Lane ..	1	13
L		
Ladypool Road ..		19
Ladywell Passage ..		
Ladywell Walk ..		
Ladywood Road ..		12
Lancaster Street ..	3	13
Landor Street		9
Langley Road ..		
Lansdowne Street ..		5
Larches Street ..	1	8
Latimer Street ..	2	15
Lawden Road ..	1	4
Lawley Street ..	1	21
Lawrence Street ..		6
Leach Street		
Lease Lane		
Ledsam Street ..	2	9
Lee Bank Road ..	3	22
Lee Crescent .. .		1
Lee Mount		1
Leek Street		3
Lees Street		6
Legge Lane		1
Legge Street		3
Leigh Road		
Lench Street		1
Lennox Street ..	3	10
Leopold Street ..	1	19
Leonard Street ..		1
Leslie Road		4
Lilly Green		1
Lime Grove		
Lingard Street ..	1	7
Link Road		1
Lionel Street		4
Lister Street		2
Little Ann Street ..	2	1
Little Barr Street ..		2
Little Bow Street ..		
Little Broom Street ..		1
Little Edward Street ..	1	3
Little Francis Street ..		4
Little Green Lane ..	1	17
Little King Street ..		5
Little Shadwell Street..		1
Liverpool Street ..	4	5
Livery Street		6
Lloyd Street		
Lodge Rd., All Saints ..	5	18
Lodge Road,Harborne..		7
Lombard Street ..	1	9
Long Acre	2	23
Long Street	1	3
Longbridge Road ..		4
Longmore Street ..		13
Lonsdale Road ..		2
Lord Street	1	10
Lordswood Road ..		4
Louisa Street		1
Love Lane		
Loveday Street ..		2
Lowe Street	1	4
Lower Dartmouth Street		3
Lower Darwin Street ..		
Lower Edwardes Street		3
Lower Essex Street ..		11
Lower Fazeley Street ..		6
Lower Hurst Street ..	2	3
Lower Hurst Street East		
Lower Lawrence Street		
Lower Loveday Street..		
Lower Priory.. ..		
Lower Temple Street ..		
Lower Tower Street ..	4	15
Lower Trinity Street ..	1	6
Loxton Street.. ..		1
Ludgate Hill		1

