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REPORT
ON THE
HEALTH OF THE BOROUGH
OF
BIRMINGHAM,

FOR THE YEAR 1878,

ALSO,

ON THE PROCEEDINGS TAKEN UNDER THE ACT FOR THE
PREVENTION OF ADULTERATION
OF ARTICLES OF FOOD AND DRINK,

BY
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and
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MEDICAL OFFICER OF HEALTH'S DEPARTMENT,

PUBLIC OFFICE, BIRMINGHAM,

May 3rd, 1879.

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I have the honour to present my Report for the year ending December 28th, 1878.

The population of the Borough, estimated by the Registrar-General to the middle of the year upon the basis of the last census in 1871, was 383,117, spread over an area of 8,400 acres, and occupying about 73,000 houses, about 6,000 houses in addition being void. The average number of persons per acre is 45·6, but of course the population is not spread equally over the whole area.

The density of a population has a marked influence on mortality, as a rule those towns which are most densely populated suffer the heaviest mortality, and the same may be said of parts of towns. Birmingham is very favourably circumstanced in regard to the area which it occupies, comparing advantageously with some of the other principal towns of the kingdom. The following table shows the population, number of persons per acre, and mortality in certain towns of the kingdom :—

	Estimated Population, 1878.	No. of Persons per Acre.	Death-rate.
London	3,577,304	47·5	23·5
Norwich	84,620	11·3	24·6
Birmingham ...	383,117	45·6	25·2
Liverpool	532,681	102·2	29·4
Manchester	360,514	84·0	27·9
Leeds	304,948	14·1	23·8
Newcastle	144,570	26·9	23·8
Glasgow	566,940	94·0	24·9
Dublin	314,666	31·3	29·6

Although density of population exerts so marked an effect on public health, its influence may be interfered with, and even eclipsed, by bad conditions of another kind; a striking example of this fact is furnished by the city of Dublin, where, with a population numbering only 31·3 persons per acre, the mortality is excessively high.

The number of

BIRTHS

registered during the year is 15,964, against 16,001 in 1877 and 15,816 in 1876, consisting of 8,155 males, and 7,809 females. The numbers for each quarter of the years 1873 to 1878 inclusive are as follows :—

1873.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	TOTAL.
Total	3,741	3,564	3,378	3,814	14,497
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
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
Males	...	..	1,929	...	1,884	...	1,815	...	1,904	..	7,532
Females	...	...	1,857	...	1,853	...	1,766	...	1,853	...	7,329
Sexless	...	...	1	...	0	...	0	...	0	...	1
1876.											
Total	...	...	4,140	...	3,924	...	3,803	...	3,949	...	15,816
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
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
Males	...	...	2,160	...	2,051	...	1,962	...	1,982	...	8,155
Females	...	...	1,979	...	2,045	...	1,887	...	1,898	...	7,809

The Birth-rate for the year is 41·67 per 1,000 persons living, against 42·39 last year, and 39·38, the average rate in the 10 years 1868—77, and though lower than last year, is still higher than in any one of the preceding ten years, except 1876 and 1877, and is exceeded this year by only two of the twenty-three large towns of the United Kingdom, viz., Salford and Hull.

In the subjoined statement will be found the Birth-rate per 1,000 of the population in the undermentioned large towns for the year 1878 :—

London.	Norwich.	Birmingham.	Liverpool.	Manchester.	Leeds.	Newcastle.	Average of large Towns.
36·2	33·6	41·7	38·8	38·2	39·2	38·1	36·8

DEATHS.

The Deaths registered during the year amount to 9,662, against 9,038 last year, and 8,330 in 1876. The Death-rate per 1,000 persons living is 25·2, as compared with rates of 24·8, 26·8, 26·3, 22·4, and 23·9, in the years 1873 to 1877 respectively. This rise is the result of the epidemic of Scarlet Fever, which raged in the Borough during the whole of the year, but more particularly, as is usual, in the 4th Quarter, and of the prolonged severity of the weather in the last two months of the year, when deaths from diseases of the Respiratory Organs were more than ordinarily numerous, as well as of a slightly higher Death-rate from Diarrhœa. Although the Death-rate was higher in 1878 than in the two previous years, it was not so high as in 1874 and 1875; in the former year both Scarlet Fever at its acme and much Small-pox existed, while in 1875 Diarrhœa was exceptionally fatal.

The death-rate given above does not exactly agree with that stated by the Registrar General, who makes it 25·5 per 1,000. This difference is explained by a footnote in the Registrar General's Annual Summary for 1878 to the effect that "the deaths in Birmingham . . . include paupers belonging to the Borough who died in Workhouses situated outside the municipal boundaries."

The Workhouses referred to are those of Erdington and King's Norton; the former receives paupers from that part of the parish of Aston situate in the Borough of Birmingham, and the latter receives them from that part of the parish of Edgbaston which constitutes a portion of the Borough.

But while these deaths are strictly set down to the account of the Borough, there is no allowance made in the opposite direction for the deaths of persons in the numerous medical and eleemosynary institutions of the Borough who come from places outside its boundaries, so that our death-rate, *ceteris paribus*, appears considerably higher than it actually is. I have not endeavoured as yet

to rectify the error, because from my experience of procuring returns I fear it would be very difficult, if not impossible, to obtain the necessary statistics, but I intend to enquire into the matter.

The Table below affords comparative information for the last 14 years upon estimated population, actual numbers of Births and Deaths and Birth-and Death-rates :—

Year.	Estimated Population in the middle of each Year.	Births.	Deaths.	Annual Rate to 1,000 living.	
				Births.	Deaths.
1865	The Estimated Population in these years is not to be relied on.	12,699	8,014	38·87	24·5
1866		12,877	8,042	38·48	24·0
1867		13,029	8,318	38·01	25·6
1868		12,992	8,548	36·31	25·9
1869		12,779	7,737	35·53	23·1
1870		12,922	7,805	35·00	23·0
1871	344,980	13,443	8,594	39·00	24·9
1872	350,164	14,123	8,048	40·50	23·1
1873	355,540	14,497	8,990	40·78	24·8
1874	360,892	14,888	9,665	41·25	26·8
1875	366,325	14,862	9,668	40·57	26·3
1876	371,839	15,816	8,330	42·53	22·4
1877	377,436	16,001	9,038	42·39	23·9
1878	383,117	15,964	9,662	41·67	25·2

In the following statement is given the Death-rate per 1,000 of the population of Birmingham and the principal large towns for the year 1878, and the five preceding years :—

DEATH-RATE PER 1,000 PERSONS LIVING.

	Average of 20 large English Towns.	London.	Norwich.	Birm.	Liverpool.	Manchstr.	Leeds.	Newcastle.
1878	24·4	23·5	24·6	25·2	29·4	27·9	23·8	23·8
1877	22·8	21·9	21·0	23·9	26·5	27·4	22·3	22·4
1876	23·6	22·3	21·9	22·4	27·6	29·2	25·1	22·8
1875	25·4	23·7	24·5	26·3	27·5	29·9	26·4	26·1
1874	25·4	22·5	23·5	26·8	32·0	30·4	28·7	29·2
1873	24·4	22·5	21·5	24·8	25·9	30·1	27·6	30·1

In the subjoined Table will be found the total number of Deaths, the number of Deaths in each sex, and the Death-rate for each quarter of the year, together with the totals for each of the four preceding years :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total 1878.	Total 1877.	Total 1876.	Total 1875.	Total 1874.
Total	2,592	2,045	2,431	2,594	9,662	9,038	8,330	9,668	9,665
Males	1,340	1,105	1,277	1,364	5,086	4,745	4,390	5,044	4,993
Females	1,252	940	1,153	1,229	4,574	4,292	3,939	4,623	4,672
Sex not known	—	—	1	1	2	1	1	1	—
Death-rate	27·06	21·35	25·90	27·08	25·2	23·95	22·40	26·34	26·78

The division of the Deaths among the nine Registration Sub-Districts is shown in the statement below :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total 1878.	Total 1877.	Total 1876.	Total 1875.	Death-rate 1878.
Ladywood	297	250	296	311	1,154	950	890	1,090	23·3
St. Thomas	237	205	221	246	909	880	805	932	21·7
St. Martin	288	199	279	304	1,070	996	1,028	1,084	24·6
St. Mary	97	74	87	100	358	352	347	394	23·5
St. George	443	311	354	357	1,465	1,383	1,286	1,568	27·5
All Saints'	404	380	365	454	1,603	1,571	1,376	1,370	37·4
Deritend	396	314	427	415	1,552	1,437	1,260	1,365	24·3
Duddeston	349	247	341	323	1,260	1,239	1,091	1,292	23·9
Edgbaston	81	65	61	84	291	230	247	273	13·6

If we exclude all the Institutions in the Borough, except the Workhouse, the Death-rate last year is 23·6; excluding the Workhouse also, it is 22·2 per 1,000 per annum.

The high Death-rates in St. George's and All Saints' Sub-Districts are due to the existence in the former of the General Hospital, and in the latter of the Gaol, Asylum, Borough Hospital, and Workhouse. The death-rate of St. George's Registration Sub-District, excluding the deaths recorded in the General Hospital, would be 23·7 instead of 27·5, as it actually now appears. In like manner, if the deaths in the Queen's Hospital, situated in St. Thomas' district be excluded, the number of deaths in that district is reduced from 909 to 781, and the death-rate from 21·7 to 18·7.

By eliminating the deaths that have taken place in the Children's Hospital the death-rate in Ladywood Registration Sub-District is brought down to 21·1, and by discarding those registered as dying in the Workhouse, Borough Hospital, Lunatic Asylum and Gaol, the death-rate of All Saints', instead of appearing as 37·4, stands at 21·3.

In the subjoined Table will be found the number of deaths in each of the 16 Wards of the Borough for each quarter of the year :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Rotton Park (W., B.H.) ...	274	281	259	323	1,137
All Saints' (L.) ...	185	168	182	202	737
Ladywood (H.) ...	159	133	161	158	611
St. Paul ...	123	80	102	129	434
St. George ...	176	120	160	147	603
St. Stephen ...	161	103	145	116	525
St. Mary (H.) ...	168	164	176	192	700
St. Bartholomew ...	182	112	184	196	674
Market Hall ...	120	84	88	99	391
St. Thomas (H.) ...	174	136	146	162	618
St. Martin ...	139	118	136	144	537
Edgbaston ...	98	72	73	97	335
Deritend ...	167	112	150	161	590
Bordesley ...	169	159	179	190	697
Duddeston ...	132	97	119	111	459
Nechells ...	170	106	171	167	614
Total ...	2,592	2,045	2,431	2,594	9,662

In the following statement is given the number of deaths at various ætal periods for each of the quarters of 1878, and the totals for that and the two preceding years :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total 1878.	Total 1877.	Total 1876.
Under 1 year of age ...	714	546	902	606	2,768	2,629	2,538
Between 1 and 5 years of age	606	440	571	645	2,262	1,832	1,344
" 5 and 10 "	110	92	135	185	522	278	290
" 10 and 20 "	72	85	79	86	322	292	304
" 20 and 40 "	251	249	220	255	975	1,054	1,020
" 40 and 60 "	393	293	262	361	1,309	1,432	1,393
" 60 and 80 "	371	301	219	394	1,285	1,321	1,245
At 80 years and upwards	75	39	43	62	219	200	196

By comparing the figures for 1878 and 1877, it will be found that there is an increase in the number of deaths at each of the ætal periods up to 20 years, and at that above 80 years of age, while at the ætal periods between 20 and 80 years

of age the number has diminished. At the aetal periods below 20 years of age, the rise in the mortality is entirely due to the excessive fatality of Scarlet Fever; that at 80 years of age and upwards is to be ascribed to a slightly larger number of deaths from Local Diseases generally at that age.

The average age at death for each Quarter of the Year, and for the whole year, is given below, and compared with the corresponding data of the previous year.

First Quarter	...	24 years 2 months.	..	27 years 7 months.
Second "	...	24 " 0 "	...	25 " 4 "
Third "	...	17 " 8 "	...	20 " 10 "
Fourth "	...	23 " 3 "	..	22 " 1 "
Whole Year	...	22 " 2 "	...	24 " 2 "

The death age for the year 1877 was two years higher than in 1878. The principal cause of the lower age in the latter year is the increased mortality from Scarlet Fever and Diarrhoea among young children.

On looking at the death age for the several Quarters of the year, it will be observed that it was lowest in the third quarter, the explanation of this fact is that in that part of the year the high mortality from Diarrhoea, combined with a high mortality from Scarlet Fever carried off a great number of the infant population; in the fourth Quarter, although Scarlatina was more fatal than at any other time, and a still low death age might be expected, the death age rose to nearly the same figure as in the first two quarters, and above that of the corresponding quarter of the previous year, this fact receives its explanation from the circumstance that there was a considerable mortality at the end of the quarter amongst persons of advanced age, from chest and other diseases.

Appended to the Report is a Chart showing the death-rate and death-age at the various weekly periods throughout the year.

