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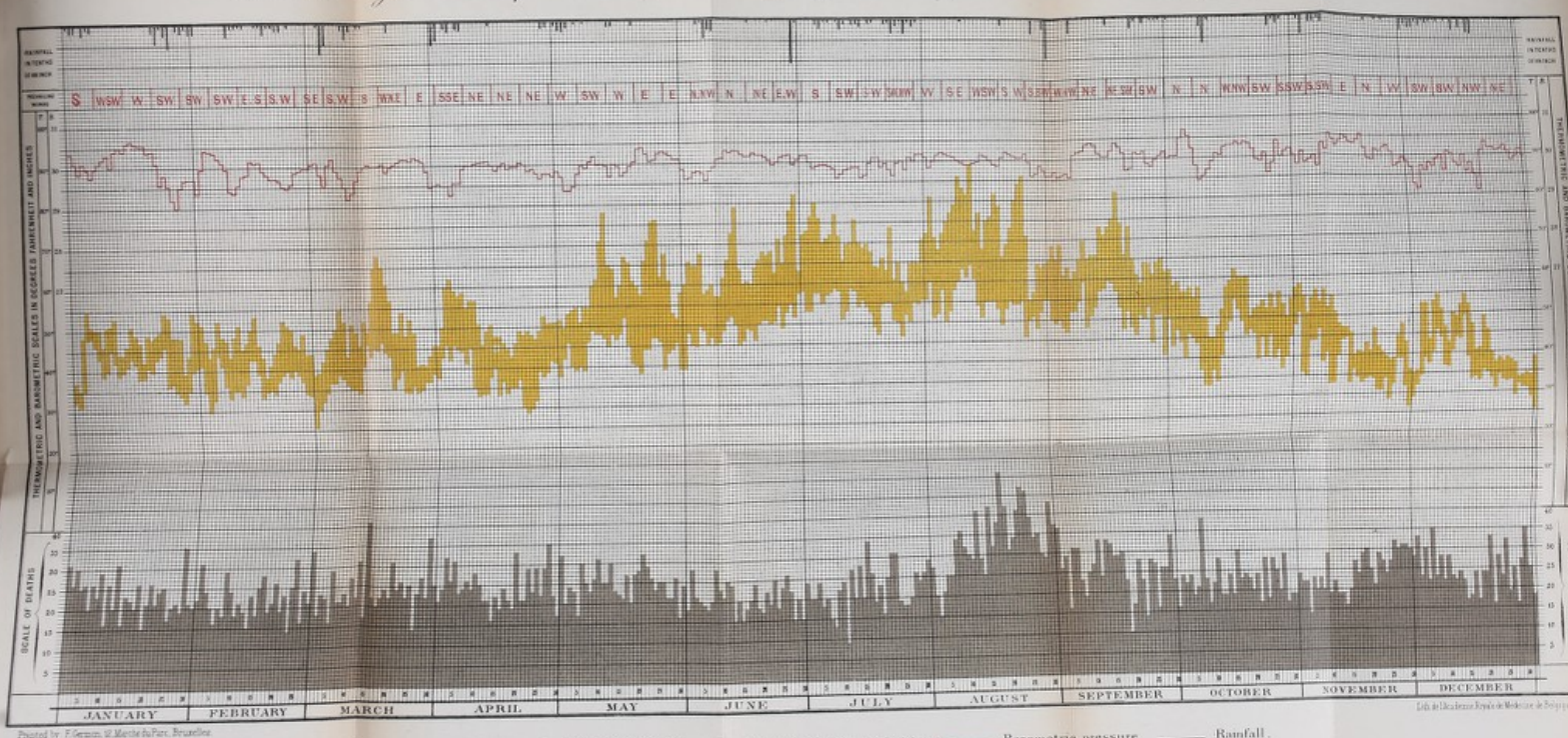
Borough of Birmingham.

Chart illustrating the relations of the number of deaths to the principal meteorological conditions on each day of the year 1884.



MORTALITY: Deaths

METEOROLOGY: Temperature (maximum and minimum) — Barometric pressure (corrected and reduced to 32° Fahrenheit and sea level) — Rainfall.

Note. The various readings for the 29th February will be found overlapping the last columns of the Chart.

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With the

Medical Officer of Health's Compliments.

REPORT

ON THE

HEALTH OF THE BOROUGH

OF

BIRMINGHAM,

FOR THE YEAR 1884,

ALSO,

ON THE PROCEEDINGS TAKEN UNDER THE ACT FOR THE

PREVENTION OF ADULTERATION

OF ARTICLES OF FOOD AND DRINK,

BY

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

Medical Officer of Health,
and
Analyst to the Borough.

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HEALTH DEPARTMENT,

THE COUNCIL HOUSE,

Birmingham, March 25th, 1885.

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

Introductory Remarks.

In presenting my Twelfth Annual Report, I have the satisfaction of again being able to state that the Health of the Borough during the year 1884 practically maintained its favourable position. I say practically, because judging solely from death-rate, although there is a fractional difference between the total death-rates of the last two years, that of 1883 being 21·01 per thousand of the population, while in 1884 it was 21·06, the increase of only $\frac{1}{20}$th of one per thousand is so small as to possess no real sanitary significance. An increase to this extent might very possibly be occasioned by such a fortuitous occurrence as the existence of an east wind or any other adverse meteorological influence acting for a single day, independently altogether of local sanitary conditions.

As a fact, the mortality, exclusive of that from Zymotic diseases, was less than in the previous year, so that its slight increase is due to the more fatal effects of this class of disease. On referring to the seven members of the group, however, it is found that Summer Diarrhœa was exceptionally prevalent, and thus is fully accounted for the slight increase of the mortality; but Summer Diarrhœa depends principally on solar heat, and thus we see meteorological condition has exercised the determining influence in this matter.

I. VITAL STATISTICS.

Population.

The Population of the Borough at the middle of 1884 is estimated at 421,258, or 6,412 more than the estimate for June, 1883. As the natural increase of population, that is the excess of Births over Deaths, was last year only 5,948, it follows that supposing the estimated increase to have really taken place during the year, 464 more persons came to reside in the Borough than the number of those residents who during that period removed outside its boundaries.

Natural Increase.

The natural increase in 1884 was equal to a rate of 1·41 per cent., against a nearly identical percentage, 1·44, in 1883. The natural increase of population continues very low, for while last year's figure, 5,987, was smaller than in any year since 1875, this year's number is slightly smaller still.

Area. Density.

No alteration has yet taken place in the boundaries of the Borough, but the mean density of its population is continually growing. The estimated population of the Borough at the middle of 1884 yields 50·1 as the mean number of persons per acre. Such a statement, however, does not really afford much valuable information with regard to most of our large towns, as it is well known that the mean density of some of them, including Birmingham, is made to appear comparatively low by the fact that within their boundaries are embraced large tracts of land, in the outskirts of these towns, which are mainly used for agricultural purposes; and though situated in urban sanitary districts, are really *sub*urban in character. It thus happens that towns like Leeds and Sheffield, whose populations appear to be very sparse, are really, where built upon, thickly populated. The district of Edgbaston, which has a sparse population, and a large expanse of agricultural land beyond Small Heath, taken by themselves, greatly reduce the mean density of our population, which in some parts of the town, such as the neighbourhood of Saint George's Ward, is as great as well could be in a town which has not adopted the "flat" system of house-construction.

The number of persons per acre in the Borough in the year 1873 was 42·4, so that in eleven years it has increased by 7·7 persons.

Comparative Statement of Death-rate, &c., in certain large towns.

The annexed statement gives the Estimated Population, the mean number of persons per acre, and the total Death-rate of certain large British towns during 1884:—

Population, Density, and Death-rate of certain Towns.	Estimated Population, 1884.	No. of Persons per Acre.	Death-rate.
London	4,019,361	53·4	20·3
Liverpool	573,202	110·0	25·1
Birmingham ...	**421,258**	**50·1**	**21·1**
Manchester ...	338,296	78·8	26·3
Sheffield	300,563	15·3	22·3
Leeds	327,324	15·2	24·1
Salford	197,153	38·1	22·2
Newcastle-on-Tyne	151,325	28·2	23·0
Norwich	90,410	12·1	21·1
Bristol	215,457	46·5	18·3
Glasgow	517,941	85·9	26·8
Dublin	351,014	14·2	27·4

It is well to mention the principal natural advantages which Birmingham enjoys, and which must exercise a considerable amount of influence on the general health and mortality of its inhabitants. Foremost amongst these I may state that the Borough stands at a considerable elevation, its height above the mean level of the sea ranging from 310 feet at the north-eastern end of the town to 600 feet at its extreme western limit. In addition to this circumstance, Birmingham is also favoured in being situated, for the most part, on porous strata, and to this fact, coupled with the strikingly undulating character of its surfaces, is attributable a general absence of dampness of soil.

Elevation.

Geological Position.

MARRIAGES.

From returns with which I have been favoured by Mr. W. Cooper, Superintendent Registrar of the Parish of Birmingham, and Mr. Hastings and Mr. E. Docker, who hold similar positions for the Parishes of Aston and King's Norton respectively, I gather that the number of Marriages in the Borough during the year was 3,435, as compared with 3,634 in 1883, and 3,581 in 1882.

Marriages in the Borough

It is thus seen that the actual number of persons married was as many as 398 fewer than in the preceding year, when the number was also relatively very small compared with those of years ago, when trade was prosperous.

Naturally, therefore, the Marriage-rate has fallen to a still greater extent, and was for the year only 16·3 per 1,000, against rates of 17·5 in each of the two previous years, conclusive evidence that the long looked-for revival of trade, with the higher and more regular wages which would thus accrue to the artizan classes, who form the great bulk of our population, is not yet an accomplished fact.

Marriage-rate.

The undergiven statement shows the number of Marriages and the Marriage-rate of the Borough in each of the last ten years:—

Year	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884
No. of Marriages...	3,606	3,736	3,683	3,245	3,046	3,215	3,261	3,581	3,634	3,435
Rate per 1,000 of the Population	20·1	20·1	19 5	16·7	15·7	16·3	16·2	17·5	17·5	16·3

BIRTHS.

The Births registered during the fifty-three weeks of last year numbered 14,991, against 14,701 in 1883, and 14,869 in 1882, and consisted of 7,689 males and 7,302 females. The

Births.

Births *(continued)*.

numbers of Births registered in each quarter of every year since 1873, inclusive, and the Birth-rates for each year in that period, are as follows:—

1873.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.	Birth-rate.
Total ...	3,741	3,564	3,378	3,814	14,497	40·78
Males ...	1,892	1,783	1,715	1,950	7,340	
Females ...	1,849	1,781	1,663	1,864	7,157	
1874.						
Total ...	3,814	3,871	3,493	3,710	14,888	41·25
Males ...	1,953	1,961	1,753	1,853	7,520	
Females ...	1,861	1,910	1,740	1,857	7,368	
1875.						
Total ...	3,787	3,737	3,581	3,757	14,862	40·57
Males ...	1,929	1,884	1,815	1,904	7,532	
Females ...	1,857	1,853	1,766	1,853	7,329	
Sexless ...	1	—	—	—	1	
1876.						
Total ...	4,140	3,924	3,803	3,949	15,816	42·53
Males ...	2,045	1,996	1,959	2,028	8,028	
Females ...	2,095	1,928	1,844	1,921	7,788	
1877.						
Total ...	4,296	4,009	3,769	3,927	16,001	42·39
Males ...	2,139	2,015	1,878	2,037	8,069	
Females ...	2,157	1,994	1,891	1,890	7,932	
1878.						
Total ...	4,139	4,096	3,849	3,880	15,964	41·67
Males ...	2,160	2,051	1,962	1,982	8,155	
Females ...	1,979	2,045	1,887	1,898	7,809	
1879.						
Total ...	4,124	3,912	3,723	4,087	15,846	39·98
Males ...	2,086	1,992	1,878	2,096	8,052	
Females ...	2,038	1,920	1,845	1,991	7,794	
1880.						
Total ...	3,964	4,104	3,572	3,471	15,111	38·28
Males ...	2,023	2,100	1,762	1,802	7,687	
Females ...	1,941	2,004	1,810	1,669	7,424	
1881.						
Total ...	3,965	3,754	3,550	3,590	14,869	36·96
Males ...	1,991	1,893	1,804	1,822	7,510	
Females ...	1,974	1,861	1,756	1,768	7,359	
1882.						
Total ...	3,968	3,760	3,478	3,660	14,866	36·39
Males ...	2,010	1,922	1,784	1,903	7,619	
Females ...	1,958	1,838	1,694	1,757	7,247	
1883.						
Total ...	3,975	3,814	3,460	3,452	14,701	35·44
Males ...	1,969	1,934	1,708	1,740	7,351	
Females ...	2,006	1,880	1,752	1,712	7,350	
1884.						
Total ...	3,765	3,817	3,557	3,852	14,991	34·91
Males ...	1,910	1,928	1,889	1,962	7,689	
Females ...	1,855	1,889	1,668	1,890	7,302	

Birth-rate.

On glancing at the above Table it will be observed that the persistent and prolonged falling off in the Birth-rate has not yet come to an end, for the rate for the year under notice showed a further reduction of 0·53 per 1,000 persons on the low figure recorded for 1883. A more careful review and

analysis of the figures for each quarter of the year for our own town and for the whole country leads me, however, to anticipate that in the year under review the lowest point of this depression in the Birth-rate has been reached, and that in the year which we have entered upon some advance upon the very low rates now prevailing will most probably occur. Births *(continued)*

On reviewing the subjoined statement, which gives the Birth-rate per 1,000 of the population in certain large towns, it will be noticed that our Birth-rate of 34·9, though an extremely low one, when compared with those of seven or eight years ago, which were practically 20 per cent. higher than at present, is still above the average rate of the twenty-eight large towns. Towns compared.

28 large Towns.	London	L'pool	Birm.	Manch.	Leeds	Sheff'ld	Salf'd	N'castle	N'wich	Bristol
34·4	33·6	35·1	**34·9**	36·0	34·7	36·8	35·5	39·4	34·1	31·3

VACCINATION.

The returns of Vaccination supplied to the Local Government Board for the year which terminated in June last, for copies of which I take this opportunity of thanking Mr. Bowen, Clerk to the Birmingham Guardians, and Messrs. Stephens and Johnson, Vaccination Officers for the Parishes of Aston and King's Norton respectively, show that out of 8,790 children whose births were registered in the Parish of Birmingham during that period, 7,661, or 87·2 per cent., were successfully vaccinated; 856, or 9·7 per cent., died before Vaccination could or need be performed; and that 123, or 1·4 per cent., had been taken to other districts beyond those under the supervision of the Vaccination Officers of the Birmingham Guardians, and without their knowledge. The other children not thus accounted for had either been removed to other Districts the Vaccination Officers of which had been apprised of the fact, or their Vaccination had been deferred on account of delicate health, or they proved insusceptible to the Vaccine virus. Vaccination.

In that portion of the Borough comprised within the Parish of Aston, during the same period of time, it would appear that the births of 5,330 children were returned by the local Registrars; in 4,390 instances, or 82·4 per cent., the Vaccination was successful; in no fewer than 610 cases, or 11·4 per cent., death occurred before Vaccination took place; and in 196, or 3·7 per cent., the children had been removed from the District without the Vaccination Officer either being apprised of the fact or being able to ascertain their new abode. The percentage of children not accounted for in these ways was 2·5. In Aston Parish.

Vaccination *(continued).*

The figures for that part of the Parish of King's Norton, viz. Edgbaston, situated within the Borough, indicate that of the 453 children whose Birth was recorded by the Registrar for Edgbaston during that period, on 404, or 89·2 per cent., the operation of Vaccination was satisfactorily performed, while 34, or 7·5 per cent., died before the expiration of the time when Vaccination becomes compulsory, and 5, or 1·1 per cent., had removed from the District without the cognisance of the Vaccination Officer. The Vaccination of the majority of the remaining 2·2 per cent. had been postponed for medical reasons.

The facts just dwelt upon will be more readily seen and compared with each other and with those for the four preceding years by a glance at the Table below.

Table of comparison of Vaccination.

PARISH.	Year.	Vaccinated.	Died before Vaccination.	Removed from District and not found.	Unfit, insusceptible, or otherwise.
Birmingham	1880	86·2	9·7	3·0	1·1
	1881	87·3	9·6	1·7	1·4
	1882	88·9	9·2	1·0	0·9
	1883	87·1	10·2	1·3	1·4
	1884	87·2	9·7	1·4	1·7
Aston (Borough portion)	1880	81·3	9·3	6·4	3·0
	1881	83·2	10·3	5·5	1·0
	1882	81·8	9·3	6·4	2·5
	1883	82·4	9·5	5·2	2·9
	1884	82·4	11·4	3·7	2·5
Edgbaston	1880	82·6	8·2	1·8	7·4
	1881	81·3	8·2	3·2	7·3
	1882	86·1	7·3	3·6	3·0
	1883	91·1	6·7	0·9	1·3
	1884	89·2	7·5	1·1	2·2

It is satisfactory to observe that, though the figures for that part of the Borough within the Aston Parish do not compare favourably with those of the other Vaccination Districts in the Borough, the improvement commenced last

year has at least been maintained, and in one sense has made further progress, for though the percentage of children successfully vaccinated remains identical with that for the preceding year, the number of children who have escaped Vaccination, and who might have been a continual source of danger, is less, which is accounted for by the fact that the mortality among infants in this part of the town was greater than usual during the period covered by the last returns. Vaccination *(continued)*.

It is a little unfortunate that the Vaccination returns cannot be made to coincide with the Registration year, but it is unavoidably so, as it is impossible to account for the Vaccination of children till they are three months old, the limit of age allowed by law. Some children who do not eventually escape Vaccination are of course not vaccinated till after this age, hence the necessity of allowing six months to expire before closing the records.

DEATHS

From the returns furnished by the local Registrars I find that the number of persons who died in the Borough during 1884 was 9,043. This figure, after allowance is made for this year containing 53 weeks, and for increased population, compares a little unfavourably with those for any year since 1879, since which the numbers for each year have been as follows:—1880, 8,088; 1881, 7,938; 1882, 8,425; and 1883, 8,714; whilst the average number in the ten years 1874–83 was 8,818. The Death-rate for the year has consequently moved a little further upwards, but to only an almost infinitesimal extent, for of 1,000 persons living 21·06 succumbed during the year under review, as compared with 21·01, a difference of only 0·05, or one-twentieth of one per thousand from the previous year, our Death-rate for which, as well as for the four preceding years, was unprecedentedly low. Deaths.

If the Death-rate for the year 1884 be compared with those for the years 1871–1879, both inclusive, it will be found that our Death-rate for the year just ended was 3·34 per 1,000 of the population lower than the average rate of those nine years. But perhaps the most striking illustration of the decline in our Death-rate in recent years is that which results from comparing our average Death-rate during the last six years with that of the six immediately preceding. For the six years from 1873–8, both inclusive, our average annual rate of mortality was 25·0, and in every one of those years was above that for any individual year in the six years 1879–1884, both inclusive, for the whole of which period our Death-rate averaged only 20·9, a difference in favour of these six years of as much as 4·1 per 1,000 persons living. Death-rate.

Deaths *(continued).*

Saving of Life.

It thus follows that once again I have the satisfaction of being able to announce that 1884 has added one more to the list of those recent years which are distinguished by a large saving of human life.

I compute that had the mortality of the last six years of the twelve during which I have held my present office continued at the same rate as that of the first six years, no fewer than 9,880 persons who are now living would have died, a sacrifice of life rivalling that of the bloodiest battlefields. This may seem an astounding statement, and truly it is, but how much greater does its magnitude appear when we reflect that if 9,880 lives have been preserved during the last six years, which, with the same rate of mortality as in the first six, would have been sacrificed, what must be the amount of sickness and of suffering which our community has been spared, a large proportion of which your Committee may unhesitatingly put down to the sanitary measures which have been prosecuted during the last ten years.

With prolonged bad trade and considerable distress among certain classes of our population, the pressure of the rates is doubtless much felt, but if the outlay on the additional sanitary measures of the past decade could be compared with the already known results, to say nothing of those which must accrue in the future, the cost of these extra health precautions would surely be much less than the value of the increased exemption from fatal and non-fatal illness which Birmingham has enjoyed of late years. The late well-known statistician, Dr. Farr, computed that the average value of every human life was £159. Applying this standard of money value to the lives saved in Birmingham during the last six years we find that the saving of money thus effected amounts to no less than £1,570,920. This immense sum does not and cannot take into account the physical disability and attendant heavy cost which would have accompanied so great an additional loss of life as that we have been happily spared.

Last year's mortality was at such a rate that of 47·5 persons living, one died during the year. The proportion which those who died during the year bear to the whole community is nearly identical with the ratio in the previous year, which was 47·6.

Mortality in Institutions.

The Deaths among the occupants of the several Institutions in the Borough, excepting the Workhouse, increased our total Death-rate by 1·6, while including the Birmingham Workhouse they increased it by 2·9 per 1,000 of the total population of the Borough.

Discrepancy between Registrar-General's and own figures.

My figures will be found as in the past to disagree in some measure with those furnished by the Registrar-General for England and Wales. This want of agreement in the two sets

Deaths *(continued).*

of figures arises, as pointed out in previous reports, from the fact that the Registrar-General thinks well to debit our Borough not only with the gross number of deaths of persons who succumb within it, but also with the deaths of all paupers removed from those portions of the parishes of Aston and Edgbaston within the Borough to the Workhouses for those districts situated respectively at Erdington and King's Norton, both, of course, beyond the Borough boundaries. With this plan no reasonable objection could be found if it were also possible to make a similar allowance for the deaths of those persons who come from outside districts to our Hospitals and, dying there, help to swell the records of our mortality, but without this necessary counter correction it is evident that the Registrar-General's method, while quite fair to Aston and King's Norton, only tends in the case of Birmingham to aggravate that unfair apportionment of the mortality among certain localities which he wishes to avoid.

We shall never be able, however, to credit any given locality with its right share of mortality till the deaths in all public Institutions are distributed among the sanitary districts in which the deceased have, prior to their admission to these Institutions, been resident.

The subjoined statement contains an estimate of the total population and of its density, the gross number of Births and Deaths, and the Birth-and Death-rates for each of the twenty years since 1864 :—

Year.	Population Estimated in the middle of each year.	Density. Persons per acre.	Births.	Deaths.	Annual Rate per 1,000 living.	
					Births.	Deaths.
1865	The Estimate of Population in these years is not to be relied on.	—	12,699	8,014	38·9	24·5
1866		—	12,877	8,042	38·5	24·0
1867		—	13,029	8,318	38·0	25·6
1868		—	12,992	8,548	36·3	25·9
1869		—	12,779	7,737	35·5	23·1
1870		—	12,922	7,805	35·0	23·0
1871	344,980	41·1	13,443	8,594	39·0	24 9
1872	350,164	41·7	14,123	8,048	40·5	23·1
1873	355,540	42·4	14,497	8,990	40·8	24·8
1874	360,892	43·0	14,888	9,665	41·2	26·8
1875	366,325	43·6	14,862	9,668	40·6	26·3
1876	371,839	44·3	15,816	8,330	42·5	22·4
1877	377,436	44·9	16,001	9,038	42·4	23·9
1878	383,117	45·6	15,964	9,662	41·7	25·2
1879	388,884	46·3	15,846	8,650	40·0	21·8
1880	394,738	47·0	15,111	8,088	38·3	20·5
1881	402,296	47·9	14,869	7,938	37·0	19·7
1882	408,532	48·6	14,866	8,425	36·4	20·6
1883	414,846	49·4	14,701	8,714	35·4	21·0
1884	421,258	50·1	14,991	9,043	34·9	21·1

Deaths *(continued).*

A comparison of our Death-rates with those of other large towns, with which it is most fairly comparable, for each of the last twelve years is afforded by the following statement:—

Comparative Death-rate of Birmingham and large towns.

	Twenty large English Towns.	London	L'pool	BIRM.	Manch.	Leeds	Sheff'ld	Salford	N'castle	Norw'h	Bristol
1884...	21·4...	20·3	25·1	**21·1**	26·3	24·1	22·3	22·2	23·0	21·1	18·3
1883...	21·7...	20·4	26·6	**21·0**	27·6	23·2	22·9	22·3	25·4	19·6	17·8
1882...	22·6...	21·4	26·5	**20·6**	26·8	23·2	21·7	23·2	23·1	20·6	19·2
1881...	21·7...	21·2	26·7	**19·7**	25·5	21·6	21·1	22·6	21·8	19·5	19·6
1880...	22·6...	22·2	27·3	**20·5**	25·4	21·0	21·1	25·9	22·0	24·7	20·1
1879...	23·2...	23·3	27·1	**21·8**	26·9	22·6	21·3	24·9	23·6	22·0	21·1
1878...	24·4...	23·5	29·4	**25·2**	27·9	23·8	25·0	25·6	23·8	24·6	21·4
1877...	22·8...	21·9	26·5	**23·9**	27·4	22·3	21·9	25·1	22·4	21·0	21·8
1876...	23·6...	22·3	27·6	**22·4**	29·2	25·1	24·3	31·9	22·8	21·9	22·6
1875...	25·4...	23·7	27·5	**26·3**	29·9	26·4	24·8	31·5	26·1	24·5	26·8
1874...	25·4...	22·5	32·0	**26·8**	30·4	28·7	26·9	29·6	29·2	23·5	22·7
1873...	24·4...	22·5	25·9	**24·8**	30·1	27·6	25·8	29·3	30·1	21·5	23·1

On reviewing these statistics it will be observed that our Death-rate for the year recently ended was not only again lower than that of 20 of our largest English towns, which showed a further reduction of 0·3 per 1,000 persons living, but actually lower than that of those of any of the towns in the above list with the exception of London and Bristol, the latter city again enjoying a very low Death-rate, though 0·5 per 1,000 of its population higher than the exceptionally low rate of 1883. The continuous reductions which have taken place in the Death-rate of the Metropolis and, more particularly, of Salford, are still in progress and continue therefore to add proofs of the beneficent results to be obtained by greater attention to sanitary improvements.

The subjoined figures give the total number of deaths, particulars of sex and the Death-rate for each quarter of last year, as well as the totals for that year, and for each of the four preceding years:—

	1st Quar.	2nd Quar.	3rd Quar.	4th Quar.	Total 1884.	Total 1883.	Total 1882.	Total 1881.	Total 1880.
Total ...	2,094	2,158	2,440	2,351	9,043	8,714	8,425	7,938	8,088
Males ...	1,124	1,181	1,282	1,210	4,797	4,536	4,337	4,049	4,230
Females ...	970	977	1,158	1,141	4,246	4,178	4,088	3,889	3,853
Death-rate	19·89	20·49	23·17	20·73	21·06	21·01	20·62	19·73	20·49

The Death-rate of the first quarter of 1884 was a remarkably low one for the winter quarter, being 3·7 per 1,000 lower than in the corresponding period of 1883, when March brought with it a prolonged spell of intensely cold trying weather. The rate of mortality for the second quarter was nearly identical with that recorded in the previous spring quarter, that of the

Deaths *(continued)*.

third quarter was 3·46 per 1,000 higher than that for the summer quarter of the previous year and that of the fourth quarter 1 per 1,000 higher than the rate of mortality for the last quarter of 1883.

Chief movements in the death-rate during the year.

Practically speaking then, the chief movements in the Death-rate last year, as compared with that for the four quarters of the previous year, were confined to the first and third quarters, the great improvement in the mortality rate noticeable in the first quarter being nullified by the considerably increased Death-rate of the third.

Connection between health and climatic conditions.

These changes are without doubt very largely referable to influences beyond the controul of a Sanitary Authority, are in fact the consequence in the one instance of a fortunately benign, genial atmosphere instead of the usual winter's cold, and in the other case of exceptionally great heat.

One cannot help inferring that such is the case when one compares the mortality from diseases of the respiratory organs in the last two winter quarters and that from Diarrhœal diseases in the last two summer quarters, for while the rate of mortality from chest affections in the first quarter of 1884 was 1·3 per 1,000 below that of the previous winter quarter, that from Diarrhœa in the past summer quarter was 2·7 higher than that of the preceding corresponding quarter.

Thus has the weather again played a great part in influencing our Death-rate, for it may not yet be forgotten how much our Death-rate of the previous year was affected adversely by an unusually cold early spring, and beneficially by a cool summer and autumn.

Perhaps the most remarkable feature, however, revealed by a study of last year's mortality figures quarter by quarter is that the Death-rate of the second quarter, usually the healthiest time of the year, was in the spring quarter of the year under notice 0·6 per 1,000 higher than that of the first or winter quarter, which is most frequently the unhealthiest quarter of the year. With the view of illustrating how the variations in the Death-rate during the year followed closely on meteorological changes, let me draw attention to the principal of both of these.

The first three months of the year were unusually mild, very few days in this period having a mean temperature below the average, while they were not characterised by a single long spell of wintry weather; their very remarkable character may be gathered from the fact that the lowest thermometric reading was 25°·5 giving only 6°·5 of frost as the lowest temperature recorded in any night of the winter quarter.

Connection between health and climatic conditions. *(continued).*

This unusually moderate temperature for the season of the year continued until nearly the middle of April, when the wind which had previously blown almost uninterruptedly from the southerly and westerly points of the compass shifted to the east and north-east, with that usual concomitant of it in the spring time—a dry searching air. Its disastrous effects on life were soon visible in the Death-rate, for in the last week of April the rate of mortality stood at a higher figure than it had reached in any previous week of the year, 27 per cent. higher in fact that it had averaged during the month of February. With the advent of May, however, the wind again shifted to the westward, the temperature rose and with a continuance of moderate heat during this and the two succeeding months, the Death-rate steadily fell, attaining its minimum for the year in the first week of July. August came in, however, with very warm weather and by the middle of the month the heat had become almost tropical, such extremely hot weather not having been felt in the Midlands since 1868. As a consequence mortality from Infantile Diarrhœa increased so rapidly that the total Death-rate rose by leaps and bounds till in the closing days of August it stood as high as 32 per 1,000 of the population. The last six days of August were almost as remarkably cool as the previous portion of the month had been hot, and as this agreeable change of temperature was partially maintained during the early days of September, a sudden fall in the total rate of mortality resulted. Another outburst, however, of very warm weather in the middle of September brought about another rise in the Death-rate, but a return to a more moderate temperature towards the latter portion of the month sent down the rate of mortality to a low level, at which, thanks to an absence of any protracted severe weather during the closing months, it remained during the greater portion of the rest of the year.

The mortality from diseases of the respiratory system was, however, notwithstanding the absence of any very low temperatures, rather high during the latter portion of the year, and I consider it probable that the increased mortality of diseases of the chest may be largely accounted for by the fact that during the greater portion of October and November the wind blew almost constantly from the northwards; and although it never brought with it any very low readings of the thermometer, the atmosphere which accompanied it was generally of a harsh, biting character, and one calculated to lead to inflammatory diseases of the respiratory tract.

The Deaths were thus distributed among the eight Registration Sub-Divisions in each Quarter of 1884, and in that year and the three preceding years:—

Distribution of deaths among Registration Sub-Districts.

	1st Quar.	2nd Quar.	3rd Quar.	4th Quar.	Total Deaths, 1884.	Total Deaths, 1883.	Total Deaths, 1882.	Total Deaths, 1881.	Death-rate, 1883.
Ladywood ...	252	255	291	290	1,088	1,004	971	907	19·9
St. Thomas ...	218	243	232	214	907	828	818	783	21·9
St. Martin ...	198	200	251	221	870	812	863	761	20·9
St. George ...	354	370	461	421	1,606	1,548	1,567	1,525	24·5
All Saints ...	404	418	401	431	1,654	1,682	1,501	1,436	31·7
Deritend ...	343	316	402	408	1,469	1,408	1,365	1,312	16·4
Duddeston ...	266	285	326	289	1,166	1,186	1,100	988	19·6
Edgbaston ...	59	71	76	77	283	246	240	226	11·3

I have thought well to append, as usual, to the actual mortality figures the Death-rates of the several Registration Sub-Districts, for the enumerated populations of each of which I have availed myself of the published Tables relating to the Census of 1881, and in order to estimate their populations at the middle of 1884 I have adopted the usual and only course open of proceeding on the supposition that the rate of movement of the population of each District which prevailed between 1871 and 1881 has been exactly maintained since that date. Owing to the extensive demolitions effected in at least one of the Sub-Districts, viz. Saint Thomas', since the last Census enumeration, it may be taken for granted that the population of that District, every inch of which, so to speak, was previously built upon, must by this method be rather over-estimated, and that therefore its Death-rate should be considered a little higher than it is stated in the Table. There is, however, no reason to doubt that, as the time since the taking of the last Census is not at present very great, the Death-rates for those Districts which do not contain in them any Institutions for the sick may be relied upon as being approximately correct guides to an estimate of the healthiness of each of these Sub-Divisions of the town. In those, however, containing Hospitals and the like, however accurate may be the estimate of their populations, the estimate of their Death-rates is very seriously vitiated by the presence in them of such Institutions, among the inmates of which the rate of mortality must necessarily be most abnormally large.

If it were possible to distribute the Deaths of persons in these Institutions among the localities where they resided prior to their admission into them, it would not only be easier to compare the Death-rate of one portion of the Borough with the others, but as it is well known that many of the inmates come from localities altogether outside our Borough boundaries, I should also be in a better position to make a needed correction in our Death-rate for the number of outsiders who have recourse to our Hospitals, and die there, which must be considerably greater than the number of those usually resident in the Borough who chance to be taken ill and succumb elsewhere.

Distribution of deaths among Registration Sub-Districts *(continued)*.

Hitherto, however, I have not found it practicable to obtain this very desirable information, and I am again compelled to make use of the best means at my command to render the figures for each Sub-District more fit for comparison with each other, viz., to deduct from the total Deaths recorded in each Registration Sub-Division all those occurring in any Institution or Institutions that may be situated within it.

It thus comes about that by eliminating the Deaths which occurred in the Children's Hospital from the total Deaths of the Ladywood Registration Sub-District, in which that Institution is situated, the Death-rate of that Sub-District is brought down from 19·9 to 18·4, and in a similar way the Death-rates of the Sub-Districts of Saint Thomas and Saint George, in the former of which is located the Queen's, and in the latter the General Hospital, instead of appearing as they now do, 21·9 and 24·5, would be 18·1 and 20·2 respectively.

The Sub-District which always stands most in need of this kind of correction is that of All Saints, as it includes within its borders the Workhouse, Lunatic Asylum, Borough Hospital, and Gaol; and if the mortality in these Institutions be disregarded, the number of Deaths debited to this Sub-District would fall from 1,654 to 925, and its Death-rate from 31·7 to only 17·7 per 1,000.

I would once more remark that this plan is necessarily of itself open to some error, because if the Death-rate is to be an absolutely true one, it is not only requisite to make such allowances as I have just referred to, but the opposite fact must also be taken into consideration—that when the Census of these localities was taken there were included in the totals which form the basis of my calculations those persons who at the time were inmates of these Institutions, so that to be quite fair we should not only deduct the Deaths in these Institutions, but also their average population during the last year. In several of the Institutions situated in the All Saints' Sub-District the mean number of inmates is considerable, and it is therefore evident that the very low amended Death-rate I have just given for that District is somewhat understated. In the case of the other Sub-Districts, the number of inmates of Institutions within them is so comparatively small that their corrected Death-rates may be looked upon as substantially accurate.

The table below enumerates the Deaths in each of the sixteen Wards of the Borough for each quarter of 1884, as well as for the whole of that year and the three preceding years:—

	1st Quar.	2nd Quar.	3rd Quar.	4th Quar.	Total 1884.	Total 1883.	Total 1882.	Total 1881.
Rotton Park (W., B.H.) ...	315	302	289	305	1,211	1,315	1,093	1,043
All Saints' (L.)	142	177	169	181	669	561	587	614
Ladywood (H.)	145	141	165	154	605	539	506	486
St. Paul	96	92	111	111	410	357	367	360
St. George...	120	112	128	100	460	585	541	484
St. Stephen	94	105	181	152	532	330	418	401
St. Mary (H.)	147	165	175	195	682	739	684	633
St. Bartholomew	112	115	152	128	507	596	608	519
Market Hall	62	74	75	67	278	243	280	308
St. Thomas	159	169	169	156	653	590	571	529
St. Martin...	109	113	125	122	469	361	401	357
Edgbaston...	65	80	79	94	318	313	298	291
Deritend	125	120	151	125	521	551	515	470
Bordesley	164	140	180	213	697	593	604	590
Duddeston	118	118	118	112	466	499	442	387
Nechells	121	135	173	136	565	542	510	466

Distribution of Deaths among the Wards.

Ward population.

The population of the Wards has not yet been correctly obtained, and without this factor any comparison of their rates of mortality is utterly impossible, so that the mere record of the actual number of deaths in each is of little or no value for purposes of comparison. In order, however, to make them, if possible, of some value I have given the totals for every Ward during each of the three previous years. They show that last year's mortality exhibits the most marked increase, as compared with the three preceding years, in the Wards of All Saints, Saint Thomas, Saint Martin, Ladywood, and Saint Stephen, notably in the last named; while in the Wards of Saint George and Saint Bartholomew it was rather considerably lower. The numbers of Deaths in Edgbaston Ward during the last four years have been very uniform, showing year by year a slight increase about proportionate to the growth of its population. I may add that when the records which the Assistant Inspectors are procuring in their systematic inspections shall be complete, I hope to be able approximately to obtain from them the long desired information, the number of inhabitants in each Ward.

Distribution of Deaths among the ætal periods.

The Deaths have been distributed among certain ætal periods during this and the three previous years as under:—

	1st Quar.	2nd Quar.	3rd Quar.	4th Quar.	Total 1884.	Total 1883.	Total 1882.	Total 1881.
Under 1 year of age ...	495	533	924	659	2,611	2,338	2,452	2,212
Between 1 and 5 years	368	425	507	404	1,704	1,480	1,527	1,429
„ 5 „ 20 „	169	149	116	144	578	688	596	494
„ 20 „ 40 „	300	277	216	288	1,081	1,115	1,028	978
„ 40 „ 60 „	369	379	333	391	1,472	1,389	1,363	1,319
At 60 years and upwards	393	395	344	465	1,597	1,704	1,459	1,506

Distribution of Deaths among the ætal periods *(continued)*.

One need not go far to seek the principal causes of the decided fluctuations in the figures at several of the above ætal periods, which appear on contrasting last year's totals with those of 1883. The first great difference that strikes the eye is the larger mortality in children under five years of age, and I need hardly say, after previous remarks, that the more than ordinary fatality of Diarrhœa in the warm months of the year is principally accountable for it, although it is true that an epidemic prevalence of Measles during the first nine months of the year also contributed to swell the totals of mortality in children between one and five years of age.

As a matter of fact the number of deaths under five years of age from Diarrhœa was higher in the third quarter of 1884 than in that period of the preceding year, by almost exactly the same figure as the total deaths under five during the year 1884 were in excess of those for 1883.

The second most prominent feature revealed by a comparison of the figures for the last two years is that last year's deaths were considerably fewer in number than in the preceding year among those who had reached 60 years of age; and here, again, a satisfactory explanation is readily afforded by the circumstance that more than the whole of the actual diminution at this period of life occurred in the first quarter of the year, when the almost uniformly higher temperature for the season which characterised last winter quarter, presents a most marked contrast to the long spell of bitterly severe polar winds in March, 1883, which occasioned so high a mortality among the aged, largely from affections of the breathing organs, though a great number of deaths at this period of life were set down to old age.

The smaller mortality from both Smallpox and Scarlet Fever has greatly helped to bring about the fewer deaths registered between the ages of 5 and 40, while the increased amount of mortality in persons between 40 and 60 seems to be pretty equally spread among the various groups of disease.

Average age at death.