STREETS.	Zymotic Diseases	Other Diseases
Ludgate Hill Passage ..		
Lupin Street	2	18
Lyttelton Road ..		
M		
Macdonald Street ..		7
Main Street	2	9
Malthouse Lane ..		5
Malvern Street ..		2
Malvern Hill Road ..		2
Manchester Street ..	1	9
Manor Road		
Margaret Road ..		2
Margaret Street ..		
Mark Lane		
Market Street		2
Marroway Street ..		6
Marshall Street ..		4
Marshall Street South ..	1	3
Martineau Street ..		
Mary St., Balsall Heath	1	21
Mary Street, St. Paul's		
Mary Ann Street ..		2
Masshouse Lane ..		3
Maxstoke Street ..		
Meadow Road		
Melville Road		
Meriden Street ..	2	10
Metchley Lane ..		5
Metchley Park Road ..		
Metropolitan Road ..		1
Midland Street ..		
Miles Street	3	11
Milk Street	2	12
Mill Lane, St. Martin's		1
Mill Lane, Harborne ..		1
Mill Lane, Saltley ..	2	4
Mill Street		1
Miller Street ..	6	12
Mills Lane		
Milton Street		5
Milward Street ..	1	10
Minories		
Moat Lane		
Moat Row		
Moilliett Street ..	2	9
Moland Street	2	19
Mole Street	1	10
Mona Road		2
Montague Road ..		
Montague Street ..	1	3
Montgomery Street ..	1	6
Montpellier Street ..		1
Monument Road ..	1	30
Moor Street	1	3
Moore's Row		1
Moorsom Street ..	3	10
Moreton Street ..		1
Morville Street ..		11
Moseley Road	5	22
Moseley Street ..	4	23
Mostyn Road		1
Mott Street		8
Mount Pleasant, B H'th		4
Mount Pleasant, B'ley ..	1	1
Mount Street		8
Muntz Street		6
Musgrave Road ..		4
N		
Navigation Street ..		5
Nechells Park Road ..	4	23
Nechells Place ..	1	9
Needham Street ..		1
Needless Alley ..		
Nelson Street ..	1	14
New Street		4
New Bartholomew St. ..	2	4
New Bond Street .		2
New Brunswick Road ..		1
New Canal Street ..	1	7
Newdegate Street ..		2
Newhall Hill		3
Newhall Street ..	2	20
New John Street ..	6	19
New John Street West ..	4	47
New Market Street ..		
New Meeting Street ..		
Newport Road ..		1
New Spring Street ..	4	24
New Summer Street ..	4	22
Newton Road		
Newton Street ..		2
Newtown Row ..	4	24
Nile Street		
Nineveh Road		
Noel Road		4
Norfolk Road		
Norman Street ..		6
Northampton Street ..	1	
North Road		7
Northbrook Street ..	1	6
Northfield Road ..		2
Northumberland Street	2	6
North Warwick Street ..		
Northwood Street ..	6	11
Norton St., All Saints	1	8
Norton St., Balsall H'th		1
Norwood Road ..		2
Nova Scotia Street ..	1	3
Nursery Road		4
O		
Oakfield Road ..		2
Oakley Road		4
Old Square		1
Old Church Road ..		
Old Cross Street ..		3
Oldfield Road	4	17
Old Meeting Street ..		
Oliver Road		1
Oliver Street .. .		6
Ombersley Road ..		4
Oozells Street		
Oozells Street North ..	1	2
Orchard Road		
Orford Road		6
Ormond Street ..	1	5
Osler Street	3	23
Oughton Place ..		5
Owen Street	1	5
Oxford Street	1	3
Oxygen Street	1	1
P		
Paddington Street ..		6
Pakenham Road ..		
Palmer Street	2	7
Palmerston Road ..		
Parade		
Paradise Street ..		
Park Lane		5
Park Road, All Saints	7	37
Park Road, Harborne ..		3
Park Road, Saltley ..		
Park Street		2
Park Hill Road ..		
Parker Street		8
Parliament Street ..		6
Paternoster Row ..		
Paxton Road	1	2
Pebble Mill Road ..		
Peel Street	3	6
Pembroke Road ..		
Penn Street, Deritend ..		2
Penn Street, Duddeston	1	4
Perrot Street	2	6
Pershore Road .		10
Pershore Street ..	1	10
Phillip Street .		
Pickford Street ..		5
Piddock Street ..		1
Pigott Street		4
Pinfold Street		
Pitney Street		
Pitsford Street ..		
Pitt Street		
Plough & Harrow Road		
Plume Street		
Pope Street	8	12
Poplar Avenue ..		
Poplar Road		
Porchester Street ..		3
Porthope Road ..		4
Portland Road ..		2
Potter Street		3
Powell Street		4
Prescott Street ..	1	15
Price Street	1	10
Priestley Road ..	2	7
Prince Albert Street ..		4
Princes Row		
Princes Street		2
Princess Road		2
Princess Street ..		1
Princip Street	2	4
Priory Road, B'lsll H'th		3
Priory Road, Edgbaston		1
Pritchatt's Road ..		
Pritchett Street ..	3	13
Proctor Street		10
Prospect Row		3
Poplar Road		
Q		
Queen Street		2
R		
Radnor Street		3
Raglan Road		
Railway Ter., Duddeston	1	5
Railway Ter., Nechells ..	2	6
Ralph Road		1
Rann Street		7
Ravenhurst Road ..		3
Ravenhurst Street ..	1	9
Rawlins Street ..	1	6
Rea Street		14
Rea Street South ..		1
Regent Parade ..		
Regent Place		2
Regent Road		
Regent Row	1	3
Regent Street		
Regent Park Road ..	1	7
Reginald Road ..	1	2
Reservoir Retreat ..		1
Reservoir Road ..		2
Richard Street ..	1	14
Richmond Hill Road ..		2
Ridley Street		1
River St., Balsall Heath		4
River St., St. Barthol'w's		1
Robert Road	1	1
Rocky Lane		10
Rodway Street ..		4
Rope Walk		

STREETS.	Zymotic Diseases.	Other Diseases.
Rosalie Street	1	3
Roshven Street ..		
Rotton Park Road ..		3
Rotton Park Street ..		
Rowland Street ..		4
Rupert Street	3	13
Russell Street		
Ruston Street	2	5
Ruston Street North ..	3	10
Rutland Road		
Ryder Street		3
Ryland Road	2	7
Ryland Street .. .		3
S		
Salop Street		4
Saltley Road	1	15
Saltley Street	1	2
Sampson Road ..	1	2
Sampson Road North ..	1	2
Sand Pits		3
Sand Street		
Sandon Road		
Sandy Lane		12
Sarah Street		
St. Andrew's Road ..	3	16
St. Andrew's Street ..		
St. Augustine's Road ..		
St. Clement's Road ..	1	2
St. George's Place ..		4
St. George's Street ..	3	13
St. James' Place ..		5
St. James' Road ..		
St. James' Street ..	2	9
St. John's Rd., B'll H'th		2
St. John's Rd., H'borne		
St. Luke's Road ..		11
St. Mark's Street ..	3	19
St. Martin's Lane ..		
St. Martin's Place ..		
St. Martin's Row ..		1
St. Martin's Street ..		5
St. Mary's Road ..		
St. Mary's Row ..		
St. Mary's Street ..	1	2
St. Oswald's Road ..		1
St. Paul's Road ..	2	16
St. Paul's Square ..		1
St. Peter's Place ..		
St. Philip's Place ..		
St. Stephen's Street ..		1
St. Vincent Street ..	2	20
Scholefield Street ..		14
Scotland Street ..	2	1
Scott Street		2
Sefton Road		
Serpentine Road ..		1
Severn Street	1	4
Seymour St., B'sall H'th		2
Seymour St, St. Barth.		
Shadwell Street ..		4
Shakespeare Road ..	1	14
Sheep Street	1	9
Sheepcote Lane ..		6
Sheepcote Street ..	1	7
Shefford Road ..		6
Shenstone Road ..		
Sherborne Street ..	4	20
Sherbourne Road ..	5	28
Sherlock Street ..	1	31
Sir Harry's Road ..		2
Skinner Lane		8
Skinner Street .		1
Sladefield Lane ..		
Slaney Street	1	3
Sloane Street		4
Slough Lane		
Smallbrook Street ..		2