INFANT MORTALITY.

The following are the per-centages of deaths under one year of age on the total number of births registered in the principal large English towns during the last six years:—

	Average of 20 large English Towns.			London.	Norwich.	Birm.	Liverpool.	Manchstr.	Leeds.	Newcastle.
1878	...	17·2	...	16·4	21·1	17·0	19·3	17·5	18·8	16·1
1877	...	15·4	...	14·6	15·4	16·4	18·8	16·1	16·5	15·1
1876	...	16·7	...	15·7	17·8	16·0	20·8	18·0	18·1	16·7
1875	...	17·6	..	16·2	21·0	19·6	21·0	18·4	19·7	18·7
1874	...	17·5	...	15·6	17·8	17·8	23·3	19·7	19·9	19·8
1873	...	17·4	...	16·0	16·1	18·1	21·3	20·0	19·4	18·7

The slight increase in the figures for 1878 is due to the diminished birth-rate for the same year.

The per-centage of deaths under one year of age on total deaths during the last six years in the principal large English towns is given in the subjoined statement:—

	Average of 20 large English Towns.			London.	Norwich.	Birm.	Liverpool.	Manchstr.	Leeds.	Newcastle.
1878	...	26·5	...	25·2	28·7	28·6	25·5	24·0	31·0	25·8
1877	...	25·5	..	24·1	24·7	29·1	27·5	22·6	29·7	26·6
1876	...	26·9	...	25·7	27·0	30·5	29·6	24·5	29·9	30·4
1875	...	26·2	...	24·4	28·0	30·6	29·4	24·3	30·1	29·1
1874	...	26·4	...	24·9	24·0	27·8	28·2	25·4	28·8	27·5
1873	...	27·0	...	25·2	24·5	29·2	30·4	25·7	28·0	27·1

The diminution in the percentage of deaths under one year on the total deaths is owing to the generally higher mortality at ages above one year.

ZYMOTIC DISEASES.

From the seven principal Zymotic Diseases 2,421 deaths, or 25·1 per cent. of the total number of deaths from all causes, have been registered. In 1877 the total number of deaths from this class of diseases was 1,576, or 845 less than that for the present year; while the average number for the five years, 1873—77, was 1,950, or 471 less than that for the year under notice. The Zymotic death-rate is this year 6·3 per 1,000 persons living per annum, against rates of 5·6, 7·3, 5·9, 3·6, and 4·2 in the years 1873, 4, 5, 6, and 7 respectively, as shown in the table below, from which it is also seen that the Zymotic death-rate is higher than in any year of the last six, except 1874, when the last epidemic of Scarlatina reached its height, and existed in conjunction with Small-Pox :—

	Average of 20 large English Towns.	London.	Norwich.	Birm.	Liverpool.	Manchestr.	Leeds.	Newcastle.
1878 ...	4·4	4·1	3·6	6·3	6·1	4·0	4·5	4·6
1877 ...	3·5	3·5	2·9	4·2	4·7	4·2	2·8	2·5
1876 ...	4·1	3·6	2·9	3·6	6·1	5·2	4·5	2·5
1875 ...	4·4	3·9	4·3	5·9	4·5	4·6	4·6	3·6
1874 ...	4·5	3·3	2·0	7·3	8·4	5·5	6·3	5·5
1873 ...	3·9	3·3	2·2	5·6	4·0	5·9	5·6	6·8

In the subjoined Table is given the percentage of Zymotic deaths on total deaths during the same period in the same principal towns :—

	Average of 20 large English Towns.	London.	Norwich.	Birm.	Liverpool.	Manchestr.	Leeds.	Newcastle.
1878 ..	18·2	17·6	14·5	25·1	21·9	14·3	19·0	19·2
1877 ...	15·4	16·0	13·8	17·4	17·8	15·4	12·6	10·3
1876 ...	17·3	16·1	13·2	16·0	22·1	17·8	17·8	11·0
1875 ...	17·5	16·5	17·6	22·2	16·4	15·5	17·4	13·8
1874 ...	18·0	14·9	9·0	27·4	25·2	19·7	22·0	18·6
1873 ...	16·3	14·9	10·1	23·8	19·1	19·7	22·9	22·0

SCARLET FEVER has been this year the most fatal of the Zymotics, having occasioned as many as 995 deaths, against 237 in 1877, and 406 the annual average in the five years 1873-1877. The mortality from this cause during the present year (1878) has been 2·6 per 1,000; in 1874 it was a little over 2 per 1,000. It has been widely scattered throughout the Borough, but has been, in relation to population, most fatal in St. Martin and Ladywood Sub-Districts, more particularly the latter. It is the habit of this disease, which is a constant guest with us, to reach the height of its epidemic wave about every five years. Such a culminating period was 1874, and in 1878 it again occurred. This regularity of appearance is no doubt due to the fact that the disease is one principally confined to children between two and seven years of age, and that the epidemic having assailed nearly every susceptible child declines from sheer want of subjects of attack, and so diminishes for a time to gradually increase and attain its maximum of development again in the quinquennial period referred to.

It will be observed that not only is the actual number of deaths from this disease greater in 1878 than in 1874, which might be accounted for by the increase of population, but it is also relatively greater to the number of persons living, the death rate being as much as 30 per cent. higher in 1878 than in 1874. The question naturally suggests itself what is the cause of this increase? It can hardly be due to worse sanitary conditions, for the last four or five years have been characterised by remarkable activity in the amelioration of the state of the town; in my opinion it is the result of that extension of the educational movement which it is so desirable to advance, but which like all other good

measures is handicapped with certain drawbacks and disadvantages. The association of children in much larger numbers than formerly in private, national, and board schools naturally favours the spread of a disease which is as intensely infectious, perhaps, as any with which we are acquainted, and the ignorance or carelessness of parents in allowing children affected to mix with other children in all stages of the disease promote the extension of it to a degree which is most blameable as well as alarming, because by care in isolating cases at an early period in their history there is no doubt that the disease might be restricted within comparatively narrow limits.

Although the greater prevalence of certain Zymotic diseases of children is as a fact traceable to the circumstance that a greater number of children are brought together in the present time than formerly, yet this in no wise reflects on the means employed for the diffusion of education. The Schools, the new ones certainly, and particularly the Board Schools, are well adapted for their purpose, and no blame is therefore to be placed on either them or their management, which latter is also excellent. As the periodical nature of Scarlet Fever epidemics is now well-known, the conditions of its propagation or arrest are understood, and the advantages of Hospital isolation and treatment are fast becoming recognised, we clearly have the means largely at command of preparing for and providing against such future epidemics. The great want is the willingness of parents and guardians of children to avail themselves of the benefits to be derived from the utilisation of the means of prevention and protection placed by the Sanitary Authority and certain benevolent institutions at their disposal.

DIARRHŒA has proved fatal in 680 instances; last year the deaths from this cause numbered 457, while the average number for the five years 1872-6 was 703. These facts show that while the mortality from Diarrhoea is this year greater than it was during 1877, owing probably to the considerably higher temperature of the third quarter of the year than existed in 1877, it has not been so high as the average of the five years 1872-6. The largest number of deaths from this cause has taken place in the Registration Sub-District of St. George. Sixty-nine per cent. of the deaths occurred in infants under one year of age, and 90·6 per cent. in children under five years of age.

The following are the Diarrhoea death-rates in certain of the large towns for 1878 :—

London.	Norwich.	Birmingham.	Manchester.	Liverpool.	Leeds.	Newcastle.
1·0	1·5	1·8	1·8	1·4	2·0	1·6

WHOOPING COUGH comes next in order of fatality, with 455 deaths, as compared with 369 deaths in 1877, 189 in 1876, and 438 in 1875. This disease has been most prevalent in St. George's Registration Sub-District, which is the most populous of the whole nine.

FEVER, of which 2 are certified from Typhus, 119 from Typhoid, and 26 from Simple Continued Fever, has resulted in 147 deaths, against 144 in 1877, 147 in 1876, and 204 in 1875. Although there are 3 cases of Fever more than in 1877, terminating fatally, the increase of population leaves the Fever death-rate unchanged.

The death-rates from Fever in Birmingham and in 20 large English towns since 1870, are as under :—

	Birm.	20 large towns.
	per 1,000 per annum.	
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

The steady diminution of Typhoid Fever during the last few years has this year apparently ceased, the proportion of deaths returned as resulting from that disease being exactly the same as last year. There is, however, good reason to believe that this arrest in the decrease of Typhoid fatality is apparent rather than real. It is reasonable to expect that the improvements of water-supply, drainage, and house construction, which have been so largely effected, and which stand confessedly in such close relation to the prevention of Typhoid, should be followed by a lower mortality, and, for my part, I have faith in the view that it is so. In the absence of such a confidence, the prospect would be anything but encouraging to the sanitarian. How, then, is the anomaly to be explained? My own observation leads me to the conclusion that much carelessness is exhibited in both diagnosing and naming several forms of disease. I have reason to know that cases of Scarlet Fever first seen by the attendant towards their termination, and after all the more characteristic signs and symptoms had disappeared, are hastily and thoughtlessly set down as Typhoid; that cases of simple fever, occurring in feeble subjects, and therefore characterised by a low type, are at once, without any careful examination for, or any discovery of the distinguishing signs of true Typhoid, designated and certified as Typhoid. On putting the matter to medical men, in some cases where, from the unexceptionably satisfactory state of the premises, there was reason to believe the cause of death could not be Typhoid, they have frankly admitted that by Typhoid they did not mean true Typhoid, but simply *low* fever, which, however, is not Typhoid at all. But the abuse of nomenclature does not stop here.

A case that occurred recently was certified and registered as Typhus. I visited the premises with a view to discover the conditions which are so well understood to be associated with this dreadfully infectious and fatal disease but found them all absent. Convinced that Typhus, which is so rare a disease in Birmingham, could not be the cause of death, I waited upon the medical man who candidly, in reply to my questions, said he did not mean Typhus, nor yet Typhoid, but simply *low* Fever, a fever in fact *low like* Typhoid or Typhus. Of course it is quite time, now that the distinctions between different kinds of fever are so well made out, that this vitiation of the registration of disease returns by means of loose nomenclature should cease. They are a reproach to professional prestige, and are injurious to the excellent object of Disease Registration, and I hold that although no fee rewards the trouble of giving medical certificates of the cause of death, yet as the duty is imposed on the medical attendant, there is no excuse for such certificates being made out incorrectly; at the same time I am prepared to admit that it appears unfair and unreasonable to expect professional men to give their time in rendering service to the State without remuneration.

Under all the circumstances, it seems justifiable to conclude that if cases were properly certified, the mortality from Typhoid, instead of appearing stationary, would exhibit a gradual decrease, and this view is strengthened by the consideration that we have no explosions or habitats of Typhoid, but that the cases are pretty generally distributed.

DIPHTHERIA is debited with a considerably larger number of deaths, 83 having been certified as terminating fatally, as compared with 52 deaths in 1877 and 58 deaths in 1876. This large increase is, however, probably rather apparent than real. In bearing in mind the severe epidemic of Scarlatina which has existed during the year, and the difficulty of distinguishing it from Diphtheria in some

cases where the eruption is slight, and therefore unobserved, or where, perhaps, it is altogether absent, we may reasonably conclude that many such obscure cases of Scarlatina have been set down as Diphtheria. I am strengthened in this view by the fact that at about the same time, and in the same house, cases have been, to my knowledge, described one as Scarlatina and another as Diphtheria; and although it is not impossible that the two diseases should exist in the same house at the same time, it is more than probable that all the cases were of the same kind, the more particularly as the peculiar conditions likely to generate Diphtheria have been proved by careful examination to be absent. Taking this view of the question, it is very likely that the actual cases of Diphtheria this year are little, if at all, proportionately greater than in previous years.

MEASLES, on the contrary, has largely diminished in its prevalence and fatality, it being accountable for only 54 deaths in 1878, against 309 deaths in 1877, 87 deaths in 1876, and 141 in 1875, having been less fatal, indeed, than in any year since 1872.

SMALL-POX.—Twenty-seven cases have come under my knowledge during the year, while the deaths were only five. The number of cases reported last year was 50, eight of which terminated fatally.

DEATHS AND DEATH-RATE FROM SMALL-POX PER 100,000
OF THE POPULATION.