The average Death-age for each quarter of the past two years has been as under:—

	1883.	1884.
First Quarter ...	29 years and 8 months.	27 years and 7 months.
Second „ ...	34 „ 1 „	26 „ 9 „
Third „ ...	22 „ 2 „	20 „ 5 „
Fourth „ ...	27 „ 1 „	27 „ 3 „
Whole Year ...	28 „ 3 „	25 „ 6 „

It will be observed on reviewing the figures for the year recently ended that they were lower in the first three quarters than in the corresponding periods of the previous year, while the mean Death-age of the fourth quarter shows a very slight

advance on the corresponding quarter of 1883. It should be stated, however, that the average age at death during the year 1883 was considerably higher than usual. The reduced Death-age of the first quarter of 1884 is the result of the mild weather which then prevailed in contrast with the exceptionally severe cold of March, 1883, which carried off a great number of elderly people; that of the second quarter was largely due to a great mortality among children, from both Measles and Whooping Cough last spring, while the lower average Death-age of the third quarter is the necessary consequence of the large amount of Infantile Diarrhœa in the past autumn. Deaths *(continued)*.

INFANT MORTALITY.

The deaths of infants under one year of age have numbered 2,611, which, calculated on the estimated population under this age, are equal to an annual death-rate of 203·9 per 1,000 infants living at this age. Infant Mortality.

The ratio of deaths of infants under one year of age to the registered births in Birmingham is 17·4 per cent., as compared with a percentage of 14·7 for the whole of England and Wales. It will be noticed, too, on referring to the tables below, that compared with the average rate of the large English towns, our ratio of deaths under one year—both to total births and to total deaths—is higher than theirs, in the former instance by 0·7 per cent., and in the latter by 2·1. In 1883 the proportion of deaths under one year to births, in Birmingham, coincided with that for the twenty large towns, while the proportion to total deaths was only 1·2 per cent. higher.

Birmingham suffers more from Diarrhœa than the great majority of the large towns, and to this fact is ascribable the less satisfactory position we occupied in this respect in 1884, when weather conditions were favourable for its production, than in 1883 when the summer was a comparatively cool one.

The percentage of deaths of infants under one year of age on the births registered in Birmingham and the principal large towns during the past ten years is given below:— Percentage of Infant Deaths on Births.

	Twenty large English Towns.	London.	L'pool.	BIRM.	Manch.	Leeds.	Sheff'ld.	Salford.	N'castle.	Norw'h.	Bristol
1884...	16·7...	15·5	19·4	**17·4**	18·3	18·4	17·2	18·4	15·6	18·7	14·3
1883...	15·9...	14·6	18·6	**15·9**	17·7	16·7	16·3	17·1	16·7	15·1	13·4
1882...	16·1...	15·1	17·8	**16·5**	17·9	18·0	16·5	17·8	16·6	16·9	14·2
1881...	15·2...	14·8	17·3	**15·0**	16·1	16·7	15·5	16·3	15·3	14·7	12·5
1880...	17·0...	15·8	19·1	**17·2**	18·0	17·4	16·5	20·0	17·1	21·6	14·6
1879...	15·1...	14·8	16·3	**15·0**	16·5	16·1	15·3	17·0	14·5	15·9	14·5
1878...	17·2...	16·4	19·3	**17·0**	17·5	18·8	17·6	18·5	16·1	21·1	16·0
1877...	15·4...	14·6	18·8	**16·4**	16·1	16·5	16·1	16·1	15·1	15·4	15·4
1876...	16·7...	15·7	20·8	**16·0**	18·0	18·1	16·9	18·9	16·7	17·8	15·3
1875...	17·6...	16·2	21·0	**19·6**	18·4	19·7	17·6	17·8	18·7	21·0	16·6

Percentage of Infant Deaths on total Deaths.

The following statement shows the percentages of Deaths of infants under one year to the total deaths at all ages in the principal large English towns during the same period of time as that embraced by the preceding table :—

Twenty large English Towns.	London.	L'pool.	BIRM.	Manch.	Leeds.	Sheff'ld.	Salford.	N'castle.	Norw'h.	Bristo
1884... 26·8...	25·7	27·1	**28·9**	25·1	26·4	28·3	29·4	26·7	30·1	24·5
1883... 25·6...	24·2	24·5	**26·8**	23·0	24·8	26·1	27·2	24·1	26·1	24·0
1882... 25·6...	24·3	24·5	**29·1**	24·6	27·8	28·4	24·0	26·9	27·7	24·4
1881... 24·9..	24·1	24·4	**27·7**	23·3	28·5	27·9	27·9	25·8	25·5	22·0
1880... 26·8...	25·7	26·7	**32·1**	24·0	29·4	27·5	29·3	28·0	30·0	24·0
1879... 23·9...	23·2	23·3	**27·5**	22·4	26·3	25·6	27·3	22·6	24·7	24·7
1878... 26·5...	25·2	25·5	**28·6**	24·0	31·0	26·5	30·5	25·8	28·7	26·4
1877... 25·5...	24·1	27·5	**29·1**	22·6	29·7	25·5	27·1	26·6	24·7	25·4
1876... 26·9...	25·7	29·6	**30·5**	24·5	29·9	28·6	29·2	30·4	27·0	25·5
1875... 26·2...	24·4	29·4	**30·6**	24·3	30·1	29·2	26·7	29·1	28·0	22·6

Deaths under five years.

The deaths of children under five years of age amounted to 4,315, as compared with 3,818 in 1883 ; the percentage on total deaths is 47·7, against 43·8 in 1883.

Death-rates at certain ætal periods.

TABLE SHOWING POPULATION AND NUMBER OF DEATHS OF PERSONS, MALES AND FEMALES, AT ALL AGES, AND AT FIVE GROUPS OF AGES, DURING THE YEAR 1884.

	PERSONS.		MALES.		FEMALES.	
	Estimated Population, 1884.	Deaths, 1884.	Estimated Population, 1884.	Deaths, 1884.	Estimated Population, 1884.	Deaths, 1884.
All ages... ...	421,258	9,043	204,222	4,797	217,036	4,246
Under 5 years ...	61,606	4,315	30,685	2,345	30,921	1,970
5 to 20 „ ...	138,024	578	67,465	277	70,559	301
20 to 40 „ ...	129,804	1,081	62,173	546	67,631	535
40 to 60 „ ...	69,332	1,472	33,894	846	35,438	626
60 and upwards..	22,492	1,597	10,005	783	12,487	814

Death-rates at certain ætal periods *(continued)*.

TABLE SHOWING RATE OF MORTALITY PER 1,000 PERSONS, MALES AND FEMALES, LIVING DURING 1883, AT ALL AGES, AND AT FIVE GROUPS OF AGES, COMPARED WITH THE ENGLISH LIFE TABLE RATES (FARR).

	PERSONS.		MALES.		FEMALES.	
	Birmingham	English Life Table.	Birmingham	English Life Table.	Birmingham	English Life Table.
All ages... ...	21·1	21·5	23·0	22·4	19·2	20·7
Under 5 years ...	68·7	65·7	75·0	70·1	62·5	61·3
5 to 20 „ ...	4·1	7·1	4·0	7·0	4·2	7·2
20 to 40 „ ...	8·2	10·3	8·6	10·1	7·8	10·5
40 to 60 „ ...	20·8	18·3	24·5	19·4	17·3	17·2
60 and upwards..	69·7	71·7	76·8	73·9	64·0	69·7

It is worthy of remark that while our death-rate per 1,000 among males has risen 0·5, and is, as last year, higher than that of the English Life Table, that among females has fallen 0·3, and is, as in 1883, considerably lower than that of the English Life Table, so that the difference in the death-rates of the two sexes is even greater than in 1883, being now no less than 3·8 per 1,000, while the difference given in the English Life Table is only 1·7.

Compared with the figures for the previous year, the most noticeable feature, however, is the greatly increased death-rate among children under five years of age, for while in 1883 our death-rate at this period of life was lower than that of the Life Table rate, it is now considerably higher; while the great disproportion in the rates of the two sexes, then noticeable, is now augmented and furnishes still stronger proof of the greater difficulty, which evidently exists, of rearing boys than girls. As a matter of fact, while the death-rate for the year among male children under five years of age, in Birmingham, was 75·0 per 1,000, that among females was 62·5, or no less than 12·5 per 1,000 lower.

At each of the four stated periods of life above five years of age the mortality among both sexes was lower in every instance, except one, than in 1883, the exception being that the death-rate among males between 40 and 60 years of age manifested during the year a slight increase.

Among that portion of the population above 60 years of age the decline in the mortality, as compared with that of 1883, is marked, and is ascribable to the fact that while March, 1883, was characterised by exceptionally severe weather, which carried off a number of aged people, no such malign influence was encountered in the year under review.

The following statement gives particulars respecting the Deaths and Death-rates from all causes and from Zymotic Diseases, and of Infant Mortality during 1884 and the preceding eleven years :—

ANALYSIS OF THE MORTALITY IN THE BOROUGH OF BIRMINGHAM IN EACH OF THE TWELVE YEARS, 1873 TO 1884.

YEAR.	Deaths of Infants under 1 year.	Proportion of Deaths under 1 year to 1,000 Births.	DEATHS. AT ALL AGES. From all Causes.	DEATHS. AT ALL AGES. From Seven Zymotic Diseases.	DEATHS. FROM ALL CAUSES. Of Children under 5 years.	DEATHS. FROM ALL CAUSES. Of Persons over 60 years.	Annual rate per 1,000 living. AT ALL AGES. From all Causes.	Annual rate per 1,000 living. AT ALL AGES. From Seven Zymotic Diseases.	Annual rate per 1,000 living. FROM ALL CAUSES. Of Children under 5 years.	Annual rate per 1,000 living. FROM ALL CAUSES. Of Persons over 60 years.
1873	2627	181	8990	2042	4424	1521	24·8	5·6	12·4	4·3
1874	2688	178	9665	2652	4589	1459	26·8	7·3	12·7	4·4
1875	2957	196	9668	2145	4785	1590	26·3	5·9	13·0	4·3
1876	2537	160	8330	1336	3881	1441	22·4	3·6	10·4	3·9
1877	2628	164	9038	1576	4460	1521	23·9	4·2	11·8	4·0
1878	2766	170	9662	2421	5128	1506	25·2	6·3	13·4	4·0
1879	2385	150	8650	1251	4095	1686	21·8	3·2	10·5	4·3
1880	2601	172	8088	1324	4043	1397	20·5	3·4	10·2	3·5
1881	2212	150	7938	1128	3741	1506	19·7	2·8	9·3	3·7
1882	2452	165	8425	1413	3979	1459	20·6	3·4	9·8	3·7
1883	2338	159	8714	1306	3818	1704	21·0	3·1	9·2	4·1
Average 1873 to 1883	2563	168	8833	1691	4268	1526	23·0	4·4	11·2	4·0
1884	2611	174	9043	1681	4315	1597	21·1	3·9	10·0	3·7

Full details of the Mortality may be found in Table A, on pages 41—43.

SPECIFIED CAUSES OF DEATH.

Specified causes of Death.

The Deaths during the year were distributed among the eight classes into which all diseases are now grouped by the Registrar-General, as under:—

Class I.—Zymotic Diseases ...	1,805,	or 20·0	per cent. of total mortality.
Class II.—Parasitic „ ...	15,	or 0·2	„ „
„ III.—Dietic „ ...	49,	or 0·5	„ „
„ IV.—Constitutional Diseases	1,274,	or 14·1	„ „
„ V.—Developmental „	563,	or 6·2	„ „
„ VI.—Local „	4,136,	or 45·7	„ „
„ VII.—Violent Deaths ...	371,	or 4·1	„ „
„ VIII.—Deaths from ill-defined and not specified causes	830,	or 9·2	„ „

The most marked changes in the distribution of the above figures, as compared with the numbers for 1883, have been confined to three classes of disease—the Zymotic, Developmental, and Local; the Deaths in the first mentioned of these bear a larger ratio to the total Deaths than in the previous year, while in the other two named classes they exhibit a smaller one.

CLASS I.—*ZYMOTIC DISEASES.*

Zymotic Diseases.

The Deaths in this class, which, in addition to the seven chief zymotic diseases, separately referred to under the next heading, includes among others all diseases of a Malarial, Venereal, or Septic origin, amounted during the year to 1,805, and were equivalent to an annual mortality rate of 4·2 per 1,000 of the population.

THE DEATHS FROM THE SEVEN PRINCIPAL ZYMOTICS,

Seven principal Zymotics.

which are Smallpox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever, and Diarrhœa, have numbered 1,681, a considerably higher figure than in any year since 1878, when Scarlet Fever was seriously rife in the Borough, the number of Deaths from these seven diseases being 1,306 in 1883, 1,413 in 1882, 1,128 in 1881, 1,324 in 1880, and 1,251 in 1879. In the first six years during which I held my present office, with a much smaller population then than now, the average number of Deaths from these seven diseases was, however, 2,029, or 348 more than that recorded in the year under notice.

Measles and Whooping Cough, over which we have at present very little or no controul, have both proved considerably

Seven principal Zymotics *(continued).*

more fatal than in the previous year, but the true cause for this decided increase in the number of deaths over those of recent years from these seven most preventable of diseases must be looked for elsewhere, as it is nearly wholly the result of the almost Herodian sacrifice of young children to bowel disorders, which followed in the train of the unusually hot summer. As a matter of fact the gross increase in the number of Deaths from these diseases over that of 1883 is 375, but if allowance be made for the additional week included in the statistics for the past year, this actual increase would really have been only 343, of which Diarrhœa is accountable for so many as 325, or 95 per cent. of the whole amount. The mortality of the other four diseases in this group which I have not yet referred to, those upon which sanitary measures exert the most powerful controul—Smallpox, Scarlet Fever, and more particularly Fever and Diphtheria—has in each instance been below the average; it is therefore clear from this fact and from what I have just said in reference to Diarrhœa that seasonal influences are doubtless very largely accountable for the greater loss of life which this group of diseases occasioned in 1884 than in recent years.

Zymotic Death-rate.

The 1,681 Deaths under this heading registered during 1884 are equal to an annual Death-rate of 3·9 per 1,000 persons living, as compared with a rate of 3·1 in the previous year. In the first ten years I held office the rates from these seven diseases were as follows, in succession from 1873:—5·6, 7·3, 5·9, 3·6, 4·2, 6·3, 3·2, 3·4, 2·8, and 3·4.

Zymotic death-rates of large towns.

In the following statement is set forth the Death-rates from the seven principal zymotic diseases in the chief large towns for the years 1875–1884, both included:—

Twenty large English Towns.	London.	L'pool.	BIRM.	Manch.	Leeds.	Sheff'ld.	Salford	N'castle.	Norw'h.	Bristol.
1884 ... 3·5	... 3·3	4·5	**3·9**	3·6	4·9	4·2	4·2	3·2	3·1	1·8
1883 ... 2·6	... 2·8	4·5	**3·1**	3·6	4·0	4·0	3·3	4·3	1·0	1·2
1882 ... 3·9	... 3·4	4·4	**3·4**	3·7	3·4	2·8	3·8	3·3	2·4	2·3
1881 ... 3·4	... 3·6	4·5	**2·8**	2·3	2·9	2·7	2·9	2·6	1·7	2·3
1880 ... 4·0	... 3·7	5·1	**3·4**	4·2	3·3	4·4	6·8	3·2	5·8	3·1
1879 ... 3·2	... 3·3	6·0	**3·2**	3·4	3·3	3·5	4·0	3·9	2·2	2·1
1878 ... 4·4	... 4·1	6·1	**6·3**	4·0	4·5	5·6	5·1	4·6	3·6	2·1
1877 ... 3·5	... 3·5	4·7	**4·2**	4·2	2·8	3·3	4·8	2·5	2·9	3·4
1876 ... 4·1	... 3·6	6·1	**3·6**	5·2	4·5	4·8	8·5	2·5	2·9	3·8
1875 ... 4·4	... 3·9	4·5	**5·9**	4·6	4·6	4·8	7·2	3·6	4·3	4·9

Percentage of Zymotic deaths on total deaths.

The percentages of these Zymotic Deaths on the gross number of Deaths from all causes in the same towns, and for the same period of time, have been as follows:—

Seven principal Zymotics *(continued)*.

	Twenty large English Towns.	London.	L'pool.	BIRM.	Manch.	Leeds.	Sheff'ld.	Salford	N'castle.	Norw'h.	Bristol.
1884	16·3	16·4	17·8	**18·6**	13·6	20·2	18·6	18·9	14·0	14·7	10·0
1883	12·0	13·4	16·8	**14·9**	12·9	17·0	17·3	14·9	17·0	5·1	6·9
1882	16·1	16·3	16·6	**16·5**	14·9	15·1	11·5	16·8	14·4	12·0	12·3
1881	15·5	17·0	16·8	**14·2**	9·1	13·6	13·0	12·9	12·1	8·7	11·7
1880	17·7	16·8	18·6	**16·4**	16·4	15·7	21·0	26·2	14·4	23·7	15·4
1879	13·8	14·3	21·2	**14·5**	12·8	14·6	16·5	16·1	16·5	10·0	10·1
1878	18·2	17·6	21·9	**25·1**	14·3	19·0	23·6	19·9	12·2	14·5	10·0
1877	15·4	16·0	17·8	**17·4**	15·4	12·6	15·1	19·1	10·3	13·8	15·7
1876	17·3	16·1	22·1	**16·0**	17·8	17·8	19·6	26·6	11·0	13·2	17·1
1875	17·5	16·5	16·4	**22·2**	15·5	17·4	19·4	22·9	13·8	17·6	18·5

From my previous remarks it will already have been inferred that of the seven diseases

Diarrhœa

has been the most fatal to life, and such has been the case, for alone it is credited with nearly as much mortality as the other six diseases put together. Including 13 deaths certified to have been due to that aggravated form of this disease known as "English Cholera," the deaths from Diarrhœa amounted to 737, of which no fewer than 559 or 76 per cent. occurred in the Summer Quarter of the year, when the certification of the death of a man named George Rolfe, residing in Bishopsgate Street, from Asiatic Cholera, produced much temporary anxiety and alarm in the town, particularly in the more immediate neighbourhood where the man had been living. A careful investigation led to a decided conclusion, however, that the man's death was attributable to one of those severe attacks of English Cholera which are liable to occur in extremely hot weather, and this view was certainly strengthened by the fact that the spread of the contagion, which would almost inevitably have occurred if the case had been one of true 'Asiatic' Cholera, did not take place.

Diarrhœa.

Reported case of Asiatic Cholera.

Full particulars of the case may be gathered from the following letter which I sent to the Medical Officer of the Local Government Board in answer to a telegram from that Authority :—

Letter to Local Government Board.

> "In reply to your telegram of this morning, I beg to send you the particulars of the case of alleged Asiatic Cholera in Birmingham. Being myself confined to the house with Rheumatism of the knee, I requested Mr. Waterson, Surgeon of H.M. Prison, to make the investigation for me, assisted by the Inspector of Nuisances.

Diarrhœa *(continued).*

"George Rolfe, aged 47 years, by trade a Wheelwright, working at present as a labourer at the repairing of a well, lived at 11 court, 3 house, in Bishopsgate Street, and was a well developed and powerful man. He is said to have been formerly a heavy drinker, though for the last three years he has been a teetotaller; he is said, nevertheless, to have been very intemperate as regards the quantity of his food and drink, and to have eaten during the last week a considerable quantity of tainted ham which he bought cheap. It is stated that he has complained of pains in the stomach for a week at least before the attack became violent. He was taken ill on Friday night, the 15th instant, with violent diarrhœa, and had no medicine until next morning, at which time he was not seen by the doctor. On Saturday night, the doctor (Dr. Richards) visited him. On Sunday morning, his friends not being satisfied with his condition, sent for Mr. Hoskins, surgeon; the man died on Monday evening at six o'clock.

"There are no sanitary defects on the premises, with the exception of the sink drain in the pantry being in direct communication with the drain; the sink surface was furnished will a bell-trap, which, at the time of the Inspector's visit was dry and, therefore, inoperative. The privy accommodation is on the pan system, and the water supply is not from a well but from the Corporation mains.

"No other cases of severe diarrhœa have occurred on the same premises. No notification was made to me by either of the medical men called in either before or after death, but communications were made with both the Coroner and the local press, and it was only by accident that the Inspector of Nuisances heard of it.

"From the history of the case and its surroundings, I have come to the conclusion that the case is simply one of English or Sporadic Cholera."

Diarrhœal Death-rate

Our Death-rate from Diarrhœa during the year recently ended was 1·7, and for the summer quarter of that year 5·3, a considerably higher figure than in each of the past three years, the Diarrhœal Death-rates during the summer quarters of 1881, 2, and 3 having been respectively 2·1, 3·8, and 2·6. Since the remarkably cool summer of 1879, with the sole exception of its immediate successor, our summers have in fact been

characterised by a general absence of prolonged extreme heat, and in each case the mortality from Diarrhœa was, as I have just shown, slight compared with the average amount at this period of the year. The increased Diarrhœal fatality in the summer of 1884 is not peculiar, as might be expected, to Birmingham, but has been general throughout the whole country, the rate for England and Wales having risen from 1·5 in the third quarter of 1882, 1·3 in the same period of 1883, and 1·9 the average rate in the ten preceding summer quarters, to 2·7 in the summer quarter of 1884; and in the twenty-eight great towns from 2·4 and 2·1 in the third quarters of 1882 and 1883 respectively to 3·9 in that of 1884.

Diarrhœa *(continued).*

In my last Annual Report, as well as in many previous ones, I have stated that from my experience a high temperature was evidently the chief cause of Diarrhœa; the connection of the one with the other has been well exemplified during the past summer, and as this matter is of growing importance I consider it worth while to trace as far as possible the intimate relation which existed between temperature and Diarrhœal mortality during that season.

The mean temperature of July was normal and practically identical with that observed on an average of twenty years, so that the mortality from Diarrhœa was only moderate. August brought with it, however, a gradually rising temperature, which reached its height about the middle of the month, and the persistence of it was such that on nine days in the month the temperature rose above 80° Fahrenheit, while on one day the thermometer stood as high as 89° in the shade. The Deaths from Diarrhœal disorders rose from 16 in the last week of July to 39 in the week ending on the 9th of August, and then more rapidly to 80 in the following week and to 100 in the week which ended on the 23rd of August. After the middle of August the temperature declined, at first slowly and then more quickly and the number of Deaths from bowel disorders exhibited a corresponding diminution. A temporary burst of hot weather in the middle of September was followed by a reduced rate of decline in the Deaths from Diarrhœa in the latter part of that month, and by the prolongation of a large Diarrhœal fatality to a later period than usual.

Temperature in relation to Diarrhœa.

Having pointed out the connection of Diarrhœal mortality and a high temperature during the past summer, I now proceed to trace the part which excessive summer heat appears to have played in Birmingham during the last fifteen years in the production of Diarrhœa.

In the nine years between 1870 and 1878, both inclusive, which embraced a more than ordinary proportion of warm

Diarrhœa *(continued).*

Summers, the average mean temperature of the Summer quarters of these years being 59°·9, the actual number of Deaths from Diarrhœa recorded in those Summer quarters averaged 502, whereas, in the series of years between 1879 and 1883, both inclusive, in which only one Summer, that of 1880, could be considered warm, with an average mean Summer temperature of only 58°·4 the Deaths set down to Diarrhœal disorders were, on an average, so comparatively low as 312, while, if the year 1880 be taken out of the series, this low average number falls still further to 238.

When it is also borne in mind that the estimated mean population of this last series of years was 401,859, and of the first mentioned series 361,197, or 40,662 smaller, the remarkable difference in the two sets of figures becomes still more striking, and is best shown by their Death-rates, which were respectively 3·1 and 5·6. So that the eye may the more readily grasp the facts I have just given, I state them below in tabular form :—

Group of Years.	Mean Population.	Average Summer Temperature.	Average Number of Deaths from Diarrhœa.	Average Diarrhœal Death-rate.
Nine Years. 1870–1878.	361,197	59°·9	502	5·6
Five Years. 1879–1883.	401,859	58°·4	312	3·1
Differences of the latter from the former series	+ 40,662	— 1°·5	— 190	— 2·5

In order, if possible, to show still more clearly the relation of Summer Diarrhœa in Birmingham to the temperature prevailing at that time of the year, I have arranged below the Summers since 1873, inclusive, farther back than which my records do not extend, in the order of their respective temperatures, commencing with the highest, and have placed side by side with these data the amount of rainfall and the number of Deaths registered from Diarrhœa, with the equivalent Death-rate in each of these Summer quarters :—

Diarrhœa *(continued).*

Summer Quarter.	Mean Temperature of the Air.	Departure from average Temperature of 20 years.	Rainfall in inches.	Mortality from Diarrhœa.	
				Deaths.	Annual Rate per 1,000 of the Population.
1884	61°·4	+ 2°·1	5·59	559	5·3
1876	61·3	+ 2·0	8·47	492	5·3
1878	60·9	+ 1·6	10·57	534	5·6
1875	60·0	+ 0·7	13·83	656	7·2
1874	59·9	+ 0·6	7·79	486	5·4
1880	59·8	+ 0·5	10·23	609	6·2
Average of Six Warmest Summers.	60·5	+ 1·2	9·41	556	5·8
1873	59°·1	— 0°·2	10·73	535	6·0
1877	58·4	— 0·9	11·90	316	3·3
1883	58·3	— 1·0	10·48	274	2·6
1879	58·2	— 1·1	13·28	81	0·9
1881	58·1	— 1·2	8·49	210	2·1
1882	57·6	— 1·7	9·34	387	3·8
Average of Six Coldest Winters.	58·3	— 1·0	10·70	300	3·1
Average of whole period.	59·4	+ 0·1	10·06	428	4·4

Note.—The temperature and rainfall from 1873–1879, inclusive, are deduced from records made by Mr. D. Smith; those since that date from my own observations.

I am not urging that heat is the only factor in the production of Summer Diarrhœa, but it is clearly a necessary agent for bringing into play those yet largely unknown forces, without which it would probably be much less powerful. As, however, I have from time to time referred to what are doubtless some of these influences, and, as the investigations which are still being systematically carried on by Dr. Ballard on behalf of the Local Government Board, will, it is to be hoped, lead to a better knowledge of them, I will not now refer to

Diarrhœa *(continued).*

more than one of them. That such additional or contributory causes do exist, however, there can be no doubt, for the greatly different incidence of Diarrhœa in certain towns and in certain portions of towns can only be thus explained. In my past Annual Reports it will be found that I have again and again drawn attention to the fact that two Registration Sub-Districts in Birmingham, those of Saint George and Saint Martin, invariably suffer more than their neighbours from Infantile Diarrhœa.

Density of population in relation to Diarrhœa.

I mentioned this circumstance in my last Annual Report, when I singled out these localities as the chief sufferers in this respect, and its significance is enhanced when I state that this year's figures furnish the same results. Thus, while in the Registration Sub-District of Edgbaston the Diarrhœa rate for the year is only 0·5, in those of Saint Martin and Saint George, both densely populated localities, it is as high as 2·3 and 2·1 respectively. Probably it would be found, if we knew the areas of the several Registration Sub-Districts in Birmingham, and were thus in a position to calculate the density of their populations, that the rate of their Diarrhœal mortality corresponded very closely with their respective densities of population.

The Diarrhœa Death-rates for each of the Registration Sub-Districts of the Borough for the year 1884 range from the highest to the lowest, as follows:—

St. Martin	... ...	2·3	St. Thomas	... ...	1·6
St. George	... ...	2·1	All Saints	... ...	1·5
Ladywood	... ...	1·9	Deritend...	... ...	1·5
Duddeston	... ...	1·8	Edgbaston	... ...	0·5

That populous localities actually suffer more than rural districts, the mortality from this disease appearing to depend to a considerable extent on the density of population, is made manifest by the following figures:—

	Death-rate from Diarrhœa in Summer Quarter, 1884.
England and Wales	2·7
" " exclusive of 78 Towns ...	2·0
50 other Towns	3·2
28 large Towns...	3·9

That a densely packed population is, however, the only necessary factor in conjunction with a high temperature in the causation of Infantile Diarrhœa is disproved when we review the statistics on this point relating to our large towns, for while last year the Diarrhœa Death-rate ranged from 1·58 in Halifax to 8·32 in Preston and 9·14 in Leicester, the average number of people in the last-mentioned town, which always suffers terribly from this disease, is 41 per acre,

a much lower number than that in Manchester, Glasgow, and other towns, all of which have a much lower Diarrhœa Death-rate. One notable example in this respect is, however, worth giving. It is the case of Bristol, which has on an average 46 persons on each acre, or 5 more than in Leicester, yet the Diarrhœa Death-rate in the former place was last Summer only 1·9 against the reversed figures, 9·1, in the latter. The remarkable divergencies in the amount of Summer Diarrhœa in different localities may also be judged from the facts that while in North Wales the Death-rate from this disease in the Summer quarter was only 0·48, and in each of seven English Counties, as wide apart as Wiltshire and Westmoreland, only 1·00, in our own County it was 4·05, in Nottinghamshire 4·21, and in Leicestershire 5·38.

Diarrhœa *(continued)*.

Each year's figures show that it is the very young and those who have reached advanced years—those who are therefore the weakliest, and the least able to withstand its attacks—who fall victims to Diarrhœa.

Infancy and Old Age in relation to Diarrhœa.

Last year 490, or 66 per cent., of the deaths from Diarrhœal diseases in Birmingham occurred in infants under one year of age, and 669, or 91 per cent., in children under five years of age, leaving only 68, or 9 per cent., at the other ages of life, of which no fewer than 35, or 5 per cent. of those at all ages occurred above 60 years of age. This latter percentage may appear at first sight small, but in proportion to the number of persons above 60 years of age in the town it is far greater than it looks to be.

It is not unworthy of remark that the disease becomes prevalent in some towns at a much earlier date than in others, and as a very general rule also leaves these towns sooner than it does the others. London is invariably about the first to feel the maximum effects of the disease, and at a later date, when other large towns are suffering severely, the deaths in the Metropolis from Diarrhœa have fallen off again to little above the ordinary amount. Thus, in the Summer under review, Diarrhœa attained a maximum amount of mortality in London in the week ending July 19th, when its death-rate from this cause was 6·9 against 2·4 in Birmingham and absolutely nil in Brighton, Plymouth, and Wolverhampton. Two other towns, Leicester and Derby, experienced their highest mortality in the following week, while in Birmingham the week of greatest fatality from this disease was that which ended on the 23rd of August, when the death-rate from this cause stood at 12·3 per 1,000 persons living, the London death-rate having by this time fallen to 2·7 ; in seven, or one-fourth, of the twenty-eight large towns the highest number of deaths was registered in the week which ended on the 30th of August, in five in the succeeding week to that, and in one so late as the week which closed on the 13th of September.

Periods of incidence in different towns.

Diarrhœa *(continued).*

A study of the figures supplied by the Registrar General's third quarterly report for 1884 on this point is one of much interest, but, although the periods of incidence are always much the same in the same towns, they appear to furnish no material from which alone to form any valuable practical conclusion.

I have continued to follow the practice adopted by the Registrar General, that of classing under the head of Diarrhœa all deaths in which, though occupying a secondary place, this disease has supervened upon Debility, or other such ill-defined forms of illness.

Measles

Measles.

has been proportionately more fatal than in any year since 1877, the deaths from this cause having numbered 333, against 155 in 1883, and 137 the average of the ten years 1873–1882. This disease, which had been on the increase in the latter portion of 1883, gained further hold in the Borough in the new year, in the early days of which it appeared to be rather prevalent in many parts of the Deritend Registration Sub-District, but particularly in the more western portions of it; in the month of March it suddenly manifested itself in an unusually severe form in the Registration Sub-District of Saint Thomas, and with great rapidity continued to spread westward to the adjoining Sub-District of Ladywood, where it prevailed very extensively, so that in the last week of this month no fewer than eighteen deaths were registered from this cause in the Borough, of which as many as twelve were returned in the comparatively small Registration Sub-District of Saint Thomas, ten of these being in the Ward of that name. The complaint was said to have taken on in these localities the hybrid form which goes under the name of "German Measles." On account of the great prevalence of this disease in the neighbourhood of Saint Thomas, I thought it necessary to send a letter to the managers of the schools in this district, drawing their attention to the advisability of having the schools thoroughly fumigated and disinfected. I also asked the School Board visiting officer for this district to supply me with the names and addresses of all cases coming to his knowledge.

In the spring months it gradually spent its power in the neighbourhood of Saint Thomas, but slowly extended in a north-westerly direction to the Wards of Rotton Park and All Saints, while during the summer, notwithstanding that this period of the year is generally regarded as unfavourable for its extension, it continued to make a circuit of the Borough, and carried its fatal influences to the Registration Sub-District of Saint George, those portions of the town which were first

attacked now having only a very slight mortality from this cause. Here its epidemic course seems to have ended, at least so far as our Borough is concerned, for during the last quarter its mortality was little above the average. While the steady march of the disease round the town affords some interest, it is remarkable that the Registration Sub-District of Duddeston, with a population of 58,000, and embracing the whole of the Wards of Duddeston and Nechells, and small portions of three other Wards, should have escaped its epidemic influence, for while the Death-rate from this infectious disease was equal to a rate per 1,000 of the population of 1·4 in the Registration Sub-District of Ladywood, and of 1·3, 1·2, and 0·9 in those of Saint Thomas, All Saints, and Saint George, respectively, in the Registration Sub-District of Duddeston it was only 0·4. Measles *(continued)*.

The distribution over the Borough of the Deaths from this cause is indicated on a map at the end of the Report. Map.

Whooping Cough,

though somewhat less fatally prevalent than has usually been the case during the last ten years, the annual average number of deaths from this cause during this period having been 315, has occasioned a very considerable mortality, for the deaths of 289 children have been registered in the Borough during the year from this very infectious disease ; in the previous year the deaths from it were fewer than in any year since 1873. The disease is one over which the Sanitary Authority is unable to exercise any controul, and though not generally a fatal disease when properly treated, it is regarded almost universally with so little fear that it is often neglected, and little or no effort is made to prevent its spread ; so little care is often taken of those attacked that various affections, which are apt to accompany and follow it, frequently carry off the sufferers, and so render this disease actually one of the most fatal of all the disorders of children. The mortality from it has been widely and pretty equally scattered over the Borough. Whooping Cough.

Scarlet Fever

has not occasioned during the past year so great a mortality as usual, no year since 1880 having a record of so few deaths from this highly infectious malady. The number of deaths registered is 134, or little more than one-third the average number in the ten years 1874–83, and considerably less than one-half the number in the preceding year, which was 326. Scarlet Fever.

On a Map appended to the Report will be found red spots to indicate the localities of the fatal cases. Map.

Fever.

Fever.

The Fever Death-rate of the Borough stands at even a lower level than that reached in 1883, being now only 0·19 per 1,000 of the population, against 0·20 in the previous year, and again compares very favourably with that for the twenty largest towns, which was in 1884, 0·28.

The Deaths under this heading, which comprehends the three forms of Fever—Typhus, Typhoid, and Simple Continued—amounted to 84, this total being made up of 3 deaths put down to Typhus, 73 to Typhoid, and 8 to Simple Continued Fever.

I have long been convinced, however, that the mortality from Typhoid Fever in Birmingham is always over-stated, as experience teaches me that a large proportion of the fatal cases ascribed to Typhoid did not present the true characteristic signs of that disease.

I have stated in previous reports that I have never known an undoubted case of Typhus in Birmingham, and the investigations which I made into the characteristics and surroundings of those reported during the year in question did not shake my belief that this disease finds no home here.

The large amount of reduction which the Fever Death-rate has undergone, not only in our own town but also in other large towns, is well indicated by the subjoined figures :—

	Per 1,000 per annum.	
	Birmingham.	20 large Towns.
1870	·63	·90
1871	·53	·78
1872	·54	·60
1873	·57	·59
1874	·56	·58
1875	·56	·52
1876	·40	·45
1877	·38	·42
1878	·38	·42
1879	·22	·29
1880	·21	·30
1881	·16	·31
1882	·21	·36
1883	·20	.33
1884	·19	·28

Map.

The distribution of the fatal cases of this disease is shown on a Map at the end of the Report.

The mortality from

Diphtheria

happily continues also to diminish, only 40 deaths being ascribed during the past year to this cause. It is no less gratifying than remarkable that while Birmingham once occupied an unenviable position in regard to this disease, the mortality from it generally exceeding that of any of the large towns, and in 1873 being between three and four times as great as that of the twenty largest English towns, our Diphtheria mortality is now only one half that of the same towns, which continue to have a continually increasing Death-rate from the disease; this is largely owing to the great prevalence of it in the Metropolis. Diphtheria.

The rate of mortality from the disease during the last twelve years in Birmingham and in the twenty large English towns has been as follows :—

Death-rate from Diphtheria per 1,000 of the Population.

Birmingham.

1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884
·31	·21	·16	·16	·14	·22	·18	·13	·14	·12	·11	·09

Twenty Large Towns.

·09	·16	·12	·09	·09	·13	·13	·12	·15	·17	·17	·18

Small-pox.

This disease began to assume great prevalence in the second quarter of 1883, and a very considerable number of cases was reported during the remainder of that year. This increased development of the disease continued with little abatement in the first quarter of the year under review. After that time the number of fresh cases rapidly fell off, so that in the last quarter only ten cases of this disease came to my knowledge. Small-pox.

The number of cases brought under notice during the year has been 471, of which as many as 384 occurred in the first quarter; the deaths which have resulted therefrom have numbered 64. In the previous year 1,202 cases of this loathsome malady, with 110 deaths, were reported to this Department.

By the kindness of Dr. Line, the Medical Superintendent of the Borough Hospital, I have been furnished with some interesting statistics relative to the vaccination of the patients Influence of Vaccination on Small-pox.

Influence of Vaccination on Small-pox *(continued).*

in the Institution under his care, showing the mortality among those unfortunately not protected by vaccination, and among those with different degrees of protection. From these figures I glean that of 425 patients under treatment for Small-pox in the Borough Hospital during the year, 370 were vaccinated and 48 not vaccinated; no vaccination marks were clearly visible, even if they had ever existed, on the 7 remaining patients. In the unvaccinated, the mortality was as high as 37·5 per cent., so that more than one in three of those having no vaccine marks succumbed, while among those vaccinated in a lesser or greater degree the mortality was only 6·2 per cent. The most noteworthy feature revealed by the figures, however, is the immunity from death from Small-pox of those who were protected by the thorough vaccination shown by four or five scars, for of 103 patients who presented that number of cicatrices not one died, while those who bore three vaccination marks suffered a mortality of only 5·6 per cent.

These figures only corroborate all previous experience, both in Birmingham and elsewhere. The protection afforded by vaccination was strikingly exemplified recently in a family of seven children living in the Borough, in which the only one not vaccinated was attacked with Small-pox.

In order to show clearly how the figures relating to our own Hospital bear out the truths conveyed by those deduced from the vaccination records made by Mr. Marson at the London Small-pox Hospital, I append side by side the statistics referring to each Institution.

Cases of Small-pox, classified according to the Vaccination marks borne by each Patient.	Percentage of deaths in each class.	
	London Small-pox Hospital.	Birm. Small-pox Hospital.
Class 1.—Said to have been Vaccinated, but having no cicatrix..	21·7	42·8
2.—Having one or two vaccine cicatrices	6·0	11·3
3.—Having three vaccine cicatrices	1·7	5·6
4.—Having four or more vaccine cicatrices	0·7	0·0
Unvaccinated	35·5	37·5

It is well to remember that the figures relating to the Borough Hospital refer to only a comparatively small number of patients; if the observations had embraced a longer period, and had consequently included a larger number of cases, the percentages in the different classes would doubtless have still more closely agreed. The difference in the amount of mortality between those imperfectly vaccinated and those well vaccinated shows, however, even a larger reduction in the

latter class in our Hospital than was observed in the London Small-pox Hospital, for while the percentage of mortality in those with only one or two vaccine marks is 6·0, and in those with four or more marks 0·7 in the last-named Institution, in the Birmingham Hospital the percentage is reduced from 11·3 in the first-mentioned class of patients to absolutely nothing in those with four or more distinct vaccine marks.