STREETS.	Zymotic Diseases.	Other Diseases.
SmithStreet, St. George's	1	13
Smith Street, Duddeston	1	2
Smithfield Passage ..		3
Smithfield Street ..		
Snow Hill	2	6
Soho Road	1	8
Somerset Road ..		
Somerset Street ..	1	4
Somerville Road ..		3
South Road	1	6
South Street		2
Southgate		
Spark Street		2
Speaking Stile Walk ..		2
Speedwell Road ..		2
Spencer Street ..	1	3
Spiceal Street		
Spon Terrace		
Spooner Street ..		3
Spring Hill	1	10
Spring Hill Passage ..		
Spring Road		3
Spring Street		2
Spring Vale	1	1
Springfield Street ..	2	9
Stafford Street ..		7
Stanhope Street ..		2
Staniforth Street ..	2	12
Stanley Road		4
Stanmore Road ..		1
Station Road, Harborne		2
Station Road, Rotton Pk		
Station Street... ..		2
Stechford Lane ..		
Steelhouse Lane ..		6
Stella Street	1	1
Stephenson Place ..		
Stephenson Street ..		
Steward Street ..	3	18
Stirling Road ..		2
Stoke Street		10
Stone Yard		1
Stoney Lane		4
Stour Street	5	15
Stratford Place ..		2
Stratford Road ..	2	13
Stratford Street ..		4
Strensham Road ..		2
Stuart Street		6
Suffolk Street	1	10
Summer Lane	2	27
Summer Road	2	6
Summer Row .. .		
Summer Street ..		
Summerfield Crescent ..		5
Summerfield Road ..		1
Summer Hill Road ..	1	3
Summer Hill Street ..	1	5
Sun Street	1	7
Sun Street West ..		3
Sutton Street		3
Swallow Street ..		
Sydenham Road ..		2
Sydney Road		3
T		
Talbot Street	1	6
Talfourd Street ..		8
Taunton Road		
Taylor Street	1	2
Temple Row		1
Temple Row West ..		
Temple Street		
Templefield Street ..	1	6
Tenby Street		1
Tenby Street North ..	1	2

STREETS.	Zymotic Diseases.	Other Diseases.
Tennal Road		1
Tennant Street ..	2	21
Tennyson Road ..		3
Theodore Street ..	2	8
Theresa Road		6
Thimble Mill Lane ..		6
Thomas St., B'sall H'th	3	6
Thomas St., Deritend ..	1	1
Thorp Street	1	3
Tillingham Street ..	1	4
Tindal St., Balsall H'th		8
Tindal St., Ladywood ..	1	
Tower Street	3	25
Trafalgar Road ..		2
Trent Street		9
Trevor Street	3	13
Trinity Terrace ..		
Tudor Street	3	8
Turk's Lane		
Turner Street	2	9
Tyndall Street. ..		2
U		
Uuett Street ..	6	22
Union Passage ..		
Union Street		
Union Terrace ..		
Upper Cox Street ..		2
Upper Dean Street ..		2
Upper Gough Street ..		5
Upper Highgate Street	6	11
Upper Marshall Street ..	1	3
Upper Mary Street ..		
Upper Mill Lane ..		
Upper Priory		2
Upper Ryland Road ..		2
Upper Trinity Street ..	2	8
V		
Varna Road		6
Vaughton Street ..	1	12
Vaughton Street South		
Vauxhall Grove ..		2
Vauxhall Road ..	1	14
Vauxhall Street		3
Ventnor Road	1	4
Vere Street	1	4
Vernon Road		
Vesey Street		
Viaduct Street		
Vicarage Rd., Edgbaston		1
Vicarage Rd, H'borne ..		
Victoria Grove ..		1
Victoria Road ..		
Victoria St., B'sall H'th	2	6
Victoria St., Bordesley	1	6
Villa Street	2	10
Villiers Street	1	1
Vincent Crescent ..	1	7
Vincent Parade ..	1	2
Vincent Street ..	2	10
Vine Street		2
Vittoria Street		4
Vyse Street .		3