Town.	Population.	Deaths from Small-pox in the year 1878.	Rate per 100,000.			
			1878.	1877.	1876.	1875.
London	3,577,304	1,416	39·6	72·0	21·1	2·2
Portsmouth	129,461	0	0·0	0·8	0·8	0·0
Norwich	84,620	2	2·4	0·0	2·4	0·0
Bristol	206,419	0	0·0	0·0	17·0	35·7
Wolverhampton	74,240	0	0·0	0·0	0·0	0·0
Birmingham	383,117	5	1·3	2·1	0·0	47·5
Leicester	121,473	0	0·0	0·9	0·0	0·0
Nottingham	165,276	0	0·0	0·0	0·0	0·0
Liverpool	532,681	3	0·6	56·7	68·4	5·6
Manchester... ..	360,514	1	0·3	13·3	55·9	4·8
Salford	170,251	1	0·6	57·1	250·7	23·8
Oldham	107,366	1	0·9	26·7	7·9	3·4
Bradford	185,088	1	0·6	2·2	0·6	1·8
Leeds	304,948	0	0·0	1·0	1·4	7·0
Sheffield	289,537	1	0·3	0·7	0·3	0·0
Hull	143,139	1	0·7	0·7	0·0	1·5
Sunderland... ..	112,459	1	0·9	0·0	0·0	0·0
Newcastle-on-Tyne	144,570	0	0·0	0·7	0·7	0·0
In 18 Towns	7,098,654	1,433	20·2	42·8	24·9	6·4

The following statement gives the number of cases and deaths from **Small-Pox** in each quarter since the end of 1871 :—

DATE.		Cases.		Deaths.	
1871.					
November 18th 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
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
Grand Total	...	—	7,833	—	1,287

The total mortality from

CONSTITUTIONAL DISEASES

has slightly increased on that in 1877. The deaths from Cancer have decreased in number, while those from Phthisis (Consumption), Tabes Mesenterica and Dropsy have each increased. With regard to

LOCAL DISEASES,

those of the Nervous System have not materially changed, the number of deaths from Paralysis and Epilepsy having diminished, while those from Apoplexy and Brain Disease have increased a little. The deaths referred to Heart Disease show a marked diminution on the number in the previous year, while those from diseases of the Respiratory Organs have remained nearly stationary, the deaths from Bronchitis showing a fall and those from Pneumonia a rather considerable rise on the number in 1877. The deaths classed under diseases of the Digestive Organs show

generally a decrease on last year, which is more particularly noticable in the case of Liver Disease. The number of persons certified as dying from diseases of the Urinary Organs has undergone no material alteration, and the same remark applies to the deaths from diseases of the Organs of Generation and Locomotion, and from those of the Integumentary System.

With reference to

DEVELOPMENTAL DISEASES

it may be noted that the number of deaths from both Premature Birth and Teething has considerably augmented, while the numbers from Old Age and Debility are smaller than those in the previous year.

Childbirth and Puerperal Fever (Metria) are certified as causing 49 deaths as compared with 59, 52, and 75 in the years 1877, 1876, and 1875 respectively, so that the deaths from these causes equal an annual rate of 3.1 per 1,000 Births registered during the year.

DISEASE MAPS,

illustrating the distribution of Scarlatina, Measles, and Typhoid, will be found appended; one object of such maps is to present to the eye the area of distribution of these diseases, by which a much better notion is formed than could possibly be conveyed by a verbal description, another is to indicate those parts of the town which are most subject to invasions of Zymotic disease, and so to indicate the direction in which to make inquiries into the possible local causes of and the conditions favourable to the existence of this class of preventable disease.

On looking at the *SCARLATINA* Map, it is at once observable that the disease existed pretty equally over the whole of the Borough, excepting in the centre of the town, the extreme outlying portions of the town and Edgbaston Ward. The explanation of these facts seems to be that in such localities the population is very sparse, and more particularly, children who form the principal subjects of attack, are few in number there. In Edgbaston Ward another condition comes into play, the combination of greater prosperity and intelligence, care and cleanliness, in consequence of which the disease has less opportunity of successfully invading that portion of the town, and in cases where it obtains a footing, curative and preventive measures are more completely employed, so that the cases as a rule terminate in recovery, and the spread of the disease is checked.

I find that in the last epidemic of Scarlet Fever in 1874 the same distribution obtained.

From a consideration of the incidence of the disease during the last six years, the conclusion is forced upon the mind that wherever children are found in large numbers, irrespective of locality, the disease is most prevalent. In one year some parts of the town are more severely visited, in another year other parts suffer most; but all parts, with the exceptions already made, are attacked in turn, those, however, suffering most—like St. George's Ward—where the population is most dense. Local conditions then, excepting density, seem to have little effect on the prevalence of Scarlatina; the real cause of the spread and general distribution being the communication of infection directly from one individual to another.

The *MEASLES* map shows that the 54 deaths of the year are distributed in much the same manner as those from Scarlatina, and that the disease does not appear to have displayed any partiality for particular localities, with the exceptions and for the reasons before named.

The *TYPHOID* map illustrates the freedom of the centre of the town and Edgbaston Ward from the disease, and a pretty general distribution over the other parts of the town. During the past six years the disease has been most prevalent in the Wards of St. Mary, St. George, and Duddeston, all of which are largely inhabited by a poor and dense population.

VACCINATION.

During the past year 8,635 persons have been vaccinated by the public Vaccinators. This number is exclusive of the cases treated by private practitioners. It is desirable, in order to judge of the amount of protection secured against Small-pox, to know how many of all the children born are submitted to the operation of Vaccination; but as it is impossible to give this information for the whole of the year ending December 31st, owing to the Act applying only to children three months old, and to other circumstances, I have given in Table XVI. a summary of the last returns made to the Local Government Board for the year ending 30th June, 1878, by Mr. Wilcox, Vaccination Officer for the parish of Birmingham, Mr. Towler, Vaccination Officer for the parish of Aston, and Mr. E. Docker, Vaccination Officer for the parish of Edgbaston, to whose courtesy and kindness I am indebted for the Statistics.

From the Table it will be found that out of 9,763 births registered in the parish of Birmingham, 680 or 6·9 per cent. apparently escaped Vaccination, or are unaccounted for, but it is probable that some few referred to in column 11 have since been Vaccinated, and others have died.

In the Borough portion of the parish of Aston likewise, out of 5,653 registered births, 358 or 6·3 per cent. had remained unvaccinated at the time the return was made, while in the corresponding part of the parish of Edgbaston, 46, or 9·1 per cent. were unaccounted for.

METEOROLOGY.

The Meteorological returns, kindly supplied by Mr. D. Smith, are as follows for the last six years :—

		1878.	1877.	1876.	1875.	1874.	1873.
Mean temperature of 1st Quarter	...	42°·4	42°·4	39°·0	40°·4	41°·4	39°·0
" " 2nd "	...	54°·5	51°·4	51°·2	53°·7	53°·2	51°·8
" " 3rd "	...	60°·9	58°·4	61°·3	60°·0	59°·9	59°·1
" " 4th "	...	40°·9	45°·5	46°·2	42°·5	41°·6	44°·5
" " year	...	49°·1	49°·5	49°·4	49°·1	49°·0	48°·6

The mean temperature for the first three quarters and for the whole year was above the average, while that for the fourth quarter was under the average temperature of the last ten years.

The rainfall, which was collected to the extent of more than $\frac{1}{20}$ th of an inch on 148 days during the year, was three inches in excess of the average during the past ten years.

Full particulars of the height of Barometer, the range of temperature and mean temperature of each month of the year, the rainfall, etc., may be found in Tables XII and XIII.

THE BOROUGH HOSPITAL

has received during the year 424 cases of Scarlet Fever, and 29 cases of Small Pox, making a total of 444, against 43 cases of Scarlet Fever, and 38 cases of Small Pox, or a total of 81, in 1877.

Of the twenty-nine cases of Small Pox received into the Hospital seventeen had been vaccinated and twelve unvaccinated; when it is considered what a small proportion the unvaccinated bear to the vaccinated in the whole population, some idea is obtained of the enormous proportion of the former to the latter which are subjects of attack, and therefore of the immense value of Vaccination in protecting from the disease; for although the percentage of unvaccinated persons to vaccinated is small, the proportion of unvaccinated persons attacked with Small Pox upon the total number of persons so attacked is no less than 41 per cent. The same remarkable disparity between the two classes is seen also in the mortality from Small Pox. Of the twenty-nine cases five died, or a little over 17 per cent., but of these five three were unvaccinated.

It is very satisfactory to find that the public are beginning to better appreciate the advantages offered by the Hospital. The number of cases admitted in 1878 is larger than in any year since its establishment, not excepting the year 1875, in which the severe epidemic of Small-pox existed. The increase is the more significant in regard to the fact that persons are, as a rule, much more ready to avail themselves of the benefits of such an Institution in cases of Small-pox, than in those of Scarlet Fever, one reason being that there is a greater fear in the popular mind of the former, than of the latter, and another reason being that Scarlet Fever occurs in younger subjects, and mothers and friends have consequently a stronger objection to part with them.

If the Borough Hospital were used as intended, that is, for the isolation of *first* cases, it would be easy to effectually prevent such an epidemic of Scarlet Fever as that from which the town is now recovering, and, indeed, epidemics generally; but though the Corporation has wisely and humanely done its part in establishing and efficiently maintaining such an institution, it is powerless to remove patients thither, except with the consent of their parents and friends, who, unfortunately, too often fail to do their part.

Under the circumstances the most that such a hospital can do is to confer the benefits of its treatment on those who choose to accept them; but it is clear that when an epidemic has become so widespread as that of Scarlatina in 1878, the preventive character of the hospital ceases to exert much influence, and it is powerless to restrain such epidemic, however valuable it may be as a mitigating and curative means.

The excellent management of the hospital, the improvements in its arrangements internal and external, and the addition now being made of a spacious, well-lighted, efficiently-warmed ward, will have the effect of increasing the claims of the institution to the favourable estimation of the public. I know, from my own observation, that children enjoy their convalescence there, and are so agreeably impressed by the treatment they receive that they leave it with reluctance, and would like to return, in some instances, with a suffering brother or sister about to go there.

The following statement gives the number of patients treated in the hospital in each quarter and year since its establishment:—

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
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 "	7	34	38
3rd "	12	139	145
4th "	7	238	245
Totals	29	424	444

THE DISINFECTING STATION,

situated in Bacchus Road, has been much more used than formerly, as will be seen by the comparative statement below. The operations carried on at the station must be highly useful in arresting the spread of infection in households where cases of disease have occurred, particularly when aided as they are by the disinfection and cleansing of the houses or apartments where the cases of illness originated.

The articles disinfected at the Station in Bacchus Road number 6,976, against 1,403 last year, and consist of:—

	1878.	1877.
Bolsters and Pillows	899	315
Mattresses	290	126
Blankets	353	103
Beds	466	115
Sheets	424	346
Counterpanes	262	68
Other Articles... ..	4,282	330
Total	6,976	1,403

The cost of maintaining the establishment during the year has been about £210, viz. :—

Wages	£135	4	0
Horsekeep, Shoeing, &c.	52	0	0
Gas, for Heating and Lighting	16	0	0
Coal	6	0	0
Total	£209	4	0

Among the various sanitary agencies by which health is maintained and improved or restored, few are more important than bathing. It is not only healthful in its influence, pleasurable in itself, and agreeable in its results, it is elevating to both the physical and moral being, and, indeed, seems as nearly as possible an unmixed good. In spite, however, of these facts it is most regrettable to find how far from universal is the practice of frequent bathing. Very much has been done of late years by public authorities in the establishment of

PUBLIC BATHS

to encourage the practice of warm and cold bathing, but at present the opportunities offered have not been embraced with the ardour or even appreciation that could be desired, and the number of the army of the "Great Unwashed" is still lamentably large. One has only to stand for a short time in a crowd, whether indoors or in the open air, to be satisfied, if any doubt previously existed, of the uncleanly condition of the great bulk of the lower classes. Now, looked at from a sanitary, let alone an æsthetic, point of view, this condition of things is a great evil, and one that efforts should be made to remove; the skin is so important a part of the human mechanism, so essential a member of that complex system of vital organs on which comfort, health, and even life depend that the neglect of it is unavoidably fraught with serious consequences. The effects of such neglect may be tardy, but they are none the less sure, and this being so, I would strongly urge, in the interests of public health, the desirability of placing the bath within more easy reach of the masses of the people. In order to do this the charges must first be reduced and ultimately probably it would be necessary to establish more baths. Swimming baths for summer might be constructed very cheaply, but in a climate like ours in which the summers are so short, and in a community made up largely of artizans like that of Birmingham, the greater want is cheap facilities for warm bathing, that is for the use of soap and water. The great point to be secured is not a pecuniary profit on the baths, but the general practice of frequent bathing by the people, and I cannot see why, as in many other sanitary matters, this view should not be acted on. If there should be no direct pecuniary gain to the funds of the Borough, there would be a distinct gain to the comfort, health, and efficiency of the community. With a rapidly-increasing population like ours the practice of bathing ought naturally to increase in at least equal proportion, but I find by a return of the number of bathers at the public baths, kindly furnished me by Mr. Purnell, Superintendent of Baths, that there were between 11,000 and 12,000 fewer bathers in 1878 than in 1876, and above 6,000 fewer than in 1875 as shewn by the following statement.