Influence of Vaccination on Small-pox. *(continued).*

DEATHS AND DEATH-RATE FROM SMALL-POX PER 100,000 OF THE POPULATION IN 20 LARGE ENGLISH TOWNS.

Town.	Population.	Deaths from Small-pox in the year 1884.	Rate per 100,000 1884.	1883.	1882.	1881.
London	4,019,361	913	22·3	3·4	11·1	61·9
Brighton	112,954	1	0·9	0·0	3·6	8·3
Portsmouth... ...	133,059	0	0·0	0·8	0·0	0·0
Norwich	90,410	0	0·0	0·0	0·0	1·1
Plymouth	75,509	0	0·0	0·0	0·0	2·6
Bristol	215,457	0	0·0	0·0	0·0	0·0
Wolverhampton ...	78,367	5	6·3	9·0	5·2	0·0
Birmingham ...	**421,258**	**64**	**14·9**	**26·5**	**4·2**	**0·7**
Leicester	132,773	0	0·0	0·0	0·0	0·0
Nottingham... ..	205,298	0	0·0	1·0	25·7	1·1
Liverpool	573,202	106	18·1	4·6	1·1	6·1
Manchester	338,296	5	1·5	0·3	4·7	0·9
Salford	197,153	0	0·0	0·0	3·3	4·0
Oldham	122,676	0	0·0	1·7	4·3	8·0
Bradford	209,564	0	0·0	0·0	1·1	1·1
Leeds	327,324	1	0·3	3·4	9·8	0·6
Sheffield	300,563	34	11·1	0·7	1·4	0·0
Hull	181,225	18	9·8	4·0	9·5	2·6
Sunderland	123,204	85	67·8	41·3	0·9	0·0
Newcastle-on-Tyne...	151,325	12	7·8	39·5	38·7	6·2
In 20 Towns ...	8,008,978	1,244	15·2	5·2	8·2	32·4

Twenty large towns compared

The number of Cases and Deaths in each quarter since 1871, is seen in the following Table:—

Cases and Deaths in the Borough from 1871.

DATE.	Cases.		Deaths.	
1871.				
November 11th to end of year... ...	359		43	
Total ...	——	359	——	43
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

Cases and Deaths in the Borough from 1871 *(continued).*

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
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
		Grand Total	...		9,633		1,486

DISEASE MAP.

Disease Map.

A Map illustrating the position of the fatal cases of three of the zymotic diseases, viz., Measles, Scarlet Fever, and Typhoid Fever will be found at the end of the Report. It will be seen that, as in previous years, those portions of the Map which represent certain thinly populated localities of the town, such as the central part of it and the jewellers' portion of St. Paul's district, present on this account few spots or crosses, and the same absence of indications on the Map of the existence during the year of these three diseases will also be noticed in Edgbaston, which not only contains a relatively sparse population, but those who are attacked with such diseases are, from their relatively superior hygienic and other circumstances, earlier treatment, and generally better nursing, more likely to recover than those who are forced to live under far less favourable conditions.

With regard to Measles it will be found that if a line be drawn from North to South, cutting the Borough into nearly equal portions, a very great majority of the Deaths from this cause occurred on the western side of this line, while the eastern portion of the town nearly escaped its fatal ravages.

The Deaths from both Scarlet Fever and Typhoid Fever have been fewer than those from Measles and widely scattered over the Borough.

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

Parasitic and Dietic Diseases.

On account of the small number of Deaths in each of these classes I have here grouped them together. The Deaths recorded in them amount to 64, as compared with only 44 in 1883.

IV.—CONSTITUTIONAL DISEASES.

Constitutional Diseases.

The Deaths in this class have numbered 1,274, and are equal to an Annual Death-rate of 3·0 per 1,000 of the population, against a rate of 2·9 in the previous year.

Many of the diseases in this class exhibit a higher mortality than in 1883, but in none is it marked.

V.—DEVELOPMENTAL DISEASES.

Developmental Diseases.

The Death-rate of the diseases included under this heading has fallen from 1·5 in 1883 to 1·3 in 1884.

The greatest reduction is observable in the number set down to Old Age, and is the consequence of the absence in 1884 of those extremely severe polar winds, which the feeble powers of the aged were unable to resist in the early Spring of 1883.

VI. LOCAL DISEASES.

Local Diseases.

The gross amount of mortality from the very large number of diseases which this class embraces shows some reduction on that furnished by the mortality records for 1883, when the Deaths in this class numbered 4,272, as compared with 4,136 in the year under notice; the latter figure gives a Death-rate of 9·8 per 1,000 persons, against 10·3 in the previous year.

VII. VIOLENT DEATHS.

Violent Deaths.

Bearing in mind the continual growth of the population of the Borough, the deaths in this class have not materially changed in proportion, though in actual numbers they are higher, namely 371, against 352 in 1883.

VIII. DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES.

Deaths from ill-defined and not Specified Causes.

Certain diseases, which are not readily relegated to any of the seven preceding classes, go to make up this additional one; among them may be mentioned Atrophy, Debility, Dropsy, Inanition, and Hæmorrhage.

Deaths Registered in the Borough of Birmingham during the Year ending January 3rd, 1885.

1884.	Ages.						Registration Sub-Districts.								Borough.
	0–1	1–5	5–20	20–40	40–60	60 and up.	Ladywood.	St. Thomas.	St. Martin.	St. George.	All Saints.	Deritend.	Duddeston.	Edgbaston.	
ALL CAUSES	2611	1704	578	1081	1472	1597	1088	907	870	1606	1654	1469	1166	283	9043
I.—Specific Febrile, or Zymotic Diseases.															
1.—Miasmatic Diseases.															
Small-pox	8	5	20	26	5	..	..	..	3	2	58	1	..	..	64
Measles	64	247	18	4	..	..	78	55	22	59	61	34	22	2	333
Scarlet Fever	6	82	42	4	..	..	20	10	7	10	51	31	5	..	134
Typhus Fever	..	..	1	1	1	..	..	2	..	1	..	..	..	..	3
Whooping Cough	99	176	14	..	..	..	32	22	31	50	39	71	41	3	289
Diphtheria	..	22	16	2	..	..	7	5	2	4	3	17	..	2	40
Simple, Continued, or Ill-defined Fever	..	2	2	2	..	2	..	..	1	..	..	5	2	..	8
Enteric or Typhoid Fever	..	5	30	28	8	2	5	9	13	12	10	10	8	6	73
Other Miasmatic Diseases	1	1	..	1	..	..	..	..	2	1	..	..	..	..	3
2.—Diarrhœal Diseases.															
Simple Cholera	..	6	..	1	5	1	1	2	3	1	2	2	2	..	13
Diarrhœa, Dysentery	490	173	6	6	15	34	105	66	92	138	78	129	103	13	724
3.—Malarial Diseases.															
Remittent Fever	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1
Ague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4.—Zoogenous Diseases.															
Cowpox and effects of Vaccination	2	..	..	..	..	..	..	..	..	1	..	1	..	..	2
Other Diseases (*e.g.*, Hydrophobia, Glanders, Splenic Fever)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5.—Venereal Diseases.															
Syphilis	59	6	1	2	2	1	11	6	9	8	20	6	11	..	71
Gonorrhœa, Stricture of Urethra	..	1	..	2	2	1	1	2	..	2	..	..	..	1	6
6.—Septic Diseases.															
Erysipelas	10	..	..	5	6	5	2	6	2	2	4	4	3	3	26
Pyæmia, Septicæmia	1	..	1	6	3	2	1	3	1	7	..	..	..	1	13
Puerperal Fever	..	..	..	2	..	..	..	..	1	1	..	..	..	..	2
II.—Parasitic Diseases.															
Thrush, and other Vegetable Parasitic Diseases	15	..	..	..	..	..	6	3	..	1	2	2	1	..	1
Worms, Hydatids, and other Animal Parasitic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
III.—Dietic Diseases.															
Want of Breast Milk, Starvation	28	2	..	..	..	1	7	..	3	..	18	1	..	2	31
Scurvy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chronic Alcoholism	..	..	..	4	10	1	3	..	5	3	..	1	2	1	15
Delirium Tremens	..	..	..	2	1	..	..	1	..	..	1	1	..	..	3
IV.—Constitutional Diseases.															
Rheumatic Fever, Rheumatism of the Heart	..	..	1	7	6	..	2	1	3	2	1	..	3	2	14
Rheumatism	..	..	3	10	10	6	5	5	4	4	3	6	1	1	29
Gout	..	..	..	1	3	12	2	2	2	1	5	3	..	1	16
Rickets	2	12	..	..	..	..	6	3	..	3	1	..	1	..	14
Cancer, Malignant Disease	..	9	2	19	119	74	34	32	20	36	31	36	18	16	223
Tabes Mesenterica	52	33	1	..	2	..	9	4	10	34	9	7	11	4	88
Tubercular Meningitis, Hydrocephalus	27	16	9	1	..	..	9	7	3	11	3	8	9	3	53
Phthisis	13	21	93	369	240	35	81	63	77	127	184	126	93	20	771
Other forms of Tuberculosis, Scrofula	4	7	4	7	5	3	6	4	3	9	1	4	3	..	30

DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM DURING THE YEAR ENDING JANUARY 3RD, 1885—*continued*.

1884.	AGES.						REGISTRATION SUB-DISTRICTS.								Borough.
	0—1	1—5	5—20	20—40	40—60	60 and up.	Ladywood.	St. Thomas.	St. Martin.	St. George.	All Saints.	Deritend.	Duddeston.	Edgbaston.	
IV.—Constitutional Dis.—*continued.*															
Purpura, Hæmorrhagic Diathesis	..	..	1	1	1	1	..	..	1	1	1	..	..	1	4
Anæmia, Chlorosis, Leucocythæmia	2	1	1	3	4	2	2	1	..	..	3	1	3	3	13
Glycosuria, Diabetes Mellitus	..	..	2	6	7	4	..	1	2	4	5	2	3	2	19
Other Constitutional Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
V.—Developmental Diseases.															
Premature Birth	168	..	..	..	..	..	29	11	11	19	31	35	28	4	168
Atelectasis	24	..	..	..	..	..	1	..	4	4	2	4	9	..	24
Congenital Malformations	23	3	4	..	..	..	4	..	4	7	4	5	3	3	30
Old Age	..	..	..	..	5	336	29	29	30	41	113	48	40	11	341
VI.—Local Diseases.															
1.—DISEASES OF NERVOUS SYSTEM.															
Inflammation of Brain or Membranes	57	95	38	15	21	10	25	14	18	38	49	47	42	3	236
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	1	..	8	38	100	179	24	27	27	55	103	45	31	14	326
Insanity, General Paralysis of the Insane	..	..	..	1	3	6	2	..	..	1	5	1	1	..	10
Epilepsy	..	1	8	15	6	4	2	2	1	8	13	5	1	2	34
Convulsions	170	66	4	..	..	..	23	15	34	50	18	37	54	9	240
Laryngismus Stridulus (Spasm of Glottis)	9	4	..	..	..	..	..	2	..	1	1	6	3	..	13
Disease of Spinal Cord, Paraplegia, Paralysis Agitans	1	1	3	5	21	29	5	5	3	4	26	8	4	5	60
Other Diseases of Nervous System	12	3	9	9	13	6	7	4	5	3	12	11	7	3	52
2.—DISEASES OF ORGANS OF SPECIAL SENSE. (*e.g.*, of Ear, Eye, and Nose).	..	1	2	..	2	1	1	1	1	1	1	1	..	..	6
3.—DISEASES OF CIRCULATORY SYSTEM.															
Pericarditis	..	..	2	2	2	1	1	..	1	1	1	2	1	..	7
Acute Endocarditis	..	..	3	2	..	1	1	2	..	1	..	..	1	1	6
Valvular Diseases of Heart	..	..	14	13	16	22	12	7	3	21	2	13	2	5	65
Other Diseases of Heart	5	5	36	67	151	160	41	50	43	67	77	69	53	24	424
Aneurism	..	..	..	6	8	2	1	2	..	5	2	5	..	1	16
Embolism, Thrombosis	..	..	..	1	1	3	..	3	..	..	..	1	..	1	5
Other Diseases of Blood Vessels	..	..	..	4	10	8	1	6	1	4	5	4	..	1	22
4.—DISEASES OF RESPIRATORY SYSTEM															
Laryngitis	3	12	2	1	1	..	3	4	2	5	3	1	1	..	19
Croup	12	50	11	..	..	..	9	2	8	8	15	25	5	1	73
Emphysema, Asthma	..	..	..	3	12	7	2	4	2	6	6	2	..	..	22
Bronchitis	318	250	16	44	231	360	125	119	139	237	197	186	191	25	1219
Pneumonia	86	138	26	71	80	54	57	52	35	75	80	82	58	16	455
Pleurisy	2	4	7	7	7	4	2	6	4	9	..	3	4	3	31
Other Diseases of Respiratory System	36	25	7	9	15	9	26	7	7	13	16	13	14	5	101
5.—DISEASES OF DIGESTIVE SYSTEM.															
Dentition	39	19	..	..	..	..	13	7	2	13	7	4	9	3	58
Sore Throat, Quinsy	2	6	2	1	..	..	..	..	6	1	..	1	3	..	11
Diseases of Stomach	21	4	..	6	11	6	6	2	6	13	5	6	9	1	48
Enteritis	17	7	6	8	2	4	4	4	5	6	9	3	13	..	44
Obstructive Diseases of Intestines	3	..	3	7	12	13	4	8	3	9	4	3	4	3	38
Peritonitis	5	6	9	20	12	3	5	7	5	5	9	9	13	2	55
Ascites	..	..	..	..	2	..	..	..	1	1	..	..	..	..	2
Cirrhosis of Liver	..	1	..	8	34	12	5	7	8	11	7	4	10	3	55
Jaundice, and other Diseases of Liver	9	4	3	7	23	19	10	8	6	8	7	18	5	3	65
Other Diseases of Digestive System	13	2	1	4	10	2	9	7	..	9	..	3	3	1	32
6.—DISEASES OF LYMPHATIC SYSTEM (*e.g.*, of Lymphatics and Spleen).	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7.—DISEASES OF GLAND-LIKE ORGANS OF UNCERTAIN USE (*e.g.*, Bronchocele, Addison's Disease).	..	..	2	1	..	..	..	1	..	..	1	..	..	1	3

DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM DURING THE YEAR ENDING JANUARY 3RD, 1885—*continued*.

1884.	AGES.						REGISTRATION SUB-DISTRICTS.								Borough.
	0—1	1—5	5—20	20—40	40—60	60 and up.	Ladywood.	St. Thomas.	St. Martin.	St. George.	All Saints.	Deritend.	Duddeston.	Edgbaston.	
Local Diseases—*continued.*															
8.—DISEASES OF URINARY SYSTEM.															
Nephritis	..	2	3	6	6	2	..	2	2	3	6	3	3	..	19
Bright's Disease, Albuminuria	..	4	6	19	38	16	11	11	6	22	8	10	9	6	83
Disease of Bladder or of Prostate	..	2	..	..	5	11	1	6	3	4	1	2	1	..	18
Other Diseases of the Urinary System	..	2	2	9	18	12	5	4	..	18	4	5	4	3	43
9.—DISEASES OF REPRODUCTIVE SYSTEM.															
(A) Of Organs of Generation.															
Male Organs	..	..	1	1	1	1	..	..	..	1	2	..	..	1	4
Female Organs	1	..	..	1	6	..	2	1	..	2	..	2	1	..	8
(B) Of Parturition.															
Abortion, Miscarriage	..	..	..	2	2	..	..	..	..	2	1	1	..	..	4
Puerperal Convulsions	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1
Placenta Prævia, Flooding	..	..	..	2	..	..	..	..	..	..	1	1	..	..	2
Other Accidents of Child-birth	..	..	3	39	4	..	2	1	1	7	7	17	8	3	46
10.—DISEASES OF BONES AND JOINTS.															
Caries, Necrosis	..	..	6	8	1	1	2	2	1	4	5	2	..	..	16
Arthritis, Ostitis, Periostitis	..	..	..	1	..	2	..	..	..	1	..	1	1	..	3
Other Diseases of Bones and Joints	1	1	3	4	2	1	4	1	..	2	3	2	..	..	12
11.—DISEASES OF INTEGUMENTARY SYSTEM.															
Carbuncle, Phlegmon	1	..	..	..	1	2	..	..	..	2	1	..	1	..	4
Other Diseases of Integumentary System	7	1	2	2	4	4	3	1	2	3	3	3	2	3	20
VII.—Deaths from Violence.															
1.—ACCIDENT OR NEGLIGENCE.															
Fractures and Contusions	3	5	5	19	29	22	2	27	4	33	2	5	5	5	83
Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab	..	..	..	1	1	1	1	1	..	..	..	..	1	..	3
Burn, Scald	3	18	13	2	6	2	6	9	1	24	1	3	..	..	44
Poison	1	1	..	2	3	2	1	2	1	2	..	..	2	1	9
Drowning	1	2	8	5	2	1	4	2	..	1	4	3	3	2	19
Suffocation	114	15	2	4	2	..	16	13	20	28	13	34	13	..	137
Otherwise	4	3	4	4	6	9	2	3	..	8	4	4	8	1	30
2.—HOMICIDE.															
Manslaughter	..	..	1	2	2	1	..	2	..	3	..	..	1	..	6
Murder	1	..	..	2	..	..	1	..	..	..	..	1	1	..	3
3.—SUICIDE.															
Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab	..	..	..	2	4	1	..	4	..	1	1	1	..	..	7
Poison	..	..	..	5	2	..	2	1	..	..	1	2	..	1	7
Drowning	..	..	..	2	..	..	..	1	..	..	..	1	..	..	2
Hanging	..	..	..	4	9	3	2	4	..	2	1	6	1	..	16
Otherwise	..	..	1	2	1	1	..	..	1	1	2	..	..	1	5
4.—EXECUTION.															
Hanging	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VIII.—Deaths from Ill-Defined and not Specified Causes.															
Dropsy	..	..	5	5	10	15	1	2	5	5	11	8	3	..	35
Debility, Atrophy, Inanition	238	9	1	2	4	11	35	14	24	46	56	37	48	5	265
Marasmus	291	90	2	..	..	1	37	38	41	61	52	77	73	5	384
Mortification	..	1	..	2	2	8	1	3	2	2	1	2	..	2	13
Tumour	2	..	4	5	9	3	13	2	1	2	3	2	..	..	23
Abscess	3	7	6	8	8	2	3	7	2	6	9	3	3	1	34
Hæmorrhage	..	..	..	1	5	6	1	1	..	5	1	1	2	1	12
Sudden Death (cause not ascertained)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other not Specified or Ill-defined Causes	21	6	6	10	13	8	6	1	6	9	25	11	5	1	64

METEOROLOGY.

Meteorology.

The past year has been, as regards weather, one of the most remarkable of recent years, and will no doubt long be remembered in Birmingham, for not only have we had one of the longest and hottest Summers ever experienced, but also one of the driest on record.

Temperature.

The average temperature of the past year was 49°·6, or 1°·4 above the average. This does not at first sight appear to be much in excess of the mean, but when we consider that this excess is spread over the whole year, and that if the period were limited to one month it would be more than 16° above the average, we see that it is more than at first sight appears. Indeed, we have to go back twelve years, that is to 1872, before we find another year with an average temperature higher than that of 1884, and 1872 was only warmer than the past year by 0°·2. In the first quarter of 1884 the weather was particularly warm, each month being considerably above the average in temperature. Hardly any frost was observed, and not one inch of snow fell throughout the whole period.

January

The mean temperature of January was, with one exception, the highest on record, being 43°·2, or 6°·6 above the average. The absolute minimum temperature reached in this month was 31°, or 1° of frost. Generally in this month we experience 12°, 16° and often 20° of frost, and in 1881 26° of frost. On the 26th of this month the largest and deepest depression which has ever been known to visit these islands passed over us, and consequently the barometer fell lower than has ever been known before. The lowest point reached in this town was 27·914 inches or reduced to 32° and sea level, 28·389 inches. Happily, the full fury of this unprecedented atmospheric disturbance was not felt here, it being expended over the North of Scotland, where buildings are more suitable than they are

February

here to withstand a severe gale. In February the mean

March

temperature was 40°·8, or 1°·7 above the average, whilst March

April

had a temperature of 43°·1 or 2°·5 in excess of the mean. April was a cold month, and thus was no exception to the rule that

May

after a mild winter April will be cold. May was a beautiful month, being exceptionally fine, dry, and warm, the sun shining on nearly every day, and on the 11th the very high maximum shade temperature of 78° was reached. This is considerably the highest temperature I have ever recorded in this month.

June

June calls for no special comment, but July, August, and September were very hot and dry, such beautiful weather not having been enjoyed since 1870. There were fifteen days in

July

July with a maximum temperature above 70°, compared with six

in the same month of 1883, and eight in 1882. August had 21 days with a maximum temperature above 70°, against 12 days in August, 1883, and eight days in 1882, whilst the temperature actually exceeded 80° on nine days. The highest temperature I have ever observed was registered on the 11th of this month, when the thermometer attained a maximum of 89°. As a further illustration of the intensity of the heat, I may mention that on no occasion in 1883 did the temperature exceed 78°·5. My records, which go back to 1865, do not furnish another instance of a summer in which the temperature was so high and the rainfall so small as in the year under review. October, November, and December were all warmer than the average, consequently April and June were the only two months which were colder than the mean.

Meteorology *(continued)*.

October
November
December

The average annual rainfall in Birmingham is 31·93 inches, but since 1873 there have been only two years with a rainfall less than the average, whilst in 1882 the total rainfall was as much as 43·59 inches. The driest year since 1860 was 1863, which had a total fall of 24·73 inches. In 1884, however, the rainfall amounted to only 23·56 inches. Thus the past year is considerably the driest in my records, indeed the excessive heat and the small rainfall brought us for a time within a measurable distance of a drought. Rotton Park Reservoir became reduced to one-tenth its size, whilst in one locality a so-called cricket match was played on the bed of the Thames. January, March, and June were the only months in the year which had a rainfall larger than the average, but in each the excess was very small. Those months, which generally are the rainiest were this year, almost without exception, the driest. The heaviest daily falls of the year occurred on June 28th, when 1·09 inches fell, and August 31st, when 0·96 inch was measured. Therefore, nearly a tenth of the whole year's rainfall fell on these two days alone. There were actually eighteen periods, each of seven consecutive days, without rain during the year. In 1872 the rainfall was more than double that of the past year.

Rainfall.

Not a single thunderstorm occurred in Birmingham either in July, August, or September.

Thunderstorms

Taking the year as a whole, it was very quiet, very few disastrous gales occurring. The mild weather in the earlier part of the year was most favourable to a low mortality from diseases of the lungs and chest, but the extremely hot summer more than counterbalanced the mild winter by causing a rather excessive death-rate from Diarrhœa, besides making an invasion of the Cholera, then prevalent on the Continent, less of an improbability.

Gales.

Meteorology *(continued).*

The following Table shows the temperature and rainfall for each month of 1884, as well as the variations from the monthly averages :—

MONTHS.	TEMPERATURE.			RAINFALL.		
	Mean Temperature.	Average for 20 years, 1861-1880 inclusive.	Above or below the average.	Rainfall for Month.	Average for 10 years, 1867-1876 inclusive.	Above or below the average.
January	43·2	36·6	+6·6	3·04	2·92	+0·12
February.....	40·8	39·1	+1·7	1·66	2·26	—0·60
March	43·1	40·6	+2·5	2·74	2·47	+0·27
April	44·2	47·2	—3·0	1·62	2·01	—0·59
May	52·8	51·9	+0·9	1·06	2·27	—1·21
June	57·4	58·4	—1·0	2·29	2·28	+0·01
July	61·7	61·6	+0·1	2·67	2·88	—0·21
August	64·1	60·5	+3·6	1·74	2·54	—0·80
September	58·5	55·4	+2·7	1·19	3·67	—2·48
October	48·7	48·2	+0·5	1·44	3·33	—1·89
November	41·8	40·3	+1·5	1·61	2·09	—0·48
December	39·5	37·9	+1·6	2·48	3·21	—0·73
Year	49·6	48·2	+1·4	23·54	31·93	—8·39

Meteorology, Births, Deaths, and Mortality from certain Prevalent Diseases for each Week of 1884.

Week.		Temperature of the Air.			Air Pressure.					Deaths at the Ages.				Deaths from							
Number.	Date of Ending.	Highest during week.	Lowest during week.	Mean Temperature.	Extreme Range of Barometric Changes.	Horizontal Movement of Air in Miles.	Mean Humidity, complete Saturation = 1000.	Rainfall in inches.	Births.	All Ages.	Under 1 year.	1 to 5 years.	Over 60.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Wh'ping Cough.	Fever.	Diarrhœa.	Phthisis.	Respiratory Diseases.
	1884.	°	°	°	inches.																	
1	Jan. 5	54·5	31·0	40·9	·688	707	96	0·63	308	176	36	37	28	8	8	8	2	1	2	1	15	38
2	„ 12	52·5	38·5	44·9	·671	1559	84	0·22	318	158	45	25	35	7	5	5	1	2	3	3	8	27
3	„ 19	50·5	38·0	43·1	·225	1178	91	0·00	281	160	33	32	27	4	7	5	...	3	2	2	15	24
4	„ 26	54·0	36·0	44·2	1·257	1748	88	1·49	255	152	33	18	39	2	6	1	3	5	2	1	11	25
5	Feb. 2	54·0	32·0	41·5	·961	1642	89	0·92	282	167	44	27	24	7	6	6	2	1	3	4	13	32
6	„ 9	51·5	29·5	41·1	·968	970	92	0·31	299	154	34	28	27	9	1	7	3	3	2	4	14	39
7	„ 16	53·0	33·0	42·0	·772	1440	85	0·29	296	141	30	26	24	3	4	3	1	2	...	5	11	24
8	„ 23	52·0	34·0	40·9	·448	1470	88	0·83	272	150	38	17	29	3	...	4	..	2	2	1	13	25
9	Mar. 1	48·5	25·5	38·1	·462	1123	91	0·01	287	171	33	32	27	2	9	1	2	4	2	...	22	32
10	„ 8	54·5	30·0	40·6	·671	818	90	1·41	282	154	41	28	26	4	5	2	2	2	2	2	20	34
11	„ 15	56·5	34·0	43·6	·858	914	86	0·57	301	169	46	28	42	...	4	3	1	2	...	1	9	53
12	„ 22	67·5	35·0	49·8	·206	1292	79	0·23	276	174	49	30	36	4	4	1	2	4	2	2	19	40
13	„ 29	53·5	34·0	39·9	·098	915	90	0·00	308	168	33	40	29	1	18	1	...	4	2	1	11	47
14	April 5	62·0	36·5	46·8	·555	843	81	1·35	310	186	41	33	41	3	3	5	2	5	1	2	19	48
15	„ 12	58·5	33·0	46·2	·519	673	85	0·36	291	163	47	38	23	2	11	2	1	5	2	1	11	39
16	„ 19	50·5	33·0	40·8	·246	1170	83	0·07	286	158	39	23	31	...	6	5	...	2	4	1	14	29
17	„ 26	49·0	28·5	41·4	·265	641	68	0·00	293	195	50	27	47	1	11	2	1	6	3	1	16	54
18	May 3	53·0	37·5	46·1	·464	1039	76	0·97	246	176	44	31	28	1	10	4	2	4	2	1	24	40
19	„ 10	61·5	39·0	50·1	·858	1430	71	0·11	334	173	37	38	29	...	8	1	...	5	1	3	17	43
20	„ 17	78·0	45·0	56·7	·294	1088	81	0·25	281	184	56	45	27	...	8	1	1	9	...	3	11	38
21	„ 24	75·5	38·0	55·0	·611	712	67	0·10	285	164	35	37	38	...	12	2	...	6	...	4	9	51
22	„ 31	76·0	39·0	52·0	·318	900	78	0·00	313	166	46	33	26	...	13	1	1	6	1	3	13	30
23	June 7	67·5	39·0	54·0	·238	719	79	0·78	237	152	32	32	26	1	12	2	...	6	...	2	19	26
24	„ 14	79·0	45·0	57·3	·518	832	69	0·28	297	151	34	31	35	...	11	2	...	7	...	5	20	28
25	„ 21	68·0	45·0	56·1	·122	760	81	0·04	352	138	36	33	15	...	9	3	1	7	...	6	14	29
26	„ 28	78·0	49·0	61·2	·258	778	69	1·15	292	152	36	24	29	...	9	1	...	2	2	6	9	37
27	July 5	82·0	51·5	64·7	·269	456	71	0·39	245	126	38	22	22	...	6	1	...	8	1	6	13	21
28	„ 12	77·0	51·0	63·4	·308	528	73	0·52	294	145	40	30	23	...	11	3	...	7	...	13	19	21
29	„ 19	75·5	49·0	61·8	·501	997	75	0·54	288	167	39	37	30	1	13	1	1	10	3	16	13	18
30	„ 26	73·5	46·5	58·1	·434	955	74	1·02	286	162	56	40	20	...	9	4	...	12	...	16	12	22
31	Aug. 2	81·0	50·0	61·7	·385	525	79	0·24	260	166	63	35	30	...	9	1	1	2	...	27	7	28
32	„ 9	86·0	50·0	65·1	·210	514	71	0·03	250	178	71	35	29	...	10	1	...	5	1	39	15	20
33	„ 16	89·0	51·0	67·8	·218	542	73	0·00	273	223	99	58	17	...	6	3	...	7	2	80	15	22
34	„ 23	81·5	49·0	64·6	·358	429	77	0·16	300	266	113	60	35	...	8	2	...	4	2	100	17	19
35	„ 30	86·0	46·0	58·6	·519	897	77	0·59	276	261	124	50	27	...	4	5	1	6	...	94	17	25
36	Sept. 6	68·5	47·0	57·6	·204	535	78	1·37	278	231	96	45	38	...	7	5	1	9	2	71	9	15
37	„ 13	69·5	48·0	58·2	·851	933	91	0·02	257	166	61	37	19	...	7	4	...	9	1	40	14	19
38	„ 20	81·5	47·5	63·7	·348	655	83	0·17	291	202	73	33	34	...	2	2	...	9	6	30	15	24
39	„ 27	73·0	44·0	55·9	·459	910	81	0·50	259	147	51	25	20	...	2	...	...	5	...	27	11	20
40	Oct. 4	65·0	41·0	53·9	·504	1045	73	0·11	287	175	68	23	35	...	1	1	2	4	3	18	16	24
41	„ 11	57·5	33·0	46·0	1·263	1080	83	0·93	254	170	58	28	25	...	...	5	1	7	3	28	15	24
42	„ 18	62·0	34·0	50·2	·487	1575	82	0·00	267	136	40	27	26	...	1	2	..	8	1	9	12	23
43	„ 25	60·0	39·5	49·1	·433	688	86	0·22	272	169	48	25	28	1	3	1	2	5	3	15	23	30
44	Nov. 1	57·0	37·0	48·2	·834	1536	85	0·35	292	164	54	28	27	...	4	...	...	4	1	8	19	36
45	„ 8	58·0	35·0	48·2	·557	976	90	1·08	289	147	42	29	29	...	3	...	...	3	1	12	16	28
46	„ 15	55·0	33·0	43·6	·358	790	93	0·03	270	157	41	32	27	...	3	1	...	4	2	5	21	28
47	„ 22	46·5	31·0	38·0	·631	1240	90	0·05	277	160	47	24	25	...	1	1	...	10	1	2	19	33
48	„ 29	47·5	28·5	37·5	·505	1135	88	0·07	266	192	60	29	39	...	6	2	2	6	1	3	15	43
49	Dec. 6	53·0	26·5	39·6	·823	1135	91	1·15	265	198	55	28	46	...	5	5	..	7	1	3	17	47
50	„ 13	54·5	36·5	45·2	·529	1471	85	0·31	292	178	39	30	40	...	1	...	1	8	4	2	10	49
51	„ 20	54·5	33·0	41·0	·890	1519	88	1·32	308	155	30	31	31	...	4	1	...	5	3	4	10	45
52	„ 27	40·0	29·0	34·8	·235	1263	86	0·00	180	167	39	38	39	...	5	3	...	8	1	1	9	40
	1885.																					
53	Jan. 3	37·5	28·0	31·7	·531	980	90	0·00	333	183	38	32	48	...	2	2	...	12	1	2	15	50

II. SANITATION.

i. *Influences affecting or threatening to affect injuriously the Public Health.* Further considerable demolitions of old, crowded, and generally insanitary dwellings have resulted during the year from the alterations necessary for the connection of the West Suburban Railway with New Street Station; but the amount of property in the town pulled down during the past year has probably been smaller than for some years. The comparatively recent removal of much of this dilapidated and unhealthy property has, doubtless, largely contributed to the improved health of the Borough.

Ashpit middens.

The conversion of the ashpit middens is still slowly progressing, and the number of these large offensive receptacles, which formerly existed, has been in the aggregate vastly reduced.

Surface filth.

The contamination of both air and water, which results from surface filth, are so prejudicial to health that it is satisfactory to know that steps continue to be taken to diminish the practice of throwing into the streets and courts all kinds of filth, particularly excrementitious matters. During the year seventeen persons were summoned for depositing house refuse in the carriage ways, and in eleven instances small fines were imposed.

The deposition on some of our public thoroughfares of animal and vegetable filth is so objectionable to the senses, and is so injurious to the health of those who have to continually breathe the atmosphere of such localities, that a cleaner condition of our streets is a great desideratum.

I am glad to be able to state that no houses have been erected during the year on foundations consisting of impure material made by deposits of road scrapings.

Improper keeping of animals.

Attention continues to be paid to the reprehensible practice of keeping fowls, ducks, pigs, pigeons, and other animals in unsuitable situations.

It is a common occurrence to find fowls in cellars, and pigeons in attics and even pantries. There is no reason to doubt that the close proximity to human habitations of the fæcal filth from such animals must lead to deterioration of health, and may even be productive of serious diseases.

Smoke.

A larger number of reports than in the preceding year having been made of the emission of dense smoke from the chimney stacks of manufactories, it has been found necessary

to issue a greater number of summonses, as many as 142, against 123 in the previous year. Cautions have also been given to 153 manufacturers not to repeat the offence. Smoke *(continued)*.

An example, showing the dangers to health from sanitary defects in houses, and the necessity for the possession of technical knowledge by Inspectors who could detect defects, superintend the required Sanitary work, and know when it was thoroughly executed, is furnished in a very striking form by the following case :— Example of an insanitary house.

Attention was called to the condition of a large house at Edgbaston, in which several of the occupants were suffering from sore throats of a Diphtheritic type, and where there were offensive smells noticeable about the house. On visiting, the Inspector of Nuisances, Mr. Parker, was informed that about twelve months previously the house had been put in a thoroughly sanitary condition, by an experienced plumber, under the superintendence of an Architect, at a cost of £120. On going over the premises he found the w.c. in the worst possible position, viz., *in the centre* of the house, with the soil pipe passing *through* the entrance hall and connected to a *defective* drain which ran *under the floor* of the breakfast room. A futile attempt had been made to ventilate the soil pipe by means of a 2½ inch zinc pipe carried from the top of the D trap through the roof, but the joints were simply *socketed* together and *not soldered*, while there was no air inlet to the soil pipe. The only ventilation of the closet was by means of a window opening into the bath room, the lavatory basins were in direct communication with the drain which received the soil pipe of the water closet. The bath waste pipe was disconnected into a spout head just *under the window* of a bed room, the spout being connected with the sewer and acting as a ventilator to it at this point. A soft water pipe traversed one of the rooms, and was *defectively connected with a brick drain under the floor*. The sinks in the pantry and scullery were also in direct communication with the drain. There was a pump, the water from which was used for drinking in preference to the town supply which was laid on. On analysis I found the pump water to be polluted with sewage to a dangerous degree. All these defects have been removed, and the family is now restored to health.

The sanitary arrangements of houses of the better class are as a rule defective, and in this respect they are at an actual disadvantage compared with the class of small houses. There are of course many difficulties in the way of correcting such defects on a large scale, but in cases where disease of a preventable kind, or positive nuisance is found, as

in the example just given, there is little or no difficulty, and this will diminish as the education of the public on health matters extends. Much more work has been done in this direction during the last year than in any previous one, and it is with pleasure I take this opportunity of referring to the very valuable assistance I have received from the Inspector of Nuisances, Mr. Parker, who possesses an exceptionally extensive acquaintance with both the theory and practice of house-sanitation, and who devotes himself to the important work with an intelligence and a zeal, which are equally creditable to himself and advantageous to the health of the town.

It affords me pleasure also to acknowledge the important and willing co-operation which Mr. Jameson, Inspector of Private Drainage in the Borough Surveyor's Department, has lent in carrying out the improvements above referred to, improvements which have been long needed and the execution of which cannot fail to exert a very beneficial influence on the health of the town in relation to the occurrence of Typhoid Fever, Diphtheria, and certain preventable diseases characterised by a low type.

Ventilation of Sewers.

The question of the ventilation of sewers by shafts carried up to a height above the houses having been brought under the notice of your Committee, the Borough Surveyor and myself were requested to report upon the question and in pursuance of that object enquiries and observations were made by us, which resulted in the following Report :—

"Health Department,

"The Council House,

"*February 6th, 1884.*

"To the Health Committee.

"Mr. Chairman and Gentlemen,

Report on sewer ventilation

"In reference to Minute 8845, we beg to report that on the 23rd instant we visited Nottingham for the purpose of examining and obtaining information respecting the ventilation of sewers by means of shafts. Through the kindness of the Medical Officer of Health and the Surveyor we were enabled to see two such shafts, both placed at the highest point of a very steep part of the town. There are eight such shafts altogether in Nottingham. One was a four sided tube like a water down spout, about five inches in diameter, extending above the eaves of the house and furnished at the top with a moveable cowl.

Report on sewer ventilation *(continued)*.

"Complaints had been made of offensive smells issuing from the ground level ventilator at the top of a very steep and very narrow street. The gentleman living at the corner said that since the introduction of the tube he had perceived no nuisance. This testimony, however, is of little value with regard to this special mode of ventilation, inasmuch as the ground-level ventilator was permanently and securely closed at the time the tube was introduced. It cannot be doubted that such closure of the then existing ground-level ventilator would, without any ventilating tube, have resulted in a similar abatement of the nuisance in question.

"The experience of this mode of ventilation by shafts at Nottingham is really very small, and no careful experiments or observations have been made with regard to it by which to test its action; and the Surveyor expressed the opinion that, except in a few special cases, ground-level ventilation is the best. It is only proposed to employ so-called shafts in very narrow and very steep situations and near certain dead ends; Dr. Seaton, in his last Annual Report, speaking of the ground-level ventilation of sewers, says:—

"'There can be nothing better than this where streets are fairly wide; it is only where the streets are narrow and where there is a dead end of a sewer at the top of a hill, that the ventilating grates in the road become offensive.'

"This being so, there are very few cases in Birmingham in which such shafts could be expected to be of service, and as a fact the complaints received are generally in reference to streets which are level, wide, and containing no dead ends. Our opinion of the methods tried at different times in different towns for artificially ventilating sewers is that they are so very partially operative as to be of very little value, though it may be that in a few exceptional instances they might possibly prove of service; we do not, however, recommend their general adoption.

"We remain,

"Mr. Chairman and Gentlemen,

"Yours faithfully,

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

"WILLIAM S. TILL,
"*Borough Surveyor.*"

Report of experiments on ventilating shafts.

Having received from your Committee a request to enquire into the efficiency of the ventilating shaft in Greenfield Crescent, which had been erected some time previously by the Borough Surveyor at your suggestion, with the object of preventing nuisance from the sewer which had been complained of by some of the inhabitants, I made a series of observations and experiments, the results of which I submitted to you in the following report:—

"At my request the Assistant Inspector has made an inspection of the nineteen houses in the Crescent, and they are by no means in the sanitary condition that they ought to be. There is a water closet to each house, but in only one case is there a properly ventilated soil-pipe. At five of the houses there are bell-traps in the cellars, which were nearly all dry. Numbers 14 and 19 have drains in the cellars because of their alleged liability to flood, and they are said to be carefully trapped and ventilated; but at No. 19 the waste pipes from the Bath and china pantry are in direct connection with the drain. All the water closets are of the "pan" pattern, and several persons complained that they were offensive when in action. All the soil pipes were outside the houses except at No. 12.