STREET.	Zymotic Diseases.	Other Diseases.
W		
Walter Street	2	6
War Lane		
Ward End		2
Ward Street	1	7
Warner Street.. ..		2
Warren Road		
Warstone Lane ..	2	17
Warstone Parade East..		
Warwick Street ..	2	15
Washington Street ..		3
Washwood Heath Road	1	7
Water Street	1	3
Waterloo Street ..		1
Waterworks Road ..		2
Watery Lane	3	20
Watts Road		
Waverley Road ..		
Weaman Row		
Weaman Street ..	1	11
Well Lane		
Well Street	1	17
Wellesley Street ..	1	6
Wellington Rd., Edg'ton		1
Wellington Rd., H'borne		3
Wellington Street ..	4	3
Wenman Street ..	3	7
Westbourne Road ..		
Western Road		1
Westfield Road ..		1
Westley Street ..	1	4
Weston Street.. ..		
Wharf Lane		1
Wharf Street	1	3
Wharton Street ..	2	1
Wheeler Street ..	4	21
Wheeley's Lane ..		6
Wheeley's Road ..		
Whitby Road		1
White Road	4	8
White Lion Passage ..		
White Street		3
Whitehall Road ..		1
Whitmore Road ..		5
Whitmore Street ..	3	7
Whittall Street ..	1	1
Wiggin Street ..		3
William Street, Deritend		2
William St., St. Thomas'	4	16
William Street, Saltley		5
William Street North ..	2	4
William Edward Street	2	7
William Henry Street ..	1	6
Willis Street	1	11
Willow Avenue ..		
Willow Crescent ..		
Willow Road		3
Wilton Street		4
Windmill Street ..		2
Windsor Street ..	4	21
Winson Green Road ..	2	19
Winson Street... ..	2	14
Witton Street	1	12
Wolseley Street ..	1	5
Wood Lane		1
Wood Street	2	1
Woodbourne Road ..		
Woodcock Street ..	1	11
Woodfield Road ..		3
Woodville Road ..		
Worcester Street ..	1	2
Wordsworth Road ..	1	4
Wrentham Street ..		14
Wright Road		7
Wright Street		8
Wrottesley Street ..		2
Wyndcliffe Road ..		2
Wyndham Road ..		
Wynn Street	1	1
X		
Y		
Yardley Road		2
Yateley Road		
Yew Tree Road ..		1
York Passage		
York Road		1
York Street, Harborne		4
York Street, St. Mary's		1
Z		
AT INSTITUTIONS.		
Children's Hospital ..	7	68
Queen's Hospital ..	7	183
General Hospital ..	15	324
City Hospital	222	8
Workhouse	26	567
City Asylum		87
St. Joseph's Home ..		24
Gaol		5
Eye Hospital ..		
Blind Institution ..		
Homœopathic Hospital..		7
Orthopædic Hospital ..		3
ADDENDA.		
Canals		24
Railways		7
Not located	2	20
Totals ..	1196	7750

Grand Total . 8946

REPORT

ON

ADULTERATION.

CITY ANALYST'S LABORATORY,

THE COUNCIL HOUSE, BIRMINGHAM,

March 16th, 1895.

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I beg to report that during the year 1894 I received 1,129 samples for analysis under the Sale of Food and Drugs Acts, and the Margarine Act. Eleven were submitted to me by private purchasers and 1,118 by your Inspector, Mr. Thomas Davis.

The following list shows the number of samples analysed, the number found to be genuine, and the number adulterated:—

	No. of Samples Analysed.	No. found to be Genuine.	No. found to be Adulterated.
Milk	340	307	33
Butter	228	197	31
Coffee	57	53	4
Pepper	48	46	2
Bread	36	36	0
Lard	35	35	0
Sugar	34	33	1
Ground Ginger	27	23	4
Tea	24	24	0
Ale	24	13	11
Sugar Confectionery	24	24	0
Whiskey	22	15	7
Mustard	22	21	1
Tincture of Rhubarb	19	15	4
Sal Volatile	14	14	0
Precipitated Sulphur	13	11	2
Tincture of Iodine	13	12	1
Syrup of Rhubarb	13	11	2
Flour	12	12	0
Oatmeal	12	12	0
Vinegar	12	12	0
Spirit of Nitrous Ether	11	6	5
Bees' Wax	10	5	5
Brandy	10	9	1
Compound Tincture of Benzoin	9	9	0

	No. of Samples Analysed.	No. found to be Genuine.	No. found to be Adulterated.
Sherry	8	8	0
Cream of Tartar ...	6	0	6
Bicarbonate of Soda ...	6	6	0
Glycerine	6	6	0
Paregoric	6	6	0
Linseed Meal	5	5	0
Saffron	4	4	0
Tincture of Senna ...	3	1	2
Light Magnesia ...	3	2	1
Port Wine	3	3	0
Cheese	3	3	0
Compound Liquorice Powder	2	2	0
Powdered Turkey Rhubarb	2	2	0
Heavy Magnesia ...	1	0	1
Tincture of Lobelia ...	1	1	0
Flowers of Sulphur ...	1	1	0
Totals ...	1,129	1,005	124

Particulars are given, in the subjoined statement, of the 124 samples which were adulterated:—