RETURN OF THE NUMBER OF BATHERS AT EACH OF THE CORPORATION BATHS FOR THE LAST FIVE YEARS:—

KENT ST.				WOODCOCK ST.			NORTHWOOD ST.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
1874	77138	4796	81934	47317	1889	49206	80801	2899	83700
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

These results are very discouraging, and to my mind shew the necessity of increasing the facilities for bathing. The Romans had a merely nominal charge to their baths, and on certain holiday occasions threw them open to the public free of charge. A proceeding of this kind was highly appreciated and made the most of, it was regarded by the populace as a great treat, similar to the present practice of the throwing open of the continental theatres on certain fête-days, and indeed was used by the leaders of the people as a means of gaining popular favour. I suggest an imitation, suitable to our circumstances, of the excellent policy of our great civilisers, we are slowly copying their system of water supply to towns, as we have long copied many other of their useful models in social oeconomics, and we might, doubtless, with equal advantage imitate their policy with regard to the bath.

WATER SUPPLY.

I have made, as usual, monthly analyses of the Corporation Water, the average analytical results of which show a slight diminution in the quantity of organic matter present, but in mineral matter a slight increase.

The number of well waters submitted to and analysed by me during the year is 509, of these 489 were so polluted that orders were issued for the closing of the wells from which they were derived. At the end of the year as many as 465 of these wells had actually been closed; in order to do this it was found necessary to serve 126 summonses upon certain owners to attend before the Magistrates, many of these summonses, however, never came to a hearing, and, indeed, in the great majority of cases owners of property have consented without the necessity of magisterial proceedings to close wells represented to them as dangerous to health.

SEWAGE AND REFUSE DISPOSAL.

During the year 1878, $3\frac{1}{2}$ miles of Sewers were constructed in streets taken to by the Corporation, and two miles in streets not taken to.

The advantage to Health of improved Sewering and Draining, together with a better water supply, frequently presents itself, but it received a striking exemplification in the case of a terrace in Argyle Street. This at the end of the year 1877 was the constant abode of much Typhoid, Diarrhoea and low-type disease, ten or a dozen cases of illness might always be found there, and the cause was not difficult to discover. There was no proper drainage, for owing to the situation and disposition of the site and its entourage, this was impossible; drains were defective, traps inefficient or absent, the water supply was consequently polluted, and everything around was dirty, damp, and dismal. Last year, however, thanks to the United Drainage Scheme, the construction of a sewer became possible, and was carried out; as if by magic, the condition of things became entirely changed. The air of depression which had previously prevailed gave way to one of cleanliness, cheerfulness, and health, and now the property presents a clean bill of health and a comfortable aspect.

The foul middens in the Borough still continue to be done away with, and pan closets substituted for the privies attached to them.

Those ash-pits that are soaking into the adjoining premises, or are in connection with houses where Typhoid Fever or Diphtheria have existed, receive attention first.

During the year 5,992 pans have been introduced; at the end of the year the total number of pan privies in the Borough was 28,660.

THE PAVING

of the carriage ways and footpaths, particularly of the latter, has been largely extended, and as this is a matter affecting comfort and health, it is a source of satisfaction as well as of hope that the work may be actively continued until the whole town be redeemed from the dampness and dirt and dustiness which the absence of pavement inevitably involves.

The length of streets in the Borough was at the end of the year 194 $\frac{1}{4}$ miles, of which 157 $\frac{3}{4}$ miles had been taken to by the Corporation, and 36 $\frac{1}{2}$ miles are not at present taken to. In the streets taken to and through private lands the length of sewers is about 142 miles, while in those not taken to, it only amounts to 31 miles. Eleven miles of the carriage ways are now paved and two miles on tramway routes are partly paved and partly macadamised.

I regret to state that the untidy and injurious habit of throwing out slops and refuse of all kinds into the streets continues unabated. On Sunday mornings the state of some streets is particularly bad, having on their surface an extra quantity of refuse of different kinds, including straw, paper, cabbage leaves, and other matters, rendering them very objectionable to the persons who have to traverse them, and positively unhealthy to those who reside in them. I have observed, over and over again, that in these dirty, damp, littered streets the population has always a less healthy appearance than one living in cleanly streets. Sore eyes, pallid countenances, cachectic subjects, persons with their heads or jaws swathed in flannel, are commonly seen in such localities, and are, I feel convinced, principally the result of that particular condition of the streets which I have mentioned. People occupying the front houses are of course the principal offenders, they prefer the ready method of throwing refuse out at the doors on to the streets, to the trouble of carrying it round to the proper receptacles which are provided in every yard, and I hope the reprehensible custom will receive the attention it deserves; it is illegal and therefore preventable, and as it constitutes a considerable sanitary evil, the prevention which is possible should be insisted on and secured.

MORTUARIES.

In these Institutions fifty-seven bodies, upon which Inquests have been held, have been deposited during the year. The return, furnishing this information and obtained through the Police, is signed by Inspector James Willis, Summoning Officer to the Coroner, who, however, remarks in a foot note, that other bodies upon which Inquests have not been held, have also been taken to the several Mortuaries.

No proper records however, appear to have been kept at the various Stations connected with the Mortuaries, so that I am unable to give with certainty the total number of bodies received into the latter, but Inspector Willis informs me, that from what he can remember from his own observations, he estimates that about seven such bodies were deposited there, making a total of 64, against 65 last year.

The fifty-seven bodies mentioned were distributed among the four Mortuaries as shown in the following Table, which also gives the corresponding statements for the previous year.

		1878.				1877.
Moor Street	...	32	...	...	...	32
Duke Street	...	10	...	...	...	12
Kenion Street	...	10	...	...	...	8
Ladywood Road	..	5	...	...	...	13

It is unnecessary to remark upon the great utility and convenience of these Mortuary houses. They are situated in different parts of the town for the reception of the bodies of persons killed, found dead, or for any other reason requiring temporarily to be disposed of in a convenient and decent manner, such as was impossible before their establishment, and they thus supply a want which for a long time was grievously felt.

The

SANITARY WORK

of the Borough continues to be rapidly pushed forward, no less than 12,377 notices having been issued for the abatement of nuisances during the year. Nearly 3,200 drains have been efficiently trapped, nearly 2,000 filthy houses cleansed and whitewashed, 1,190 houses where contagious disease had existed, cleansed and purified, 1,447 privies reconstructed, 1,384 ashpits and privies repaired, 930 accumulations of manure, wash, etc., removed, 1,549 drains opened and cleared from obstruction, and 859 sink drains disconnected from the sewer. Full particulars of the work done by the Inspector and his assistants with regard to lodging houses, houses let in lodgings, the keeping of swine and other animals in improper places, smoke, &c., may be found in Table VI., the details of most of which have been supplied to me by Mr. Booker, the Inspector of Nuisances, who, I am glad to acknowledge, has given me much valuable assistance and ready cooperation. The work of the Limewashers includes the whitewashing of 5,173 privies and 3,550 passages, courts, and back yards.

SLAUGHTER-HOUSES

which are private, number 282, against 278 in 1877 and 1876, and 274 in 1875. One hundred and sixty of them are licensed, and 122 are registered. The number of visits of inspection to Slaughter-houses, seizures of bad meat, and other particulars in connection with the Meat Supply, are to be found under the heading "Slaughter Houses" in Table VI., as furnished by Mr. Birkley, Superintendent of Markets. I regret that nothing has yet been done to supplant these private slaughter-houses by a public abattoir, because, as I have on previous occasions stated, in addition to their being frequently altogether unsuitable and great nuisances, they facilitate the traffic in diseased meat, which a single large abattoir under official supervision would enable the authorities almost entirely to prevent.

I am pleased, however, to be able to report that the Markets and Fairs Committee is exercising and has exercised for some months past every possible care to prevent the licensing of private premises which are not well suited for the purpose of slaughter-houses. It is now made an indispensable condition to further licenses that the proper requirements of space, light, ventilation, water-supply, drainage, and ready and safe access be thoroughly fulfilled, and so the errors of the past, flagrant in many instances, will in future be avoided. It is, nevertheless, much to be hoped that the time is not far distant when the boon of a public abattoir will be accorded.

I remain,

Mr. Chairman and Gentlemen,

Your obedient Servant,

ALFRED HILL, M.D.,

Medical Officer of Health.

TABLE I.
BIRTHS & DEATHS (GROSS NUMBERS).

DATE.	BIRTHS.	DEATHS.
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
1873	14,497	8,990
1872	14,123	8,048
1871	13,443	8,594
1870	12,922	7,805
1869	12,779	7,737
1868	12,992	8,548
Average of Ten Years, } 1868—1877	14,232	8,642

NOTES.

- 1.—Population at Census, 1871, 343,787.
- 2.—Population, estimated to the middle of the Year 1878, 383,117.
- 3.—Area in Acres, 8,400.
- 4.—Number of Inhabited Houses in Borough at Cenus 1871, 68,532.
- 5.—Average number of Persons in each House at Census 1871, 5·0.

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.
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
1873	24.8	29.2	18.1	49.2	11.6
1872	23.1	29.1	16.6		12.0
1871	24.9	29.7	19.0		10.9
1870	23.0	29.9	18.1		11.4
1869	23.1				
1868	25.9				
Average of 10 Years 1868—1877 }	24.4				

Estimation of the Population of the Bascom in the

100

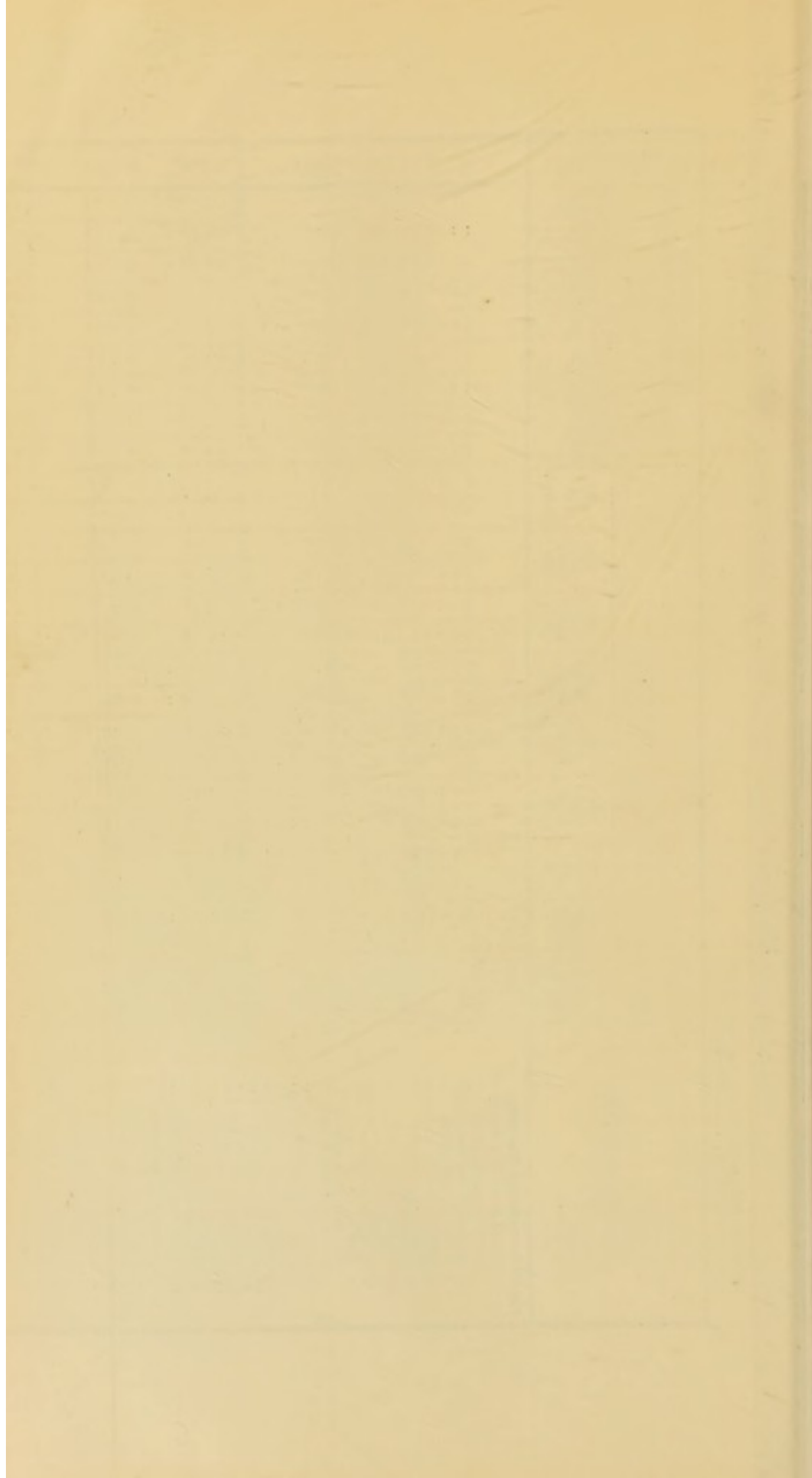


TABLE IV.