"The sewer is a brick one, cylindrical in form, and two feet in diameter. Like the street it is about 250 yards long, and is furnished with three ventilators in the crown of the sewer, and five gully gratings at the sides of the street, which are not trapped, and therefore act also as ventilators. With the help of the Inspector of Nuisances and the Assistant Inspector of the district I tested the various openings by means of smoke, and found that all those in the crown of the sewer at the time of the experiment acted as exits and all the gullies except the one situated at the south-west corner of the Crescent at its junction with Calthorpe Road acted in the same manner. The latter gully acted strongly as an inlet and the smoke produced in it was given out abundantly and for a considerable time at the three sewer-crown ventilators. There was no odour of sewer gas at any of these openings. The ventilating tube put up by the Borough Surveyor at the side of the house No. 18, and starting from a dome on the sewer, as I understand, gave out a little smoke, but proportionately very little, and its discharge was in puffs and continued only for a short time. This intermittent mode of discharge is probably due to concussions of the air in the sewer occasioned by wind and varying sewer flow. It is evident, therefore, that if shafts are to be used for ventilation they will only be effective in case the street ventilators are closed, and in that case the shafts will either have to be very numerous

or very large. As long as the openings remain in the roads, ventilation will be carried on principally by them in preference to being carried on through long and bent tubes, which cause much friction, and will act in opposite directions according to varying conditions of temperature, atmospheric movement, and sewer flow.

"I have calculated the area, both of the sewer and of the different outlets; the area of the former is 452 inches, that of the latter including the openings in the crown of the sewer and of the gully pipes is only 417 inches, so that the various outlets have a smaller area than that of the sewer, while I think it desirable they should be larger.

"The area of the ventilating pipe, put in by the Borough Surveyor, is only 9¼ inches or one forty-third of that of the ground openings, so that forty-three such pipes would be required to equal the present openings, supposing that the pipes acted as well as the openings, which of course they would not do, owing to their length and the angle which they must necessarily have. In order to give the pipes an area equal to that of the sewer itself, 47 of them would be required. The expense of such a mode of ventilation, even if desirable, would be absolutely prohibitive, but independently of this consideration, it possesses the great objection of delivering the sewer air much too near windows and chimneys. In the present instance, as far as I could judge, the pipe terminates at about twelve feet from a bedroom window, and nearly on a level with it, and much nearer to chimneys, while a sewer opening if there were one exactly opposite the house, would be forty feet away. If, moreover, a system of ventilation by pipes were to be established, it would be necessary to abolish nearly all the present ground ventilators, otherwise the pipes would be drawing in fresh air through the nearest opening; the removal of the ground openings would create a danger, under certain circumstances, of forcing the house traps, which would lead to the discharge of sewer gas into the interiors of houses.

"There were a few complaints that the gully holes sometimes smell offensively, but there was no nuisance when I was there.

"If sewers are in good working order, and ventilated as ours are, there ought to be no offensive gases issuing from them. Should such be the case there must be an admission of improper material such as the drainage from privies or elsewhere of putrid liquids, or there must be decomposing organic matter in the gully catchpits. No system of ventilation would obviate nuisance so produced, and the remedy would be in removing the particular cause.

Report of experiments on ventilating shafts *(continued)*.

"Sewers not in good working order, if there are any, should be repaired, so as to prevent lodgments of putrescible material.

"Proper sewer air is not offensive, and the safest condition for sewers is to have the freest possible admission of air, in fact the nearer they approach the condition of open channels the better. The closest practical approach to this state is obtained by having as many openings as possible in the crown of the sewer.

"Edgbaston lying at the highest point of Birmingham, the air of the sewers at the lowest parts of the town has a natural disposition to rise and escape there. To prevent this it might be necessary, as has been done in some instances, to separate one section of the system from another by flap valves.

"I conclude from my observations that, after each house is put in sanitary order, there would be very little nuisance to complain of, but, if any, that it would be best met by keeping the gully pits free from offensive accumulations and increasing the openings in the crown of the sewer. These measures in my opinion would be more effective, more sanitary, and infinitely more economical than ventilation by pipes erected against the houses."

Inquests.

Inquests were held during the year in 755 cases where the cause of death could not be certified by a Medical man, while the deaths of 137 other persons, on whom an Inquest was not considered necessary, were registered on the information of the nearest relative.

CERTIFICATION OF THE CAUSES OF DEATH IN 1884.

Registration Sub-Districts.	Total Deaths.	Certified by		Not Certified.	Proportion per cent. of Deaths.		
		Registered Medical Practitioners.	Coroner.		Certified by Registered Medical Practitioners.	Certified by Coroner.	Not Certified.
Borough of Birmingham	9,043	8,151	755	137	90·1	8·4	1·5
Ladywood	1,088	982	82	24	90·2	7·6	2·2
St. Thomas	907	797	102	8	87·9	11·2	0·9
St. Martin	870	774	82	14	89·0	9·4	1·6
St. George	1,606	1,393	191	22	86·7	11·9	1·4
All Saints	1,654	1,542	88	24	93·2	5·3	1·5
Deritend	1,469	1,349	104	16	91·8	7·1	1·1
Duddeston	1,166	1,054	87	25	90·4	7·5	2·1
Edgbaston	283	260	19	4	91·9	6·7	1·4

Uncertified Deaths.

The ratio of deaths on which the Coroner deemed it desirable to hold Inquests is somewhat smaller than in the preceding year, but I regret to say that the proportion of deaths, the causes of which were neither certified by a Medical man nor investigated by a Coroner's Jury, has considerably increased, and in the Registration Sub-Districts of both Ladywood and Duddeston amounted during the year to more than two per cent.

Causes, origin, and distribution of Disease.

ii. *The Causes, Origin, and Distribution of Disease.*— As a result of the lessened prevalence of both Small-pox and Scarlet Fever, and the continued reduction in the mortality from both Typhoid Fever and Diphtheria, less time has been taken up by investigations into diseases of an infectious character than in some recent years.

Measles.

Diarrhœa.

The epidemic of Measles created, however, some trouble in the Spring, while the serious prevalence of Infantile Diarrhœa in the latter part of the Summer occasioned greater pressure of work than usual on the Inspectorial staff. For more than two months the whole time of one officer was devoted to obtaining information necessary for the enquiry as to the origin of Diarrhœa, which Dr. Ballard is conducting for the Local Government Board.

On becoming acquainted with the occurrence of cases of Scarlet Fever and Small-pox, efforts were immediately made to procure the removal of the patients from their own homes, where they act as so many distinct centres of infection, to the Borough Hospital; while steps were taken to properly disinfect the rooms which had been occupied by the patients, by fumigation with sulphur, and to purify the clothing, by disinfection at the Bacchus Road Disinfecting Station. Where disease of a Zymotic character exists, the whole of the surroundings of the case are made the subject of an investigation, including, amongst other things, an enquiry as to its source, as to accumulations of filth or the improper keeping of animals, an inspection of the drainage, the nature and condition of the privy accommodation, and the source of the drinking water, samples being analysed when it is found to be procured from a shallow well. On receipt of a report of disease of a Typhoidal or Diphtheritic nature, a visit to the premises and a thorough enquiry are made by the Ward Inspector and myself. Other precautionary measures adopted embrace warnings to neighbours of the danger and responsibility of unnecessarily visiting at houses where disease of a highly contagious character exists, the notification to the heads of schools and to employers of labour of the attendance at schools or factories of members of households in which infectious disease is present, and the temporary suspension of such occupations as laundry work, mangling, tailoring, and the like, when danger arises of the spread of infection by such means.

Schools and infectious diseases.

Trades and infectious diseases.

Report on alleged insufficiency of suitable house accommodation

It having been stated that there was an insufficiency of suitable house accommodation for the artizan classes, the Town Council appointed a Committee, known as the "Artizans' Dwellings Inquiry Committee," to investigate the truth of the statements, and at the same time to make any suggestions that might be necessary to remedy the evil complained of.

At the request of the Committee I, in company with the Inspector of Nuisances and the Assistant Inspectors of the Wards, inspected the worst properties in the town, and reported on one or more wards at a time to the weekly meetings of the Committee, who after their sittings visited some of the most insanitary dwellings, so that they might see for themselves their actual state. It was found from the rate books, which corroborated my own evidence, that the number of houses in the Borough with rentals under 7s. per week was amply sufficient for the artizan population, nearly 8 per cent. of them being void, and that these voids were distributed pretty equally over the Borough, though the largest proportion existed in Bordesley Ward. It also turned out that as many as 14½ per cent. of the houses with a rental under 2s. 6d. per week were unoccupied.

Sufficiency of house accommodation

With regard to the sanitary condition of the properties visited, I may state that the defects which existed were not confined to old property, but were equally numerous and serious in the comparatively new properties in some of the suburbs, and that the condition of by no means a small proportion of them, particularly in St. George's Ward, was the result of the ignorance, filthiness, idleness, dishonesty, destructiveness, and destitution of the tenants.

Sanitary defects due to tenants.

In some cases the tenants and others had broken up and sold or burnt the woodwork, such as the doors, cupboards, window frames and staircases of the houses, and the ash tubs, and wrenched up the traps of the drains, and sold them for old iron, along with even the grates, and boilers in wash-houses; the condition of the houses was in some instances indescribably filthy and occasionally positively disgusting, and the same remark applies to many courts and the privies, both of which were occasionally found to have human excrement lying about them. With regard to a property in Saint George's Ward, I reported that it had "been almost wrecked by bad tenants." It is a common practice too for the tenants of even some of the better class properties to allow the drain traps to become stopped up and then to pull the trap from its setting, rather than remove the obstruction. Much of the dilapidated and miserable appearance of the worst class of property is, therefore, ascribable to the low moral tone and ignorance of the tenants; but a better condition of things may be looked for along with the general though gradual moral improvement of the people which is, doubtless, in progress. Much the same

Overcrowding.

state of things exists in all large communities, and is not peculiar to Birmingham. I found very little overcrowding, and some of that which did exist was not altogether the consequence of insufficient sleeping-room space, but of the evident wish of the occupants to collect in one room, doubtless preferring to huddle together for warmth; the result of this in one case, where the tenant had a bedrooom and an attic of larger dimensions, but chose that the whole family of five should sleep in the smaller room, was that instead of each member of the family having an average space of 301 cubic feet, which they might have had, they had only 133 cubic feet per head, and in another still worse instance, eight children and two adults slept in one room with a capacity of only 110 cubic feet each, while an attic remained unoccupied. In several others the cubic space in the bedrooms for each person ranged from 110 to 126 cubic feet, while in a squatter's one-storey cottage on some waste land near Garrison Lane it was found that the inmates had only 100 cubic feet of space per head. Owing, however, to the considerable trade depression, which has in some cases caused artizans to take a portion of a house, there can be no doubt that the average number of occupants per house in the Borough is somewhat higher than it has been of late years. While on this point I may say that the flat or block system found some advocates, but I am not impressed in favour of it, and consider the massing of a large number of families under one roof objectionable from many points of view, social and sanitary.

Flat system.

Lighting of courts.

As checks to the wanton destruction and filthiness of tenants and as safeguards to morality, I stated the advantage that would result from the courts being lighted, and that, as far as practicable, each house should have its own privy and wash-house.

Defects caused by negligence of landlords.

Another great reason for the defective state of much property in Birmingham is the short-sightedness of some of the owners, who neglect and refuse to do necessary repairs, and so allow their property to fall into an extremely bad condition, on the "penny wise and pound foolish" principle.

The owner of some worn-out and dilapidated property, when asked by the tenant to repair it, replied, "put some rags or paper in the holes."

The principal defects which came under my notice as being due to this circumstance were the insufficiency and bad repair of the privies, and the dirty state of many of the houses, some of which had not been papered or even limewashed by the owner for from six to eight, and in one case for ten years. In other instances the yards were either very irregularly paved, or paved with pebbles, or not at all, and were, consequently, in wet weather, dotted with pools of water; the roofs of the houses were leaky and admitted the rain and cold winds, and

Defects caused by negligence of landlords *(continued)*.

the chimney was smoky; there was no provision for *proper* ventilation, while, mainly owing to the defective state of the spouting, the walls were damp. In one case the privies (pan) were within three feet of the house door, while in another lot of property it was necessary to convey the pans through the houses.

"Jerry" built property.

But perhaps the most serious state of affairs was revealed by an examination of some of the recently built property in outlying portions of the Borough, notably, in Bordesley and All Saints' Wards. The condition of much of this property is best expressed by the term "Jerry-built," for though new, it is already very dilapidated and sometimes tottering, and, not being provided with damp courses, the walls often are very damp. The plaster, when touched, fell off the walls, some of which bulged very much, while others had actually been blown down, one not long before our visit. The mortar was composed in some cases of road scrapings, and some that I analysed from the interior walls of buildings in All Saints' Ward contained only one part of lime to fifty of sand, with 6 or 7 per cent. of organic matter; and in a sample from property in Bordesley Ward there was a still smaller proportion of lime, only one part to sixty-five of sand. The timber, instead of being pine, was deal, and often so slender as to be mere sticks; the slates were inferior and rotten, and the nails of iron instead of copper or zinc; the bricks friable and very porous, and the workmanship on a par with the material. Some of this description of property, although so recently erected, is indeed scarcely, if at all, fit for human habitation, while the material used in it is decidedly inferior to that generally employed in older building. This description of property was put up before the present building bye-laws came into operation, and it cannot be doubted that such erections will be prohibited in future. I stated at the enquiry, that I thought new houses should not be occupied until certified to be fit by some competent person.

Cellar dwellings. Typhus Fever.

I came across no cellar-or attic-dwellings in the Borough, neither did I hear of any Typhus Fever, a disease which is peculiar to districts inhabited by the very poor and dirty, and which still exists in certain over crowded parts of some large English towns.

Recommendation to Artizans' Dwellings Committee.

Among my recommendations to the Committee were the following:—

That the Corporation should employ scavengers and whitewashers in the worst courts, to occasionally cleanse them.

That the sub-letting of rooms should be discouraged.

That the interiors of many houses should be more frequently cleansed, at least once in two years. Recommendation to Artizans' Dwellings Committee *(continued)*.

That ashpit privies should be abolished.

That the ash collectors should not only remove the contents of the tubs, but clear up the refuse around them.

That a considerable number of houses in some Wards should be closed.

That the Corporation should have power to purchase property at its actual value.

iii. *Advice to the Sanitary Authority on Matters affecting the Public Health.*—In the early part of the year four cases of Typhoid Fever having occurred in succession at Rubery Hill Asylum, I was requested by the Committee to investigate the cause of the outbreak. Advice to the Sanitary Authority. Typhoid Fever at Rubery Hill Asylum.

This being probably connected with either the water supply or the drainage, I addressed myself to an enquiry into the conditions of these, assisted by Dr. Lyle, the Medical Superintendent and Mr. Martin, the Architect. Report on probable cause of outbreak.

The water supply is derived from a deep well in the sandstone. The analysis showed that the water was chemically of great purity, and although the germs of disease are so minute and imponderable as to elude discovery by chemical analysis, I was inclined to attribute the disease to some other cause.

An examination of the system of drainage revealed the fact that it was not free from defects; that it admitted of sewer gas finding its way into certain parts of the building, owing to insufficient ventilation and trapping of the system at various points.

After consultation with Dr. Lyle and Mr. Martin, certain improvements were decided on, and promptly made in the direction indicated. The value of these is best shown by the results, not a single case of Typhoid having occurred in the Institution since.

iv. *Outbreaks of Infectious, Contagious, or Epidemic Diseases.*—No fresh outbreak of disease has occurred during the year, but Measles existed extensively in one locality in the early Spring, and gradually extended over the more densely populated portion of the Western half of the Borough, as described elsewhere. Outbreaks of Infectious Diseases.

v. *Examination of, and Action in regard to Suspected, Diseased, or Unwholesome Food.*—A large quantity of meat has been condemned and destroyed during the year, but the great bulk of it was voluntarily handed over to the Meat Inspectors, and in consequence it has been found necessary to prosecute Unwholesome food.

Unwholesome food *(continued).*

in only a few instances. Heavy fines and imprisonments having of late years been imposed upon several potted meat manufacturers, the trade in this vile stuff seems to be discouraged. Some horse-flesh was found, however, in possession of a meat salesman in the town, but the case was dismissed by the Stipendiary.

izure of mon.

On the 18th June, 1884, a Salmon, one of a large number consigned from Cork, was submitted to me by Mr. Superintendent Birckley owing to information having been received that the fish had been poisoned by means of spurge. The fish I examined had a wound on the back, similar to what would be inflicted by a spear, and I was informed that all the fish except two presented a like injury.

Externally the fish was of a much yellower colour than ordinary, and the gills, instead of being of a bright red, were of a very pale reddish yellow. On examining the internal organs I found nothing remarkable, the stomach was empty, and there were no signs of congestion or inflammation. The question I had to decide was whether the fish was fit for food.

As the only way to settle the question in the absence of a chemical test was by means of physiological action, I fed a dog with the internal organs of the fish and with some of the flesh, with the result that no ill effects were produced. I concluded that the fish might be safely sold for consumption, which it was, and nothing more was heard of it. It would be a pity for so much valuable food to be sacrificed except on good grounds. I am of opinion that the fish had been stupefied with the drug, and while in this condition they had been speared, and thus captured. It is not at all an uncommon practice among poachers to stupefy fish in order to render them an easy prey. It fortunately happens that fish are very sensitive to poisons, and they can be rendered sick enough to enable them to be taken without their flesh being rendered injurious as food.

vi. *Duties under Sanitary Bye-Laws and Regulations.*—These refer to Slaughter-houses, Cow Sheds, Dairies, Milk Shops, Common Lodging Houses, and Houses let in Lodgings.

Common lodging houses

The Common Lodging Houses numbered at the end of the year 108, with accommodation for 2,472 lodgers. There have been 10,424 inspections; 7,244 of these visits were paid by day and the remainder by night.

Houses let in lodgings.

The number of Houses let in Lodgings, and registered under the Public Health Act, 1875, is now 200; the number of lodgers permitted is 1,123, giving an average number of lodgers in each house of 5·6. The number of these houses is lower than in the previous year.

Slaughter-Houses.

Slaughter-houses.

The number of private slaughter-houses has, unfortunately, undergone no reduction during the year, there still being 270 of these in the town, 132 of which are registered and 138 licensed; all these figures are exactly identical with those given in my last report.

Dairies, Cow Sheds, and Milk Shops.

Dairies, Cow Sheds, and Milk Shops.

The Assistant Inspector specially appointed at the beginning of the year to see that Milk Shops have suitable provision for the storage of Milk, and to assure himself that the entire surroundings of such premises are in a satisfactory sanitary condition, and also to assist in the supervision of the Bakehouses, reports that he has made 3,291 visits to the Milk Shops in the Borough; in 1883 the number of visits paid to them was 1,190.

It is highly satisfactory to know that much greater attention is now being paid to all places were Milk is stored, though there can be no doubt that their number, which is 1,484, is far larger than is either necessary or desirable. As it is well known that several very serious diseases may be conveyed through the medium of Milk, I need not urge the extreme importance of a strict supervision over its storage and quality.

Four hundred and eleven visits have been paid to the Cowsheds and Dairies, and they are reported to be in a generally satisfactory condition. Two convictions have been obtained for neglecting to register cow-sheds, and a fine of £5 and costs was imposed upon the owner of a filthy cow-shed.

It is satisfactory to know that owing to the fact that milk can now be bought from the country at a cheaper rate than it can be produced in the town, the practice of cow-keeping in the Borough is fast on the wane.

Canal Boats Act, 1877.

Canal Boats Act.

Upwards of one thousand inspections have been made under this Act, and thirty-two additional boats have been registered during the year, making altogether 454 that have been registered by this Authority. It has been found necessary to issue ten summonses for infringement of the provisions of the Act in the case of seven boats, the fines and costs inflicted amounting in the aggregate to £4. The owners of twenty-three boats were ordered to cleanse them, and this was done in each case without recourse to legal proceedings.

Infectious Disease in Boats

Small-pox was found to exist in two boats while plying in the Borough, and the cases, four in number, were all removed to the Borough Hospital; the boats were afterwards thoroughly disinfected.

Canal Boats Amendment Act.

Last August an Act to amend the Canal Boats Act, 1877, came into force, some of the principal new provisions of which were the following:—

"The master is made responsible for non-compliance with regulations." "Enforcement of the Act by the Registration and Sanitary Authorities is made imperative, and an annual Report of the measures adopted is to be made to the Local Government Board." "Boats are to be numbered and marked on both sides."

The expression "by day" is now defined and is made to include the hours between six a.m. and nine p.m., but unfortunately power is not given to enter at night, and this is really necessary in order to prove overcrowding.

An Inspector has also been appointed, acting under the Local Government Board, to visit periodically every Registration District, and to see that the Act is being satisfactorily enforced.

Caravans.

It is very desirable that some legislative controul should also be had over caravans, as cases of infectious disease have from time to time been brought into the town by them.

In my investigations into the condition of the Artizans' Dwellings, I found a caravan much overcrowded; shortly afterwards Small-pox broke out in it.

Bakehouses.

Bakehouses.

I am glad to be able to state that the sanitary condition of these is now thoroughly satisfactory. Some of the results that have occurred from the 582 visits made to the 479 Bakehouses in the Borough, have been that 37 drains, which formerly opened inside Bakehouses, now have their openings outside, that no animals are kept in Bakehouses, which are not permitted to be used for any purpose other than making and baking bread, etc., and are furnished with a suitable supply of water. When youths and women are found to be employed in Bakehouses, I make a notification of the fact to the Inspector of Factories; 99 such intimations have been sent during the past year.

Offensive trades.

vii. *Offensive Trades.*—As no new licenses have been granted during the year for the carrying on of additional offensive or noxious processes of manufacture, the number of such trading establishments is not materially altered.

The owner of a gut-cleaning establishment having been ordered to close it he made alterations to the building and applied for permission to renew the business. I visited the premises, and reported to your Committee that I was of opinion that the premises were unsuitable for the purpose of preparing "ropes" for sausage-making.

Many complaints were received of a nuisance from another gut-cleaning shed, which I also visited and found that the man had been carrying on this business for some years without a licence, and that the place was very unsuitable for a trade of this description. On this account I recommended that he be called upon to discontinue it. Offensive trades *(continued)*.

viii. *Fortnightly Reports of the Medical Officer of Health to the Health Committee.*—I have reported to your Committee, at each of its meetings, on various subjects, including the following :— Fortnightly Reports of Medical Officer of Health.

1. The general health of the Borough, including the total death-rate, Zymotic death-rate, and average age at death.
2. The occurrence of Infectious disease, and the results of the investigation of certain of the most dangerous cases.
3. The Waters supplied from shallow wells and by the Corporation.
4. Articles of Food, Drink, and Drugs obtained for analysis.
5. Diseased and unwholesome Food.
6. Reports on special questions in pursuance of resolutions, instructions, and otherwise.

The Borough Hospital

has received during the year 360 cases of Scarlet Fever, and 437 of Smallpox; in the previous year, 638 patients suffering from Scarlet Fever and 1,090 from Smallpox were admitted. The number of cases treated in this Institution from the fourth quarter of 1874 up to the end of the year 1884 is as follows :— Borough Hospital. Cases admitted each year.

DATE.	Small-pox.	Scarlatina.	Total Cases.
1874.			
4th Quarter	194	—	194
(2nd Nov. to the end of the year)			
1875.			
1st Quarter	186	—	186
2nd „	169	—	169
3rd „	53	13	66
4th „	12	7	19
Totals	420	20	440
1876.			
1st Quarter	2	1	3
2nd „	2	4	6
3rd „	2	5	7
4th „	5	28	33
Totals	11	38	49

Cases admitted each year *(continued)*.

DATE.	Small-pox.	Scarlatina.	Total Cases.
1877.			
1st Quarter	4	20	24
2nd „	19	7	26
3rd „	15	13	28
4th „	—	3	3
Totals	38	43	81
1878.			
1st Quarter	3	13	16
2nd „	4	34	38
3rd „	6	139	145
4th „	7	238	245
Totals	20	424	444
1879.			
1st Quarter	1	60	61
2nd „	—	37	37
3rd „	3	40	43
4th „	—	47	47
Totals	4	184	188
1880.			
1st Quarter	2	45	47
2nd „	3	27	30
3rd „	8	36	44
4th „	3	62	65
Totals	16	170	186
1881.			
1st Quarter	8	36	44
2nd „	8	79	87
3rd „	1	91	92
4th „	—	127	127
Totals	17	333	350
1882.			
1st Quarter	—	90	90
2nd „	54	120	174
3rd „	38	197	235
4th „	13	220	233
Totals	105	627	732
1883.			
1st Quarter	46	120	166
2nd „	160	157	317
3rd „	481	198	679
4th „	403	163	566
Totals	1,090	638	1,728

DATE. 1884.	Small-pox.	Scarlatina.	Total Cases.
1st Quarter	359	41	400
2nd „	56	94	150
3rd „	12	124	136
4th „	10	101	111
Totals	437	360	797

Cases admitted each year *(continued)*.

The much smaller use made of the Hospital during the year is the necessary consequence of the greatly diminished prevalence of the two diseases, Small-pox and Scarlet Fever, treated in it.

Disinfecting Station.

Disinfecting Station.

The number of articles purified at the Borough Disinfecting Station during each of the last eight years is given in the following Table :—

Articles Disinfected.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.
Beds	56	115	466	221	128	181	452	2,165	855
Mattresses ...	113	126	290	339	229	358	517	1,109	592
Sheets	48	346	424	192	73	164	557	1,024	1,033
Blankets... ...	92	103	353	241	113	290	556	1,833	1,749
Counterpanes ...	37	68	262	154	70	121	264	893	5 93
Pillows & Bolsters	185	315	899	586	317	481	940	3,397	2,325
Other Articles ...	141	330	4,282	2,645	1,632	1,940	4,920	24,446	5,502
Totals ...	672	1,403	6,976	4,378	2,562	3,535	8,206	34,867	12,649

The much smaller amount of work done in 1884, compared with that of the year 1883 is gratifying evidence of the much more limited existence of infectious disease.

The estimated cost of the Station during the year is :—

Cost of Station.

	£	s.	d.
Wages	140	9	0
Horse-keep, Shoeing, &c.... ...	95	0	0
Gas for Heating and Lighting ...	16	19	8
Coal	5	0	0
Water	2	0	0
Total	£263	3	2

Mortuaries

Mortuaries.

exist at all the Police Stations in the Borough; 176 bodies have been deposited in these valuable sanitary establishments during the year, as compared with 168 in 1883.

The number of corpses taken to each Station during each of the last nine years has been as under :—

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.
Moor Street ...	3	32	32	28	15	13	30	76	58
Duke Street ...	1	12	10	11	12	9	17	10	18
Kenion Street ...	—	8	10	14	10	25	22	46	42
Ladywood Road ...	—	13	5	12	7	17	17	10	23
Moseley Street ...	—	—	—	6	8	8	25	26	35
Totals ...	4	65	57	71	52	72	111	168	176

from which it appears that these buildings become, year by year, increasingly useful.

Water Supply.

Water supply.

The two chief sources of water supply to the town, that from the Corporation mains and that from shallow wells, have again received that attention which the importance of a drinking water supply demands.

Corporation water.

The results of my monthly analyses of the Corporation water have been duly laid before your Committee, and the means of the figures prove that the town water still continues to be chemically of good quality, and to manifest a progressive improvement. In the Summer months, however, owing to the hot weather, a green vegetable growth was set up in the water, and this gave it for a time a very objectionable appearance. It is impossible to prevent such growths in uncovered Reservoirs, as they are promoted by the action of sunlight. The covering of the Hagley Road Reservoir was completed during the year, so that now two Reservoirs are so protected.

Shallow wells.

The water of the shallow wells was generally of the same character as that I have always found it.

Shallow wells *(continued)*.

The decided evidences of serious pollution, by animal and probably excrementitious matters, which most of the well waters exhibited, made it imperative that the owners of them should be called upon to promptly close them. This desirable end has been in almost all cases attained by means of an interview with the Health Sub-Committee, and without the necessity of resorting to legal proceedings.

Miscellaneous Sanitary Analysis.

I have also made 70 analyses of miscellaneous articles during the year, these of course being exclusive of the water analyses referred to above, and of those samples of food, drink, and drugs purchased under the provisions of the "Sale of Food and Drugs Act."

Public Baths.

Public Baths.

No additional bathing accommodation has been provided during the year, but new Baths were erected in Monument Road in 1883, and so far they have been exceedingly well patronised. In the returns for the year are also included the number of bathers in the open air Baths at Small Heath Park. The gross number of bathers during the year shows a considerable increase on the number in the previous year, though when we call to mind the exceptionally high temperature of last summer such an increase is what might be expected. Taking, however, into consideration that the opening of the additional bathing establishment at Monument Road would necessarily more or less affect the attendance at the other Baths, and looking also at the total number of bathers, not only in 1884 but also in 1883, the past year's figures must be considered to show that our population is better appreciating the value of the Bath.

Increased number of bathers.

Return of the Number of Bathers at each of the Corporation Baths During the Last Ten Years.

	Kent Street.			Woodcock Street.			Northwood Street.			Monument Road.			Small Heath.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
1875	105162	4931	110093	73341	2055	75396	100858	2827	103685	—	—	—	—	—	—
1876	107647	4880	112527	76781	2451	79232	99941	2832	102773	—	—	—	—	—	—
1877	95428	4397	99825	58432	2012	60444	83844	2153	85997	—	—	—	—	—	—
1878	106820	6016	112836	64680	2171	66851	101059	2129	103188	—	—	—	—	—	—
1879	105395	7274	112669	48794	1501	50295	82408	2027	84435	—	—	—	—	—	—
1880	108253	8468	116721	71843	2051	73894	115446	3166	118612	—	—	—	—	—	—
1881	115260	8768	124028	64014	1762	65776	106550	2704	109254	—	—	—	—	—	—
1882	112141	8509	120650	66272	2015	70287	113036	4049	117085	—	—	—	—	—	—
1883	101503	8025	109528	72852	2025	74877	96115	3093	99208	88073	5245	93318	8258	282	8540
1884	115608	8812	124420	80279	2079	82358	103421	3506	106927	101173	6917	108090	23009	741	23750

Sewerage Works.

Sewerage Works.

During the year under notice nearly three miles of Sewers were constructed by the authority of the Town Council, of which 1,049 yards were substitutions for Sewers of an inferior and inadequate kind.

Sewers were also laid in several new roads which were formed during the year.

Total length of sewers.

The total length of Sewers at present under the control of the Corporation is about 187 miles.

Streets and Roads.

Streets and roads.

At the end of last year there were 199 miles of Streets and Roads in the Borough after allowing for the abandonment of Coach Yard, Cotton Street, and the Gullet leading from Fordrough Street to Holliday Street, of which 191¼ miles were maintained by the Corporation, 1¼ miles by the various Local Board Districts abutting on the Borough, 2½ miles are private roads and passages, and there still remain about 4 miles of Highways in an unfinished state.

Nightsoil and Refuse Disposal.

Night-soil and refuse disposal.

The conversion of the midden privies, and the substitution of pan privies still makes some progress, the number of pans in the Borough having increased at the end of the year to 38,865. 1,922,752 removals of the contents of pans were effected during the year. More than 129,000 loads of ashes from the ashtubs and of nightsoil from the middens were also collected.

The number of Waterclosets in the Borough is computed to be nearly ten thousand.

Sanitary Work

Sanitary work.

has been most energetically carried on, no fewer than 16,060 notices having been served for the removal of nuisances.

More than 5,000 drains have been put in order, either by trapping, where no trap formerly existed, by the resetting of the drain trap, by its replacement by a better kind or by the removal of obstructions in the pipes. Upwards of 1,500 sinks which were directly connected with the drains, and thus ever liable to admit sewer air into the dwellings, have been severed and made to discharge above the ground, while 394 leaky and defective spout drains have been repaired and set right, and 124 premises which were not connected with the sewers have been made to discharge their drainage into them.

Sanitary work *(continued)*.

Houses unfit for habitation.

Forty-five premises have been supplied with a purer description of drinking water, 44 with better ventilation, while 24 houses have, on account of their dilapidated and generally insanitary condition, been closed as unfit for habitation.

Other sanitary work done includes the removal of fowls in 636 instances and of pigs in 144, and of 2,203 collections of manure and other offensive deposits, the purification and cleansing of 1,293 houses after Zymotic disease, and of 1,984 others on account of their dirty state, the paving of 1,017 courts and yards, and the reconstruction of 303 midden privies.

Steps have also been taken to prevent overcrowding, to keep back-yards, courts, and privies in a cleanly state by limewashing, &c., and to diminish nuisance arising from urinals, while waste of water from leakage has been notified to the Water Department in 660 instances, and 735 erections which were considered in danger of falling were reported to the Borough Surveyor's Department.

The gross total of nuisances abated is no fewer than 22,585, to effect which it has been necessary to take out only 183 summonses, or only half the number of the previous year.

Systematic Inspection of the Borough.

Systematic Inspection of the Borough. It has long been felt that independently of the special inspections made of premises on which preventable disease or nuisances are reported, and which necessarily receive first attention, it is desirable to have such a regular and systematic inspection as shall lead to a knowledge and a record of the condition of every street, court, and house in the Borough. The advantages of knowledge so obtained embracing the character and sanitary condition of every property, the number of houses and population on different areas, and other matters are so great as not to need description. Accordingly I have had a map prepared dividing each Assistant Inspector's district consisting of a ward into blocks distinguished by numbers. Roughly speaking there are eleven blocks in each ward and about 450 houses in each block. The inspection was commenced in May, and in some of the wards is now approaching completion; the work is not carried on so expeditiously as could be wished, but this is a necessary consequence of special and urgent inspections having the precedence.

Appointment of Inspector of Nuisances.

At the beginning of the year Mr. John Parker, one of the Assistant Inspectors, was promoted to the office of Inspector, *vice* Mr. Dale resigned. The highly satisfactory manner in which Mr. Parker has performed his duties fully justifies the choice of your Committee in appointing him.

I have great pleasure in testifying to the courtesy and assistance which I have received on all hands during the year.

I remain,

Mr. Chairman and Gentlemen,

ALFRED HILL, M.D.,

Medical Officer of Health.

III. APPENDIX.

(TABLES, MAP, AND CHART.)

TABLE I.

BIRTHS AND DEATHS (GROSS NUMBERS.)

DATE.	BIRTHS.	DEATHS.
1884	14,991	9,043
1883	14,701	8,714
1882	14,866	8,425
1881	14,869	7,938
1880	15,111	8,088
1879	15,846	8,650
1878	15,964	9,662
1877	16,001	9,038
1876	15,816	8,330
1875	14,862	9,668
1874	14,888	9,665
Average of Ten years 1874-1883.	15,292	8,818

NOTES.

1.—Population at Census 1881, 400,774.

2.—Population, estimated to the middle of the Year 1884, 421,258.

3.—Area in Acres 8,400.

4.—Number of Inhabited Houses in Borough at Census 1881, 78,301.

5.—Average number of Persons in each House at Census, 1881, 5·1.

TABLE II.

Annual Rate of Mortality, Death-Rate among Children, and Deaths in Public Institutions.

DATE.	Annual rate of Mortality per 1,000 Living.	Deaths of Children under 1 year; percentage to total Deaths.	Percentage of Deaths of Children under 1 year to Registered Births.	Deaths of Children under 5 years; percentage to total Deaths.	Percentage of Deaths in Public Institutions to total Deaths.
1884	21·1	28·9	17·4	47·7	13·8
1883	21·0	26·8	15·9	43·8	15·7
1882	20·6	29·1	16·5	47·2	15·4
1881	19·7	27·7	15·0	47·1	15·3
1880	20·5	32·1	17·8	49·9	12·4
1879	21·8	27·5	15·0	49·7	14·1
1878	25·2	28·6	17·0	53·1	11·8
1877	23·9	29·1	16·4	49·4	12·2
1876	22·4	30·5	16·0	46·6	11·6
1875	26·3	30·6	19·6	49·4	11·8
1874	26·8	27·8	17·8	47·5	11·8
Average of 10 years 1874–1883.	22·8	29·0	16·7	48·4	13·2

TABLE III.

Mortality from certain classes of Diseases, and proportions to population and to 1,000 deaths in 1884.

CLASS OF DISEASES.	Total Deaths.	Death Rate per 1,000 of the population.	Proportion of Deaths to 1,000 Deaths.
1—Seven principal Zymotic Diseases	1,681	3·9	186
2—Pulmonary (other than Phthisis)	1,705	4·0	189
3—Tubercular	903	2·1	99
4—Wasting Diseases of Infants ...	796	1·8	88
5—Convulsive Diseases of Infants ...	489	1·1	54

1.—Includes Smallpox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever, and Diarrhœa.

3.—Includes Phthisis, Scrofula, Rickets, and Tabes.

4.—Includes Marasmus, Atrophy, Debility, and Premature Birth.

5.—Includes Hydrocephalus, Infantile Meningitis, Convulsions, and Teething.

TABLE IV.

SHOWING THE NUMBER OF DEATHS IN THE TEN YEARS, 1874 TO 1883, FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES, AND THE NUMBER IN 1884.

	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	Annual Average of 10 Years 1874-1883.	Proportion of deaths to 1,000 deaths in 10 years, 1874-1883.	1884.	Proportion of deaths to 1,000 deaths in 1884.
Small-pox	637	174	0	8	5	0	2	6	17	110	96	10·9	64	7·1
Measles	139	141	87	309	54	169	63	132	150	155	140	15·9	333	36·8
Scarlet Fever ...	737	265	204	237	995	306	123	164	256	326	361	40·9	134	14·8
Diphtheria	74	55	58	52	83	71	51	57	49	46	60	6·8	40	4·4
Whooping Cough ...	242	438	189	369	455	384	217	362	319	176	315	35·7	289	32·0
Fever	201	204	147	144	147	87	84	66	87	81	125	14·2	84	9·3
Diarrhœa	622	868	651	457	682	234	784	341	535	412	559	63·4	737	81·5
TOTAL	2,652	2,145	1,336	1,576	2,421	1,251	1,324	1,128	1,413	1,306	1,656	187·8	1,681	185·9
London	11,230	13,411	12,565	10,292	14,734	12,216	13,661	13,811	13,553	10,801	12,627	156·4	13,629	164·1

TABLE V.

SUMMARY OF NUISANCES AND OTHER MATTERS REPORTED AND WORK DONE BY THE OFFICERS AND MEN EMPLOYED DURING THE YEAR ENDED DECEMBER 31ST, 1884.