NO.	DATE.	ARTICLE.	REMARKS.
10—	Jany. 4th ...	Butter	Adulterated with 95% of foreign fat. Fined £2 and 8s. costs.
12—	" 4th ...	Butter	Adulterated with 80% of foreign fat. Fined £1 and 8s. costs.
35—	" 13th ...	Ground Ginger ...	Adulterated with 75% of exhausted ginger. No action taken; same vendor as No. 36.
36—	" 13th ...	Butter	Adulterated with 90% of foreign fat. Fined £1 and 8s. costs.
44—	" 12th ...	Ground Ginger ...	Adulterated with 80% of exhausted ginger. No action taken, pending application to appeal against decision in reference to No. 48, which was refused.
48—	" 13th ...	Ground Ginger ...	Adulterated with 75% of exhausted ginger. Dismissed on the ground that there was no fraudulent intent. Case for appeal refused.
50—	" 13th ...	Milk	Adulterated with 12% of water. Dismissed on the ground that the certificate was not sufficiently clear.
55—	" 17th ...	Butter	Adulterated with 85% of foreign fat. Fined £2 and 11s. costs.
58—	" 17th ...	Coffee	Adulterated with 70% of chicory. Dismissed on the ground that there was no fraudulent intent. Case for appeal refused.
59—	" 17th ...	Butter	Adulterated with 95% of foreign fat. Fined £2 and 9s. costs.

NO.	DATE.	ARTICLE.	REMARKS.
62—	Jany. 17th ...	Butter	Adulterated with 80% of foreign fat. Fined £2 and 9s. costs.
67—	" 18th ...	Butter	Adulterated with 70% of foreign fat. Fined £2 and 10s. costs.
73—	" 25th ...	Cream of Tartar ...	Contained a trace of lead.
75—	" 25th ...	Cream of Tartar ...	Contained a trace of lead.
77—	" 25th ...	Cream of Tartar ...	Contained a trace of lead.
79—	" 25th ...	Cream of Tartar ...	Contained a trace of lead.
81—	" 25th ...	Cream of Tartar ...	Contained a trace of lead.
83—	" 25th ...	Cream of Tartar ...	Contained a trace of lead.
97—	" 29th ...	Milk	Adulterated with 6% of water. Cautioned by Health Sub-Committee.
118—	Feb. 1st ...	Milk	Deprived of 38% of its fat. Fined £2 and 38s. costs.
150—	" 16th ...	Tincture of Rhubarb	Adulterated with 10% of water and deficient in saffron. Cautioned by Health Sub-Committee.
158—	" 16th ...	Tincture of Rhubarb	Contained only 82% of Tincture of Rhubarb and 18% of spirit and water. Fined £3 and 11s. costs.
202—	" 28th ...	Milk	Adulterated with 7% of water. Cautioned by Health Sub-Committee.
213—	Mar. 2nd ...	Butter	Adulterated with 90% of foreign fat. Fined £5 and 8s. costs.
227—	" 6th ...	Butter	Adulterated with 80% of foreign fat. Fined £5 and 8s. costs.
228—	" 6th ...	Butter	Adulterated with 85% of foreign fat. Fined £5 and 8s. costs.
229—	" 6th ...	White Pepper ...	Contained 5% to 10% of powdered olive stones. Cautioned by Health Sub-Committee.
231—	" 6th ...	Milk	Adulterated with 16% of water and deprived of 12% of its fat. Fined £3 and 8s, costs.
233—	" 6th ...	Milk	Adulterated with 5% of water and deprived of 24% of its fat. Fined £3 and 9s. costs.
234—	" 6th ...	Milk	Adulterated with 17% of water and deprived of 16% of its fat. Fined £1 and 9s. costs.
240—	" 8th ...	Butter	Adulterated with 70% of foreign fat. Cautioned by Health Sub-Committee.
249—	" 9th ...	Milk	Adulterated with 26% of water. Fined £1 and 8s. costs.
251—	" 13th ...	Milk	Adulterated with 4% of water and deprived of 16% of its fat. No action taken.
283—	" 22nd ...	Whiskey	Adulterated with 3% of water. Cautioned by Health Sub-Committee.
284—	" 29th ...	Milk	Deprived of 19% of its fat. Fined £2 and 10s. 6d costs.
297—	" 29th ...	Butter	Adulterated with 85% of foreign fat. Fined £4 and 10s. costs.
300—	" 31st ...	Butter	Adulterated with 90% of foreign fat. Fined £4 and 10s. costs.
311—	April 4th ...	Butter	Adulterated with 80% of foreign fat. Fined £4 and 10s. costs.
321—	" 5th ...	Milk	Adulterated with 11% of water. Summons dismissed on production of warranty.