Mortality from certain classes of Diseases, and proportions to population and to 1,000 deaths in 1878 :—

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	2,421	6·3	250
2.—Pulmonary (other than Phthisis)	1,751	4·6	182
3.—Tubercular 	1,015	2·6	105
4.—Wasting Diseases of Infants ...	831	2·2	86
5.—Convulsive Diseases of Infants...	648	1·6	67

NOTES.

- 1.—Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever, and Diarrhoea.
- 3.—Includes Phthisis, Scrofula, Rickets, and Tabes.
- 4.—Includes Marasmus, Atrophy, Debility, Want of Breast Milk, and Premature Birth.
- 5.—Includes Hydrocephalus, Infantile Meningitis, Convulsions, and Teething.

TABLE V.
 SHEWING THE NUMBER OF DEATHS IN THE FIVE YEARS, 1873 TO 1877, FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES,
 AND THE NUMBER IN 1878.

	1873	1874	1875	1876	1877	Annual average of 5 years, 1873-1877.	Proportion of deaths to 1,000 deaths in 5 years, 1873-1877.	1878	Proportion of deaths to 1,000 deaths in 1878.
Small-pox ...	125	637	174	0	8	189	20.7		0.5
Measles ...	123	139	141	87	309	160	17.5	54	5.6
Scarlet Fever ...	587	737	265	204	237	406	44.4	995	103.0
Diphtheria ...	107	74	55	58	52	69	7.5	83	8.6
Whooping Cough ...	169	242	438	189	369	281	30.8	455	47.1
Fever ...	203	201	204	147	144	180	19.7	147	15.2
Diarrhoea ...	728	622	868	651	457	666	72.9	682	70.6
TOTAL ...	2,042	2,652	2,145	1,336	1,576	1,951	213.5	2,421	250.6
London ...	11,385	11,230	13,411	12,565	10,292	12,258	163.0		

TABLE VI.
YEAR ENDING DECEMBER 29TH, 1878.

SUMMARY OF NUISANCES AND OTHER MATTERS REPORTED AND WORK ACCOM-
PLISHED BY THE OFFICERS AND MEN EMPLOYED DURING THE YEAR
ENDED DEC. 31ST, 1878.

	Work Reported.	Work Done.
Number of cases of Nuisances remaining on the books Dec. 31 st , 1877	2,986 ...	
Defective Yard or Private Street Drains requiring opening and clearing from obstruction	1,501 ...	1,549
" Drains not efficiently trapped	2,945 ...	3,195
" Sink Drains requiring disconnection from the Sewer	827 ...	859
" Spout Drains	162 ...	118
Nuisances arising from the want of drains	370 ...	366
" " " keeping of fowls	432 ...	487
" " " water in cellars	122 ...	186
" " " foul and defective urinals	513 ...	538
" " " the overcrowding of houses	61 ...	69
Houses reported unfit for human habitation	84 ...	48
Houses Disinfected by the Inspectors where Zymotic disease has occurred	1,281 ...	1,281
Filthy Houses requiring cleansing and whitewashing	1,713 ...	1,965
Houses Cleansed and Purified—paper stripped off the walls, &c.	1,281 ...	1,190
Accumulations of wash, deposits of offensive matter, manure, &c.	1,090 ...	930
Swine and Swine Styes so kept as to be a nuisance	269 ...	486
Foul Ashpits and Privies requiring repairs	1,257 ...	1,384
Privies requiring re-construction	1,541 ...	1,447
Houses not having sufficient privy accommodation	907 ...	872
Back Yards requiring paving	621 ...	615
Filthy Workshops requiring limewashing... ..	16 ...	77
" Privies requiring cleansing and limewashing	5,450 ...	77
Number of Privies limewashed by our own men... ..	— ...	5,173
" Courts, Passages, and Back Yards ditto	3,639 ...	3,550
Miscellaneous premises limewashed by our men	— ...	289
Nuisances arising from the want of ashtubs	183 ...	469
" " " coverings for ditto	158 ...	177
" " " water	109 ...	162
" " inefficient ventilation	137 ...	153
" " foul dumb wells	3 ...	9
" " want of washhouses	2 ...	5
Number of Nuisances remaining on the Books under notice, December 31 st , 1878	— ...	1,934
Total	29,660 ...	29,660
Number of Notices issued for the abatement of Nuisances during the year ended Dec. 31 st , 1878	12,377	
Number of cases dealt with by the Magistrates	450	
Amount of Fines	£20 0 0	
" Costs	55 14 9	
	<u>£75 14 9</u>	

TABLE VI.—Continued.

WELL WATERS.

No. of Well Waters submitted by the Inspector for analysis	...	...	509
No. of Wells reported as polluted...	...	...	489
No. of Wells closed	...	...	465
No. of Premises supplied with Tap Water	...	...	496
No. of Persons dealt with by the Magistrates	...	...	126
Amount of Costs	...	...	£18 16 0

COMMON LODGING HOUSES.

Houses Registered	...	...	438
Number of Lodgers allowed in the Houses	...	...	8,913
Number of Visits by Day	...	...	8,027
" " Night	...	...	3,148

HOUSES LET IN LODGINGS.

Houses Registered	...	...	772
No. of Lodgers allowed in the Houses...	...	...	4,289

SLAUGHTER HOUSES.

No. of Slaughter Houses	...	...	282
No. of Visits	...	...	12,072
Seizures of Bad Meat	...	...	302
Weight Destroyed	...	...	47,435lbs
Seizures of Fish, &c.	...	...	115lbs

SMOKE NUISANCES.

No. of registered Proprietors of furnaces or fireplaces used for manufacturing purposes...	...	...	1,035
No. of Chimneys	...	...	1,531
No. of Notices served for the abatement of nuisances	...	...	1,035
No. of Observations made by the Smoke Inspectors...	...	...	11,490
No. of Chimneys emitting black smoke from 1 to 5 minutes in the hour, the Occupiers of which have been cautioned	...	...	13
No. of Chimneys emitting black smoke from 5 to 20 minutes in the hour	...	...	42
No. Cautioned	...	...	20
No. Summoned	...	...	22
No. excused by the Magistrates	...	...	1
No. Convicted	...	...	21
Amount of Penalties	...	...	£142 0
" Costs	...	...	81 16

TABLE VII.
QUARTERLY SHEET FOR THE WHOLE YEAR.

WEEKLY REGISTER OF DEATHS IN THE BOROUGH OF BIRMINGHAM,

From DECEMBER 29th, 1877, to DECEMBER 28th, 1878.