(Return made by Mr. PARKER, *Inspector of Nuisances).*

	Nuisances Reported.	Nuisances Abated.
Nuisances remaining on the Books, Dec. 31st, 1883 ...	3,376	—
Defective Drains requiring opening and clearing from obstruction	3,534	3,370
,, Spout Drains	291	394
,, Drains not efficiently trapped...	1,720	1,973
,, Sink Drains requiring disconnection from the sewer	1,253	1,539
Nuisances arising from the want of drains	97	124
,, ,, ,, the want of an efficient supply of wholesome water ...	47	45
,, ,, ,, the keeping of fowls	566	636
,, ,, ,, an accumulation of water in cellars	113	132
,, ,, ,, the filthy condition of privies...	71	166
,, ,, ,, foul and defective urinals ...	704	638
,, ,, ,, the overcrowding of houses ...	34	38
,, ,, ,, the want of efficient ventilation	50	44
Swine and Swine Styes so kept as to be a nuisance ...	152	144
Houses reported unfit for human habitation	23	24
Houses disinfected, cleansed, and purified, where Zymotic disease has occurred	1,184	1,293
Filthy and unwholesome Houses requiring cleansing and whitewashing	1,949	1,984
Accumulation of wash, deposits of offensive matter, manure, &c.	1,851	2,203
Foul Ashpits and Privies requiring repairs	2,056	2,210
Houses where the privies and ashpits belonging thereto are so foul and defective as to require reconstruction	307	303
Back Yards requiring paving	790	1,017
Number of Privies limewashed by our own men ...	2,432	2,432
,, Courts or Back Yards ,, ,, ...	481	481
,, Dangerous Premises reported to the Borough Surveyor's Department	704	735
,, Defective Water Taps and Standpipes reported to the Water Department	588	660
,, Cases still on the Books under notice ...	—	1,788
Totals	24,373	24,373

Number of Notices issued for the abatement of Nuisances during the Year ended December 31st, 1884 ...	16,060	
Number of Cases Summoned	183	
,, ,, Convicted	179	
,, ,, Withdrawn	4	
Amount of Costs	£15	7 7
,, Penalties	11	2 6
Total ...	£26	10 1
Number of visits to Milkshops		3,291
,, ,, Bakehouses		582

WELL WATERS.

Well Waters submitted for Analysis	283
,, ,, reported polluted	278
No. of Wells closed	273
,, Premises supplied with Tap Water	274
,, Persons Summoned	24
,, ,, Convicted	24
,, ,, Withdrawn	0
Amount of Costs	£2 12 6

SMOKE NUISANCES.

No. of observations made by the Inspectors...	4,892
,, Manufacturers Reported for the emission of dense smoke ...	295
,, ,, Cautioned	153
,, ,, Summoned	142
,, ,, Convicted	141
,, ,, Withdrawn	1
Amount of Penalties	£97 10 0
,, Costs	£53 9 0

COMMON LODGING HOUSES.

No. of Registered Common Lodging Houses	108
,, Lodgers allowed	2,472
,, Houses visited by day	7,244
,, Houses visited by night	3,180
,, Lodgers found occupying the Houses...	41,816
,, Houses Registered under the Public Health Act, 1875 ...	200
,, Lodgers allowed	1,123

THE CANAL BOATS ACT, 1877.

No. of Canal Boats inspected during the Year	1,059
,, Canal Boats registered during the Year	32
,, Persons summoned for Offences against the Act	10
Amount of Penalties	£0 15 0
,, Costs	£3 11 6

SLAUGHTER HOUSES.

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

No. of Visits	1,2711
Seizures of Bad Meat	430
Weight Destroyed	94,363lbs.
Seizures of Fish, &c.	167

CONTAGIOUS DISEASES (ANIMALS) ACT.

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

No. of Visits to Railway Stations	1,765
No. of Visits to Cow Houses	411

TABLE VI.

METEOROLOGICAL CONDITION OF THE AIR, AND AMOUNT OF RAINFALL FOR THE YEAR ENDING DECEMBER 31ST, 1884.

Observed at 9-0 a.m. at the Hollies, Winson Green, by myself and my son, Mr. H. GROSVENOR HILL.

The cistern of the Barometer is 476 feet above the mean level of the sea.

The other Instruments are about 473 feet above the mean level of the sea.

1884. Months.	Pressure of Air. Barometer. Mean Monthly Reading (corrected and reduced to 32 degrees Fahrenheit)	TEMPERATURE OF THE AIR. Reading of Thermometer. Highest in Shade.	Lowest in Shade.	Range of Temperature in the Month.	Mean Temperature in the Month.	RAINFALL. Gauge 1 foot diameter. Receiving surface 3ft. 8in. above the ground. Depth of Rain deposited upon a square foot of surface, in inches and parts.	Measurement converted into weight per acre.	Number of days on which Rain fell, when 5/100ths of an inch or more was measured.
	In. Parts.	Dg. Prts.	Dg. Prts.	Dg. Prts.	Dg. Prts.	In. Parts.	Tons.	
January ...	29·534	54·5	31·0	23·5	43·2	3·04	307	13
February ...	29·351	53·0	25·5	27·5	40·8	1·66	168	11
March	29·401	67·5	29·0	38·5	43·1	2·74	277	7
April	29·323	62·0	28·5	33·5	44·2	1·62	164	9
May	29·475	78·0	37·5	40·5	52·8	1·06	107	7
June	29·533	82·0	39·0	43·0	57·4	2·29	231	5
July	29·421	80·0	46·5	33·5	61·7	2·67	270	15
August ...	29·515	89·0	46·0	43·0	64·1	1·74	176	4
September ...	29·508	81·5	41·0	40·5	58·5	1·19	120	6
October ...	29·604	62·0	33·0	29·0	48·7	1·44	145	7
November ...	29·642	58·0	26·5	31·5	41·8	1·61	163	8
December ...	29·339	54·5	28·5	26·0	39·5	2·48	245	12

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, 1880-1884.

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.
1884	10/1½	22/1½	70/-	Beef -/7 Mut'n -/7¾	2,544	4,346
1883	10/5	25/2	101/8	-/7¾	2,388	4,861
1882	9/9	29/10	75/-	Beef -/5¾ Mut'n -/8¼	2,355	4,886
1881	9/4	26/10	71/-	Beef -/5¾ Mut'n -/8	2,596	4,767
1880	10/-	27/-	75/-	-/6⅝	2,415	4,825

TABLE VII.

RAINFALL AND TEMPERATURE IN EACH MONTH AND YEAR FROM 1874 TO 1884.

MONTH.	1874. Rainfall.	1874. No. of days on which 5-100ths of an inch or more was measured.	1874. Temperature.	1875. Rainfall.	1875. No. of days on which 5-100ths of an inch or more was measured.	1875. Temperature.	1876. Rainfall.	1876. No. of days on which 5-100ths of an inch or more was measured.	1876. Temperature.	1877. Rainfall.	1877. No. of days on which 5-100ths of an inch or more was measured.	1877. Temperature.
January ...	1·86	10	41·4	3·12	16	44·4	1·75	6	36·1	4·47	18	42·8
February ...	2·68	9	38·2	1·68	10	36·0	2·55	14	39·6	2·43	12	44·5
March	1·72	16	44·6	0·81	5	40·7	3·16	22	40·8	2·72	15	40·3
April	1·45	5	50·5	1·09	7	47·2	1·98	13	47·5	2·82	12	45·0
May	3·24	7	50·5	2·10	12	54·1	1·00	5	48·1	2·27	9	48·2
June	1·13	5	58·5	3·91	15	58·0	2·23	8	58·0	2·96	10	59·0
July	1·26	8	64·0	8·14	13	58·9	1·42	6	63·7	5·03	12	59·8
August ...	1·99	14	60·1	1·80	7	62·0	1·22	5	62·7	2·29	10	61·6
September ...	4·54	19	56·4	3·89	14	59·3	5·83	21	55·7	4·58	13	54·9
October ...	2·71	12	51·2	7·21	16	47·4	2·26	3	53·0	1·91	12	49·1
November ...	1·45	10	41·6	3·31	10	41·9	2·94	8	43·4	2·87	15	47·4
December ...	4·38	16	33·9	1·45	10	39·1	5·68	19	42·9	2·40	11	41·3
Year	28·41	131	49·0	38·51	135	49·1	32·02	136	49·4	36·75	149	49·1

MONTH.	1878. Rainfall.	1878. No. of days on which 5-100ths of an inch or more was measured.	1878. Temperature.	1879. Rainfall.	1879. No. of days on which 5-100ths of an inch or more was measured.	1879. Temperature.	1880. Rainfall.	1880. No. of days on which 5-100ths of an inch or more was measured.	1880. Temperature.	1881. Rainfall.	1881. No. of days on which 5-100ths of an inch or more was measured.	1881. Temperature.
January ...	1·96	11	43·2	2·01	10	32·4	0·69	3	33·7	0·96	4	28·4
February ...	1·11	8	40·1	3·68	18	38·5	3·12	16	41·0	3·43	13	36·3
March	1·17	9	43·6	0·95	9	40·7	0·53	3	41·7	2·37	11	41·0
April	2·17	11	48·3	3·39	16	43·6	2·35	7	46·0	0·78	3	44·3
May	5·33	21	54·7	4·26	13	50·1	1·62	6	50·6	1·48	7	53·9
June	3·37	14	60·8	6·16	19	56·0	2·55	17	56·2	1·74	15	57·9
July	0·98	7	63·7	3·97	18	59·0	4·80	20	59·8	1·66	9	62·5
August ...	6·44	18	62·0	5·72	13	60·1	0·80	4	60·9	5·18	16	57·4
September ...	3·15	13	56·9	3·59	12	55·6	4·63	10	58·7	1·65	9	54·4
October ...	3·66	16	52·2	2·06	9	49·6	6·38	11	44·0	3·17	11	45·2
November ...	3·15	11	39·4	1·98	12	40·9	2·30	9	40·1	3·13	16	47·3
December ...	2·44	11	31·2	1·07	5	35·3	3·48	13	41·7	3·40	9	37·9
Year	34·93	150	49·6	38·84	154	46·8	33·25	119	48·0	28·95	123	47·2

MONTH.	1882. Rainfall.	1882. No. of days on which 5-100ths of an inch or more was measured.	1882. Temperature.	1883. Rainfall.	1883. No. of days on which 5-100ths of an inch or more was measured.	1883. Temperature.	Average for 10 yrs. 1874—1883. Rainfall.	Average for 10 yrs. 1874—1883. No. of days on which 5-100ths of an inch or more was measured.	Average for 10 yrs. 1874—1883. Temperature.	1884. Rainfall.	1884. No. of days on which 5-100ths of an inch or more was measured.	1884. Temperature.
January ...	2·41	7	40·5	4·21	14	40·3	2·34	10	38·3	3·04	13	43·2
February ...	2·15	5	41·9	3·53	13	42·4	2·64	12	39·8	1·66	11	40·8
March	2·57	6	45·6	1·44	9	35·1	1·74	11	41·4	2·74	7	43·1
April	4·18	17	47·0	0·98	6	47·1	2·12	10	46·6	1·62	9	44·2
May	3·19	11	52·9	1·38	9	51·5	2·59	10	51·5	1·06	7	52·8
June	4·00	15	55·7	3·63	9	57·0	3·17	13	57·7	2·29	5	57·4
July	3·83	14	60·0	3·95	11	58·4	3·50	12	61·0	2·67	15	61·7
August ...	2·48	12	59·2	0·64	5	60·5	2·86	10	60·6	1·74	4	64·1
September ...	3·03	9	53·7	5·89	15	55·9	4·08	13	56·1	1·19	6	58·5
October ...	6·61	15	48·9	2·64	12	49·2	3·86	12	49·0	1·44	7	48·7
November ...	4·56	18	42·0	4·47	15	41·9	3·02	12	42·6	1·61	8	41·8
December ...	4·59	18	37·8	1·02	5	40·4	2·99	12	38·1	2·48	12	39·5
Year	43·60	147	48·8	33·78	123	48·3	34·91	137	48·5	23·54	104	49·6

TABLE VIII.

NEW CASES OF DISEASE COMING UNDER TREATMENT DURING THE YEAR ENDING JAN. 3RD, 1885, AT THE FOLLOWING INSTITUTIONS.

DISEASES.	I. General Hospital.	II. General Dispensy.	III. Queen's Hospital.	IV. Children's Hospital.	V. The Work-house.	VI. Out-door Pauper Patients.	VII. Boro' Hosptl.	TOTAL.
Small-pox	6	8	3	...	2	66	437	522
Measles	88	69	21	33	24	442	...	677
Scarlet Fever.....	23	25	27	90	29	51	360	605
Diphtheria	5	1	...	8	...	...	...	14
Whooping Cough ...	58	119	23	1,192	16	256	...	1,664
Croup	12	1	4	34	...	7	...	58
Diarrhœa	5,875	253	2,946	1,250	112	417	...	10,853
Dysentery	2	...	...	2	...	6	...	10
Asiatic Cholera	...	...	...	...	...	...	...	...
Erysipelas	119	40	162	15	15	36	...	387
Continued Fever ...	...	1	...	...	...	1	...	2
Typhus	...	...	1	...	...	...	...	1
Enteric or Typhd.	55	59	28	26	13	5	...	186
Relapsing	...	...	...	...	...	...	...	...
Febricula.....	134	36	44	138	...	290	...	642
Ague	2	...	...	...	...	...	...	2
Rheumatic Fever ...	108	205	73	40	...	37	...	463
Puerperal Fever ...	...	6	1	...	5	...	..	12
Bronchitis & Catarrh	919	1,697	1,079	1,757	578	2,467	...	8,497
Influenza.....	...	2	...	...	...	...	...	2
Pleurisy & Pneumonia	309	223	123	183	93	59	...	990
Phthisis	349	1,120	416	137	302	182	...	2,506
Constl. Syphilis	129	156	441	199	281	46	...	1,252
All other diseases ...	22,867	16,219	14,040	10,512	4,506	4,035	...	72,179
Accidents	13,299	199	8,701	150	258	68	...	22,675
Totals	44,359	20,439	28,133	15,766	6,234	8,471	797	124,199

The above returns are made by (I.)—G. Coulson Bull, Esq., F.R.C.S.; (II.)—Henry J. Ley, Esq., M.B., D. Holmes, Esq., M.B., R. A. Fitch, Esq., M.R.C.S., and Thomas Nelson, Esq., M.B ; (III.)—Sidney C. Lawrence, Esq., L.R.C.P.; (IV.)—L. Jones Bateman, Esq., B.A., M.B.; (V.)—Walter Bowen, Esq., Clerk to the Guardians; (VI.)—A. B. Simpson, Esq., L.R.C.S., Surgeon; (VII.)—W. H. Line, Esq., B.A., M.D., Medical Superintendent.

TABLE IX.—WATER: RESULTS OF ANALYSES

Date of Receipt of Samples.	DESCRIPTION.	Temp. C.	Total Solid Impurity	Organic Carbon.	Organic Nitrogen.
1884.	**CORPORATION SUPPLY.**				
Jan. 4th	4 Court, Bromsgrove Street	7°·8	26·86	·178	·023
Feb. 4th	16 Court, Great Charles Street.....	7°·2	28·88	·131	·020
Mar. 18th	54, Crabtree Road	8°·9	27·18	·080	·011
April 4th	39, New Canal Street.....	8°·9	28·88	·126	·025
May 5th	45 Court, Irving Street	11°·1	25·46	·055	·021
June 6th	132, Harborne Road	12°·8	30·84	·034	·010
July 3rd	4 Court, Allison Street	18°·3	26·46	·106	·029
Aug. 6th	102, Vyse Street	17°·2	25·38	·201	·039
Sept. 3rd	191, Icknield Port Road.....	15°·5	32·86	·079	·018
Oct. 7th	8 Court, Dartmouth Street	13°·3	25·62	·096	·030
Nov. 4th	3 Court, Russell Street	10°·6	25·82	·108	·033
Dec. 3rd	42, Winson Green Road.....	9°·4	31·54	·037	·028
	Average Results ... 1884...	11°·7	27·98	·103	·024
	,, ,, ... 1883...	11°·4	27·23	·148	·027
	,, ,, ... 1882...	7°·6	29·15	·171	·028
	,, ,, ... 1881...	10°·8	26·98	·185	·029
	,, ,, ... 1880...	10°·3	26·02	·205	·036
	WELL WATERS.				
Jan. 3rd.	1 Court, Allison Street (Measles)	...	208·80	...	moderate
,, ,,	Back 130, Digbeth (2nd time)	...	57·60	...	small
,, ,,	80 and 82, Green Lane (Measles)	...	133·80	...	very large
,, ,,	214, Green Lane (Small-Pox & Scarlet Fever)	...	130·60	...	...
,, 4th	Back 33 and 34, Essex St. (Small-Pox)	...	177·80	...	...
,, ,,	18 Court, Benacre Street	...	170·20	...	...
,, 10th	5 Court, Coventry Road.....	...	120·60	...	...
,, ,,	Back 108, Well Street	...	137·60	...	large
,, ,,	54—56, Edward Street	...	217·80	...	...
,, ,,	9 and 10, Moseley Street	...	158·60	...	moderate
,, ,,	177, Moseley Street	...	179·80	...	...
,, ,,	15 and 16, Ormond Street.....	...	175·20	...	large
,, 16th	229 and 231, Bristol Street (Small-Pox)	...	144·60	...	...
,, ,,	4 and 6, Bristol Street	...	180·60	...	..
,, ,,	2, Greenway Street, and 409 and 410, Coventry Road.....	...	146·60	...	...
,, ,,	1—5, Bromsgrove Street	...	29·80	...	moderate
,, 17th	135, Great Hampton Street	...	155·80	...	large
,, ,,	Lee Bank Square, Lee Bank Road (2nd time)	...	74·20	...	very large
,, 23rd	125, Moseley Street.....	...	177·80	...	very large
,, ,,	Back 95 and 96, Coventry Road ...	...	122·60	...	moderate
,, 24th	Back 67, Lower Trinity Street.....	...	171·80	...	large
,, ,,	2, Lower Trinity Street	..	188·60	...	large
,, 25th	6 Court, Moor Street	...	114·80	...	very large
,, ,,	15 Court, Watery Lane	...	152·20	...	very large
,, ,,	22 and 22½ Norton Street	...	101·10	...	...

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.	
·003	·154	·179	1,240	1·5	6°·7	7°·6	14°·3	
·003	·275	·297	2,450	2·0	8°·1	8°·3	16°·4	Very slightly turbid; slightly greenish.
·003	·319	·332	2,890	1·9	6°·7	10°·0	16°·7	Clear; greenish.
·004	·099	·127	700	1·4	12°·5	10°·2	22°·7	Clear
·002	·319	·341	2,880	2·1	6°·3	9°·0	15°·3	Very slightly turbid
·001	·248	·259	2,170	1·7	10°·8	10°·2	21°·0	Very slightly turbid
·004	·110	·142	810	1·5	5°·9	8°·0	13°·9	Very slightly turbid; slightly greenish.
·001	·110	·150	790	1·7	5°·7	9°·3	15°·0	Slightly turbid; slightly greenish.
·001	·264	·283	2,330	1·4	6°·4	12°·4	18°·8	Clear; very slightly greenish
·002	·110	·141	790	1·6	3°·2	10°·7	13°·9	Slightly turbid, slightly greenish
·001	·242	·276	2,110	1·9	5°·1	6°·7	11°·8	Very slightly turbid, slightly greenish
·002	·165	·194	1,340	1·5	10°·3	8°·0	18°·3	Clear, very slightly green
.002	·201	·227	1,710	1·7	7°·3	9°·2	16°·5	
·002	·250	·278	2,190	1·8	7°·5	9°·3	16°·8	
·003	·227	·266	1,870	1·7	6°·8	9°·2	16°·0	
·003	·252	·283	2,220	1·7	7°·6	7°·8	15°·4	
·003	·279	·317	2,470	1·7	7°·7	7°·0	14°·7	
·002	3·52	3·521	34,890	36·2	...	...	...	Clear
·002	·55	·551	5,190	7·1	...	...	..	Clear
·002	7·37	7·371	73,390	12·5	...	...	...	Clear
1·100	5·39	6·296	62,640	12·1	...	...	...	Clear
·040	6·60	6·632	66,000	21·7	...	...	...	Clear
·110	4·18	4·270	42,380	14·5	...	...	...	Clear
·020	2·42	2·436	24,040	6·4	...	...	...	Clear
·001	5·72	5·721	56,890	18·8	...	..	...	Clear
·700	7·15	7·730	76,980	35·9	...	...	...	Clear
·004	4·73	4·733	47,010	15·0	...	...	...	Clear
·110	1·98	2·070	20,380	12·0	...	...	...	Clear
·001	1·98	1·981	19,490	19·1	...	...	...	Clear
·012	6·05	6·060	60,280	10·5	...	...	...	Clear
·010	9·24	9·248	92,160	22·3	...	...	...	Clear
·030	5·50	5·525	54,930	18·5	...	...	...	Clear
·002	·66	·661	6,290	2·5	...	...	...	Clear
·005	4·62	4·624	45,920	17·9	...	...	...	Clear
·006	3·41	3·415	33,830	8·6	...	...	...	Clear
·003	1·54	1·542	15,100	16·8	...	...	...	Turbid
·001	·66	·661	6,290	6·9	...	...	...	Clear
·002	4·95	4·951	49,190	21·5	...	...	...	Clear
·000	2·31	2·310	22,780	16·0	...	...	...	Clear
·004	2·20	2·203	21,710	14·3	...	...	...	Clear
·005	2·86	2·864	28,320	11·3	...	...	...	Clear
·065	2·75	3·285	32,530	14·6	...	...	...	Clear

TABLE IX—

Date of Receipt of Samples.	DESCRIPTION.	Temp. C.	Total Solid Impurity.	Organic Carbon.	Organic Nitrogen
1884.	**WELL WATERS—(continued).**				
Feb. 4th	116 and 117, Nechells Park Road	...	95·80	...	moderate
,, ,,	1 and 3, Walter Street, and Houses corner of Long Acre	...	235·60	...	...
,, ,,	16 and 17, Freeman Street (Scarlet Fever)	...	99·80	...	...
,, ,,	243—251, Bloomsbury Street, and 35, Weston Street	...	167·60	...	...
,, ,,	Southfield, Church Road, Edgbaston	...	31·80	...	small
,, 5th	11 and 12, Augusta Street (Small-Pox)	...	335·20	...	...
,, 11th	House occupied by Hodgetts, Park Road (Small-Pox)	...	106·80	...	large
,, ,,	74—80, Hingeston Street (Small-Pox)	...	47·60	...	small
,, ,,	308—310, Bell Barn Road.....	...	153·80	...	rather large
,, ,,	185 and 187, Bristol Street	...	152·60	...	rather large
,, ,,	5 and 7, Alexandra Road	...	176·80	...	excessive
,, ,,	3, Alexandra Road	...	184·20	...	...
,, 18th	140 and 142, Grosvenor Street West	...	139·80	...	moderate
,, ,,	12 and 13, Ladywood Road (Diphtheria)	...	166·60	...	...
,, ,,	124 and 125, Ryland Road.....	...	90·80	...	small
,, ,,	114 and 116, Cregoe Street	...	118·60	...	moderate
,, ,,	119 and 120, Cregoe Street	...	127·80	...	moderate
,, ,,	Back 8, Eyre Street	...	176·20	...	...
,, 25th	61—63, Hollier Street (Scarlet Fever) ...	...	151·80	...	very large
,, ,,	9 Court, Lombard Street	...	177·60	...	very large
,, ,,	18 and 20, Bristol Road.....	...	117·80	...	moderate
,, ,,	32 and 33, Princess Road	...	83·60	...	large
,, ,,	34 and 35, Princess Road	...	102·80	...	very large
,, ,,	36, Princess Road	...	126·20	...	very large
,, 28th	80 and 82, White Road	...	63·00	...	rather large
,, ,,	48, Grantham Road (Diphtheria).....	...	92·40	...	...
March 5th	44, Grantham Road.....	...	52·80	...	large
,, ,,	50 and 52, Grantham Road	...	75·60	...	...
,, ,,	54, Grantham Road	...	69·80	...	very large
,, ,,	30 and 31, Tillingham Street.....	...	94·60	...	moderate
,, ,,	18—25, Skinner Street	...	198·80	...	...
,, ,,	30 and 32, Sherlock Street.....	...	126·20	...	...
,, 12th	74 and 75, Summer Hill.....	...	117·80	...	large
,, ,,	136 and 137, Aberdeen Street	...	144·60	...	...
,, ,,	138 and 139, Aberdeen Street	...	65·80	...	large
,, ,,	140 and 141, Aberdeen Street	...	52·60	...	moderate
,, ,,	142 and 143, Aberdeen Street	...	57·80	...	large
,, 13th	Back 3, Upper Mill Lane	...	206·20	...	rather large
,, 18th	13 Court, Kent Street	...	171·80	...	...
,, ,,	305 and 306, New John Street West	...	149·60	...	...
,, ,,	86—92, Green Lane	...	98·80	...	large
,, ,,	231—235, Green Lane	...	123·60	...	rather large
,, ,,	20 and 21, Whitmore Road	...	102·80	...	large
,, ,,	22, Whitmore Road	...	131·20	...	rather large

(*continued*).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated.)	Chlorine.	Hardness.			REMARKS.
					Temporary.	Permanent.	Total.	
·003	3·96	3·962	39,300	12·2	...	...	...	Clear
·025	3·30	3·320	32,780	12·5	...	...	...	Clear
·012	4·40	4·410	43,780	6·1	...	...	...	Clear
·030	8·80	8·824	87,920	16·5	...	...	...	Clear
·002	·99	·991	9,990	3·6	...	...	...	
·035	23·54	23·568	235,360	53·3	...	...	...	Clear
·002	4·62	4·621	45,890	6·5	..	...	...	Clear
·001	·44	·441	4,090	5·5	...	...	...	Clear
·001	5·72	5·721	56,890	15·1	...	...	...	Clear
·002	5·28	5·281	52,490	14·5	...	...	...	Clear
·005	4·40	4·404	43,720	9·2	...	...	...	Slightly turbid.
·014	3·96	3·971	39,390	9·1	...	...	...	Turbid; greenish.
·005	6·16	6·164	61,320	14·7	...	...	...	Clear
·280	4·40	4·630	45,980	13·8	...	...	...	Clear
·005	2·09	2·094	20,620	15·3	...	...	...	Clear
·002	6·71	6·711	66,790	17·7	...	...	...	Clear
·005	4·95	4·954	49,220	26·2	...	...	...	Clear
·030	7·04	7·064	70,320	28·1	...	...	...	Clear
·003	4·40	4·402	43,700	12·8	...	...	...	Clear
·001	5·50	5·501	54,690	12·0	...	...	...	Clear
·002	3·08	3·081	30,490	9·5	...	...	...	Clear
·001	·88	·881	8,490	3·9	...	...	...	Clear
·002	·66	·661	6,290	5·2	...	...	...	Clear
·002	3·52	3·521	34,890	4·2	...	...	...	Clear
·003	2·75	2·752	27,200	3·9	...	...	...	Clear
·070	2·09	2·148	21,160	10·1	...	...	...	Clear
·003	1·10	1·102	10,700	3·1	...	...	...	Clear
·025	2·64	2·660	26,280	6·5	...	...	...	Clear
·005	trace	trace	none	3·4	...	..	...	Clear
·002	1·32	1·321	12,890	8·7	...	...	...	Clear
1·200	6·05	7·038	70,060	23·9	...	...	...	Clear
·050	1·54	1·581	15,490	13·1	...	...	...	Clear
·007	5·50	5·505	54,730	9·9	...	...	...	Clear
1·600	8·25	9,568	95,360	17·1	...	...	...	Clear
·005	2·42	2·424	23,920	2·2	...	...	...	Clear
·003	1·65	1·652	16,200	6·3	...	...	...	Clear
·003	1·98	1·982	19,500	8·0	...	...	...	Clear
·001	5·72	5·721	56,890	28·8	...	...	...	Clear
·080	2·20	2·266	22,340	14·0	...	...	...	Clear
·020	4·40	4·416	43,840	21·1	...	...	...	Clear
·002	4·18	4·181	41,490	5·8	...	...	...	Clear
·001	3·63	3·631	35,990	17·2	...	...	...	Clear
·007	2·09	2·096	20,640	7·5	...	...	...	Clear
·003	1·10	1·102	10,700	9·3	...	...	...	Clear

TABLE IX—

Date of Receipt of Samples.	DESCRIPTION.	Temp. C.	Total Solid Impurity.	Organic Carbon.	Organic Nitrogen.
1884.	WELL WATERS—(continued.)				
Mar. 25th	27 and 29, Newtown Row.....	...	205·80	...	...
,, ,,	14, Rodway Street	...	91·60	...	large
,, 26th	9 and 10, Tillingham Street	...	171·80	...	very large
,, ,,	10 and 11, Tillingham Street	...	168·60	...	large
,, ,,	Holtom Place, Tillingham Street...	...	150·80	...	very large
,, ,,	12 and 14, Turner Street		133·20	...	large
April 2nd	480—483, Coventry Road	...	51·80	...	large
,, ,,	110 and 111, Digbeth (Typhoid).....	...	273·60	...	large
,, ,,	Back 296 and 297, Monument Road	...	93·80	...	...
,, ,,	24 and 25, Icknield Port Road.....	...	91·60	...	moderate
,, 3rd	2 Court, Deritend	...	191·80	...	...
,, ,,	48 and 50 Emily Street.....	...	151·20	...	large
,, 15th	4 Court, Vauxhall Road.....	...	96·80	...	large
,, ,,	9, Union Terrace, Vauxhall Road...	...	175·60	...	very large
,, ,,	376 and 377, Nechells Park Road...	...	141·80	...	large
,, ,,	70—80, Cuckoo Road.....	...	92·60	...	very large
,, ,,	142 and 143, Argyle Street	...	113·80	...	very large
,, 16th	16 Court, Nelson Street South.....	...	260·40	...	very large
,, 21st	265—268, Icknield Port Road	...	36·60	...	rather large
,, ,,	103 and 104, Icknield Port Road...	...	88·40	...	moderate
,, ,,	20, Pershore Street	...	148·80	...	...
,, ,,	105 and 107, Hagley Road	...	60·80	...	rather large.
,, ,,	101 and 103, Hagley Road	...	44·40	...	moderate
,, ,,	97 and 99, Hagley Road	...	46·80	...	rather small
,, 22nd	7 and 8, Frederick Road	...	96·00	...	moderate
,, 25th	299 and 301, Monument Road	...	50·20	...	moderate
May 1st	299 and 301, Monument Road	...	50·80	...	rather large
,, 5th	5 and 6, Frederick Road	...	67·60	...	large
,, ,,	1 Court, Pritchett Street	...	112·40	...	large
,, ,,	121, Bordesley Park Road	...	96·80	...	moderate
,, ,,	2 Court, Bordesley Park Road.....	...	94·80	...	large
,, ,,	54—57, Coventry Road	...	121·40	...	very large
,, ,,	58 and 59, Coventry Road.....	...	137·80	...	very large
,, 12th	18 Court, Darwin Street	...	169·60	..	large
,, ,,	19 and 20 Courts, Darwin Street...	...	172·40	...	large
,, ,,	67—72, Camp Hill.....	...	166·80	...	very large
,, ,,	69—73, Miles Street	...	103·60	...	...
,, ,,	11 Court, Bordesley Park Road ...	...	113·40	...	moderate
,, ,,	3 Court, Lennox Street.....	...	93·80	..	very large
,, 19th	33, Milton Street.....	...	176·60	...	...
,, ,,	6 Court, Emily Street	...	268·40	...	very large
,, ,,	65, Emily Street.....	...	168·80	...	moderate
,, ,,	15, Darwin Street and 163, Vaughton Street	...	159·80	...	moderate
,, 20th	1 Court, Bromsgrove Street	...	72·40	...	large
,, ,,	21 and 22, Warstone Lane	...	170·80	...	very large
,, 26th	13 Court, Bordesley Park Road ...	...	115·60	...	rather large

(*continued*).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Temporary.	Permanent.	Total.	
1·700	4·62	6·023	59,910	33·1	...	...	...	Clear
·007	1·65	1·655	16,230	13·0	...	...	...	Clear
·006	4·18	4·185	41,530	11·1	...	...	...	Clear
·002	4·07	4·071	40,390	12·0	...	...	...	Clear
·002	2·86	2·861	28,290	8·8	...	...	...	Clear
·001	1·32	1·321	12,890	6·1	...	...	...	Clear
·003	·11	·112	800	7·6	...	...	...	Clear
·001	2·75	2·751	27,190	76·9	...	...	...	Clear
·200	4·62	4·784	47,520	12·3	...	...	...	Clear
·002	4·84	4·841	48,090	8·7	...	...	...	Clear
·150	1·87	1·993	19,610	21·1	...	...	...	Clear
·002	4·18	4·181	41,490	13·1	...	...	...	Clear
·003	4·95	4·952	49,200	13·2	...	...	...	Clear
·004	8·58	8·583	85,510	14·2	...	...	...	Clear
·002	7·04	7·041	70,090	15·5	...	...	...	Clear
·002	2·97	2·971	29,490	9·1	...	...	...	Clear
·002	3·74	3·741	37,090	8·1	...	...	...	Clear
·001	13·64	13·641	136,090	25·2	...	...	...	Clear
·002	·22	·221	1,890	4·7	...	...	...	Clear
·003	1·21	1·212	11,800	9·2	...	...	...	Clear
·035	3·96	3·988	39,560	21·5	...	...	...	Clear
·007	2·42	2·425	23,930	6·0	...	...	...	Clear
·001	·66	·661	6,290	5·1	..	...	...	Clear
·001	·88	·881	8,490	5·6	...	...	...	Clear
·004	3·74	3·743	37,110	8·9	...	...	...	Clear
·003	1·43	1·432	14,000	3·4	...	...	...	Clear
·003	1·65	1·652	16,200	3·4	...	...	...	Clear
·002	3·19	3·191	31,590	6·0	...	...	...	Clear
·005	3·30	3·304	32,720	13·0	...	...	...	Clear
·002	·88	·881	8,490	6·7	...	.	...	Clear
·002	2·97	2·971	29,390	5·9	...	...	...	Clear
·003	5·61	5·612	55,800	8·3	...	...	...	Clear
·007	6·27	6·275	62,430	10·9	...	...	...	Clear
·001	2·20	2·201	21,690	15·5	...	...	...	Clear
·002	3·96	3·961	39,290	15·6	...	...	...	Clear
·001	2·42	2·421	23,890	22·1	...	...	...	Clear
·800	·66	1·319	12,870	7·6	...	...	...	Clear
·001	1·76	1·761	17,290	6·1	...	...	...	Clear
·006	2·64	2·645	26,130	15·6	...	...	...	Clear
·700	4·29	4·867	48,350	20·1	...	...	...	Clear
·004	3·08	3·083	30,510	28·9	...	...	...	Clear
·001	2·09	2·091	20,590	12·0	...	...	...	Clear
·002	2·53	2·531	24,990	20·0	...	...	...	Clear
·006	·99	·995	9,630	6·8	...	...	...	Clear
·011	8·58	8·589	85,570	23·9	...	...	...	Clear
·001	·44	·441	4,090	8·9	...	...	...	Clear

TABLE IX—

Date of Receipt of Samples.	DESCRIPTION.	Temp. C.	Total Solid Impurity.	Organic Carbon.	Organic Nitrogen.
1884.	WELL WATERS—(continued).				
May 26th	21 and 22, Watery Lane	...	221·40	...	very large
,, ,,	3, Park Street.....	...	122·80	...	...
,, ,,	86, Kent Street	...	206·60	...	very large
,, ,,	25—27, Gooch Street.....	...	134·40	...	very large
,, 27th	4 Court, Clark Street...	...	87·80	...	rather large
June 3rd	51—55, Montgomery Street	...	47·60	...	very large
,, ,,	57—59, Montgomery Street	...	72·40	...	very large
,, ,,	77—83, Montgomery Street	...	76·80	...	very large
,, ,,	85—91, Montgomery Street	...	46·60	...	very large
,, ,,	404 and 405, Park Road, Soho.....	...	100·40	...	very large
,, ,,	147—149, Sandpits	...	127·80	...	very large
,, 9th	45, Carpenter Road (Small-Pox)	...	23·60	...	rather small
,, ,,	22 and 23, Lee Crescent	...	52·40	...	small
,, ,,	4 Court, Kent Street	...	81·80	...	large
,, ,,	5 Court, Kent Street	...	144·60	...	moderate
,, ,,	33, Leopold Street	...	226·40	...	excessive
,, ,,	93—99, Highgate Road.....	...	103·80	...	large
,, 16th	The Hollies, Yardley Road	...	161·60	...	...
,, ,,	68—70, Muntz Street	...	116·40	...	large
,, ,,	56, Wright Street	...	146·80	...	large
,, ,,	42 and 43 Courts, New John Street West	...	136·60	...	...
,, ,,	11 and 12, Wellesley Street..... ...	...	114·40	...	...
,, ,,	12—14, Graham Street	...	176·60	...	rather large
,, 17th	83 and 85, Friston Street	...	96·60	...	large
,, 24th	107 and 109, Bristol Road.....	...	101·60	...	rather large
,, 30th	177 and 179, Sherlock Street	...	205·60	...	very excessive
,, ,,	141 and 143, Saint Luke's Road ...	...	128·40	...	...
,, ,,	17 Court, Lionel Street (Measles)	...	176·80	...	...
,, ,,	4—7, Tenby Street.....	...	226·60	...	large
,, ,,	45 and 46, Summer Hill	...	92·40	...	very large
July 7th	16, Montpellier Street (Typhoid) ...	...	153·60	...	very large
,, ,,	18 and 20, Braithwaite Road (Diphtheria).....	...	103·40	...	,,
,, ,,	405 and 406, Monument Road	...	58·80	...	large
,, ,,	32, Bellis Street	...	183·60	...	...
,, ,,	Laurel Place, Bellis Street	..	120·40	...	...
,, ,,	20 to 23, Bellis Street	...	82·60	...	...
,, 14th	98, Bell Barn Road.....	...	121·60	...	moderate
,, ,,	105, Pershore Road	...	98·40	...	,,
,, ,,	58 and 59, Priestley Road.....	...	92·80	...	rather small
,, ,,	80, Kyrwick's Lane	...	83·60	...	moderate
,, ,,	74–76, Kyrwick's Lane	...	128·40	...	very large
,, ,,	29 and 30, Kyrwick's Lane	...	126·60	...	,,
,, 21st	33, Dymoke Street	...	133·60	...	moderate
,, ,,	89 and 90, Dymoke Street.....	...	156·40	...	,,
,, ,,	62 and 63, Charles Henry Street ...	...	158·80	...	...