NO.	DATE.	ARTICLE.	REMARKS.
322	April 5th	Milk	Deprived of 28% of its fat. Fined £1 and 8s. costs
337	„ 19th	Butter	Consisted entirely of foreign fat. Fined £4 and 9s. costs.
347	„ 19th	Butter	Consisted entirely of foreign fat. Fined £5 and 10s. costs.
355	„ 19th	Milk	Adulterated with 3·5% of water. No action taken.
372	„ 27th	Black Pepper ...	Adulterated with a small quantity of poivrette. Cautioned by Health Sub-Committee.
375	„ 27th	Butter	Adulterated with 91% of foreign fat. Fined £1 and 8s. costs.
376	„ 27th	Butter	Adulterated with 92% of foreign fat. Summons dismissed ; same vendor as No. 375.
384	„ 28th	Butter	Adulterated with 82% of foreign fat. Fined £3 and 10s. costs.
388	„ 28th	Butter	Adulterated with 86% of foreign fat. Fined £3 and 10s. costs.
401	May 2nd	Milk	Deprived of 18% of its fat. Fined £3 and 12s. 6d. costs.
408	„ 4th	Syrup of Rhubarb	Adulterated with 20% of water. Fined £3 and 9s. costs.
409	„ 4th	Spirit of Nitrous Ether	Contained only 54% of the amount of Ethyl Nitrite required by the Pharmacopœia. Fined £1 and 9s. costs.
412	„ 4th	Spirit of Nitrous Ether	Contained 34% of Ethyl Nitrite in excess. Cautioned by Health Sub-Committee.
421	„ 7th	Milk	Adulterated with 7% of water. Cautioned by Health Sub-Committee.
424	„ 7th	Milk	Adulterated with 3% of water. No action taken.
447	„ 16th	Spirit of Nitrous Ether	Contained only 84% of the amount of Ethyl Nitrite required by the Pharmacopœia. Cautioned by Health Sub-Committee.
452	„ 16th	Syrup of Rhubarb	Contained 8% of added water. No action taken ; same vendor as No. 453.
453	„ 16th	Tincture of Iodine	Contained only 80% of the Iodine and 70% of the Iodide of Potassium required by the Pharmacopœia. Fined £2 and 10s. costs.
464	„ 17th	Spirit of Nitrous Ether	Contained only 88% of the amount of Ethyl Nitrite required by the Pharmacopœia. Cautioned by Health Sub-Committee.
551	June 14th	White Wax ...	Consisted entirely of Japan wax. Cautioned by Health Sub-Committee.
554	„ 14th	White Wax ...	Adulterated with 60% of Paraffin. No action taken.
557	„ 14th	Yellow Bees' Wax	Adulterated with 10% Paraffin. Same vendor as No. 558.
558	„ 14th	White Wax ...	Adulterated with 70% of Paraffin. Cautioned by Health Sub-Committee.
561	„ 14th	White Wax ...	Adulterated with 65% of Paraffin. No action taken.
591	„ 19th	Milk	Adulterated with 11% of water, and deprived of 24% of its fat. Fined 10s. and 9s. costs.

NO.	DATE.	ARTICLE.	REMARKS.
601	July 3rd	Milk	Deprived of 24% of its fat. Fined 5s. and 9s. costs.
605	" 3rd	Milk	Deprived of 15% of its fat. Cautioned by Health Sub-Committee.
606	" 3rd	Milk	Deprived of 20% of its fat. Cautioned by Health Sub-Committee.
620	" 4th	Butter	Contained 80% of foreign fat. Fined 10s. and 9s. costs.
635	" 11th	Milk	Adulterated with 5% of water. Cautioned by Health Sub-Committee.
636	" 11th	Milk	Adulterated with 6% of water. Cautioned by Health Sub-Committee.
638	" 11th	Milk	Adulterated with 8% of water. Cautioned by Health Sub-Committee.
641	" 13th	Milk	Adulterated with 12% of water, and deprived of 15% of its fat. Fined 10s. and 8s. costs.
643	" 13th	Milk	Deprived of 15% of its fat. Fined 10s. and 9s. costs.
648	" 13th	Milk	Deprived of 22% of its fat. Fined 10s. and 9s. costs.
653	" 18th	Precipitated Sulphur	Contained 57% of sulphate of lime. Fined £2 and 11s. costs.
657	" 18th	Tincture of Senna	Contained only 25% of the amount of solid ingredients prescribed by the Pharmacopœia. Fined £2 and 11s. costs.
665	" 18th	Tincture of Rhubarb	Deficient of 20% of solid ingredients. Fined £2 and 9s. costs.
666	" 18th	Tincture of Senna	Deficient of 18% of proof spirit. Same vendor as No. 665. No prosecution.
678	" 18th	Milk	Adulterated with 22% of water. Fined 10s. and 8s. costs.
706	" 31st	Ale	Contained 105 grains of salt per gallon.
707	" 31st	Ale	" 87 " " "
708	" 31st	Ale	" 55 " " "
714	" 31st	Ale	" 86 " " "
715	" 31st	Ale	" 74 " " "
716	" 31st	Ale	" 57 " " "
768	Aug. 16th	Ale	" 80 " " "
773	" 16th	Ale	" 76 " " "
774	" 16th	Ale	" 57 " " "
776	" 16th	Ale	" 78 " " "
779	" 16th	Ale	" 80 " " "
800	Sept. 7th	Coffee	Adulterated with 10% of chicory. Cautioned by Health Sub-Committee.
806	" 7th	Coffee	Adulterated with 50% of chicory. Fined 1s. and 9s. costs.
807	" 7th	Demerara Sugar ...	Consisted of coloured beet-sugar. Cautioned by Health Sub-Committee.
859	Oct. 9th	Whiskey	Adulterated with 4% of water. Cautioned by Health Sub-Committee.
869	" 12th	Butter	Adulterated with 25% of foreign fat. Fined 10s. and 8s. costs.
881	" 12th	Milk	Deprived of 20% of its fat. Fined 10s. and 8s. costs.
890	" 16th	Whiskey	Adulterated with 11% of water. Fined £1 and 8s. costs.