| Row | Col 1 | Col 2 | Col 3 | Col 4 | Col 5 | Col 6 | Col 7 | Col 8 | Col 9 | Col 10 | Col 11 | Col 12 | Col 13 | Col 14 | Col 15 | Col 16 | Col 17 | Col 18 | Col 19 | Col 20 | Col 21 | Col 22 | Col 23 | Col 24 | Col 25 | Col 26 | Col 27 | Col 28 | Col 29 | Col 30 | Col 31 | Col 32 | Col 33 | Col 34 | Col 35 | Col 36 | Col 37 | Col 38 | Col 39 | Col 40 | Col 41 | Col 42 | Col 43 | Col 44 | Col 45 | Col 46 | Col 47 | Col 48 | Col 49 | Col 50 | Col 51 | Col 52 | Col 53 | Col 54 | Col 55 | Col 56 | Col 57 | Col 58 | Col 59 | Col 60 | Col 61 | Col 62 | Col 63 | Col 64 | Col 65 | Col 66 | Col 67 | Col 68 | Col 69 | Col 70 | Col 71 | Col 72 | Col 73 | Col 74 | Col 75 | Col 76 | Col 77 | Col 78 | Col 79 | Col 80 | Col 81 | Col 82 | Col 83 | Col 84 | Col 85 | Col 86 | Col 87 | Col 88 | Col 89 | Col 90 | Col 91 | Col 92 | Col 93 | Col 94 | Col 95 | Col 96 | Col 97 | Col 98 | Col 99 | Col 100 | Col 101 | Col 102 | Col 103 | Col 104 | Col 105 | Col 106 | Col 107 | Col 108 | Col 109 | Col 110 | Col 111 | Col 112 | Col 113 | Col 114 | Col 115 | Col 116 | Col 117 | Col 118 | Col 119 | Col 120 | Col 121 | Col 122 | Col 123 | Col 124 | Col 125 | Col 126 | Col 127 | Col 128 | Col 129 | Col 130 | Col 131 | Col 132 | Col 133 | Col 134 | Col 135 | Col 136 | Col 137 | Col 138 | Col 139 | Col 140 | Col 141 | Col 142 | Col 143 | Col 144 | Col 145 | Col 146 | Col 147 | Col 148 | Col 149 | Col 150 | Col 151 | Col 152 | Col 153 | Col 154 | Col 155 | Col 156 | Col 157 | Col 158 | Col 159 | Col 160 | Col 161 | Col 162 | Col 163 | Col 164 | Col 165 | Col 166 | Col 167 | Col 168 | Col 169 | Col 170 | Col 171 | Col 172 | Col 173 | Col 174 | Col 175 | Col 176 | Col 177 | Col 178 | Col 179 | Col 180 | Col 181 | Col 182 | Col 183 | Col 184 | Col 185 | Col 186 | Col 187 | Col 188 | Col 189 | Col 190 | Col 191 | Col 192 | Col 193 | Col 194 | Col 195 | Col 196 | Col 197 | Col 198 | Col 199 | Col 200 | Col 201 | Col 202 | Col 203 | Col 204 | Col 205 | Col 206 | Col 207 | Col 208 | Col 209 | Col 210 | Col 211 | Col 212 | Col 213 | Col 214 | Col 215 | Col 216 | Col 217 | Col 218 | Col 219 | Col 220 | Col 221 | Col 222 | Col 223 | Col 224 | Col 225 | Col 226 | Col 227 | Col 228 | Col 229 | Col 230 | Col 231 | Col 232 | Col 233 | Col 234 | Col 235 | Col 236 | Col 237 | Col 238 | Col 239 | Col 240 | Col 241 | Col 242 | Col 243 | Col 244 | Col 245 | Col 246 | Col 247 | Col 248 | Col 249 | Col 250 | Col 251 | Col 252 | Col 253 | Col 254 | Col 255 | Col 256 | Col 257 | Col 258 | Col 259 | Col 260 | Col 261 | Col 262 | Col 263 | Col 264 | Col 265 | Col 266 | Col 267 | Col 268 | Col 269 | Col 270 | Col 271 | Col 272 | Col 273 | Col 274 | Col 275 | Col 276 | Col 277 | Col 278 | Col 279 | Col 280 | Col 281 | Col 282 | Col 283 | Col 284 | Col 285 | Col 286 | Col 287 | Col 288 | Col 289 | Col 290 | Col 291 | Col 292 | Col 293 | Col 294 | Col 295 | Col 296 | Col 297 | Col 298 | Col 299 | Col 300 | Col 301 | Col 302 | Col 303 | Col 304 | Col 305 | Col 306 | Col 307 | Col 308 | Col 309 | Col 310 | Col 311 | Col 312 | Col 313 | Col 314 | Col 315 | Col 316 | Col 317 | Col 318 | Col 319 | Col 320 | Col 321 | Col 322 | Col 323 | Col 324 | Col 325 | Col 326 | Col 327 | Col 328 | Col 329 | Col 330 | Col 331 | Col 332 | Col 333 | Col 334 | Col 335 | Col 336 | Col 337 | Col 338 | Col 339 | Col 340 | Col 341 | Col 342 | Col 343 | Col 344 | Col 345 | Col 346 | Col 347 | Col 348 | Col 349 | Col 350 | Col 351 | Col 352 | Col 353 | Col 354 | Col 355 | Col 356 | Col 357 | Col 358 | Col 359 | Col 360 | Col 361 | Col 362 | Col 363 | Col 364 | Col 365 | Col 366 | Col 367 | Col 368 | Col 369 | Col 370 | Col 371 | Col 372 | Col 373 | Col 374 | Col 375 | Col 376 | Col 377 | Col 378 | Col 379 | Col 380 | Col 381 | Col 382 | Col 383 | Col 384 | Col 385 | Col 386 | Col 387 | Col 388 | Col 389 | Col 390 | Col 391 | Col 392 | Col 393 | Col 394 | Col 395 | Col 396 | Col 397 | Col 398 | Col 399 | Col 400 | Col 401 | Col 402 | Col 403 | Col 404 | Col 405 | Col 406 | Col 407 | Col 408 | Col 409 | Col 410 | Col 411 | Col 412 | Col 413 | Col 414 | Col 415 | Col 416 | Col 417 | Col 418 | Col 419 | Col 420 | Col 421 | Col 422 | Col 423 | Col 424 | Col 425 | Col 426 | Col 427 | Col 428 | Col 429 | Col 430 | Col 431 | Col 432 | Col 433 | Col 434 | Col 435 | Col 436 | Col 437 | Col 438 | Col 439 | Col 440 | Col 441 | Col 442 | Col 443 | Col 444 | Col 445 | Col 446 | Col 447 | Col 448 | Col 449 | Col 450 | Col 451 | Col 452 | Col 453 | Col 454 | Col 455 | Col 456 | Col 457 | Col 458 | Col 459 | Col 460 | Col 461 | Col 462 | Col 463 | Col 464 | Col 465 | Col 466 | Col 467 | Col 468 | Col 469 | Col 470 | Col 471 | Col 472 | Col 473 | Col 474 | Col 475 | Col 476 | Col 477 | Col 478 | Col 479 | Col 480 | Col 481 | Col 482 | Col 483 | Col 484 | Col 485 | Col 486 | Col 487 | Col 488 | Col 489 | Col 490 | Col 491 | Col 492 | Col 493 | Col 494 | Col 495 | Col 496 | Col 497 | Col 498 | Col 499 | Col 500 | Col 501 | Col 502 | Col 503 | Col 504 | Col 505 | Col 506 | Col 507 | Col 508 | Col 509 | Col 510 | Col 511 | Col 512 | Col 513 | Col 514 | Col 515 | Col 516 | Col 517 | Col 518 | Col 519 | Col 520 | Col 521 | Col 522 | Col 523 | Col 524 | Col 525 | Col 526 | Col 527 | Col 528 | Col 529 | Col 530 | Col 531 | Col 532 | Col 533 | Col 534 | Col 535 | Col 536 | Col 537 | Col 538 | Col 539 | Col 540 | Col 541 | Col 542 | Col 543 | Col 544 | Col 545 | Col 546 | Col 547 | Col 548 | Col 549 | Col 550 | Col 551 | Col 552 | Col 553 | Col 554 | Col 555 | Col 556 | Col 557 | Col 558 | Col 559 | Col 560 | Col 561 | Col 562 | Col 563 | Col 564 | Col 565 | Col 566 | Col 567 | Col 568 | Col 569 | Col 570 | Col 571 | Col 572 | Col 573 | Col 574 | Col 575 | Col 576 | Col 577 | Col 578 | Col 579 | Col 580 | Col 581 | Col 582 | Col 583 | Col 584 | Col 585 | Col 586 | Col 587 | Col 588 | Col 589 | Col 590 | Col 591 | Col 592 | Col 593 | Col 594 | Col 595 | Col 596 | Col 597 | Col 598 | Col 599 | Col 600 | Col 601 | Col 602 | Col 603 | Col 604 | Col 605 | Col 606 | Col 607 | Col 608 | Col 609 | Col 610 | Col 611 | Col 612 | Col 613 | Col 614 | Col 615 | Col 616 | Col 617 | Col 618 | Col 619 | Col 620 | Col 621 | Col 622 | Col 623 | Col 624 | Col 625 | Col 626 | Col 627 | Col 628 | Col 629 | Col 630 | Col 631 | Col 632 | Col 633 | Col 634 | Col 635 | Col 636 | Col 637 | Col 638 | Col 639 | Col 640 | Col 641 | Col 642 | Col 643 | Col 644 | Col 645 | Col 646 | Col 647 | Col 648 | Col 649 | Col 650 | Col 651 | Col 652 | Col 653 | Col 654 | Col 655 | Col 656 | Col 657 | Col 658 | Col 659 | Col 660 | Col 661 | Col 662 | Col 663 | Col 664 | Col 665 | Col 666 | Col 667 | Col 668 | Col 669 | Col 670 | Col 671 | Col 672 | Col 673 | Col 674 | Col 675 | Col 676 | Col 677 | Col 678 | Col 679 | Col 680 | Col 681 | Col 682 | Col 683 | Col 684 | Col 685 | Col 686 | Col 687 | Col 688 | Col 689 | Col 690 | Col 691 | Col 692 | Col 693 | Col 694 | Col 695 | Col 696 | Col 697 | Col 698 | Col 699 | Col 700 | Col 701 | Col 702 | Col 703 | Col 704 | Col 705 | Col 706 | Col 707 | Col 708 | Col 709 | Col 710 | Col 711 | Col 712 | Col 713 | Col 714 | Col 715 | Col 716 | Col 717 | Col 718 | Col 719 | Col 720 | Col 721 | Col 722 | Col 723 | Col 724 | Col 725 | Col 726 | Col 727 | Col 728 | Col 729 | Col 730 | Col 731 | Col 732 | Col 733 | Col 734 | Col 735 | Col 736 | Col 737 | Col 738 | Col 739 | Col 740 | Col 741 | Col 742 | Col 743 | Col 744 | Col 745 | Col 746 | Col 747 | Col 748 | Col 749 | Col 750 | Col 751 | Col 752 | Col 753 | Col 754 | Col 755 | Col 756 | Col 757 | Col 758 | Col 759 | Col 760 | Col 761 | Col 762 | Col 763 | Col 764 | Col 765 | Col 766 | Col 767 | Col 768 | Col 769 | Col 770 | Col 771 | Col 772 | Col 773 | Col 774 | Col 775 | Col 776 | Col 777 | Col 778 | Col 779 | Col 780 | Col 781 | Col 782 | Col 783 | Col 784 | Col 785 | Col 786 | Col 787 | Col 788 | Col 789 | Col 790 | Col 791 | Col 792 | Col 793 | Col 794 | Col 795 | Col 796 | Col 797 | Col 798 | Col 799 | Col 800 | Col 801 | Col 802 | Col 803 | Col 804 | Col 805 | Col 806 | Col 807 | Col 808 | Col 809 | Col 810 | Col 811 | Col 812 | Col 813 | Col 814 | Col 815 | Col 816 | Col 817 | Col 818 | Col 819 | Col 820 | Col 821 | Col 822 | Col 823 | Col 824 | Col 825 | Col 826 | Col 827 | Col 828 | Col 829 | Col 830 | Col 831 | Col 832 | Col 833 | Col 834 | Col 835 | Col 836 | Col 837 | Col 838 | Col 839 | Col 840 | Col 841 | Col 842 | Col 843 | Col 844 | Col 845 | Col 846 | Col 847 | Col 848 | Col 849 | Col 850 | Col 851 | Col 852 | Col 853 | Col 854 | Col 855 | Col 856 | Col 857 | Col 858 | Col 859 | Col 860 | Col 861 | Col 862 | Col 863 | Col 864 | Col 865 | Col 866 | Col 867 | Col 868 | Col 869 | Col 870 | Col 871 | Col 872 | Col 873 | Col 874 | Col 875 | Col 876 | Col 877 | Col 878 | Col 879 | Col 880 | Col 881 | Col 882 | Col 883 | Col 884 | Col 885 | Col 886 | Col 887 | Col 888 | Col 889 | Col 890 | Col 891 | Col 892 | Col 893 | Col 894 | Col 895 | Col 896 | Col 897 | Col 898 | Col 899 | Col 900 | Col 901 | Col 902 | Col 903 | Col 904 | Col 905 | Col 906 | Col 907 | Col 908 | Col 909 | Col 910 | Col 911 | Col 912 | Col 913 | Col 914 | Col 915 | Col 916 | Col 917 | Col 918 | Col 919 | Col 920 | Col 921 | Col 922 | Col 923 | Col 924 | Col 925 | Col 926 | Col 927 | Col 928 | Col 929 | Col 930 | Col 931 | Col 932 | Col 933 | Col 934 | Col 935 | Col 936 | Col 937 | Col 938 | Col 939 | Col 940 | Col 941 | Col 942 | Col 943 | Col 944 | Col 945 | Col 946 | Col 947 | Col 948 | Col 949 | Col 950 | Col 951 | Col 952 | Col 953 | Col 954 | Col 955 | Col 956 | Col 957 | Col 958 | Col 959 | Col 960 | Col 961 | Col 962 | Col 963 | Col 964 | Col 965 | Col 966 | Col 967 | Col 968 | Col 969 | Col 970 | Col 971 | Col 972 | Col 973 | Col 974 | Col 975 | Col 976 | Col 977 | Col 978 | Col 979 | Col 980 | Col 981 | Col 982 | Col 983 | Col 984 | Col 985 | Col 986 | Col
987 | Col 988 | Col 989 | Col 990 | Col 991 | Col 992 | Col 993 | Col 994 | Col 995 | Col 996 | Col 997 | Col 998 | Col 999 | Col 1000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 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 | | | | | | CLASS LXXIII - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXIV - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXV - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXVI - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXVII - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXVIII - 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Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXXXXXXI - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXXXXXXII - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXXXXXXIII - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXXXXXXIV - Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | CLASS LXXXXXXXV - 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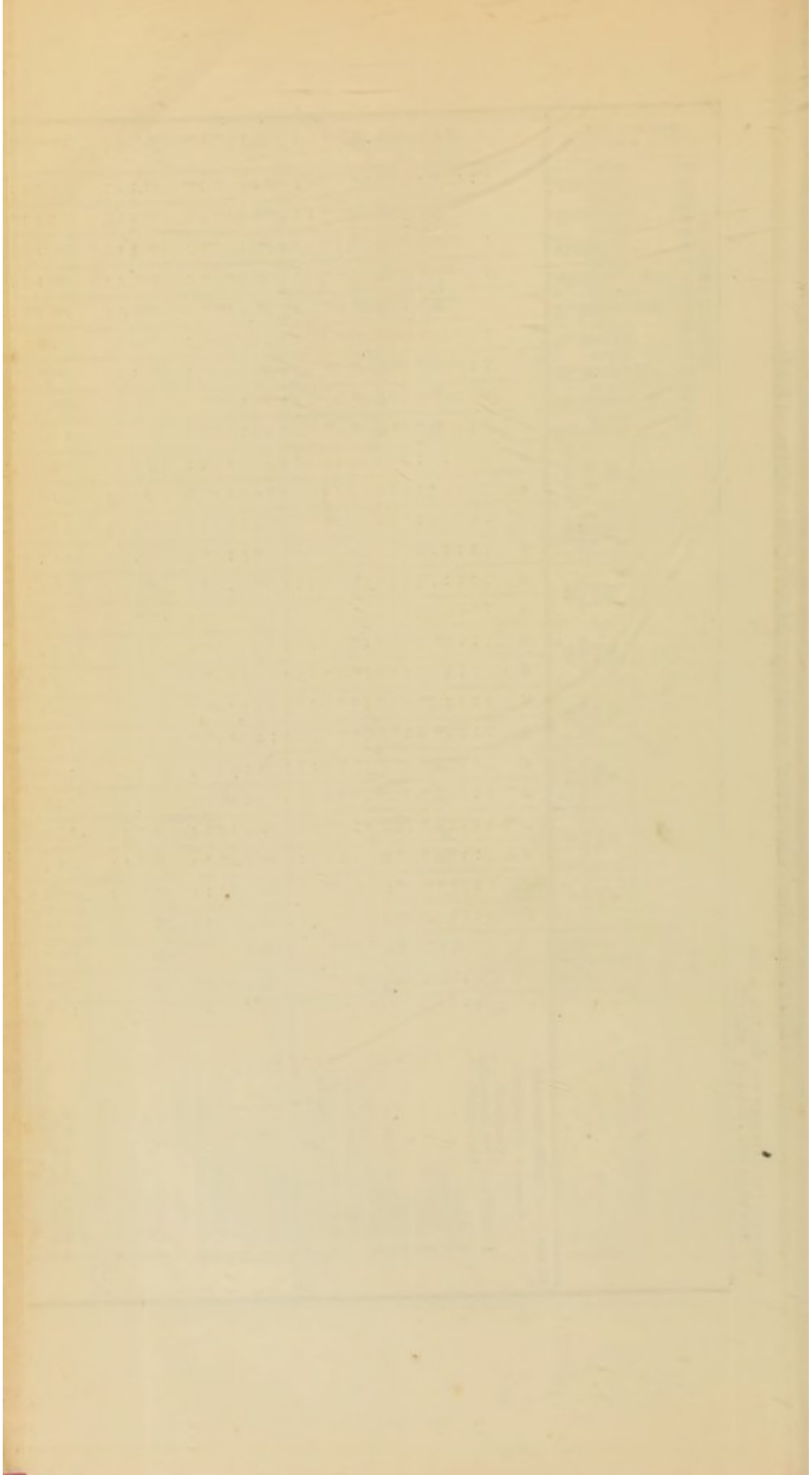
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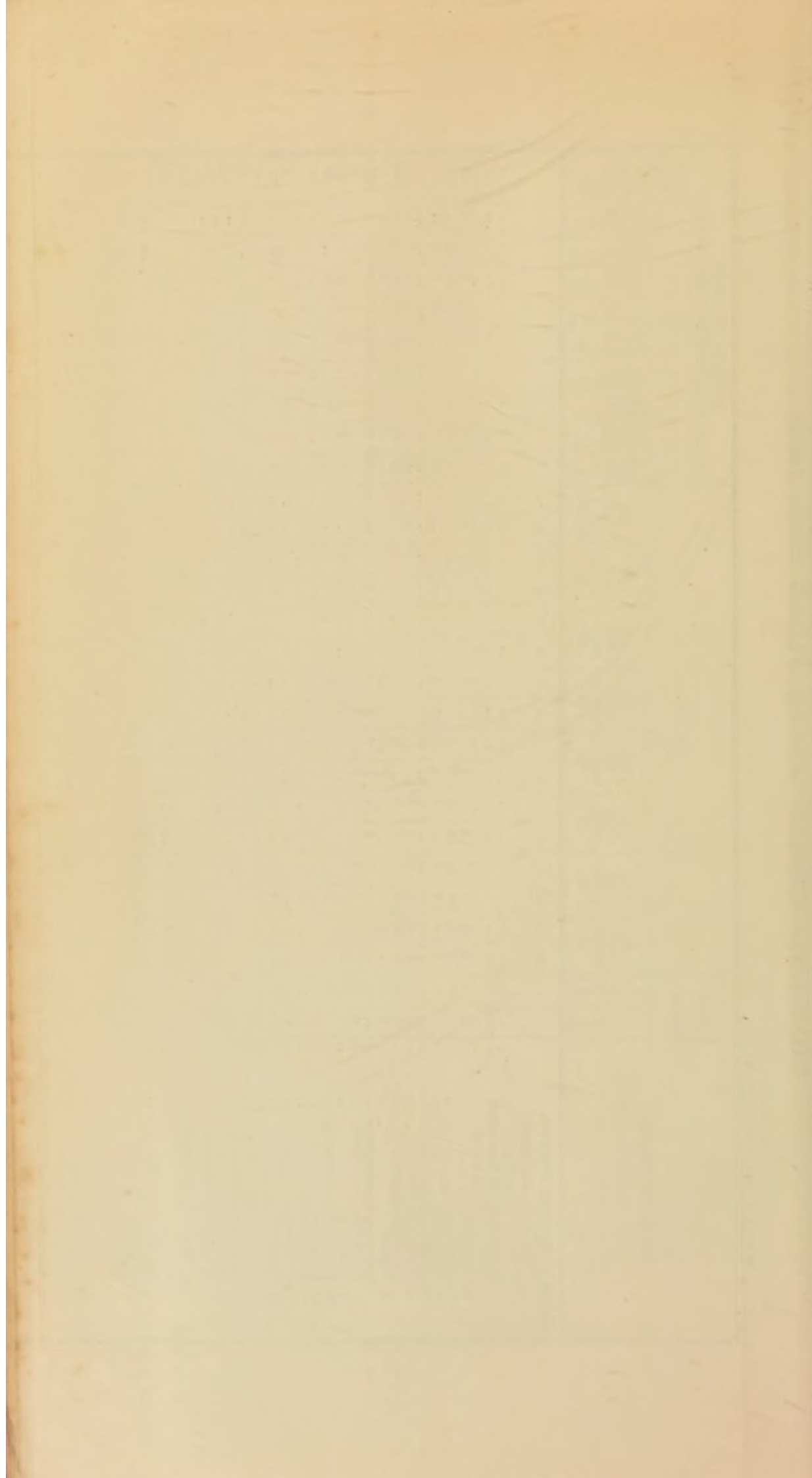
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CLASS I - Specific Diseases		CLASS II - Infectious Diseases		CLASS III - Constitutional Diseases		CLASS IV - Degenerative Diseases		CLASS V - Traumatic Diseases		CLASS VI - Degenerative Diseases		CLASS VII - Degenerative Diseases		CLASS VIII - Degenerative Diseases		CLASS IX - Degenerative Diseases		CLASS X - Degenerative Diseases		CLASS XI - Degenerative Diseases		CLASS XII - Degenerative Diseases		CLASS XIII - Degenerative Diseases		CLASS XIV - Degenerative Diseases		CLASS XV - Degenerative Diseases		CLASS XVI - Degenerative Diseases		CLASS XVII - Degenerative Diseases		CLASS XVIII - Degenerative Diseases		CLASS XIX - Degenerative Diseases		CLASS XX - Degenerative Diseases		CLASS XXI - Degenerative Diseases		CLASS XXII - Degenerative Diseases		CLASS XXIII - Degenerative Diseases		CLASS XXIV - Degenerative Diseases		CLASS XXV - Degenerative Diseases		CLASS XXVI - Degenerative Diseases		CLASS XXVII - Degenerative Diseases		CLASS XXVIII - Degenerative Diseases		CLASS XXIX - Degenerative Diseases		CLASS XXX - 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ESTIMATED POPULATION OF THE BROADBEN IN THE
WINTER OF THE YEAR 1873-1874.¹¹⁷