(*continued*).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated.)	Chlorine.	Hardness.			REMARKS.
					Temporary.	Permanent.	Total.	
·001	4·62	4·621	45,890	32·1	...	...	...	Clear
·120	3·74	3·839	37,970	14·0	...	...	...	Clear
·001	6·38	6·381	63·490	17·0	...	...	...	Clear
·002	1·54	1·541	15,090	15·0	...	...	...	Clear
·001	3·08	3·081	30,490	12·2	...	...	...	Clear
·001	·44	·441	4,090	3·5	...	...	...	Clear
·020	2·42	2·436	24,040	5·2	...	...	...	Clear
·002	2·64	2·641	26,090	6·1	. .	...	...	Clear
·002	·33	·331	2,990	3·8	...	...	...	Clear
·003	2·31	2·312	22,800	6·0	...	...	...	Clear
·004	4·95	4·953	49,210	11·6	...	...	...	Clear
·001	·22	·221	1,890	3·0	...	...	...	Clear
·002	2·42	2·421	23,890	5·6	...	...	...	Clear
·002	2·09	2·091	20,590	10·8	...	...	...	Clear
·001	4·95	4·951	49,190	18·3	...	...	...	Clear
·001	·22	·221	1,890	22·9	...	...	...	Clear
·001	1·32	1·321	12,890	10·3	...	...	...	Clear
·500	2·53	2·942	29,100	14·1	...	...	...	Clear
·003	3·30	3·302	32,700	11·0	...	...	...	Clear
·002	3·74	3·741	37,090	10·2	...	...	...	Clear
·018	4·62	4·635	46,030	16·5	...	...	...	Clear
·600	3·52	4·014	39,820	13·8	...	...	...	Clear
·003	5·28	5·282	52,500	14·2	...	...	...	Clear
·004	3·41	3·413	33,810	10·9	...	...	...	Clear
·002	2·20	2·201	21,690	5·8	...	...	...	Clear
·006	1·43	1·435	14,030	49·5	...	...	...	Clear
·380	1·54	1·853	18,210	5·8	...	...	...	Clear
·190	2·64	2·797	27,650	45·1	...	...	...	Clear
·004	12·65	12·653	126,210	21·8	...	...	...	Clear
·003	3·08	3·082	30,500	5·0	...	...	...	Clear
·005	3·30	3·304	32,720	15·5	...	...	...	Clear
·003	2·20	2·202	21,700	8·8	...	...	...	Clear
·002	2·20	2·201	21,690	11·5	...	...	...	Clear
1·000	8·91	9·733	97,010	21·8	...	...	...	Clear
·090	3·74	3·814	37,820	9·6	...	...	...	Clear
·750	3·41	4·028	39,960	10·0	...	...	...	Clear
·004	4·84	4·843	48,110	13·1	...	...	...	Clear
·003	3·63	3·632	36,000	5·4	...	...	...	Clear
·002	3·41	3·412	33,800	6·0	...	...	...	Clear
·003	1·32	1·322	12,900	8·4	...	...	...	Clear
·002	4·40	4·401	43,690	9·7	...	...	...	Clear
·001	1·32	1·321	12,890	10·2	...	...	...	Clear
·002	2·75	2·751	27,190	10·5	...	...	...	Clear
·001	3·96	3·961	39,290	13·1	...	...	...	Clear
1·450	3·96	5·154	51,220	13·3	...	...	...	Clear

TABLE IX—

Date of Receipt of Samples.	DESCRIPTION.	Temp. C.	Total Solid Impurity	Organic Carbon.	Organic Nitrogen.
1884.	**WELL WATERS—(continued).**				
July 21st	86 and 87, Charles Henry Street ...	...	105·60	...	...
,, ,,	52 and 53, Branston Street	...	242·40	...	...
,, ,,	70—80, Cuckoo Road.....	...	112·60	...	...
,, 23rd	207 and 209, Bristol Road.....	...	73·80	...	moderate
,, 28th	100, Bristol Street	...	98·20	...	,,
,, ,,	94, Wrentham Street	...	204·40	...	very large
,, ,,	7 and 9, Belgrave Road	...	86·80	...	large
,, ,,	68 and 70, Belgrave Road	...	98·60	...	very large
,, ,,	72 and 74, Belgrave Road.....	...	99·40	...	very large
,, ,,	76 and 78, Belgrave Road.....	...	125·60	...	,,
,, 30th	185 and 187, Bristol Street	...	202·40	...	large
,, ,,	308 and 310, Bell Barn Road	...	143·50	...	large
Aug. 5th	Lee Bank Square, Lee Bank Road	...	55·60	...	,,
,, 11th	7, Burbury Street	...	121·60	...	...
,, ,,	58—61, Lombard Street.....	...	174·40	...	large
,, ,,	58 and 59, Rea Street	...	294·80	...	...
,, ,,	197, Stratford Road	...	46·60	...	large
,, ,,	3 and 4, Tillingham Street	...	192·40	...	very large
,, ,,	14 and 15, Albert Street.....	...	70·60	...	...
,, ,,	26, Wordsworth Road	...	60·60	...	moderate
Sept. 1st	36 Court, Hope Street	...	170·60	...	large
,, ,,	40, Bristol Street (Diphtheria).....	...	176·40	...	rather large
,, ,,	9 and 10, Lower Essex Street	...	121·80	...	,,
,, ,,	6 Court, Skinner Lane (Diarrhœa)	...	108·60	...	...
,, ,,	3—7, Bordesley Street	...	208·40	...	excessive
,, ,,	88 and 89, Parade	...	216·60	...	...
,, 8th	Back 186, Green Lane (Diarrhœa)	...	67·60	...	rather large
,, ,,	178 & 180, Green Lane (Diarrhœa)	...	106·40	...	very large
,, ,,	Back 243 Gooch Street	...	128·80	...	moderate
,, ,,	233 and 234, Gooch Street.....	...	92·60	...	,,
,, ,,	9 and 11, Pershore Road	...	144·40	...	very large
,, ,,	249—253, Sherlock Street.....	...	217·60	...	,,
,, 15th	77 & 79, Pershore Road (Diarrhœa)	...	61·60	...	moderate
,, ,,	81 & 83, Pershore Road	...	89·40	...	large
,, ,,	64 and 65, Lee Bank Road	...	48·80	...	rather large
,, ,,	125, Bell Barn Road	...	155·60	...	...
,, ,,	12 and 13, Gladstone Road	...	96·40	...	very large
,, ,,	161 and 162, Moseley Road	...	124·60	...	large
,, 18th	29 and 30, Wellington Road	...	84·60	...	moderate
,, 22nd	8, Upper Highgate Street and Back 61, Leopold Street.....	...	146·60	...	very large
,, ,,	Prospect Place, Hawkes St. (Diarrhœa)	...	112·40	...	large
,, ,,	1 Court, Baker Street (Diarrhœa)	...	97·80	...	...
,, ,,	183, Cattell Road	...	102·60	. .	large
,, ,,	61 and 63, Herbert Road	...	137·40	...	...
,, 23rd	Prince Albert Buildings, Saint James' Place	...	75·60	...	moderate

(continued).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Temporary.	Permanent.	Total.	
·500	2·64	3·052	30,200	10·8	...	...	...	Clear
·021	18·92	18·937	189,050	38·5	...	...	...	Clear
·017	2·64	2·654	26,220	15·1	...	...	...	Clear
·001	2·20	2·201	21,690	4·7	...	...	...	Clear
·004	4·18	4·183	41,510	12·1	...	...	...	Clear
·003	3·74	3·742	37,100	42·8	...	...	...	Clear
·002	2·75	2·751	27,190	5·0	...	...	...	Clear
·003	2·20	2·202	21,700	14·0	...	...	...	Clear
·003	1·98	1·982	19,500	14·1	...	...	...	Clear
·002	2·64	2·641	26,090	9·5	...	...	...	Clear
·003	9·02	9·022	89,900	18·1	...	...	...	Clear
·007	6·60	6·605	65,730	14·1	...	...	...	Clear
·004	·99	·993	9,600	9·9	...	...	...	Clear
·350	4·62	4·908	48,760	13·5	...	...	...	Clear
·004	5·06	5·063	50,310	21·8	...	...	...	Clear
·015	·22	·232	2,000	21·3	...	...	...	Clear
·002	·99	·991	9,590	2·8	...	...	...	Clear
·001	5·28	5·281	52,490	14·5	...	...	...	Clear
·035	2·31	2·339	23,070	6·4	...	...	...	Clear
·001	1·65	1·651	16,190	4·7	...	...	...	Clear
·002	4·18	4·181	41,490	17·9	...	...	...	Clear
·002	4·62	4·621	45,890	24·9	...	...	...	Clear
·003	3·30	3·302	32,700	19·3	...	...	...	Clear
·450	1·87	2·241	22,090	12·0	...	...	...	Clear
·008	5·28	5·286	52,540	27·4	...	...	...	Clear
1·600	1·10	2·417	23,750	42·8	...	...	...	Clear
·001	2·42	2·421	23,890	4·9	...	...	...	Clear
·004	2·20	2·203	21,710	9·6	...	...	...	Clear
·002	3·96	3·961	39,290	19·5	...	...	...	Clear
·003	1·98	1·982	19,500	11·5	...	...	...	Clear
·005	3·96	3·964	39,320	9·2	...	...	...	Clear
·003	8·36	8·362	83,300	24·8	...	...	...	Clear
·002	1·32	1·321	12,890	3·8	...	...	...	Clear
·001	1·10	1·101	10,690	5·1	...	...	...	Clear
·003	1·98	1·982	19,500	6·0	...	...	...	Clear
1·750	7·59	9·034	90,020	16·5	...	...	...	Clear
·007	3·19	3·195	31,630	5·8	...	...	...	Clear
·001	3·85	3·851	38,190	15·0	...	...	...	Clear
·001	1·32	1·321	12,890	7·0	...	...	...	Clear
·003	·88	·882	8,500	15·8	...	...	...	Clear
·002	3·08	3·081	30,490	9·9	...	...	...	Clear
·800	2·53	3·189	31,570	9·6	...	...	...	Clear
·004	3·74	3·743	37,110	14·5	...	...	...	Clear
·300	6·05	6·297	62,650	12·3	...	...	...	Clear
·002	1·76	1·761	17,290	5·7	...	...	...	Clear

TABLE IX—

Date of Receipt of Samples.	DESCRIPTION.	Temp. C.	Total Solid Impurity	Organic Carbon.	Organic Nitrogen.
1884.	WELL WATERS—(continued).				
Sep. 29th	Back 18, Macdonald Street	...	299·60	...	excessive
,, ,,	13, Pershore Road	...	132·40	...	excessive
,, ,,	1—4, Birchall Street	...	300·80	...	very large
,, ,,	3 Court, Pershore Street (Diarrhœa) ...	...	45·60	...	small
,, 30th	3 Court, Sun Street.....	...	187·40	...	very large
,, ,,	116—118, Lee Bank Road.....	...	105·40	...	large
Oct. 6th	11 Court, Erasmus Road	...	75·60	...	large
,, ,,	53 and 55, Kyott's Lake Road	...	78·40	...	...
,, ,,	185, Broad Street	...	115·80	...	moderate
,, ,,	297 and 298, Summer Lane	...	170·60	...	...
,, ,,	299 and 300, Summer Lane	...	164·40	...	...
,, ,,	301 and 302, Summer Lane	...	152·60	...	...
,, 11th	50, Wellington Road (Scarlet Fever).....	...	42·60	...	small
,, ,,	34 and 36, Gough Road (Scarlet Fever)...	...	103·40	...	moderate
,, 13th	Cooper Place, Little Edward St. (Diarrhœa)	...	235·80	...	very large
,, ,,	26, Horse Fair, and 5 and 6, Little Bow Street.....	...	149·60	...	rather large
,, ,,	122 and 124, Bath Row.....	...	139·40	...	moderate
,, ,,	65 and 67, Belgrave Road.....	...	104·60	...	large
,, 21st	124, Longmore Street.....	...	107·60	...	...
,, ,,	3, Vicarage Road.....	...	69·80	...	moderate
,, ,,	8, Noel Road	...	111·60	...	...
,, ,,	25, York Road.....	...	85·80	...	moderate
,, 22nd	75, Balsall Heath Road.....	...	115·60	...	very large
,, ,,	27 and 29, York Road	...	111·80	...	...
,, 28th	43, Icknield Square.....	...	101·80	...	...
,, ,,	The Wharf, Icknield Square.....	...	121·20	...	...
,, ,,	32, Greenway Street	...	85·40	...	rather large
,, ,,	120 and 121, Grange Road (Scarlet Fever)	...	136·80	...	large
,, ,,	132, Muntz Street (Diarrhœa).....	...	102·80	...	...
Nov. 3rd	273—276, Bellbarn Road	...	76·20	...	rather large
,, ,,	189 and 190, Bellbarn Road	...	165·80	...	...
,, ,,	277—279, Bellbarn Road	...	42·20	...	small
,, ,,	59 Court, Bellbarn Road	...	129·40	...	moderate
,, ,,	270 and 271, Great Colmore Street	...	162·80	...	moderate
,, ,,	Tudor Villas, Handsworth New Rd.	...	81·80	...	very large
,, 10th	Houses occupied by Chambers and Postings, Fawdry's Buildings, Dudley Road (second time)	...	48·20	...	moderate
,, ,,	287, Dudley Road (second time).....	...	54·80	...	...
,, ,,	Back 496, Dudley Road.....	...	67·20	...	rather small
,, ,,	Back 502, Dudley Road.....	..	31·40	...	...
,, ,,	Back 506—510, Dudley Road	...	20·80	...	small
,, ,,	21 and 24, Albion Street	...	169·80	...	moderate
,, 14th	The Oaklands, Bristol Road.....	...	66·20	...	...
,, ,,	122 and 124, Bath Row (second time)	...	136·80	...	small

(*continued*).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Temporary.	Permanent.	Total.	
·003	trace	trace	none	44·0	...	...	...	Clear
·007	6·60	6·605	65,730	12·8	...	...	...	Clear
·001	1·65	1·651	16,190	32·2	...	...	...	Clear
·002	·22	·221	1,890	5·9	...	...	...	Clear
·003	3·85	3·852	38,200	21·2	..	...	...	Clear
·012	4·18	4·190	41,580	14·3	...	...	...	Clear
·002	·44	·441	4,090	5·2	...	...	...	Clear
·180	1·32	1·468	14,360	3·8	...	...	...	Clear
·001	5·50	5·501	54,690	19·3	...	...	...	Clear
·190	8·03	8·187	81,550	15·1	...	...	...	Clear
·020	7·26	7·276	72,440	17·1	...	...	...	Clear
·300	6·49	6·737	67,050	11·6	...	...	...	Clear
·002	1·43	1·431	13,990	4·6	...	...	...	Clear
·001	5·50	5·501	54,690	9·6	...	...	...	Clear
·003	·33	·332	3,000	27·8	...	...	...	Clear
·002	5·28	5·281	52,490	22·5	...	...	...	Clear
·003	·22	·222	1,900	56·1	...	...	...	Clear
·004	3·52	3·523	34,910	9·1	...	...	...	Clear
·400	1·87	2·199	21,670	8·4	...	...	...	Clear
·007	1·98	1·985	19,530	4·5	...	...	...	Clear
·380	5·94	6·253	62,210	13·5	...	...	...	Clear
·004	1·43	1·433	14,010	9·8	...	...	...	Clear
·004	1·98	1·983	19,510	10·1	...	...	...	Clear
2·100	·22	1·949	19,170	16·4	...	...	...	Clear
·110	2·64	2·731	26,990	12·3	...	...	...	Clear
·040	2·20	2·233	22,010	12·7	...	...	...	Clear
·002	3·30	3·301	32,690	7·0	...	...	...	Clear
·001	4·62	4·621	45,890	10·2	...	...	...	Clear
·055	3·74	3·785	37,530	7·0	...	...	...	Clear
·003	2·64	2·642	26,100	11·0	...	...	...	Clear
·025	3·96	3·980	39,480	30·1	...	...	...	Clear
·001	·99	·991	9,590	2·9	...	...	...	Clear
.002	2·75	2·751	27,190	14·5	...	...	...	Clear
·002	8·36	8·361	83,290	18·8	...	...	...	Clear
·007	1·87	1·875	18,430	6·2	...	...	...	Clear
·002	·44	·441	4,090	4·0	..	...	...	Clear
·015	1·21	1·222	11,900	3·8	...	...	...	Clear
·001	·88	·881	8,490	6·8	...	...	...	Clear
·030	none	·025	none	3·9	...	...	...	Slightly turbid; colour, brownish and dirty; black sediment; residue, brown; odour of sewage.
·001	none	none	none	3·0	...	...	...	Clear
·002	7·26	7·261	72,290	13·3	...	...	...	Clear
·025	1·43	1·450	14,180	3·0	...	...	...	Clear
·001	·22	·221	1,890	52·5	...	...	...	Clear

TABLE IX—

Date of Receipt of Samples.	DESCRIPTION	Temp. C.	Total Solid Impurity	Organic Carbon.	Organic Nitrogen.
1884.	WELL WATERS—(continued.)				
Nov. 18th	96—101, Aberdeen Street	...	124·20	...	...
,, ,,	76, Aberdeen Street	...	90·60	...	...
,, ,,	62—64, Peel Street.....	...	138·80	...	...
,, ,,	289 and 291, Dudley Road	...	53·80	...	...
,, ,,	153, Coventry Road.....	...	84·20	...	...
,, 24th	229, Coventry Road	...	78·80	...	very large
,, ,,	12 and 13, Lee Mount (Scarlet Fever).....	...	104·20	...	moderate
,, ,,	1—3, Spring Street.....	...	34·60	...	very small
,, ,,	25, Belgrave Road	...	66·80	...	...
,, ,,	30, Belgrave Road	...	117·80	...	large
Dec. 1st.	485—487, Moseley Road	...	131·20	...	large
,, ,,	181 and 182, Moseley Street.....	...	194·80	...	...
, ,,	56 and 57, Dymoke Street.....	...	157·20	...	moderate
,, ,,	13 and 15, Conybere Street	...	123·60	...	moderate
,, ,,	5 Court, Bordesley Park Road (1st pump, top of entry)	...	115·80	..	...
,, ,,	Ditto ditto (2nd pump, Scarlet Fever)...	...	89·80	...	very large
,, 3rd	Kingsdown House, Stratford Road	...	68·60	...	excessive
,, 8th	52 and 54, Belgrave Road.....	...	93·20	...	rather large
,, ,,	56 and 58, Belgrave Road.....	...	99·80	...	rather large
,, ,,	104 and 106, Belgrave Road	...	243·20	...	large
,, ,,	276 and 278, Sherlock Street	...	101·40	...	rather large
,, ,,	64 and 65, Gooch Street	...	150·80	...	...
,, ,,	108 and 109, Benacre Street.....	...	173·80	...	rather large
,, 15th	11 Court, Barford Street South ...	...	236·20	...	rather large
,, ,,	48 and 50 Courts, Sherlock Street	...	110·80	...	moderate
,, ,,	69 and 71, Sherlock Street	...	102·20	...	...
,, ,,	59 and 60, Wynn Street.....	...	109·40	...	small
,, ,,	11 and 12, Reservoir Retreat, Reservoir Road	...	58·80	...	moderate
,, ,,	6—12, Freeth Street	...	64·80	...	moderate
,, 29th	509, Park Road, Soho.....	...	148·20	...	very large
,, ,,	57—60, Bridge Street West	...	112·80	...	moderate
,, ,,	61—64, Bridge Street West	...	102·20	...	...
,, ,,	8—10, Digbeth	...	76·40	...	small
,, ,,	105—111, Icknield Square.....	...	78·80	...	moderate
,, 30th	Draw Well at Tudor Villas, Handsworth New Road	...	59·80	...	small

(*continued*).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Temporary.	Permanent.	Total.	
·110	5·61	5·701	56,690	12·3	...	...	...	Clear
·020	2·86	2·876	28,440	10·5	...	...	...	Clear
2·500	5·72	7·779	77,470	16·8	...	...	...	Muddy, yellowish
·016	1·32	1·333	13,010	3·9	...	...	...	Clear
·400	2·64	2·969	29,370	7·3	...	...	...	Clear
·012	1·98	1·990	19,580	4·9	...	...	...	Clear
·002	3·30	3·301	32,690	14·1	...	...	...	Clear
none	·66	·660	6,280	2·4	...	...	...	Clear
·280	2·20	2·431	23,990	5·5	...	...	...	Clear
·003	3·96	3·962	39,300	8·9	...	...	...	Clear
·001	3·85	3·851	38,190	18·0	...	...	...	Clear
·270	4·40	4·622	45,900	13·7	...	...	...	Clear
·002	1·32	1·321	12,890	10·7	...	...	...	Clear
·003	·88	·882	8,500	9·5	...	...	...	Clear
·180	1·98	2·128	20,960	8·1	...	...	...	Clear
·003	·33	·332	3,000	6·1	...	...	...	Clear
·010	·99	·998	9,660	4·9	...	...	...	Turbid, blackish
·003	3·08	3·082	30,500	10·2	...	...	...	Clear
·005	1·10	1·104	10,720	10·4	...	...	...	Clear
·003	8·25	8·252	82,200	18·5	...	...	...	Clear
·002	·88	·881	8,490	15·7	...	...	...	Clear
·380	1·65	1·963	19,310	22·8	...	...	...	Clear
·003	5·50	5·502	54,700	22·5	...	...	...	Clear
·002	trace	trace	0	18·2	...	...	...	Clear
·001	·44	·441	4,090	17·9	...	...	...	Clear
·090	2·53	2·604	25,720	11·2	...	...	...	Clear
·001	5·50	5·501	54,690	10·2	...	...	...	Clear, dark-blue sediment
·003	3·08	3·082	30,500	5·2	...	...	...	Clear
·003	1·43	1·432	14,000	7·7	...	...	...	Clear
·005	6·16	6·164	61,320	14·0	...	...	...	Clear
·002	3·63	3·631	35,990	7·6	...	...	...	Clear
·070	3·41	3·468	34,360	8·2	...	...	...	Clear
·000	1·98	1·980	19,480	14·0	...	...	...	Clear
·004	2·86	2·863	28,310	10·1	...	...	...	Clear
·001	1·76	1·761	17,290	4·3	...	...	...	Clear

TABLE X.

RETURN FOR THE PERIOD 1ST JULY, 1883, TO 30TH JUNE, 1884, RESPECTING THE VACCINATION OF CHILDREN WHOSE BIRTHS WERE REGISTERED IN THE BOROUGH DURING THE SAID PERIOD.

PARISH.	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 Small-pox."	"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	8,790	7,661	12	1	856	103	34	123	—
Aston (within the Boro')	5,330	4,390	6	—	610	60	16	196	52
Edgbaston („ „)	453	404	2	—	34	6	1	5	1

Table of the Number of Deaths occurring in each Street in the Borough of Birmingham during the Year, 1884.

STREETS.	Zymotic Diseases	Other Diseases
A		
Abberley Street ...		
Abbey Street		7
Aberdeen Street ...	4	10
A. B. Row		1
Ada Road		1
Adam Street	7	17
Adderley Street ...	1	6
AdelaideStreet,Deritend	2	14
Adelaide St., Duddeston		
Albany Road		
Albert Street, Deritend		5
Albert Street, All Saints		2
Albert St., St. Martin's		1
Albion Street	3	6
Alcester Street ...	3	14
Alexandra Road ...	1	3
Alexandra Street ...	1	8
Alfred Street		1
Allcock Street ...	2	11
Allen's Road		2
Allesley Street ...	3	4
Allison Street	6	16
All Saints' Road ...		7
All Saints' Street ...		4
Alma Crescent ...		4
Alma Street		1
Alston Street	2	6
Ampton Road ...		1
Anderton Road ...		4
Anderton Street ...	7	10
Andover Street ...	1	
Angelina Street ...	7	26
Argyle Street	2	9
Armoury Road ...		
Arsenal Street ...		2
Arthur Road		
Arthur Street	8	20
Ashford Street ...	1	
Ashted Row	2	20
Aston Brook Street ...	1	1
Aston Road	4	29
Aston Street	1	6
Asylum Road	1	6
Atlas Road		2
Athole Street		1
Auckland Road ...	1	7
Augusta Street ...	1	3
Augustus Road ...		
Austin Street	2	5
Avenue Road		
B		
Bacchus Road ...		13
Bagot Street	4	10
Bailey Street		2
Baker Street	1	2
Balloon Street ...		
Balsall Heath Road ...		5
Banbury Street ...	1	1
Barford Road	3	4
Barford Street ...	7	20
Barford Street South ...	1	15
Barker Street	3	4
Barlow's Road ...		
Barn Street	7	10
Barrack Street ..		
Barr Street		22
Barr Street West ...	1	8
Bartholomew Row ...	2	2
Bartholomew Street ...	1	13
Barwell Road		4
Barwick Street ...		
Baskerville Passage ...		
Baskerville Place ...		
Bath Passage		2
Bath Row	2	17
Bath Street	1	6
Beachfield Road ...		
Beach Street	3	5
Beak Street		1
Bear Lane		
Beatrice Crescent ...		
Beaufort Road ...		3
Bedford Road... ...		3
Beechfield Road ...		11
Belgrave Road ...	1	5
Bell Barn Road ...	8	39
Bellis Street		6
Bell Street		
Belmont Passage ...	1	2
Belmont Row	2	9
Benacre Street ...	6	29
Bennett's Hill ...		
Berkley Street ...		1
Berners Street ...	1	7
Beswick Street ...		
Betholom Row ...		1
Birchall Street ...	2	12
Bird Lane		
Bishopsgate Street ...	7	18
Bishop St., St. Martin's	6	11
Bishop Street, St.Mary's		
Bishop Street South ...	1	10
Bissell Street	9	17
Blake Lane		
Blews Street	5	11
Blews Street West ...	2	2
Bloomsbury		1
Bloomsbury Street ...	6	27
Blucher Street ...	2	12
Bolton Road	3	14
Bolton Street	1	4
Bond Street		
Bordesley Green ...	6	11
Bordesley Green Road	2	4
Bordesley Park Road ...	10	22
Bordesley Street ...	6	19
Bow Street	5	5
Bowyer Street ...		
Bracebridge Street ...		15
Bradford Street ...	6	27
Braithwaite Road ...		2
Branston Street ...		11
Brasshouse Passage ...	1	2
Brass Street	4	5
Bread Lane		
Bread Street, St. Paul's	1	5
Bread St., St. Martins's		
Brearley Street ...	13	47
Brearley Street West ...	1	2
Brewery St., Deritend...		
Brewery St., St. Mary's	2	4
Brewery St., Duddeston		
Brickiln Street ...		
Bridge Road		
Bridge Street, Nechells		
Bridge Street Duddeston		
Bridge Street St. Thomas		2
Bridge Street West ...	5	36
Bristol Road		16
Bristol Street	5	24
Broad Street	4	22
Bromsgrove Street ...	1	21
Brookfield Road ...		
Brook Road		
Brook Street		
Broom Street		1
Brueton's Street ...		
Buckingham Street ...	1	4
Buck Street		5
Bullock Road		
Bullock Street... ..	5	3
Bull Ring		1
Bull Street		2
Burbury Street ...	3	14
Burlington Passage ...		
Butler Street	3	5
Butler Street South ...		1
Butlin Street		1
C		
Calthorpe Road ...		4
Cambridge Crescent ...		1
Cambridge Street ...	1	1
Camden Drive ...		3
Camden Grove ...		3
Camden Street ...	9	49
Camp Hill		7
Camp Street	1	2
Canal Street	2	5
Cannon Street ...		1
Cape Lane		
Cape Street	1	3
Cardigan Street ...	3	17
Carlyle Road		2
Carlisle Street ...	1	2
Carnarvon Road ...		
Caroline Street ...		
Carpenter Road ...		2
Carr's Lane		
Cartland Road ...		
Carver Street	3	15
Castle Street,St.Martin's		1
Castle Street, Deritend...		
Cathcart Street ...		6
Cato Street	1	11
Cato Street North ...		10
Cattell Road	4	25
Cattell Grove		2
Cecil Street	3	22
Centre Row	1	3
Chad Road		
Chandos Road ...	1	2
Chapel House Street ...		1
Chapel Street		2
Chapman Road ...		
Charles Arthur Street ...	1	11
Charles Henry Street ...	14	28
Charles Road		
Charlotte Road ...	1	3
Charlotte Street ...	2	7
Chattaway Street ...		1
Cheapside	6	28
Cheatham Street ...		1
Chequers Walk ...		3
Cherry Street		
Cherry Wood Lane ...	2	5
Chester St., Ladywood	2	12
Chester St., Duddeston	1	3
Cheston Road ...		
Christ Church Passage		
Church Road,Duddeston	2	4
Church Road,Edgbaston		3
Church Street		11
Clarendon Road ...	1	2
Clark Street	6	18
Claverdon Street ...	1	5
Claybrook Street ...	1	1
Clement Street ...	2	9
Cleve Terrace ...	1	
Clissold Street ...	1	2
Cliveland Street ...	1	1
Coach Yard		
Coleman Street ...	6	13
Coleshill Street ...	3	12
College Street	1	7
Colmore Row		5
Commercial Street ...	1	3
Communication Row ...		3
Congreve Street ...		2
Constance Road ...		
Constitution Hill ...	3	3

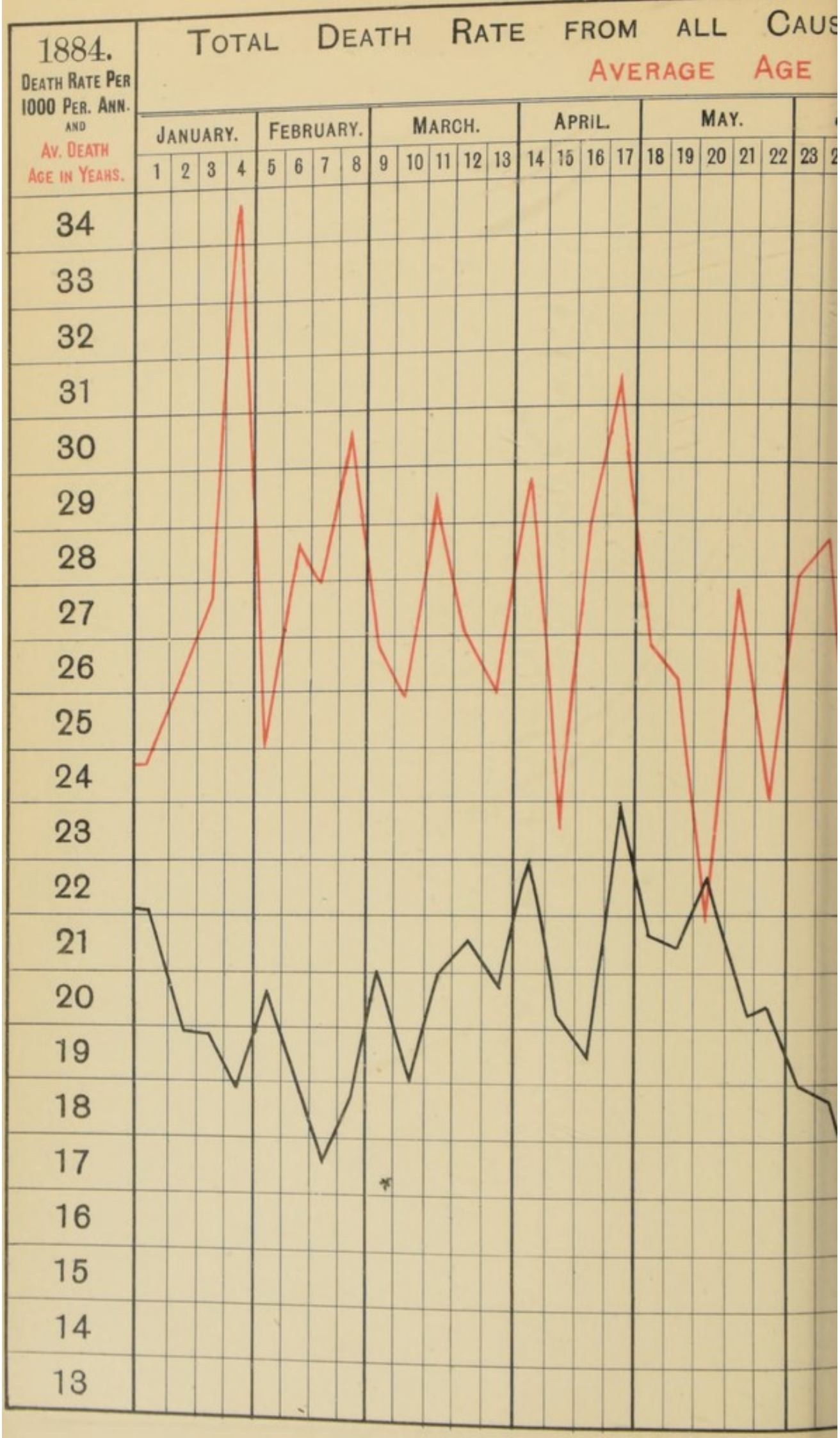
STREETS.	Zymotic Diseases	Other Diseases
Conybere Street ...	2	16
Cook's Hill		
Cook Street	2	2
Cooksey Road ...	5	22
Cope Street	1	4
Coplow Street ...	3	7
Coralie Street ...		1
Corporation Street ...		2
Cotton Row		
Cotton Street		
Coventry Road ...	8	34
Coventry Street ...		6
Cowper Street ...	1	9
Cox Street	2	7
Coxwell Road ...	1	2
Crabtree Road ...	5	10
Cranemore Street ...	1	
Cregoe Street	5	15
Crescent		19
Crescent Wharf ...		
Cromwell Street ...	7	40
Crooked Lane		
Cross Street		
Cuckoo Road	3	11
Cumberland Street ...	2	3
Curzon Street	2	9
Cuthbert Road ...		
D		
Dale End		6
Dalton Street		3
Dart Street		4
Dartmouth Street ...	1	17
Darwin Street ...	7	24
Dawson Street ...		4
Dean Street	3	1
Dearman Road ...	2	3
Derby Street		
Devon Street	5	16
Devonshire Street ...	8	18
Digbeth	4	14
Digby Street		1
Doe Street		5
Dolman Street ...		6
Dolobran Road ...		6
Dr. Johnson's Passage...		1
Duchess Road... ...		5
Duddeston Mill Road ...		10
Duddeston Row ...	2	5
Dudley Road	6	14
Dudley Street		2
Dugdale Street ...	3	6
Duke Street	2	10
Dymoke Street ...	5	9
E		
Eastern Road		
Easy Row		2
Eden Place		
Edgbaston Road ...		1
Edgbaston Street ...		1
Edmund Street ...		2
Edward Road		
Edward Street ...	3	14
Elkington Street ..		
Ellen Street		9
Ellis Street		1
Elvetham Road ..		4
Emily Street	7	22
Emmeline Street ..	1	
Enfield Road		1
Engine Street		
Erasmus Road ..	1	5
Ernest Street		
Erskine Street... ..		6
Essex Street	3	3
Essington Street ..	2	11
Exeter Row		
Eyre Street	2	2
F		
Factory Road .	1	
Falconer Road ...		
Farm Road		2
Farm Street	7	45
Farquhar Road		3
Fawdry Street ...		
Fazeley Street ...		9
Fisher Street	1	7
Fleet Street	5	11
Floodgate Street ...	2	14
Florence Street ...	1	6
Fordrough Lane ...		
Fordrough Street ...	3	5
Ford Street	5	14
Forge Street		1
Forster Street... ...		3
Foundry Road ...	3	5
Fowler Street		1
Fox Street		2
Francis Road		2
Francis Street ...	5	22
Frankfort Street ...	6	14
Franklin Street ...		2
Frank Street		2
Frederick Road ...		2
Frederick Street ...		3
Freeman Road ...		3
Freeman Street ...	1	1
Freeth Street	5	12
Friston Street ...	5	17
G		
Galton Street		2
Garbett Street ...	4	18
Garrison Lane ...	4	25
Garrison Street ...	3	3
Gas Street		1
Geach Street	3	8
Gee Street	1	8
Gem Street	1	7
George Road		1
George Street, St. Paul's		5
George Street, Nechells	2	5
George Street West ...	5	23
Gibb Street	1	1
Gillott's Road... ...		2
Gladstone Road ...		3
Glebe Passage... ...		
Glebe Street	1	1
Gloucester Street ...		1
Glover's Road ...		2
Glover's Street ...	2	10
Godwin Street... ...		5
Golden Hillock Road ...	1	1
Gooch Street	3	20
Goode Street	2	2
Good Knave's End ...		1
Goodrick Street ...		6
Gopsall Street ...		3
Gosta Green		1
Gough Road	1	7
Gough Street	3	4
Grace Road		8
Grafton Road		2
Graham Street ...		7
Grange Road		5
Grantham Road ...		
Grant Street	2	7
Granville Street ...	2	15
Great Barr Street ...	6	14
Great Brook Street ...	6	21
Great Charles Street ...		6
Great Colmore Street ...	5	22
Great Francis Street ...	1	21
Great Hampton Row ...	7	34
Great Hampton Street...	1	6
Great King Street ...	7	24
Great Lister Street ...	5	40
Great Russell Street ...	5	27
Great Tindal Street ...	2	7
Greenfield Crescent ...		2
Green Lane	3	16
Green's Court		
Green Street, Deritend	4	5
Green Street, All Saints'	2	3
Green's Village ...	11	30
Greenway Street ...		
Grindstone Road ...		
Grosvenor Row ...		
Grosvenor Street ...		
Grosvenor Street West	4	22
Guest Street		4
Guildford Street ...	1	11
Gullet, St. Mary's ...		
Gullet, Deritend ...		
Gullet, St. Thomas's ...		
H		
Hagley Road		7
Halberton Street ...	1	5
Hall Hill Road ...		
Hall Street		3
Hampton Street ...		4
Hampton Row ...		
Handsworth New Road		1
Hanley Street ...	3	6
Hanover Street ...		1
Harborne Road ..		5
Harding St. St. George's	4	8
Harding St., All Saints'	1	
Harford Street ...	1	2
Harrison's Road ...		
Hatchett Street ...	1	14
Hawkes Street ...	3	2
Heath Mill Lane ...	4	10
Heath Street	6	34
Heath Street South ...		3
Heaton Street	6	13
Helena Street	1	2
Heneage Street ...	1	37
Henley Street	1	10
Henn Street		
Henn's Walk		1
Henrietta Street ...	1	1
Henry Street	3	13
Herbert Road	5	13
Hickman Road ...	1	1
Hick Square		1
Hick Street	1	5
Highfield Road ...		
Highgate Lane ...		1
Highgate Place ...		1
Highgate Street ...	11	26
High Park Street ...		5
High Street		11
High Street, Bordesley...	1	2
High Street, Deritend ...	2	18
Hill Street	1	9
Hinckley Street ...		1
Hingeston Street ...	8	26
Hob Moor Road ...		2
Hockley Hill	2	7
Hockley Pool Road ...		
Hockley Street ...	1	3
Holborn Hill	1	4
Holland Street ...		6
Holliday Street ...	5	17
Hollier Street		6
Holloway Head ...	2	9
Holly Road		
Holt Street	2	10
Hooper Street... ...		4
Hope St. (St. Martin's)	10	16
Hope St. (All Saints') ...		
Horse Fair	1	
Hospital Street ...	13	36
Howard Place ...		
Howard Street ...		9
Howe Street	1	16
Hubert Road		
Hubert Street	1	
Humpage Road ...		2
Hunter's Lane ...		
Hunter's Vale		
Hurst Street	2	11
Hutton Street		3
Hyde Road		5
Hylton Street		2