NO.	DATE.	ARTICLE.	REMARKS.
892—	Oct. 19th ...	Butter	Adulterated with 70% of foreign fat. Fined £1 and 9s. costs.
893—	" 19th ...	Butter	Adulterated with 70% of foreign fat. Fined £1 and 8s. costs.
895—	" 19th ...	Butter	Consisted entirely of foreign fat. Fined £1 and 8s. costs.
896—	" 19th ...	Butter	Adulterated with 70% of foreign fat. Fined £1 and 8s. costs.
898—	" 19th ...	Ground Ginger ...	Adulterated with 5% of mineral matter. Case dismissed.
899—	" 19th ...	Butter	Adulterated with 83% of foreign fat. Same vendor as No. 898.
918—	" 25th ...	Whiskey	Adulterated with 6% of water. Fined £1 and 8s. costs.
921—	" 25th ...	Milk	Deprived of 25% of its fat. Fined 10s. and 8s. costs.
934—	" 25th ...	Butter	Adulterated with 85% of foreign fat. Fined £2 and 8s. costs.
939—	" 25th ...	Butter	Adulterated with 85% of foreign fat. Fined £5 and 10s. costs.
957—	" 31st ...	Coffee	Adulterated with 80% of chicory. Fined £5 and 10s. costs.
958—	" 31st ...	Butter	Adulterated with 75% of foreign fat. Fined £5 and 10s. costs.
1002—	Nov. 16th ...	Milk	Adulterated with 27% of water, and deprived of 19% of its fat. Fined 10s. and 8s. costs.
1052—	Dec. 3rd ...	Mustard	Adulterated with 20% of wheaten flour. No action taken.
1061—	" 6th ...	Milk	Adulterated with 10% of water. Fined 10s. and 9s. costs.
1068—	" 6th ...	Butter	Adulterated with 90% of foreign fat. Fined 10s. and 9s. costs.
1080—	" 7th ...	Milk	Deprived of 20% of its fat and coloured. Fined 10s. and 8s. costs.
1082—	" 7th ...	Milk	Adulterated with 8% of water. Cautioned by Health Sub-Committee.
1100—	" 14th ...	Precipitated Sulphur	Adulterated with 47% of sulphate of calcium. Fined 10s. and 8s. costs.
1102—	" 14th ...	Heavy Magnesia	Consisted of carbonate of magnesia. Cautioned by Health Sub-Committee.
1108—	" 19th ...	Tincture of Rhubarb	Deficient of 15% of the proper amount of solid ingredients. Cautioned by Health Sub-Committee.
1110—	" 19th ...	Light Magnesia ...	Contained only 80% of Magnesia. Cautioned by Health Sub-Committee.
1113—	" 19th ...	Spirit of Nitrous Ether	Contained 24% of Ethyl Nitrite in excess. Cautioned by Health Sub-Committee.
1122—	" 20th ...	Whiskey	Adulterated with 2½% of water. Cautioned by Health Sub-Committee.
1124—	" 20th ...	Whiskey	Adulterated with 7% of water. Fined 10s. and 8s. costs.
1125—	" 20th ...	Brandy	Adulterated with 6·5% of water. Fined 10s. and 8s. costs.
1126—	" 20th ...	Whiskey	Adulterated with 33% of water. Fined £3 and 8s. costs.

Percentage of Adulteration.

Of the 1,129 samples analysed, 124, or 11 per cent. were adulterated. This was a rather lower figure than usual, the percentage in the previous year having been 13. The table below shows the total percentage of adulteration and the percentages in certain classes of articles in the ten years 1873-1882, and in each year since 1882. In drawing up the table I have not calculated the percentage unless at least twenty samples were analysed, as such a statement based on too small a number of analyses might be very misleading :—

Years.	Number of Samples Analysed.	Total Percentage of Adulteration	Percentage of Adulteration of undermentioned Articles.								
			Milk.	Butter.	Lard and Cheese.	Bread and Flour.	Oatmeal, Arrowroot, Sago, Tapioca	Condiments and Spices	Tea, Coffee, Cocoa.	Beer and Spirits.	Drugs.
10 years 1873-82	1529	29	50	18	—	0	21	11	25	30	31
1883	151	38	47	—	—	—	—	25	—	—	—
1884	816	21	41	40	—	1	0	9	67	3	16
1885	914	15	24	40	—	0	0	11	—	2	30
1886	876	9	18	23	—	0	1	11	—	8	—
1887	818	12	15	52	—	0	1	20	18	1	0
1888	753	11	18	20	30	0	1	7	—	13	0
1889	873	16	19	32	—	2	2	11	48	6	17
1890	927	13	22	14	0	0	0	3	35	4	—
1891	811	11	18	23	—	0	0	0	0	12	6
1892	969	14	19	17	3	0	4	6	0	12	27
1893	1004	13	19	11	2	0	0	13	0	17	26
1894	1129	11	10	14	0	0	—	6	5	28	20

Milk.