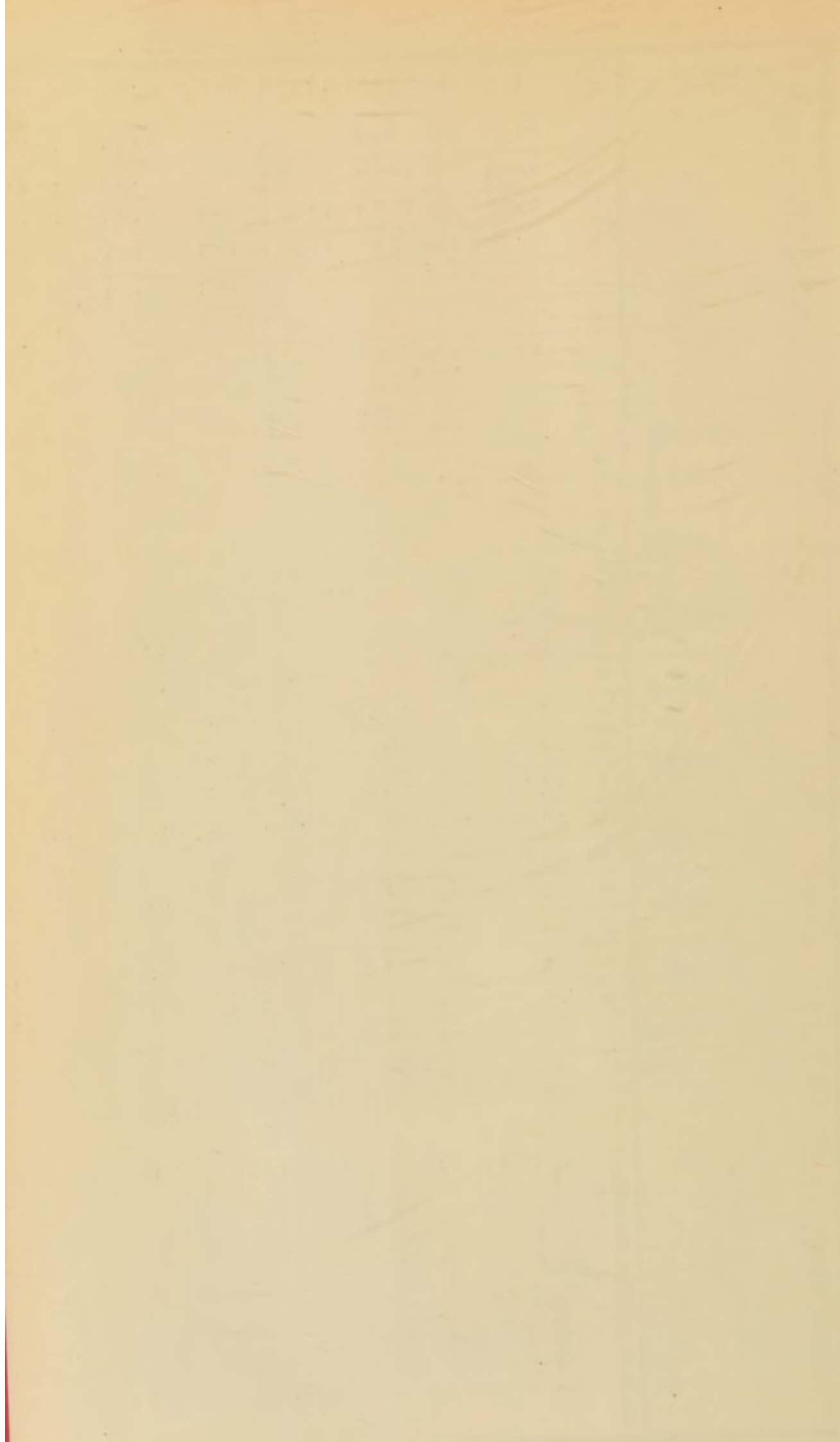
Total



DEATHS REGISTERED IN THE BOROUGH OF BIRMINGHAM,
During the Quarter ending SEPTEMBER 28th, 1878.

Estimated Population of the Borough in the
middle of the Year 1878—561,127.

CAUSES OF DEATH.		SEX.	AGES.										PERMANENT INFLUENCE OF THE SEASON.									
TOTAL.																						



estimated Population of the Boreas in the
 1970s. *Journal of Wildlife Management*, Vol. 34, 1970, pp. 137-147.

* Not used in regression

TABLE XII.

METEOROLOGICAL CONDITION OF THE AIR, AND AMOUNT OF RAINFALL FOR
THE YEAR ENDING DECEMBER 28TH, 1878.

Observed at 63, Bloomsbury Street, Birmingham, at 8.0 a.m., by
D. SMITH, Esq., F.R.A.S.

The Instruments are considered to be 340 feet above the mean level of the sea.

From the returns of the Registrar-General, the area within the Municipal Boundary of the Borough of Birmingham is taken at 8,400 acres, and the population estimated to the middle of the year 1878, at 383,117.

1878. Months.	Pressure of Air.	TEMPERATURE OF THE AIR				RAINFALL. Gauge 8 inches diameter. Receiving surface 8 inches above the ground.		
	Barometer	Reading of Thermometer.				Depth of Rain depo- sited upon a square foot of sur- face, in inches and parts.	Measure- ment converted into weight per Acre.	Number of Days on which Rain fell, when $\frac{1}{16}$ ths of an inch or more was measured.
	Mean Monthly Reading (corrected and reduced to 32 degrees Fahrenheit)	Highest in Shade.	Lowest in Shade.	Range of Temp- erature, in the Month	Mean Tempe- rature in the Month			
	In. Parts.	Dg. Pts.	Dg. Pts.	Dg. Pts.	Dg. Pts.	In. Parts.	Tons.	
Jan.	29.750	57.0	26.4	30.6	43.2	1.96	198	11
Feb.	29.847	61.0	28.0	33.0	40.1	1.11	112	8
Mar.	29.755	59.0	27.3	31.7	43.6	1.17	119	9
April	29.445	67.0	30.0	37.0	48.3	2.17	219	11
May	29.368	70.0	39.0	31.0	54.7	5.33	539	21
June	29.545	89.0	43.0	46.0	60.8	3.37	340	14
July	29.665	90.3	48.8	41.5	63.7	0.98	99	7
Aug.	29.384	77.0	46.3	30.7	62.0	6.44	650	18
Sept.	29.587	73.0	36.3	36.7	56.9	3.15	318	13
Oct.	29.364	70.6	33.2	37.4	52.2	3.66	370	16
Nov.	29.396	51.1	29.0	22.1	39.4	3.15	318	11
Dec.	29.320	52.8	10.4	42.4	31.2	2.44	246	11

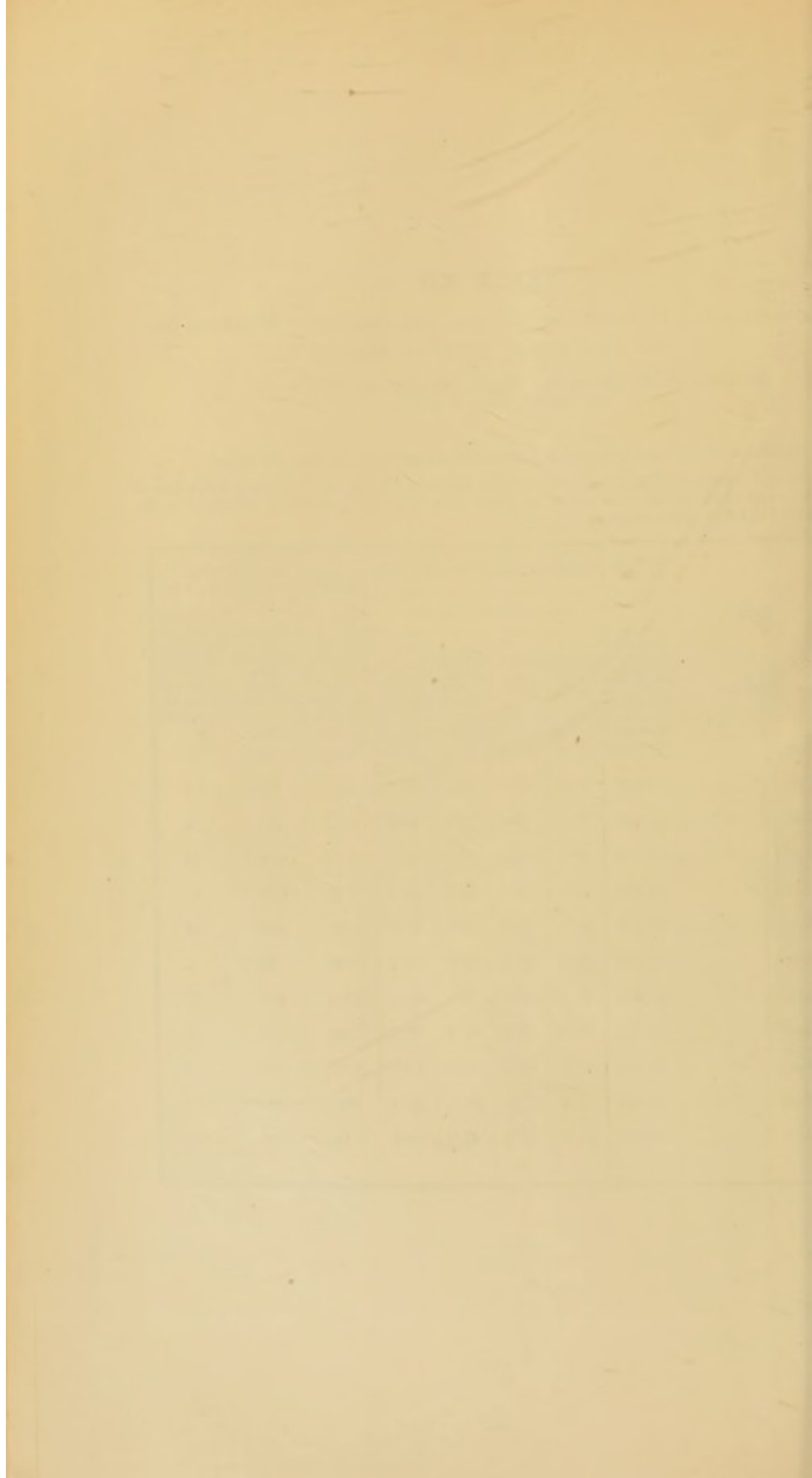


TABLE XIII.