STREETS.	Zymotic Diseases	Other Diseases
I		
Icknield Port Road ...	8	37
Icknield Square ...	6	9
Icknield Street ...	6	25
Inge Street	3	15
Ingleby Street ...	2	14
Inkerman Street ...	2	14
Irving Street	13	47
Islington		
Islington Row ...		2
Ivy Lane		1
J		
Jamaica Row		2
James Street		
James Turner Street ...		9
Jenkins Street ...		2
Jennens Row		2
John Bright Street ...		
Johnson Street ...	1	7
Johnstone Street ...		4
John Street		
K		
Keeley Street		1
Kelynge Street ...		8
Kendal Road		
Kent Street	1	6
Kent Street North ...	3	7
Kenyon Street ...	2	14
Key Hill	1	8
King Alfred's Place ...	1	4
King Edward's Place ...	3	2
King Edward's Road ...	3	15
Kingscote Road		
Kingston Road ...		1
King Street	3	3
Kyott's Lake Road ...		
Kyrwick's Lane ...	3	20
L		
Ladypool Road ...	1	5
Ladywell Passage ...		
Ladywell Walk ...		2
Ladywood Road ...	5	19
Ladywood Grove ...		
Lancaster Street ...		15
Lander Street		
Langley Road ...		3
Lansdowne Street ...	1	2
Larches Street ...	5	7
Latimer Street ...	1	2
Latimer Street South ...	3	24
Lawden Road ...	2	9
Lawley Street ...	6	22
Lawrence Street ...	1	13
Lease Lane		3
Ledsam Street ...	1	18
Lee Bank Road ...	6	21
Lee Crescent	1	7
Lee Mount		2
Leek Street		2
Lees Street	1	2
Legge Lane	1	2
Legge Street	4	8
Lench Street	3	11
Lennox Street ...	9	11
Leopold Street ...		12
Lichfield Street ...		
Lilly Green	1	3
Lingard Street ...	2	10
Lionel Street	1	11
Lister Street	1	1
Little Ann Street ...	1	4
Little Barr Street ...	2	4
Little Bow Street ...	1	
Little Broom Street ...		1
Little Cannon Street ...		
Little Cherry Street ...		
Little Edward Street ...	2	2
Little Francis Street ...	1	2
Little Green Lane ...	3	14
Little Hill Street ..		
Little King Street ...	1	4
Little Shadwell Street...		
Liverpool Street ...		3
Livery Street	2	5
Lloyd Street	1	1
Lodge Road	4	35
Lombard Street ...	1	10
London 'Prentice Street		
Long Acre	3	22
Longmore Street ...		3
Long Street	1	10
Lord Street		11
Louisa Street		
Loveday Street ...	1	5
Love Lane	3	2
Lower Camden Street ...		
Lower Dartmouth Street		2
Lower Darwin Street ...		
Lower Dean Street ...		
Lower Essex Street ...	5	15
Lower Fazeley Street ...		3
Lower Henry Street ...		2
Lower Hospital Street...		1
Lower Hurst Street ...	3	11
Lower Hurst Street East		1
LowerKing Edward'sRd		
Lower Lawley Street ...		
Lower Loveday Street...	1	
Lower Pershore Street		
Lower Priory		
Lower Russell Street ...		
Lowe Street	1	2
Lower Temple Street ...		
Lower Tower Street ...	8	25
Lower Trinity Street ...	1	7
Lower Windsor Street...		
Loxton Street		1
Ludgate Hill	2	4
Ludgate Hill Passage ...		
Lupin Street		24
M		
Macdonald Street ...	2	5
Main Street	6	10
Malvern Hill Road ...		2
Manchester Street ...	2	8
Manor Road		
Market Street		4
Mark Lane	1	2
Marroway Street ...		
Marshall Street ...	3	7
Marshall Street South...	3	4
Mary Ann Street ...	1	
Mary Street		1
Masshouse Lne, St. Mtns	1	1
MasshouseLane, Edgbsn		
Meeting House Yard ...		
Meriden Street ...	6	5
Metchley Lane ...		
Metchley Park Road ...		
Miles Street	3	16
Milk Street	1	6
Miller Street	1	17
Mill Lane		4
Mill Street		5
Milton Street	4	9
Milward Street ...	1	4
Minories		
Moat Lane		1
Moat Row		1
Moilliett Street ...	1	3
Moland Street... ...	3	10
Mole Street		1
Mona Road		
Monmouth Street ...		
Montague Road ...		1
Montague Street ...	1	1
Montgomery Street ...	2	3
Montpellier Street ...		2
Monument Road ...	4	24
Moore's Row	1	
Moorsom Street ...		
Moor Street	1	5
Moreton Street ...		3
Morville Street ...	2	12
Moseley Road	1	16
Moseley Street ...	7	20
Mott Street	2	7
Mountfield Road ...		
Mount Pleasant ...		1
Mount Street, Deritend	2	1
Mount St., Winson Green	4	
Mount Street, Nechells	4	12
Musgrave Road ...	1	3
Muntz Street	1	9
N		
Navigation Street ...	5	6
Nechells Park Road ...	3	23
Nechells Place ...	4	8
Needham Street ...		
Needless Alley ...		1
Nelson Street	1	6
Nelson Street South ...	4	14
Nelson Street West ...	9	19
New Bartholomew St. ...		5
New Bond Street ...		
New Bridge Street ...		
New Canal Street ...	4	9
New Church Street ...		
Newdegate Street ...	1	2
New Edmund Street ...		
New England		
New Hall Hill... ...	1	3
New Hall Street ...	1	13
New Inkleys		1
New John Street ...	3	18
New John Street West...	7	45
New Market Street ...	2	2
New Meeting Street ...		
New Spring Street ...	9	10
New Street		5
New Summer Street ...	8	21
Newton Street ...	3	8
Newtown Row ...	12	41
Nile Street		
Nineveh Road... ...		
Noel Road		4
Norfolk Road		2
Norfolk Street... ...	4	5
Norman Street ...	3	9
Northampton Street ...		
Northbrook Street ...		4
Northumberland Street	3	7
North Warwick Street...		1
Northwood Street ...	6	9
North Street		
Norton Street	4	1
Nova Scotia Street ...		7
Nursery Road		

STREETS.	Zymotic Diseases	Other Diseases
O		
Oakley Road		1
Old Cross Street ...	2	6
Old Inkleys		
Old Meeting Street ...		1
Old Square		1
Oliver Road	1	2
Oliver Street	3	6
Oozells Street		
Oozells Street North ...	2	1
Ormond Street ...	1	12
Osler Street	4	16
Oughton Place ...	1	1
Outlet Road		
Owen Street	3	10
Oxford Street	2	3
Oxygen Street... ...		2
P		
Paddington Street ...	5	13
Pakenham Road ...		
Palmer Street	4	4
Parade	1	3
Paradise Street ...	2	2
Parker Street		12
Park Lane		6
Park Road, All Saints	14	43
Park Road, Edgbaston		
Park Street	2	12
Parliament Street ...	2	8
Paxton Road		4
Pebble Mill Road ...		
Peel Street	3	11
Penn Street, Deritend ...		2
Penn Street, Duddeston		8
Pershore Road ...	2	13
Pershore Street ...	2	9
Phillips St., Market Hall		2
Phillips St., St. George's		
Pickford Street ...	5	4
Piddock Street ...	1	
Pigott Street	2	5
Pinfold Street... ...		2
Pitney Street		
Pitsford Street ...	1	
Plough & Harrow Road		
Pope Street	5	26
Poplar Avenue ...		1
Porchester Street ...	1	1
Port Hope Road ...	1	3
Portland Road ...		4
Potter Street	1	4
Poultry		
Powell Street		2
Prescott Street ...	2	14
Price Street	3	9
Priestley Road ...	1	2
Primrose Hill		
Princes Row		
Princes Street... ...		3
Princess Road... ...	3	6
Princip Street... ...		3
Priory Road		1
Pritchett's Lane ...		
Pritchett Street ...	5	17
Proctor Street... ...	3	8
Prospect Row... ...		2
Q		
Queen Street		
R		
Radnor Street... ...		4
Raglan Road		
Railway Ter., Duddeston		8
Railway Ter., Nechells		7
Rann Street	2	9
Ratcliff Place ...		
Ratcliff Street ...		
Ravenhurst Street ...	3	6
Rawlins Street ...	3	8
Rea Street	2	15
Rea Street South ...	3	3
Regent Parade ...		
Regent Park Road ...		3
Regent Place		3
Regent Row		1
Regent Street		
Reservoir Retreat ...		2
Reservoir Road ...	1	1
Richard St., Nechells ...	4	11
Richard St., St. Paul's		
Richmond Hill Road ...		1
River Street		1
Robert Road		1
Rocky Lane	2	8
Rodway Street ...		4
Rope Walk		1
Rosalie Street	1	1
Rotton Park Road ...		1
Rotton Park Street ...		2
Rowland Street ...		2
Rupert Street	3	18
Russell Street	2	3
Ruston Street	2	5
Ruston Street North ...	6	17
Rutland Road	1	1
Ryland Road	1	3
Ryland Street, Deritend		
Ryland St., Ladywood	2	5
Ryland Street North ...		
S		
Salop Street		2
Saltley Road	4	15
Saltley Street		5
Sampson Road ...	2	11
Sampson Road North ...		1
Sandon Road		1
Sand Pits		1
Sand Street		
Sandy Lane	4	7
Sarah Street		
St. Andrew's Road ...	1	17
St. Clement's Road ...		
St. George's Crescent ...		
St. George's Street ...	4	22
St. George's Place ...		2
St. George's Terrace ...		
St. James' Place ...	1	4
St. James' Road ...		
St. James' Street ...		3
St. Luke's Road ...	5	22
St. Mark's Street ...	6	15
St. Mark's Street West		
St. Martin's Lane ...		1
St. Martin's Place ...		4
St. Martin's Row ...		
St. Martin's Street ...	4	7
St. Mary's Row ...		3
St. Mary's Street ...		4
St. Oswald's Road ..		1
St. Paul's Square ...	1	2
St. Peter's Place ...		
St. Philip's Church Yard		
St. Stephen's Street ...		
St. Vincent Street ...	4	23
Scholefield Street ...	3	19
Scotland Passage ...		
Scotland Street ...	1	1
Scott Street		
Severn Street	1	5
Seymour Street ...		
Shadwell Street ...	1	2
Shakespeare Road ...	3	10
Sheepcote Lane ...	2	2
Sheepcote Street ...	2	7
Sheep Street	6	20
Sherborne Street ...	9	19
Sherlock Street ...	2	33
Shutt Lane		
Sidney Road		
Silver Street		
Sir Harry's Road ...		3
Skinner Lane	2	3
Skinner Street ...	1	6
Slaney Street		5
Slough Lane		
Smallbrook Street ...		2
Smithfield Passage ...	1	2
Smithfield Street ...		2
SmithStreet, St George's	2	23
Smith Street, Duddeston		1
Snape Street	3	1
Snow Hill	1	6
Soho Road	3	6
Somerset Road ...		2
Somerset Street ...	1	3
South Road	2	9
Spark Street		2
Speaking Stile Walk ...	2	1
Speedwell Road ...		2
Spencer Street ...	1	9
Spiceal Street	1	
Spon Terrace		1
Spooner Street ...		2
Springfield Street ...	2	9
Spring Hill	6	17
Spring Hill Passage ...	1	1
Spring Road		2
Spring Street	1	3
Spring Vale	1	1
Stafford Street ...	2	8
Staniforth Street ...		10
Stanley Road		
Stanhope Street ...		5
Stanmore Road ...		1
Station Road		1
Stella Street	1	5
Steelhouse Lane ...	1	12
Stephenson Place ...		
Stephenson Street ...		
Steward Street ...	2	13
Stirling Road		1
Stoke Street	2	9
Stone Yard		1
Stoney Lane		1
Stour Street	6	11
Stratford Place ...		1
Stratford Road ...	2	11
Stratford Street ...	1	8
Stuart Street	1	5
Suffolk Street... ...	4	23
Summerfield Crescent ...		
Summer Hill		8
Summer Hill Road ...		1
Summer Hill Street ...	3	6
Summer Hill Terrace ...		2
Summer Lane... ...	8	40
Summer Row	1	6
Summer Road... ...		5
Summer Street ...		1
Sun Street	1	10
Sun Street West ...		5
Sutton Street	1	3
Swallow Street ...		3
Swan Passage... ...		
Sydney Road		3
T		
Talbot Street	1	12
Talfourd Street ...	2	7
Tanter Street		
Taylor Street	2	3
Temple Field Street ...		3
Temple Row		

STREETS.	Zymotic Diseases	Other Diseases
Temple Row West ...		1
Temple Street... ...		3
Tenby Street		2
Tenby Street North ...	6	15
Tennant Street ...	2	12
Theodore Street ...		3
Theresa Road		5
Thimble Mill Lane ...		
Thomas St., St. Mary's	4	4
Thomas Street, Deritend	4	6
Thorp Street	1	8
Tillingham Street ...	2	15
Tindal Street		
Tonk Street	10	20
Tower Street		
Trafalgar Road ...	1	6
Trent Street		
Trinity Terrace ...		4
Turner Street	4	3
Tyndall Street... ...		
U		
Unett Street	1	17
Union Passage ...		
Union Street		
Union Terrace ...		1
Upper Dean Street ...		7
Upper Gough Street ...	2	9
Upper Highgate Street		1
Upper Hockley Street...		
Upper Hospital Street...		3
Upper Marshall Street...		
Upper Mill Lane ...		2
Upper Priory	1	2
Upper Ryland Road ...	2	1
Upper Tower Street ...	3	6
Upper Trinity Street ...		
Upper Windsor Street...		
V		
Varna Road		4
Vaughton Street ...	7	12
Vaughton Street South		1
Vauxhall Grove ...		2
Vauxhall Road ...	1	19
Vauxhall Street ...	1	3
Vere Street	4	10
Viaduct Street... ...		2
Vicarage Road ...		
Victoria Grove ...	4	4
Victoria Street ...	2	6
Villa Street	2	5
Villiers Street... ...		6
Vine Street	1	1
Vittoria Street... ...	2	
Vyse Street	1	5
W		
Walter Street	2	3
Ward Street	2	8
Warner Street... ...		5
Warstone Lane ...	1	15
Warstone Parade ...		1
Warwick Passage ...		
Warwick Street ...	2	13
Washington Street ...		3
Waterloo Street ...		2
Water Street		7
Waterworks Road ...	2	9
Watery Lane	6	19
Weaman Row		2
Weaman Street ...	4	8
Wellesley Street ...	1	2
Wellington Passage ...		
Wellington Road ...		1
Wellington St. W'ns'n Gr	4	8
Wellington St., Icknield Sq.	1	
Well Lane		1
Well Street	4	14
Westbourne Road ...		1
Western Road... ...		
Westfield Road ...		1
Westley Street ...		7
Weston Street... ...	1	5
Wharf Lane		3
Wharf St., All Saints ...	2	8
Wharf St., St. Thomas's	2	5
Wharf Street, Deritend		
Wharf St., Duddeston ...		
Wharton Street ...		1
Wheeler Street ...	7	27
Wheeley's Lane ...		4
Wheeley's Road ...	1	5
White Lion Passage ...		
White Road	2	5
Whitmore Road ...		3
Whitmore Street ...	4	6
Whittall Street ...		3
Wiggin Street... ...		
William Edward Street	5	8
William Henry Street ...	1	2
William St., St. Thomas'	17	27
William Street, Deritend		1
William Street North ...	1	9
Willis Street	2	9
Willow Avenue ...		
Wilton Street	2	1
Windmill Street ...	5	8
Windsor Street ...	8	16
Winson Green Road ...	6	10
Winson Street... ...	3	10
Witton Street	1	2
Woodbourne Road ...		
Woodcock Street ...	2	12
Wood St., St. Thomas'		
Wood Street, Ladywood	2	3
Worcester Street ...		4
Worcester Wharf ...		1
Wordsworth Road ...	5	13
Wrentham Street ...		3
Wright Street... ...	1	1
Wrottesley Street ...		4
Wyndcliffe Road ...		2
Wyndham Road ...	5	10
Wynn Street		
X		
Y		
Yardley Road	1	
Yew Tree Road ...		3
York Passage		
York Road		1
York Street		1
Z		
ADDENDA.		
Old Birmingham Canal		5
Birmingham and Warwick Canal		3
Birmingham & Fazeley Canal...		2
Birmingham and Worcester Canal... ...		2
Banbury Street Railway Station		1
New St. Railway Station		4
Hockley Railway Station		2
Hagley Road Railway Station		1
Lawley Street Railway Station		1
Midland Railway ...		1
Market Hall		1
Rotton Park Reservoir...		2
AT INSTITUTIONS		
General Hospital ...	20	257
Queen's Hospital ...	7	151
Children's Hospital ...	24	58
Workhouse	12	532
Asylum		78
Gaol		7
Borough Hospital ...	97	3
Homœopathic Hospital	1	7
Eye Hospital		1
Orthopœdic Hospital ..		1
Totals ...	1681	7362

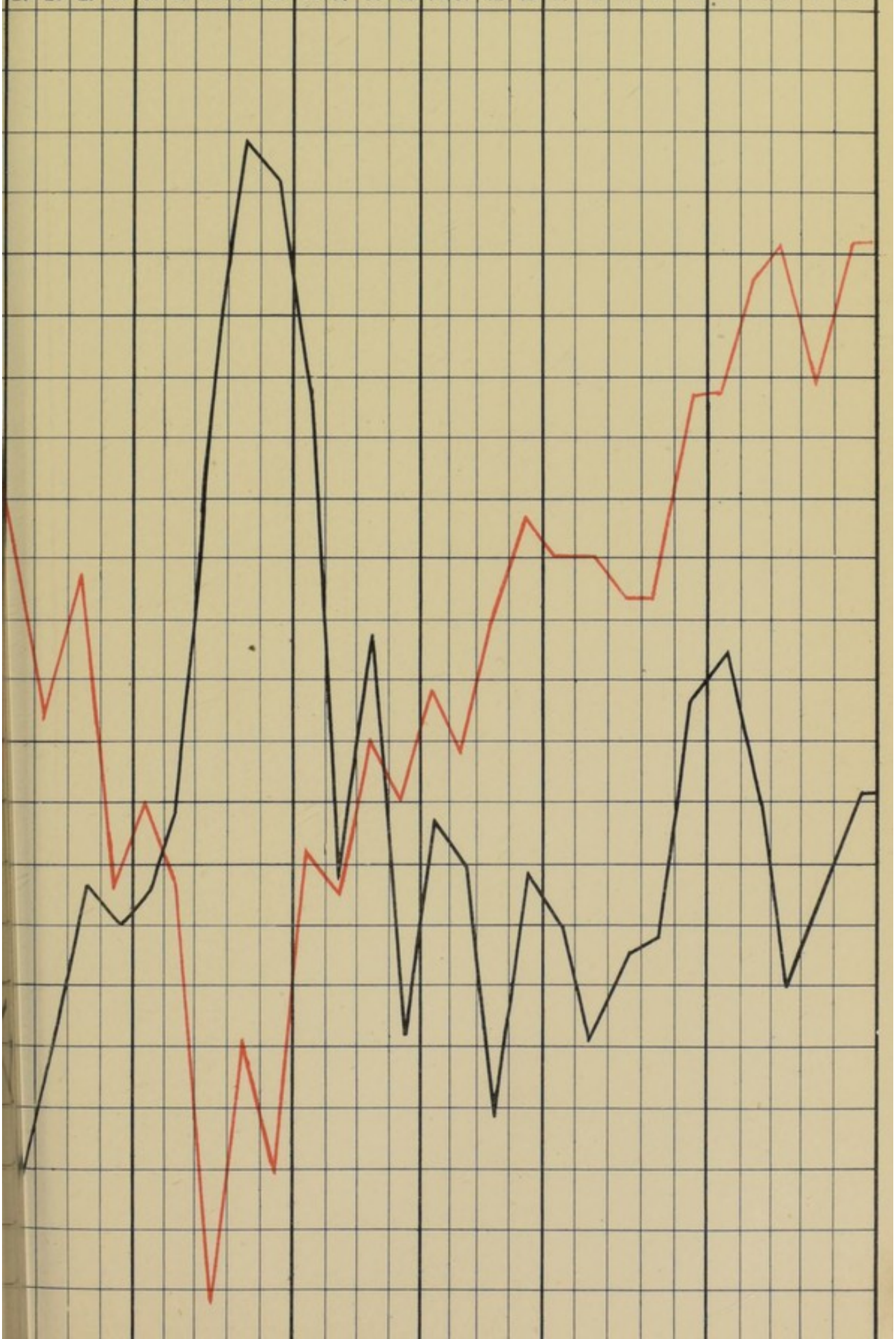
Grand Total ... 9,043


1884.
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
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13

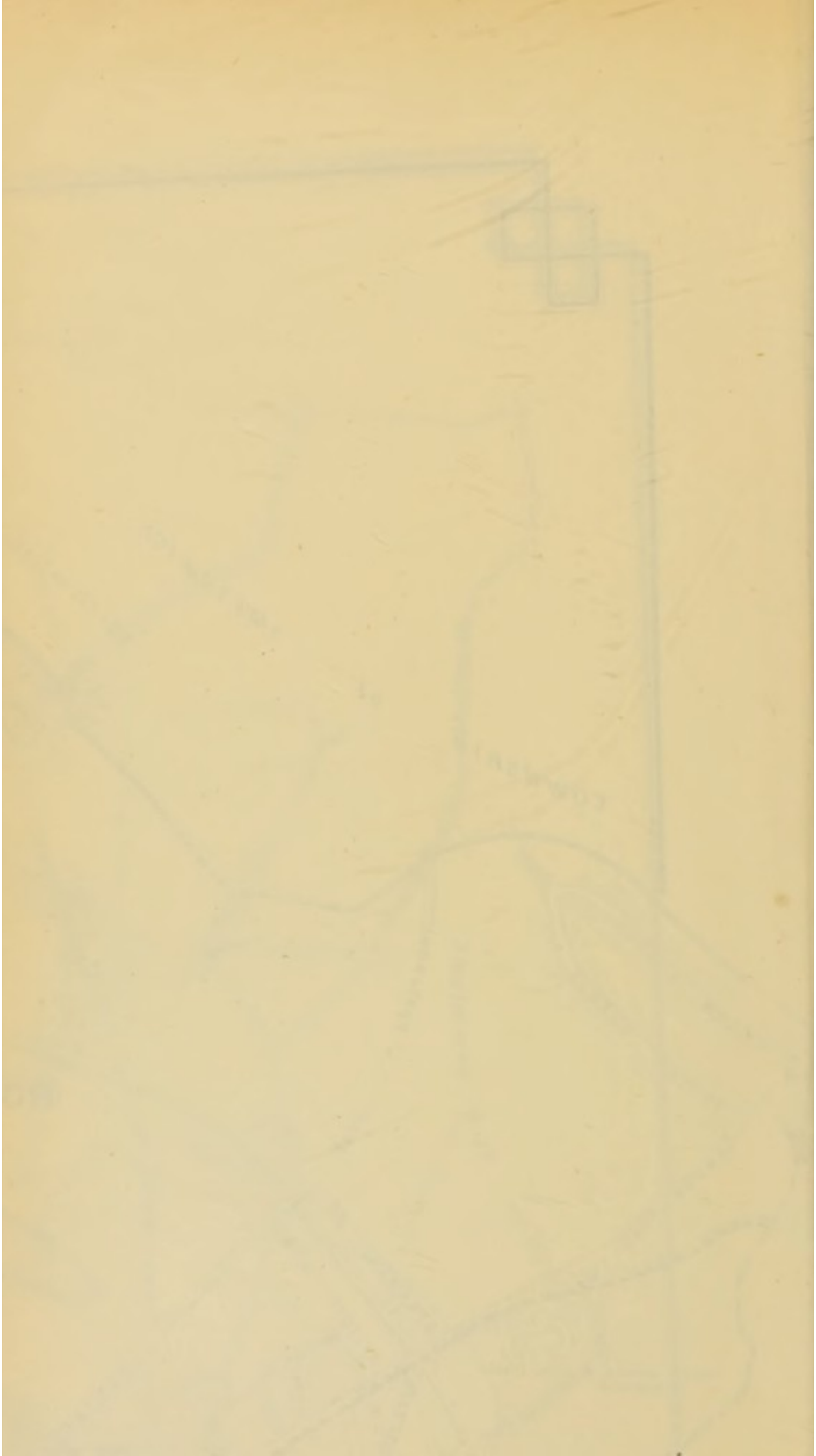
SHEWN IN WEEKLY PERIODS THUS _____

DEATH " " " " " " _____

JULY.				AUGUST.					SEPTEMBER.				OCTOBER.				NOVEMBER.					DECEMBER.				
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	53




MAP OF THE BOROUGH OF BIRMINGHAM, AS IN 1880.
NOTE. THE RED SPOTS REPRESENT THE NUMBER OF DEATHS (134) FROM SCARLET FEVER IN 1884.
CROSSES (333) MEASLES
BLUE (73) TYPHOID FEVER
PARISH OF HANDSWORTH
TOWNSHIP OF SMETHWICK
ALL SAINTS
ROTTON PARK
ST GEORGE'S
ST STEPHEN'S
NECHELLS
ST PAUL'S
ST MARY'S
LADYWOOD
DUDDESTON
MARKET HALL
ST THOMAS
ST BARTHOLEMEW'S
ST MARTIN'S
EDGBASTON
DERITEND
BORDESLEY
HAMLET OF LITTLE BROMWICH
TOWNSHIP OF HARBORNE
PARISH OF KINGS NORTON
PARISH OF NORTHFIELD
PARISH OF YARDLEY
BOROUGH SURVEYOR'S OFFICE BIRMINGHAM



REPORT
ON
ADULTERATION.

BOROUGH ANALYST'S LABORATORY,
THE COUNCIL HOUSE, BIRMINGHAM,
March 25th, 1885

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I beg to report that I have analysed during the year, under the provisions of the "Sale of Food and Drugs Act," 816 samples of food, drink, and drugs, detailed particulars of which are set forth in the following Table :—

NO.	DATE.	ARTICLE.	REMARKS.
1—	Jan. 4th	Milk	Adulterated with 7 % water.
2—	„ 11th	Milk	Deprived of 11 % of its cream. Cautioned by Health Sub-Committee.
3—	„ 11th	Milk	Adulterated with 11½ % water. Cautioned by Health Sub-Committee.
4—	„ 15th	Milk	Genuine.
5A—	„ 15th	Milk	Genuine.
6A—	„ 16th	Milk	Deprived of 15 % of its cream.
5—	„ 21st	Oatmeal	Genuine.
6—	„ 21st	Oatmeal	Genuine.
7—	„ 21st	Oatmeal	Genuine.
8—	„ 21st	Oatmeal	Genuine.
9—	„ 21st	Oatmeal	Genuine.
10—	„ 21st	Oatmeal	Genuine.
11—	„ 24th	Milk	Genuine.
12—	„ 24th	Milk	Deprived of 20 % of its cream. Fined 20s. & costs.
13—	„ 24th	Milk	Genuine.
14—	„ 24th	Milk	Genuine (nearly).
15—	„ 24th	Milk	Deprived of 18% of its cream. Fined 5s. & costs.
16—	„ 24th	Milk	Deprived of 19 % of its cream. Withdrawn.
17—	„ 29th	Milk	Deprived of 36 % of its cream. Fined 5s. & costs.
18—	„ 29th	Milk	Adulterated with 15·5 % of water, and deprived of 30 % of its cream. Fined 5s. & costs.
19—	„ 29th	Milk	Deprived of 30 % of its cream. Fined 5s. & costs.
20—	„ 29th	Milk	Adulterated with 11½ % of water. Fined 5s. and costs.
21—	„ 29th	Milk	Genuine.
22—	„ 29th	Milk	Adulterated with 5½ % of water, and deprived of 5 % of its cream. Cautioned by Health Sub-Committee.

NO.	DATE.	ARTICLE.	REMARKS.
23—	Feb. 5th	Milk	Genuine.
24—	„ 5th	Milk	Deprived of 9 % of its cream. Cautioned by Health Sub-Committee.
25—	„ 5th	Milk	Deprived of 35 % of its cream. Fined 20s. & costs
26—	„ 5th	Milk	Adulterated with 4½ % water, and deprived of 25 % of its cream. Fined 5s. & costs.
27—	„ 5th	Milk	Genuine.
28—	„ 5th	Milk	Genuine.
29—	„ 6th	Bread	Genuine.
30—	„ 6th	Bread	Genuine.
31—	„ 6th	Bread	Genuine.
32—	„ 6th	Bread	Genuine.
33—	„ 14th	Flour	Genuine.
34—	„ 14th	Flour	Genuine.
35—	„ 14th	Flour	Genuine.
36—	„ 14th	Flour	Genuine.
37—	„ 14th	Flour	Genuine.
38—	„ 14th	Flour	Gennine.
39—	„ 14th	Flour	Genuine.
40—	„ 14th	Flour	Genuine.
41—	„ 14th	Flour	Genuine.
42—	„ 14th	Flour	Genuine.
43—	„ 14th	Flour	Genuine.
44—	„ 14th	Flour	Genuine.
45—	„ 20th	Milk	Adulterated with 9½ % water, and deprived of 10 % of its cream. Fined 20s. and costs.
46—	„ 20th	Milk	Adulterated with 7 % water, and deprived of 15 % of its cream. Fined 40s. and costs.
47—	„ 20th	Milk	Deprived of 20 % of its cream. Fined 40s. & costs.
48—	„ 20th	Milk	Genuine.
49—	„ 20th	Milk	Deprived of 15 % of its cream. Fined 20s. & costs.
50—	„ 20th	Milk	Adulterated with 23 % water. Fined 40s. & costs.
51—	„ 26th	Coffee	Adulterated with 42 % chicory. Cautioned by Health Sub-Committee.
52—	„ 26th	Pepper (white)..	Genuine.
53—	„ 26th	Pepper (white)..	Genuine.
54—	„ 26th	Coffee	Genuine.
55—	„ 26th	Arrowroot.....	Genuine.
56—	„ 26th	Pepper (white)..	Genuine.
57—	„ 26th	Coffee	Adulterated with 53 % chicory. Cautioned by Health Sub-Committee.
58—	„ 26th	Arrowroot.....	Genuine.
59—	„ 26th	Pepper (white)..	Genuine.
60—	„ 26th	Arrowroot.....	Genuine.
61—	„ 26th	Coffee.....	Genuine.
62—	„ 26th	Pepper (white)..	Genuine.
63—	„ 26th	Arrowroot.....	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
64—	Feb. 26th	Coffee.....	Genuine.
65—	„ 26th	Pepper (white)..	Genuine.
66—	„ 26th	Coffee.....	Adulterated with nearly 10 % chicory.
67—	„ 26th	Coffee.....	Adulterated with 45 % chicory. Cautioned by Health Sub-Committee.
68—	„ 26th	Pepper (white)..	Genuine.
69—	„ 26th	Arrowroot.....	Genuine.
70—	„ 26th	Milk.....	Genuine.
71—	„ 26th	Milk.....	Genuine.
72—	„ 26th	Milk.....	Adulterated with 16 % water. Withdrawn.
73—	„ 26th	Milk.....	Genuine.
74—	„ 26th	Milk	Deprived of 30 % of its cream. Absconded.
75—	„ 26th	Milk	Deprived of over 25 % of its cream. Fined 20/- and costs.
76—	„ 28th	Milk	Genuine.
77—	„ 28th	Milk	Adulterated with 24 % water. Fined 20/- and costs.
78—	„ 28th	Milk	Adulterated with 27 % water, and deprived of 20 % of its cream. Fined 20/- and costs.
79—	„ 28th	Milk	Deprived of 15 % of its cream. Fined 20/- and costs.
80—	„ 28th	Milk	Adulterated with 25 % water. Withdrawn.
81—	„ 28th	Milk	Genuine.
82—	Mar. 8th	Butter	Genuine.
83—	„ 8th	Butter	Adulterated with 69 % of foreign fat. Fined 10/- and costs.
84—	„ 8th	Butter	Genuine.
85—	„ 8th	Butter	Adulterated with 84 % of foreign fat. Fined 20/- and costs.
86—	„ 8th	Butter	Adulterated with 66 % of foreign fat. Fined 20/- and costs.
87—	„ 8th	Butter	Adulterated with 72 % of foreign fat. Fined 5/- and costs.
88—	„ 11th	Milk	Genuine.
89—	„ 11th	Milk	Deprived of 35 % of its cream. Fined 40/- and costs.
90—	„ 11th	Milk	Genuine.
91—	„ 11th	Milk	Adulterated with 6 % water, and deprived of 25 % of its cream. Fined 5/- and costs.
92—	„ 11th	Milk	Genuine.
93—	„ 11th	Milk	Deprived of 25 % of its cream. Fined 20/- and costs.
94—	„ 11th	Milk	Genuine.
95—	„ 11th	Milk	Adulterated with 15 % water. Fined 20/- and costs.
96—	„ 11th	Milk	Adulterated with 3 % water, and deprived of 10 % of its cream.
97—	„ 11th	Milk	Genuine.
98—	„ 11th	Milk	Genuine (nearly).

NO.	DATE.	ARTICLE.	REMARKS.
99—	Mar. 11th	Milk	Genuine (nearly).
99A—	„ 17th	Sugar Confectionery	Contained no mineral matter.
99B—	„ 17th	Sugar Confectionery	Contained no mineral matter.
100—	„ 18th	Milk	Deprived of 15 % of its cream. Cautioned by Health Sub-Committee.
101—	„ 18th	Milk	Adulterated with 22 % water. Fined 10/- and costs.
102—	„ 18th	Milk	Deprived of 30 % of its cream. Fined 20/- and costs.
103—	„ 18th	Milk	Genuine (nearly).
104—	„ 18th	Milk	Adulterated with 9 % water, and deprived of 25 % of its cream. Fined 10/- and costs.
105—	„ 18th	Milk	Adulterated with 6 % water, and deprived of 12 % of its cream. Fined 10/- and costs.
106—	„ 19th	Milk	Deprived of 50 % of its cream. Fined 20/- and costs.
107—	„ 19th	Milk	Adulterated with 4 % water.
108—	„ 19th	Raspberry Confection.	Genuine.
109—	„ 19th	Milk	Genuine.
110—	„ 19th	Milk	Genuine.
111—	„ 19th	Milk	Deprived of 8 % of its cream.
112—	„ 19th	Ground Ginger ..	Genuine.
113—	„ 19th	Ground Ginger ..	Genuine.
114—	„ 19th	Ground Ginger ..	Genuine.
115—	„ 20th	Milk	Adulterated with 7 % water, and deprived of 8 % of its cream. Paid costs.
116—	„ 20th	Milk	Genuine.
117—	„ 20th	Milk	Genuine.
118—	„ 20th	Milk	Genuine.
119—	„ 20th	Milk	Genuine.
120—	„ 20th	Milk	Deprived of 25 % of its cream. Fined 10/- and costs.
121—	„ 20th	Milk	Genuine.
122—	„ 20th	Milk	Genuine.
123—	„ 20th	Milk	Deprived of 20 % of its cream. Fined 2/6 and costs.
124—	„ 21st	Milk	Adulterated with 7 % water, and deprived of 20 % of its cream.
125—	„ 22nd	Coffee.....	Genuine.
126—	„ 22nd	Coffee.....	Genuine.
127—	„ 22nd	Coffee.....	Genuine.
128—	„ 22nd	Coffee.....	Adulterated with 60 % chicory. Cautioned by Health Sub-Committee.
129—	„ 22nd	Coffee.....	Labelled a mixture.
130—	„ 22nd	Coffee.....	Labelled a mixture.
131—	„ 24th	Milk	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
132—	Mar. 24th	Milk	Deprived of 30 % of its cream. Fined 20/- and costs.
133—	„ 24th	Milk	Genuine (nearly).
134—	„ 24th	Milk	Deprived of 45 % of its cream. Fined 40/- and costs.
135—	„ 24th	Milk	Adulterated with 2½ % water, and deprived of 15 % of its cream. Paid costs.
136—	„ 24th	Milk	Deprived of 25 % of its cream. Fined 5/- and costs.
137—	„ 27th	Milk	Adulterated with 21 % water, and deprived of 15 % of its cream. Fined 10/- and costs.
138—	„ 27th	Milk	Genuine.
139—	„ 27th	Milk	Genuine (nearly).
140—	„ 27th	Milk	Adulterated with nearly 10 % water, and deprived of 20 % of its cream. Fined 5/- and costs.
141—	„ 27th	Milk	Deprived of 12 % of its cream. Cautioned by Health Sub-Committee.
142—	„ 27th	Milk	Adulterated with 5 % of water, and deprived of 8 % of its cream. Cautioned by Health Sub-Committee.
143—	April 2nd	Milk	Adulterated with 5 % of water and deprived of 6% of its cream. Cautioned by Health Sub-Committee.
144—	„ 2nd	Milk	Genuine.
145—	„ 2nd	Milk	Deprived of 10 % of its cream.
146—	„ 2nd	Milk	Genuine.
147—	„ 2nd	Milk	Genuine.
148—	„ 2nd	Milk	Genuine.
149—	„ 5th	Milk	Genuine.
150—	„ 7th	Milk	Genuine.
151—	„ 7th	Milk	Genuine.
152—	„ 7th	Milk	Deprived of 20 % of its cream. Fined 40s. and costs.
153—	„ 7th	Milk	Genuine.
154—	„ 7th	Milk	Genuine.
155—	„ 7th	Milk	Genuine (nearly.)
156—	„ 7th	Milk	Genuine (nearly.)
157—	„ 7th	Milk	Genuine (nearly.)
158—	„ 7th	Milk	Deprived of nearly 15 % of its cream.
159—	„ 9th	Flour	Genuine.
160—	„ 9th	Flour	Genuine.
161—	„ 9th	Flour	Genuine.
162—	„ 9th	Flour	Genuine.
163—	„ 9th	Flour	Genuine.
164—	„ 9th	Flour	Genuine.
165—	„ 9th	Flour	Genuine.
166—	„ 16th	Milk	Genuine.
167—	„ 16th	Milk	Adulterated with 7 % of water, and deprived of 8 % of its cream. Cautioned by Health Sub-Committee.
168—	„ 16th	Milk	Genuine.
169—	„ 16th	Milk	Genuine.
170—	„ 16th	Milk	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
171	—April 16th	Milk	Adulterated with 24 % of water. Fined 20s. and costs.
172	— „ 16th	Soda Water	Presented nothing injurious, but contained too little carbonate of soda.
173	— „ 16th	Soda Water	Presented nothing injurious, but contained too little carbonate of soda.
174	— „ 16th	Soda Water	Presented nothing injurious, but contained too little carbonate of soda.
175	— „ 16th	Soda Water	Presented nothing injurious, but contained too little carbonate of soda.
176	— „ 16th	Soda Water	Presented nothing injurious, but contained too little carbonate of soda.
177	— „ 19th	Oatmeal	Genuine.
178	— „ 19th	Oatmeal	Genuine.
179	— „ 19th	Oatmeal	Genuine.
180	— „ 19th	Oatmeal	Genuine.
181	— „ 19th	Oatmeal	Genuine.
182	— „ 19th	Oatmeal	Genuine.
183	— „ 22nd	Milk	Genuine (nearly.)
184	— „ 22nd	Milk	Deprived of 15 % of its cream. Fined 5s. and costs.
185	— „ 22nd	Milk	Deprived of 15 % of its cream. Cautioned by Health Sub-Committee.
186	— „ 22nd	Milk	Genuine (nearly).
187	— „ 22nd	Milk	Adulterated with 8 % of water. Cautioned by Health Sub-Committee.
188	— „ 22nd	Milk	Genuine (nearly).
189	— „ 22nd	Milk	Adulterated with 12 % of water. Cautioned by Health Sub-Committee.
190	— „ 22nd	Milk	Genuine.
191	— „ 22nd	Milk	Genuine (nearly).
192	— „ 22nd	Milk	Deprived of 30 % of its cream. Dismissed.
193	— „ 22nd	Milk	Genuine.
194	— „ 22nd	Milk	Adulterated with 7 % of water, and deprived of 25 % of its cream. Dismissed.
195	— „ 22nd	Milk	Deprived of 15 % of its cream.
196	— „ 22nd	Milk	Genuine (nearly.)
197	— „ 22nd	Milk	Adulterated with 7 % of water. Cautioned by Health Sub-Committee.
198	— „ 23rd	Butter	Adulterated with 76 % of foreign fat. Fined 20s. and costs.
199	— „ 23rd	Butter	Genuine.
200	— „ 23rd	Butter	Genuine.
201	— „ 23rd	Butter	Genuine.
202	— „ 23rd	Butter	Genuine.
203	— „ 23rd	Butter	Genuine.
204	— „ 23rd	Milk	Genuine.
205	— „ 28th	Ale	Genuine.
206	— „ 28th	Ale	Genuine.
207	— „ 28th	Ale	Genuine.
208	— „ 28th	Ale	Genuine.
209	— „ 28th	Ale	Genuine.
210	— „ 28th	Ale	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
211—	April 28th	Ale.....	Genuine.
212—	„ 28th	Ale.....	Genuine.
213—	„ 28th	Ale.....	Genuine.
214—	„ 28th	Ale.....	Genuine.
215—	„ 28th	Ale	Genuine.
216—	„ 28th	Ale.....	Genuine.
217—	„ 29th	Milk	Genuine (nearly.)
218—	„ 29th	Milk	Genuine.
219—	„ 29th	Milk	Deprived of 60 % of its cream. Fined 20s. and costs.
220—	„ 29th	Milk	Adulterated with 12 % of water, and deprived of 10 % of its cream. Fined 5s. and costs.
221—	„ 29th	Milk	Genuine.
222—	„ 29th	Milk	Adulterated with 10 % of water, and deprived of 10 % of its cream. Fined 5s. and costs.
223—	May 7th	Milk	Genuine.
224—	„ 7th	Milk	Genuine.
225—	„ 7th	Milk	Adulterated with 5 % of water, and deprived of 8 % of its cream. Cautioned by Health Sub-Committee.
226—	„ 7th	Milk	Genuine
227—	„ 7th	Milk	Genuine.
228—	„ 7th	Milk	Genuine.
229—	„ 7th	Milk	Genuine,
230—	„ 7th	Milk	Genuine.
231—	„ 7th	Milk	Genuine (nearly.)
232—	„ 7th	Milk	Genuine (nearly).
233—	„ 10th	Bread	Genuine.
234—	„ 10th	Bread	Genuine.
235—	„ 10th	Bread	Genuine.
236—	„ 10th	Bread	Genuine.
237—	„ 10th	Bread	Genuine.
238—	„ 10th	Bread	Genuine.
329—	„ 12th	Milk	Adulterated with 5 % of water, and deprived of 6 % of its cream. Cautioned by Health Sub-Committee.
240—	„ 12th	Milk	Genuine.
241—	„ 12th	Milk	Genuine (nearly).
242—	„ 12th	Milk	Deprived of 15 % of its cream. Cautioned by Health Sub-Committee.
243—	„ 12th	Milk	Genuine.
244—	„ 12th	Milk	Adulterated with 7 % of water, and deprived of 13 % of its cream. Cautioned by Health Sub-Committee.
245—	„ 12th	Milk	Deprived of 12 % of its cream. Cautioned by Health Sub-Committee.
246—	„ 12th	Milk	Deprived of 40 % of its cream.
247—	„ 12th	Milk	Genuine (nearly).
248—	„ 12th	Milk	Adulterated with 5 % of water, and deprived of 10 % of its cream. Cautioned by Health Sub-Committee.
249—	„ 16th	Milk	Adulterated with 6 % of water. Cautioned by Health Sub-Committee.
250—	„ 16th	Milk	Genuine (nearly).