It is pleasing to find that the percentage of adulterated *Milks* was so much lower than in any former year, 10 per cent. comparing very well with the best figures previously recorded. Of the 33 adulterated samples, 14 contained too much water, 12 possessed too small a quantity of fat, and 7 had presumably been both watered and partially skimmed. The amount of adulteration varied very greatly ; one sample had as much as 27 per cent. of water in excess of the natural quantity, and at the same time, was deficient of 19 per cent. of the proper amount of cream. I think it must be admitted that the sale of such a milk merited a much heavier fine than 10s. and costs, the amount imposed by the Magistrates. In another instance, 20 per cent. of cream had been abstracted and the milk had been coloured to hide the offence.

Butter.

Thirty-one, or 14 per cent., of the *Butters* contained fats not found in the genuine article ; in other words, they were really margarine, some containing a little butter fat, and some none at all. Such articles may be quite wholesome as food, but their sale as butter is a distinct fraud.

Lard. Cheese.

Of *Lard* there were 35 samples, and of *Cheese* 3, all of which were genuine.

Bread. Flour.

Thirty-six samples of *Bread* and 12 of *Flour* were examined. They all proved to be genuine, so that it would appear that these staple articles of diet are not adulterated, at least to any serious extent, in Birmingham. All the 12 samples of *Oatmeal* also were of good quality.

Oatmeal.

Condiments and Spices.

Of the *Condiments and Spices* 6 per cent. were adulterated. One sample of *White Pepper* contained a little powdered olive stone, and a sample of *Black Pepper* contained a small quantity of poivrette. Four *Ground Gingers* were not of the proper quality; 3 of them contained over 75 per cent. of ginger which had been previously used and had lost its potency, while the fourth was adulterated with 5 per cent. of mineral matter. One sample of *Mustard* was found to contain 20 per cent. of wheaten flour.

Tea. Coffee.

Twenty-four samples of *Tea* and 57 of *Coffee* were examined. All the teas were genuine, but 4 of the coffees contained chicory, the amounts being 10, 50, 70, and 80 per cent. respectively.

Beer, Wine, and Spirits.

Of the samples of *Beer, Wine, and Spirits*, 28 per cent. proved to be adulterated, a much higher figure than had been recorded of late years. Eleven samples of *Ale* contained more than 50 grains of salt per gallon—the maximum quantity approved by the Excise authorities. Seven out of 22 *Whiskeys* had been diluted to a greater extent than is allowed by law. One *Brandy* also contained too much water, but the samples of *Sherry* and *Port Wine* were of good quality.

Drugs.

The *Drugs* were of rather better quality than in the two preceding years, though 20 per cent. of them were adulterated. Four *Tinctures of Rhubarb* were not compounded as specified by the British Pharmacopœia. Two *Precipitated Sulphurs* contained about 50 per cent. of Sulphate of Lime. One sample of *Tincture of Iodine* was deficient in both iodine and iodide of potassium. Water had been added to two *Syrups of Rhubarb*. Two *Sweet Nitres* contained far too much ethyl nitrite, an objectionable feature in a drug which is required to have a definite strength; three other samples had much too small a quantity of the same constituent. A sample of *Yellow Beeswax* and three of *White Wax* were adulterated with paraffin; a fourth sample of White Wax consisted entirely of Japan Wax, which is a vegetable product. All the six samples of *Cream of Tartar* contained traces of lead. One *Tincture of Senna* did not contain the proper quantity of solid ingredients, and another was deficient of 18 per cent. of proof spirit. A sample sold as *Light Magnesia* had only 80 per cent. of that article in it, and one purchased as *Heavy Magnesia* consisted entirely of carbonate of magnesia.

Sugar.

A sample of *Sugar*, sold as Demerara, proved to be white crystals dyed to resemble the real article.

Your Committee cautioned the vendors of 27 adulterated samples, and in 68 other cases legal proceedings were instituted, convictions being obtained in 62 instances. A tradesman who had sold Milk containing 12 per cent. of added water was let off because the word "added" was accidentally omitted from the certificate. The vendors of a Ground Ginger containing 75 per cent. of exhausted ginger, and a Coffee in which there was 70 per cent. of chicory, were acquitted, on the ground that no intention to defraud the customer was proved! Moreover, the magistrates refused to state a case for a higher court in both these prosecutions. Another prosecution for selling adulterated Milk collapsed through the production of a warranty, and one for selling margarine for Butter was dismissed because the vendor had already been fined on the same day for a similar offence. One case was dismissed on the ground that, though an offence had been committed, it was too trivial to convict upon; this was in respect of a Ground Ginger containing 5 per cent. of extraneous mineral matter, or a total ash of 12 per cent. Legal Proceedings.

In the cases in which convictions were obtained, the fines imposed amounted to £120 6s. 0d. and the costs to £29 4s. 0d.

I remain,

Mr. Chairman and Gentlemen,

Your obedient Servant,

ALFRED HILL, M.D., F.I.C.,

City Analyst.

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