NO.	DATE.	ARTICLE.	REMARKS.
251—	May 16th	Milk	Adulterated with 3½ % of water. Cautioned by Health Sub-Committee.
252—	„ 16th	Milk	Genuine.
253—	„ 16th	Milk	Genuine.
254—	„ 16th	Milk	Deprived of 20 % of its cream. Fined 40s. and costs.
255—	„ 19th	Oatmeal.....	Genuine.
256—	„ 19th	Oatmeal.....	Genuine.
257—	„ 19th	Oatmeal.....	Genuine.
258—	„ 19th	Oatmeal.....	Genuine.
259—	„ 19th	Oatmeal.....	Genuine.
260—	„ 19th	Oatmeal.....	Genuine.
261—	„ 19th	Oatmeal.....	Genuine.
262—	„ 19th	Milk	Adulterated with 8 % of water. Cautioned by Health Sub-Committee.
263—	„ 19th	Milk	Deprived of 18 % of its cream. Fined 40s. and costs.
264—	„ 19th	Milk	Genuine (nearly).
265—	„ 19th	Skimmed Milk...	Adulterated with 4 % of water. Cautioned by Health Sub-Committee.
266 —	„ 19th	Milk	Genuine.
267—	„ 19th	Milk	Genuine.
268—	„ 22nd	Butter	Genuine.
269—	„ 22nd	Cheese	Genuine.
270—	„ 22nd	Butter	Genuine.
271—	„ 22nd	Cheese	Genuine.
272—	„ 22nd	Butter	Adulterated with 87 % of foreign fat. Fined 20s and costs.
273—	„ 22nd	Cheese	Genuine.
274—	„ 22nd	Butter	Genuine.
275—	„ 22nd	Cheese	Genuine.
276—	„ 22nd	Butter	Genuine.
277—	„ 22nd	Cheese	Genuine.
278—	„ 22nd	Butter	Genuine.
279—	„ 22nd	Cheese	Genuine.
280—	„ 22nd	Butter	Consisted entirely of foreign fat. Fined 20s. and costs.
281—	„ 29th	Milk	Deprived of 20 % of its cream.
282—	„ 29th	Bread	Genuine.
283—	June 4th	Milk	Genuine.
284—	„ 4th	Milk	Deprived of 13 % of its cream. Cautioned by Health Sub-Committee.
285—	„ 4th	Milk	Adulterated with 5 % of water. Cautioned by Health Sub-Committee.
286—	„ 4th	Milk	Genuine (nearly).
287—	„ 6th	Oatmeal.....	Genuine.
288—	„ 6th	Flour	Genuine.
289—	„ 6th	Flour	Genuine.
290—	„ 6th	Oatmeal	Genuine.
291—	„ 6th	Oatmeal	Genuine.
292—	„ 6th	Flour.....	Genuine.
293—	„ 6th	Flour.....	Genuine.

NO.	DATE.	ARTICLE.	REMARKS
294—	June 6th	Flour.....	Genuine.
295—	„ 6th	Oatmeal.....	Genuine.
296—	„ 6th	Flour	Genuine.
297—	„ 6th	Oatmeal.....	Genuine.
298—	„ 6th	Oatmeal.....	Genuine.
299—	„ 9th	Milk	Deprived of 50 % of its cream.
300—	„ 9th	Milk	Genuine.
301—	„ 9th	Milk	Adulterated with 18 % water, and deprived of 15 % of its cream.
302—	„ 9th	Milk	Genuine.
303—	„ 9th	Milk	Genuine.
304—	„ 9th	Milk	Adulterated with 15 % water. Fined 5s. and costs.
305—	„ 10th	Ale.....	Contained 44 grains of salt per gallon.
306—	„ 10th	Ale...	Contained 31 grains of salt per gallon.
307—	„ 10th	Ale.....	Contained 41 grains of salt per gallon.
308—	„ 10th	Ale.....	Contained 12 grains of salt per gallon.
309—	„ 10th	Ale.....	Contained 41 grains of salt per gallon.
310—	„ 10th	Ale.....	Contained 33 grains of salt per gallon.
311—	„ 17th	Milk	Adulterated with 2 % of water and deprived of 7 % of its cream.
312—	„ 17th	Milk	Genuine.
313—	„ 17th	Milk	Adulterated with 3 % of water.
314—	„ 17th	Milk	Genuine (nearly).
315—	„ 17th	Milk	Genuine.
316—	„ 17th	Milk	Genuine (nearly).
317—	„ 19th	Quinine Disulphate	Quantity too small for analysis.
318—	„ 19th	Quinine Disulphate	Quantity too small for analysis.
319—	„ 19th	Quinine Disulphate	Quantity too small for analysis.
320—	„ 19th	Quinine Disulphate	Quantity too small for analysis.
321—	„ 19th	Quinine Disulphate	Quantity too small for analysis.
322—	„ 19th	Quinine Disulphate	Quantity too small for analysis.
323—	„ 19th	Milk of Sulphur	Genuine.
324—	„ 21st	Cream of Tartar	Genuine.
325—	„ 21st	Milk of Sulphur	Genuine.
326—	„ 21st	Cream of Tartar	Genuine.
327—	„ 21st	Milk of Sulphur	Adulterated with 45 % of Sulphate of Lime.
328—	„ 21st	Cream of Tartar	Genuine.
329—	„ 21st	Milk of Sulphur	Genuine.
330—	„ 21st	Cream of Tartar	Genuine.
331—	„ 21st	Milk of Sulphur.	Genuine.
332—	„ 21st	Cream of Tartar	Genuine.
333—	„ 21st	Milk of Sulphur.	Genuine.
334—	„ 21st	Cream of Tartar	Genuine.
335—	„ 27th	Mustard.....	Genuine.
336—	„ 27th	Mustard.....	Adulterated with 30 % of flour and turmeric.
337—	„ 27th	Pepper	Genuine.
338—	„ 27th	Mustard	Genuine.
339—	„ 27th	Pepper	Genuine.
340—	„ 27th	Mustard.....	Genuine.
341—	„ 27th	Pepper	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
342—	June 27th	Mustard.....	Genuine.
343—	„ 27th	Pepper	Genuine.
344—	„ 27th	Mustard.....	Genuine.
345—	„ 27th	Pepper	Genuine.
346—	„ 27th	Mustard.....	Adulterated with 40 % of flour and turmeric.
347—	„ 27th	Pepper	Genuine.
348—	„ 27th	Mustard.....	Genuine.
349—	„ 27th	Pepper	Genuine.
350—	„ 30th	Oatmeal	Genuine.
351—	„ 30th	Oatmeal.....	Genuine.
352—	„ 30th	Oatmeal.....	Genuine.
353—	„ 30th	Oatmeal.....	Genuine.
354—	„ 30th	Oatmeal..	Genuine.
355—	„ 30th	Oatmeal.....	Genuine.
356—	July 5th	Port Wine.....	Quantity insufficient for analysis.
357—	„ 5th	Port Wine.....	Quantity insufficient for analysis.
358—	„ 5th	Port Wine.....	Quantity insufficient for analysis.
359—	„ 5th	Port Wine.....	Quantity insufficient for analysis.
360—	„ 5th	Port Wine.....	Quantity insufficient for analysis.
361—	„ 5th	Port Wine.....	Quantity insufficient for analysis.
362—	„ 8th	Milk	Genuine (nearly).
363—	„ 8th	Skimmed Milk ...	Genuine.
364—	„ 8th	Milk	Genuine.
365—	„ 8th	Skimmed Milk ..	Genuine.
366—	„ 8th	Milk	Genuine.
367—	„ 8th	Milk	Adulterated with 14 % of water. Fined 1/- & costs.
368—	„ 9th	Bread	Genuine.
369—	„ 9th	Bread	Genuine.
370—	„ 9th	Bread	Genuine.
371—	„ 9th	Bread	Genuine.
372—	„ 9th	Bread	Genuine.
373—	„ 9th	Bread	Genuine.
374—	„ 10th	Milk	Genuine.
375—	„ 10th	Milk	Adulterated with 5 % of water, and deprived of 10 % of its cream. Cautioned by Health Sub-Committee.
376—	„ 10th	Milk	Genuine (nearly).
377—	„ 10th	Milk	Genuine.
378—	„ 10th	Milk	Adulterated with 10 % of water. Cautioned by Health Sub-Committee.
379—	„ 10th	Milk	Adulterated with 5 % of water, and deprived of 7 % of its cream. Cautioned by Health Sub-Committee.
380—	„ 15th	Milk	Genuine.
381—	„ 15th	Milk	Adulterated with 16 % of water. Fined 20/- and costs.
382—	„ 15th	Milk	Deprived of 25 % of its cream. Fined costs only.
383—	„ 15th	Milk	Genuine.
384—	„ 15th	Milk	Genuine (nearly).
385—	„ 15th	Milk	Genuine (nearly).
386—	„ 17th	Milk	Adulterated with 8 % of water. Cautioned by Health Sub-Committee.

NO.	DATE.	ARTICLE.	REMARKS.
387—	July 17th	Milk	Genuine.
388—	„ 18th	Butter	Genuine.
389—	„ 18th	Mustard.....	Genuine.
390—	„ 18th	Coffee & Chicory.	Labelled a Mixture.
391—	„ 18th	Butter	Genuine.
392—	„ 18th	Butter	Genuine.
393—	„ 18th	Coffee.....	Adulterated with 57 % of Chicory. Cautioned by Health Sub-Committee.
394—	„ 18th	Mustard.....	Genuine.
395—	„ 18th	Butter	Genuine.
396—	„ 18th	Mustard.....	Genuine.
397—	„ 18th	Coffee & Chicory.	Labelled a Mixture.
398—	„ 18th	Butter	Genuine.
399—	„ 18th	Mustard	Genuine.
400—	„ 18th	Coffee & Chicory.	Labelled a Mixture.
401—	„ 18th	Butter	Genuine.
402—	„ 18th	Butter	Consisted entirely of Foreign fat. Fined costs only.
403—	„ 18th	Butter	Genuine.
404—	„ 18th	Milk of Sulphur..	Adulterated with 45 % of Sulphate of Lime. Cautioned by Health Sub-Committee.
405—	„ 23rd	Milk	Genuine.
406—	„ 23rd	Milk	Genuine.
407—	„ 23rd	Milk	Genuine.
408—	„ 24th	Milk	Genuine.
409—	„ 25th	Milk	Deprived of 20 % of its cream. Cautioned by Health Sub-Committee.
410—	„ 25th	Milk	Genuine.
411—	„ 25th	Milk	Genuine (nearly).
412—	„ 25th	Milk	Genuine.
413—	„ 25th	Milk	Genuine (nearly).
414—	„ 25th	Milk	Genuine (nearly).
415—	„ 30th	Flour	Genuine.
416—	„ 30th	Oatmeal.....	Genuine.
417—	„ 30th	Bread.....	Genuine.
418—	„ 30th	Oatmeal.....	Genuine.
419—	„ 30th	Flour	Genuine.
420—	„ 30th	Bread.....	Genuine.
421—	„ 30th	Oatmeal.....	Genuine.
422—	„ 30th	Flour	Genuine.
423—	„ 30th	Oatmeal.....	Genuine.
424—	„ 30th	Flour	Genuine.
425—	„ 30th	Oatmeal.....	Genuine.
426—	„ 30th	Flour	Genuine.
427—	„ 30th	Oatmeal.....	Genuine.
428—	„ 30th	Flour	Genuine.
429—	„ 30th	Bread.....	Genuine.
430—	„ 30th	Bread.....	Genuine.
431—	„ 30th	Bread.....	Genuine.
432—	„ 30th	Bread.....	Genuine.
433—	Aug. 7th	Milk	Genuine (nearly).

NO.	DATE.	ARTICLE.	REMARKS.
434—	Aug. 7th	Milk	Adulterated with 8 % of water. Cautioned by Health Sub-Committee.
435—	„ 7th	Milk	Adulterated with 16 % of water. Cautioned by Health Sub-Committee.
436—	„ 7th	Milk	Adulterated with 5 % of water Cautioned by Health Sub-Committee.
437—	„ 7th	Milk	Genuine.
438—	„ 7th	Milk	Genuine.
439—	„ 9th	Flour	Genuine.
440—	„ 9th	Oatmeal	Genuine.
441—	„ 9th	Flour	Genuine.
442—	„ 9th	Oatmeal	Genuine.
443—	„ 9th	Flour	Genuine.
444—	„ 9th	Oatmeal	Genuine.
445—	„ 9th	Flour	Genuine.
446—	„ 9th	Oatmeal	Genuine.
447—	„ 9th	Flour	Genuine.
448—	„ 9th	Oatmeal	Genuine.
449—	„ 9th	Flour	Genuine.
450—	„ 9th	Oatmeal	Genuine.
451—	„ 19th	Ale	Genuine.
452—	„ 19th	Ale	Genuine.
453—	„ 19th	Ale	Genuine.
454—	„ 19th	Ale	Genuine.
455—	„ 19th	Ale	Genuine.
456—	„ 19th	Ale	Genuine.
457—	„ 20th	Bread	Genuine.
458—	„ 20th	Flour	Genuine.
459—	„ 20th	Bread	Genuine.
460—	„ 20th	Bread	Gennine.
461—	„ 20th	Flour	Genuine.
462—	„ 20th	Bread	Geuuine.
463—	„ 20th	Flour	Genuine.
464—	„ 20th	Bread	Genuine.
465—	„ 20th	Flour	Genuine.
466—	„ 20th	Flour	Genuine.
467—	„ 20th	Bread	Genuine.
468—	„ 20th	Flour	Genuine.
469—	„ 20th	Bread	Genuine.
470—	„ 20th	Flour	Genuine.
471—	„ 20th	Bread	Genuine.
472—	„ 20th	Flour	Genuine.
473—	„ 20th	Bread	Genuine.
474—	„ 20th	Flour	Genuine.
475—	„ 20th	Bread	Genuine.
476—	„ 20th	Flour	Genuine.
477—	„ 20th	Bread	Genuine.
478—	„ 20th	Flour	Genuine.
479—	„ 20th	Bread	Genuine.
480—	„ 20th	Flour	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
481—	Sept. 1st	Milk	Genuine.
482—	„ 1st	Milk	Genuine.
483—	„ 1st	Milk	Deprived of 25 % of its cream. Cautioned by Health Sub-Committee.
484—	„ 1st	Milk	Adulterated with 18 % of water. Cautioned by Health Sub-Committee.
485—	„ 1st	Milk	Genuine.
486—	„ 1st	Milk	Genuine.
487—	„ 2nd	Milk	Genuine.
488—	„ 2nd	Milk	Genuine.
489—	„ 2nd	Milk	Genuine.
490—	„ 2nd	Milk	Genuine.
491—	„ 2nd	Milk	Genuine.
492—	„ 2nd	Milk	Adulterated slightly with water.
493—	„ 8th	Rock Cocoa	Contained some sugar and 50 % of added wheat. starch.
494—	„ 8th	Rock Cocoa	Contained only a small trace of wheat starch
495—	„ 8th	Rock Cocoa	Contained some sugar and 30 % of wheat starch.
496—	„ 11th	Milk	Genuine.
497—	„ 11th	Milk	Adulterated with 7 % of water.
498—	„ 11th	Milk	Adulterated with 5 % of water.
499—	„ 11th	Milk	Genuine (nearly)
500—	„ 11th	Milk	Genuine.
501—	„ 11th	Milk	Deprived of 20 % of its cream.
502—	„ 12th	Oatmeal	Genuine.
503—	„ 12th	Flour	Genuine.
504—	„ 12th	Oatmeal	Genuine.
505—	„ 12th	Flour	Genuine.
506—	„ 12th	Oatmeal	Genuine.
507—	„ 12th	Flour	Genuine.
508—	„ 12th	Oatmeal	Genuine.
509—	„ 12th	Flour	Genuine.
510—	„ 12th	Flour	Genuine.
511—	„ 12th	Oatmeal	Genuine.
512—	„ 12th	Oatmeal	Genuine.
513—	„ 12th	Flour	Genuine.
514—	„ 12th	Oatmeal	Genuine.
515—	„ 12th	Flour	Genuine.
516—	„ 12th	Oatmeal	Genuine.
517—	„ 12th	Flour	Genuine.
518—	„ 12th	Flour	Genuine.
519—	„ 12th	Oatmeal	Genuine.
520—	„ 20th	Oatmeal	Genuine.
521—	„ 20th	Flour	Genuine.
522—	„ 20th	Flour	Genuine.
523—	„ 20th	Oatmeal	Genuine.
524—	„ 20th	Flour	Genuine.
525—	„ 20th	Oatmeal	Genuine.
526—	„ 20th	Beer	Genuine.
527—	„ 20th	Beer	Genuine.
528—	„ 20th	Beer	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
529—	Sept. 20th	Beer	Genuine.
530—	„ 20th	Beer	Genuine.
531—	„ 20th	Beer	Genuine.
532—	„ 25th	Bread	Genuine.
533—	„ 25th	Bread	Genuine.
534—	„ 25th	Bread	Genuine.
535—	„ 25th	Bread	Genuine.
536—	„ 25th	Bread	Genuine.
537—	„ 25th	Bread	Genuine.
538—	„ 25th	Bread	Genuine.
539—	„ 25th	Bread	Adulterated with a small quantity of alum.
540—	„ 25th	Bread	Genuine.
541—	„ 25th	Bread	Genuine.
542—	„ 25th	Bread	Genuine.
543—	„ 25th	Bread	Genuine.
544—	Oct. 6th	Milk	Genuine.
545—	„ 6th	Milk	Genuine (nearly).
546—	„ 6th	Milk	Genuine.
547—	„ 6th	Milk	Adulterated with 5 % of water, and deprived of 30 % of its cream. No Prosecution.
548—	„ 6th	Milk	Genuine.
549—	„ 6th	Milk	Genuine.
550—	„ 9th	Bread	Genuine.
551—	„ 9th	Bread	Genuine.
552—	„ 9th	Bread	Genuine.
553—	„ 9th	Pepper	Genuine.
554—	„ 9th	Pepper	Genuine.
555—	„ 9th	Pepper	Genuine.
556—	„ 9th	Bread	Genuine.
557—	„ 9th	Pepper	Genuine.
558—	„ 9th	Bread	Genuine.
559—	„ 9th	Pepper	Genuine.
560—	„ 9th	Pepper	Genuine.
561—	„ 9th	Bread	Genuine.
562—	„ 9th	Milk of Sulphur	Genuine.
563—	„ 9th	Milk of Sulphur	Adulterated with 51 % of Sulphate of Lime. Cautioned by Health Sub-Committee.
564—	„ 9th	Milk of Sulphur	Genuine.
565—	„ 9th	Milk of Sulphur	Genuine.
566—	„ 9th	Milk of Sulphur	Genuine.
567—	„ 9th	Milk of Sulphur	Adulterated with 53 % of Sulphate of Lime. Cautioned by Health Sub-Committee.
568—	„ 14th	Milk	Genuine (nearly).
569—	„ 14th	Milk	Genuine.
570—	„ 14th	Milk	Genuine.
571—	„ 14th	Milk	Genuine.
572—	„ 14th	Milk	Gennine.
573—	„ 14th	Milk	Genuine.
574—	„ 20th	Bread	Genuine.
575—	„ 20th	Flour	Genuine.
576—	„ 20th	Flour	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
577—	Oct. 20th	Oatmeal	Genuine.
578—	„ 20th	Flour	Genuine.
579—	„ 20th	Oatmeal	Genuine.
580—	„ 20th	Bread	Genuine.
581—	„ 20th	Bread	Genuine.
582—	„ 20th	Flour	Genuine.
583—	„ 20th	Oatmeal	Genuine.
584—	„ 20th	Bread	Genuine.
585—	„ 20th	Oatmeal	Genuine.
586—	„ 20th	Bread	Genuine.
587—	„ 20th	Flour	Genuine.
588—	„ 20th	Oatmeal	Genuine.
589—	„ 20th	Bread	Genuine.
590—	„ 20th	Flour	Genuine.
591—	„ 20th	Oatmeal	Genuine.
592—	„ 21st	Milk	Genuine.
593—	„ 21st	Milk	Genuine.
594—	„ 21st	Milk	Genuine.
595—	„ 21st	Milk	Genuine.
596—	„ 21st	Milk	Genuine.
597—	„ 21st	Milk	Genuine.
598—	„ 28th	Vinegar	Genuine.
599—	„ 28th	Vinegar	Genuine.
600—	„ 28th	Vinegar	Genuine.
601—	„ 28th	Vinegar	Genuine.
602—	„ 28th	Vinegar	Genuine.
603—	„ 28th	Vinegar	Genuine.
604—	„ 31st	Milk	Genuine (nearly).
605—	„ 31st	Milk	Genuine.
606—	„ 31st	Milk	Genuine.
607—	„ 31st	Milk	Genuine.
608—	„ 31st	Milk	Genuine (nearly).
609—	„ 31st	Milk	Genuine.
610—	Nov. 3rd	Coffee	Adulterated with 70 % of chicory.
611—	„ 3rd	Pepper	Genuine.
612—	„ 3rd	Mustard	Genuine.
613—	„ 3rd	Mustard	Genuine.
614—	„ 3rd	Pepper	Genuine.
615—	„ 3rd	Coffee	Adulterated with 52 % of chicory.
616—	„ 3rd	Coffee	Adulterated with 57 % of chicory.
617—	„ 3rd	Pepper	Genuine.
618—	„ 3rd	Mustard	Genuine.
619—	„ 3rd	Coffee	Adulterated with 56 % of chicory.
620—	„ 3rd	Mustard	Genuine.
621—	„ 3rd	Pepper	Genuine.
622—	„ 3rd	Coffee	Adulterated with 63 % of chicory.
623—	„ 3rd	Mustard	Genuine.
624—	„ 3rd	Pepper	Genuine.
625—	„ 3rd	Coffee	Adulterated with 65 % of chicory.
626—	„ 3rd	Mustard	Genuine.
627—	„ 3rd	Pepper	Contained about 6 % of sandy matter.

NO.	DATE.	ARTICLE.	REMARKS.
628—	Nov. 6th	Vinegar	Genuine.
629—	„ 6th	Vinegar	Genuine.
630—	„ 6th	Vinegar	Genuine.
631—	„ 6th	Vinegar	Genuine.
632—	„ 6th	Vinegar	Genuine.
633—	„ 6th	Vinegar	Genuine.
634—	„ 10th	Mustard	Adulterated with 30 % of starch and turmeric.
635—	„ 10th	Mustard	Genuine.
636—	„ 10th	Pepper	Nearly Genuine.
637—	„ 10th	Mustard	Genuine.
638—	„ 10th	Pepper	Nearly Genuine.
639—	„ 10th	Pepper	Slightly adulterated with sandy matter.
640—	„ 10th	Cocoa	Adulterated with sugar and starch.
641—	„ 10th	Pepper	Contained about 3 % of sandy matter.
642—	„ 10th	Cocoa	Adulterated with sugar and starch.
643—	„ 10th	Mustard	Genuine.
644—	„ 10th	Pepper	Slightly adulterated with sandy matter.
645—	„ 10th	Mustard	Genuine.
646—	„ 10th	Cocoa	Adulterated with sugar and starch.
647—	„ 10th	Mustard	Genuine.
648—	„ 10th	Pepper	Slightly adulterated with sandy matter.
648*a*—	„ 11th	Pepper	Contained about 6 % of sandy matter. Cautioned by Health Sub-Committee.
649—	„ 11th	Pepper	Marked not genuine; contained about 10 % of wheat starch.
650—	„ 11th	Milk	Genuine (nearly).
651—	„ 11th	Milk	Genuine.
652—	„ 11th	Milk	Adulterated with 7½ % of water. Cautioned by Health Sub-Committee.
653—	„ 11th	Milk	Genuine.
654—	„ 11th	Milk	Deprived of 13 % of its cream. Cautioned by Health Sub-Committee.
655—	„ 11th	Milk	Adulterated with 5 % of water.
656—	„ 18th	Flour	Genuine.
657—	„ 18th	Flour	Genuine.
658—	„ 18th	Flour	Genuine.
659—	„ 18th	Ground Ginger	Genuine.
660—	„ 18th	Ground Ginger	Genuine.
661—	„ 18th	Ground Ginger	Genuine.
662—	„ 18th	Flour	Genuine.
663—	„ 18th	Ground Ginger	Genuine.
664—	„ 18th	Flour	Genuine.
665—	„ 18th	Ground Ginger	Genuine.
666—	„ 18th	Ground Ginger	Genuine.
667—	„ 18th	Flour	Genuine.
668—	„ 18th	Bread	Genuine.
669—	„ 18th	Bread	Genuine.
670—	„ 18th	Bread	Genuine.
671—	„ 18th	Bread	Genuine.
672—	„ 18th	Bread	Genuine.
673—	„ 18th	Bread	Genuine.
674—	„ 20th	Milk	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
675—	Nov. 20th	Milk	Genuine (nearly).
676—	„ 20th	Milk	Deprived of 50 % of its cream. Paid costs.
677—	„ 20th	Skimmed Milk	Adulterated with 30 % of water. Fined 40s. and costs.
678—	„ 20th	Milk	Genuine.
679—	„ 20th	Milk	Genuine.
680—	„ 26th	Milk	Genuine.
681—	„ 26th	Mustard	Adulterated with 10 % of flour.
682—	„ 26th	Milk	Genuine.
683—	„ 26th	Coffee	Genuine.
684—	„ 26th	Milk	Genuine.
685—	„ 26th	Milk	Genuine (nearly).
686—	„ 26th	Milk	Genuine (nearly).
687—	„ 26th	Milk	Adulterated with 20 % of water. Fined 10s. and costs.
688—	„ 26th	Pepper	Genuine.
689—	„ 26th	Pepper	Genuine.
690—	„ 27th	Milk	Deprived of 20 % of its cream. Case dismissed.
691—	„ 27th	Milk	Deprived of 40 % of its cream. Fined 10s. and costs.
692—	„ 27th	Milk	Adulterated with 7½ per cent. of water. Cautioned by Health Sub-Committee.
693—	„ 27th	Milk	Genuine.
694—	„ 27th	Milk	Genuine.
695—	„ 27th	Milk	Genuine.
696—	„ 29th	Beer	Genuine.
697—	„ 29th	Beer	Genuine.
698—	„ 29th	Beer	Genuine.
699—	„ 29th	Beer	Genuine.
700—	„ 29th	Beer	Genuine.
701—	„ 29th	Beer	Genuine.
702—	Dec. 1st	Oatmeal	Genuine.
703—	„ 1st	Oatmeal	Genuine.
704—	„ 1st	Oatmeal	Genuine.
705—	„ 1st	Oatmeal	Genuine.
706—	„ 1st	Oatmeal	Genuine.
707—	„ 1st	Oatmeal	Genuine.
708—	„ 3rd	Butter	Consisted entirely of foreign fat. Fined 10s. and costs.
709—	„ 3rd	Butter	Consisted entirely of foreign fat. Fined 10s. and costs.
710—	„ 3rd	Butter	Genuine.
711—	„ 3rd	Butter	Consisted entirely of foreign fat. Fined 10s. and costs.
712—	„ 3rd	Butter	Consisted entirely of foreign fat. Fined 10s. and costs.
713—	„ 3rd	Butter	Genuine.
714—	„ 3rd	Vinegar	Genuine.
715—	„ 3rd	Vinegar	Genuine.
716—	„ 3rd	Vinegar	Genuine.
717—	„ 3rd	Vinegar	Genuine.
718—	„ 3rd	Vinegar	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
719—	Dec. 3rd	Vinegar	Genuine.
720—	„ 3rd	Whiskey	Adulterated ; 59° under proof.
721—	„ 8th	Arrowroot	Genuine.
722—	„ 8th	Ginger	Genuine.
723—	„ 8th	Arrowroot	Genuine.
724—	„ 8th	Ginger	Genuine.
725—	„ 8th	Arrowroot	Genuine.
726—	„ 8th	Ginger	Genuine.
727—	„ 8th	Arrowroot	Genuine.
728—	„ 8th	Ginger	Genuine.
729—	„ 8th	Arrowroot	Genuine.
730—	„ 8th	Ginger	Genuine.
731—	„ 8th	Arrowroot	Genuine.
732—	„ 8th	Ginger	Genuine.
733—	„ 9th	Milk	Genuine.
734—	„ 9th	Milk	Genuine (nearly).
735—	„ 9th	Milk	Genuine.
736—	„ 9th	Milk	Adulterated with 17 % per cent. of water. Fined 5s. and costs.
737—	„ 9th	Milk	Genuine.
738—	„ 9th	Milk	Genuine.
739—	„ 10th	Ale	Genuine.
740—	„ 10th	Ale	Genuine.
741—	„ 10th	Ale	Genuine.
742—	„ 10th	Ale	Nearly Genuine.
743—	„ 10th	Ale	Genuine.
744—	„ 10th	Ale	Genuine.
745—	„ 10th	Ale	Genuine.
746—	„ 10th	Ale	Genuine.
747—	„ 10th	Ale	Genuine.
748—	„ 10th	Ale	Genuine.
749—	„ 10th	Ale	Genuine.
750—	„ 10th	Ale	Genuine.
751—	„ 10th	Ale	Nearly Genuine.
752—	„ 12th	Bread	Genuine.
753—	„ 12th	Bread	Genuine.
754—	„ 12th	Bread	Genuine.
755—	„ 12th	Bread	Genuine.
756—	„ 12th	Bread	Genuine.
757—	„ 12th	Bread	Genuine.
758—	„ 12th	Vinegar	Genuine.
759—	„ 12th	Vinegar	Genuine.
760—	„ 12th	Vinegar	Genuine.
761—	„ 12th	Vinegar	Genuine.
762—	„ 12th	Vinegar	Genuine.
763—	„ 12th	Vinegar	Genuine.
764—	„ 13th	Mustard	Genuine.
765—	„ 13th	Pepper	Genuine.
766—	„ 13th	Mustard	Genuine.
767—	„ 13th	Pepper	Genuine.
768—	„ 13th	Mustard	Genuine.

NO.	DATE.	ARTICLE.	REMARKS.
769—	Dec. 13th	Pepper	Genuine.
770—	„ 13th	Mustard	Genuine.
771—	„ 13th	Pepper	Genuine.
772—	„ 13th	Mustard	Genuine.
773—	„ 13th	Pepper	Genuine.
774—	„ 13th	Mustard	Genuine.
775—	„ 13th	Pepper	Genuine.
776—	„ 16th	Ale	Contained a slight excess of common salt. Cautioned by Chairman of Committee.
777—	„ 16th	Gin	Adulterated, 39° under proof. Cautioned by Health Sub-Committee.
778—	„ 16th	Gin	Genuine.
779—	„ 16th	Whiskey	Genuine.
780—	„ 16th	Whiskey	Genuine.
781—	„ 16th	Ale	Genuine.
782—	„ 19th	Bread	Genuine.
783—	„ 19th	Bread	Genuine.
784—	„ 19th	Bread	Genuine.
785—	„ 19th	Bread	Genuine.
786—	„ 19th	Bread	Genuine.
787—	„ 19th	Bread	Genuine.
788—	„ 19th	Butter	No butter fat, it was butterine. Cautioned by Chairman of Committee.
789—	„ 19th	Butter	No butter fat, it was butterine. Cautioned by Chairman of Committee.
790—	„ 19th	Butter	No butter fat, it was butterine. Cautioned by Chairman of Committee.
791—	„ 19th	Butter	Genuine.
792—	„ 19th	Butter	No butter fat, it was butterine. Cautioned by Chairman of Committee.
793—	„ 19th	Butter	No butter fat, it was butterine. Cautioned by Chairman of Committee.
794—	„ 19th	Butter	Genuine.
795—	„ 19th	Butter	Genuine.
796—	„ 19th	Butter	No butter fat, it was butterine. Cautioned by Chairman of Committee.
797—	„ 19th	Butter	Genuine.
798—	„ 19th	Butter	Genuine.
799—	„ 19th	Butter	Genuine.
800—	„ 20th	Pepper	Genuine.
801—	„ 20th	Pepper	Genuine.
802—	„ 20th	Pepper	Genuine.
803—	„ 20th	Pepper	Genuine.
804—	„ 20th	Pepper	Genuine.
805—	„ 20th	Pepper	Genuine.
806—	„ 29th	Ale	Genuine.
807—	„ 29th	Ale	Genuine.
808—	„ 29th	Ale	Genuine.
809—	„ 29th	Ale	Genuine.
810—	„ 29th	Ale	Genuine.
811—	„ 29th	Ale	Genuine.

The samples analysed consisted of—

288	Samples of	Milk.
77	„	Bread.
73	„	Flour.
67	„	Oatmeal.
57	„	Ale.
48	„	Pepper.
45	„	Butter.
31	„	Mustard.
24	„	Vinegar.
21	„	Coffee.
15	„	Ground Ginger.
13	„	Milk of Sulphur.
11	„	Arrowroot.
6	„	Cheese.
6	„	Cocoa.
6	„	Cream of Tartar.
6	„	Port Wine.
6	„	Quinine.
5	„	Soda Water.
3	„	Whiskey.
3	„	Sugar Confectionery.
3	„	Coffee and Chicory.
2	„	Gin.
Total ...	814	

The Table below shows the number of samples analysed, the total percentage of adulteration, and the percentage of adulteration of certain leading articles of Food for each year since 1873 :—

PROPORTION OF ADULTERATED ARTICLES PER 100 SAMPLES, ANALYSED OF THE FOLLOWING COMMODITIES :—

Years.	Number of Samples Analysed.	Total Percentage of Adulteration	Percentage of Adulteration of undermentioned Articles.								
			Milk.	Bread and Flour.	Butter.	Groceries.	Wines.	Beer.	Spirits.	Drugs.	Other Articles
1873	87	65	75	0	0	87	—	—	—	100	100
1874	79	42	67	0	66	16	—	0	100	—	—
1875	73	38	55	0	—	36	100	—	—	25	—
1876	92	33	30	—	—	19	—	33	25	36	62
1877	176	40	58	0	—	12	—	21	36	26	31
1878	158	21	57	0	0	10	0	13	26	—	—
1879	168	25	60	0	0	5	—	16	—	—	0
1880	178	21	46	0	0	0	—	0	—	—	0
1881	197	23	54	0	36	8	—	0	50	0	0
1882	321	18	36	0	25	10	—	0	—	—	0
1883	151	38	47	0	30	42	100	17	29	100	—
1884	816	21	41	1	40	23	—	0	40	21	0

It will be seen that considerable activity has been displayed in the purchase of articles of consumption, and that the number so examined is now about that indicated by the Local Government Board, viz., two articles per 1,000 of the population.

A comparison of the percentages of adulteration for 1884 of various articles, or groups of articles, with those of recent years, brings to light the fact that the percentage of adulteration of all the groups of articles has fallen again to the amount noticed two years ago, the chief movements since the previous year being a rather smaller amount of adulteration in the milks examined, and a larger percentage of butters containing other than butter fat. As, however, some articles are invariably much more extensively adulterated than others, it follows that the proportion of adulterated samples to the total number of samples analysed largely depends upon the kinds and relative proportions of the various articles submitted for analysis. Too much importance must not, therefore, be attached to the total percentage of adulteration revealed by one year's return.

Milk.

No fewer than 288 samples of Milk have been procured for analysis during the year, 118 of which contained either less cream, or a smaller proportion of other solids, than is natural to Milk. In some cases both these constituents were less in amount than is found in Milk from a dairy of cows, showing both the abstraction of cream and the addition of water.

It is gratifying to observe that the percentage of samples which had been tampered with is little more than one half of that in the previous year. It would appear that the greater activity which has been displayed by Mr. Parker, the Inspector of Nuisances, in taking samples in all parts of the Borough, and in prosecuting the vendors, has had a decidedly deterrent effect on the widespread practice of Milk adulteration, which, however, is still far more common than one can rest satisfied with, especially when it is remembered how highly fraught it is with danger to health of the most serious kind.

Bread.

I have also examined 77 samples of Bread and 73 of Flour. One of the Breads contained a small quantity of alum, the first instance of adulteration in these important articles that I have met with for many years.

Pepper.

Out of 48 samples of Pepper, seven were not genuine, as in six sandy matter was found, and in the seventh about 10 per cent. of wheat starch; while of 31 samples of mustard, four contained considerable quantities of flour, and in addition a little turmeric to restore the condiment to its natural colour.

Butter.

Forty-five Butters were procured during the year, an examination of which revealed the fact that as many as 18 were either entirely devoid of true Butter fat, that is to say were Butterine, or were composed nearly entirely of foreign fat.

Butterine.

The sale of Butterine has become very greatly developed of late, and the article is frequently palmed off on the public as butter. As long as it is made from good beef fat there is no objection to its being used as an article of food; the objection is that not being butter, its sale as such is a deception, which is discreditable and injurious to commercial morality. Another objection is that it is often sold at a price much above its value, at the price of genuine butter in fact, which is a still more serious fraud on the purchaser, and one which influences very seriously the interests of the true butter trade. Butterine is neither so agreeable in flavour nor so digestible as butter, which, however, it is made to resemble as much as possible by churning it with milk and appropriately colouring it. Butterine is not only sold as a substitute for butter, but it is also used for adulterating it. It taxes all the resources of Chemistry to keep pace with falsification at the present time, as the science seems to be pressed as much into the service of the adulterator as of the detector of adulteration, for the reason that cheating pays; and it will continue to do so as long as the practice is so leniently viewed and dealt with, and allowed so many loopholes of escape from punishment.

Vaseline in pastry.

The last instance of this perversion of chemical knowledge presents itself in the addition of Vaseline to pastry. This new substance cannot even lay claim to being a food, as it possesses no nutritive qualities whatever, but it is found to have the effect of preventing pastry getting dry; in other words, it enables the pastry-cook to endow stale pastry with the appearance of being fresh.

Coffee.

Coffee is also an article which is much sophisticated, for many of the so-called Coffees mainly consist of Chicory, 12 out of 21 samples submitted to me during the year were so constituted, while of six Cocoas examined, all were admixtures of that substance with very large quantities of sugar and starch.

Milk of Sulphur

Four of 13 samples of Milk of Sulphur contained large amounts of Sulphate of Lime.

Whiskey and Gin.

Of three samples of Whiskey and two of Gin, one of each was found to be under the limit of alcoholic strength assigned by law.

The Sugar Confectionery contained nothing deleterious to health. Sugar Confectionery.

The samples of Oatmeal, Ale, Vinegar, Ground Ginger, Arrowroot, Cheese, Cream of Tartar, and Soda Water were genuine, or nearly so. Miscellaneous articles.

I remain,

Mr. Chairman and Gentlemen,

Your obedient Servant,

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

Borough Analyst.

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