RAINFALL AND TEMPERATURE IN EACH MONTH AND YEAR FROM 1868 TO 1878.

COMPILED FROM OBSERVATIONS MADE AT 63, BLOOMSBURY STREET, BIRMINGHAM, BY D. SMITH, Esq., F.R.A.S.

MONTH.	1868.		1869.		1870.		1871.		1872.		1873.		1874.		1875.		1876.		1877.		Average for 10 years 1868-77.		1878.									
	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	Rainfall.	Temperature.	No. of days on which a trace of an inch or more was measured.	Rainfall.	No. of days on which a trace of an inch or more was measured.	Temperature.								
January ...	2.290	37.9	3.460	41.6	2.285	38.0	1.485	9	32.5	4.750	40.4	4.48	19	41.4	1.86	10	41.4	3.12	16	44.4	1.75	6	36.1	4.47	18	42.8	2.99	13	39.9	1.96	11	43.2
February ...	1.890	43.1	3.075	45.3	2.300	36.0	1.730	9	42.5	3.410	43.8	1.76	11	35.1	2.685	9	38.2	1.675	10	36.0	2.55	14	39.6	2.43	12	44.5	2.34	11	40.4	1.11	8	40.1
March ...	2.920	44.1	2.500	36.2	1.660	40.6	1.240	8	44.1	2.365	44.0	2.66	14	39.9	1.72	16	44.6	0.81	5	40.7	3.16	22	40.8	2.72	15	40.3	2.18	12	43.5	1.17	9	43.6
April ...	1.935	47.9	1.825	49.8	0.915	49.1	3.850	10	47.6	3.925	47.6	0.77	7	46.6	1.45	5	50.5	1.09	7	47.2	1.98	13	47.5	2.82	12	45.0	2.05	9	47.1	2.17	11	48.3
May ...	1.675	56.9	5.745	50.2	1.390	53.9	2.165	7	53.6	2.265	49.3	2.545	12	50.6	3.24	7	50.5	2.10	12	54.8	1.00	5	48.1	2.27	9	48.2	2.40	9	51.5	5.33	21	54.7
June ...	0.190	61.3	1.210	56.4	0.785	60.7	3.005	11	54.7	5.770	58.3	1.65	9	58.2	1.13	5	58.5	3.915	15	58.0	2.23	8	58.0	2.96	10	59.0	2.39	9	58.3	3.37	14	60.8
July...	0.395	65.3	0.580	63.6	1.270	64.2	4.550	17	59.5	3.565	65.0	5.16	11	62.3	1.26	8	64.0	8.14	13	58.9	1.42	6	63.7	5.03	12	59.8	3.14	9	61.9	0.98	7	63.7
August ...	5.515	62.2	1.260	60.6	1.720	61.0	2.180	6	61.7	3.810	60.3	3.435	18	61.1	1.985	14	60.1	1.80	7	62.0	1.22	5	62.7	2.29	10	60.9	2.52	9	61.3	6.44	18	62.0
September ...	2.470	57.6	4.105	58.2	0.800	55.4	6.010	11	55.5	2.645	57.0	2.13	8	53.4	4.545	19	56.4	3.89	14	59.3	5.83	21	55.7	4.58	13	53.7	3.77	12	56.4	3.15	13	56.9
October ...	1.920	47.0	1.660	49.6	6.215	50.5	1.955	12	49.6	4.650	47.1	1.86	9	47.8	2.71	12	51.2	7.21	16	47.4	2.26	9	53.0	1.91	12	49.1	3.24	12	49.2	3.66	16	52.2
November ...	1.815	41.5	2.035	44.3	2.195	40.7	0.835	4	37.7	3.475	41.3	1.83	10	43.0	1.45	10	41.6	3.31	10	41.9	2.94	8	43.4	2.87	15	45.2	2.27	10	42.6	3.15	11	39.4
December ...	6.065	44.9	4.005	36.5	2.205	32.8	1.615	9	39.0	4.505	41.1	0.975	5	41.3	4.375	16	33.9	1.45	10	39.1	5.68	19	42.9	2.40	11	41.3	3.21	14	39.3	2.44	11	31.2
YEAR ...	29.620	50.8	31.460	49.3	23.650	48.5	30.620	113	49.0	45.135	49.8	29.255	133	48.6	28.41	131	49.0	38.51	135	49.1	32.02	136	49.4	36.75	149	49.1	32.56	129	49.3	34.93	150	49.6

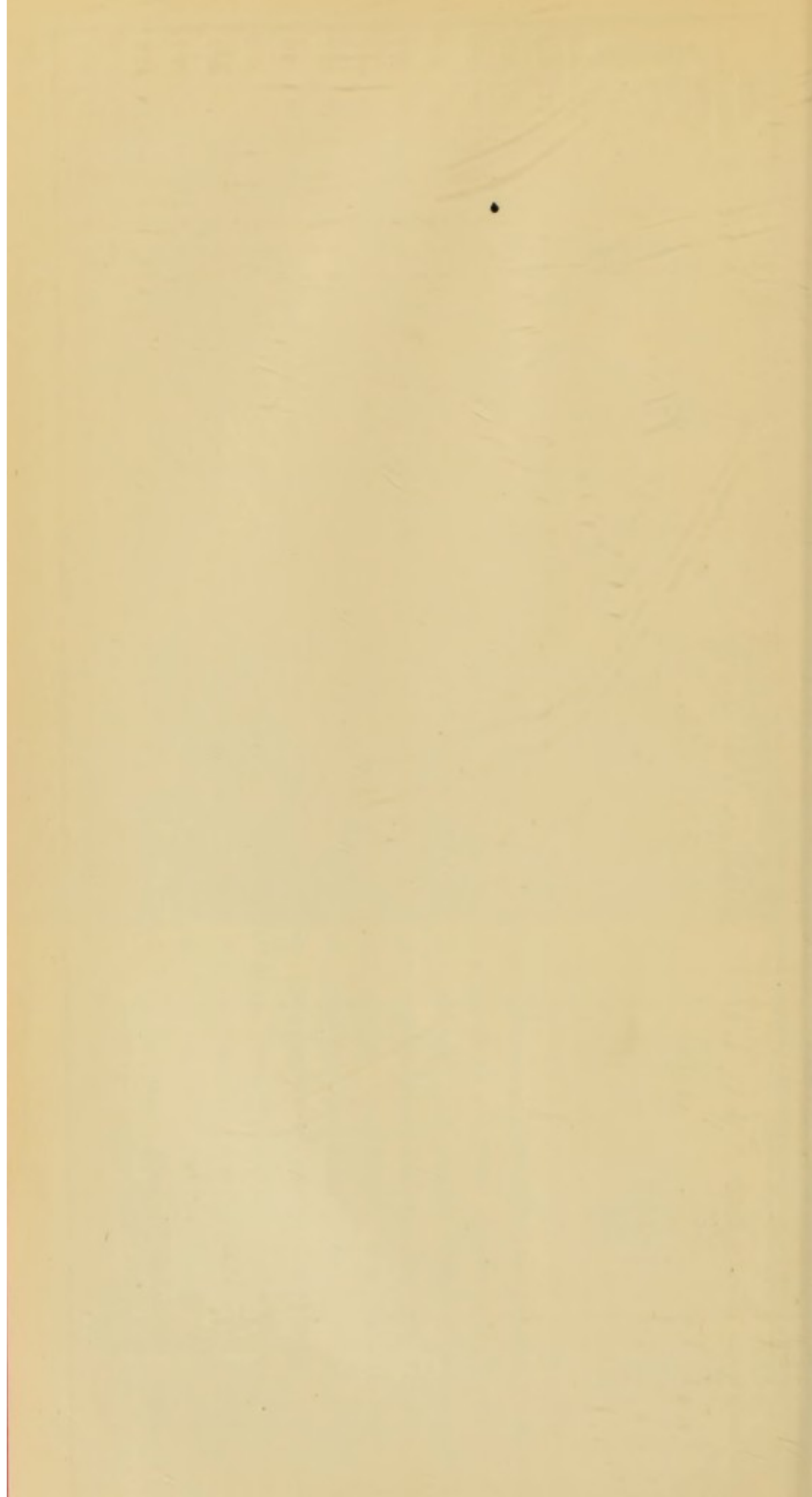


TABLE XIV.

NEW CASES OF DISEASE COMING UNDER TREATMENT DURING THE YEAR ENDING
DECEMBER 28TH, 1878, AT THE FOLLOWING INSTITUTIONS, &c.

DISEASES.	I. General Hospital.	II. General Dispensary	III. Queen's Hospital.	IV. Children's Hospital.	V. The Work- house.	VI. Out-door Pauper Patients.	VII. Boro' Hosptl.	TOTAL.
Small Pox .....	...	...	...	...	...	3	20	23
Measles	7	21	11	10	11	13	...	73
Scarlet Fever	68	95	51	205	...	281	424	1,124
Diphtheria	6	7	16	32	1	3	...	65
Whooping Cough ...	17	31	33	1,247	83	87	...	1,498
Croup	4	1	5	7	1	1	...	19
Diarrhoea	1,044	107	388	2,441	92	372	...	4,444
Dysentery	4	1	1	1	...	..	...	7
Asiatic Cholera .....	...	...	...	...	...	...	...	...
Erysipelas	28	18	44	18	26	21	...	155
Continued Fever.....	...	...	..	...	...	...	1	1
Typhus .....	...	...	...	...	...	...	...	...
Typhoid	32	34	30	58	25	...	...	179
Relapsing .....	...	...	...	...	...	3	...	3
Febricula	29	12	29	344	10	348	...	772
Ague.....	4	...	4	...	...	...	...	8
Rheumatic Fever ...	41	52	78	6	2	46	...	225
Puerperal Fever .....	..	3	...	...	...	17	...	20
Bronchitis & Catarrh	670	1,010	900	2,502	498	1,696	...	7,276
Influenza	1	59	4	11	...	...	...	75
Pleurisy & Pneumonia	98	117	103	123	25	32	...	498
Phthisis	425	959	523	105	201	170	...	2,383
Constl. Syphilis	302	94	373	263	266	20	...	1,318
All other Diseases ...	14,427	9,714	9,799	9,383	2,901	3,453	...	49,317
Accidents..	10,435	106	6,642	85	96	9	...	17,373
Totals	27,282	12,441	19,034	16,841	4,238	6,576	444	86,856

The above returns are made by (I.) Howard G. Lowe, Esq. ; (II.) J. H. Palmer, J. M. Taylor, and C. Gosling, Esqrs. ; (III.) J. Spofforth, Esq., M.R.C.S., and J. Wood, Esq. ; (IV.) W. Rhodes, A. Cardew, M.R.C.S., and T. Richards, Esqrs. ; (V.) A. B. Simpson, Esq., L.R.C.S. ; (VI.) V. G. Coulton, Esq., Clerk to the Guardians ; (VII.) William Bates, Esq., B.A., Surgeon to the Borough Hospital.

TABLE XV.—WATER: RESULTS OF ANALYSIS

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878. CORPORATION SUPPLY.					
Jan. 10th	Rear of 46, Miles Street ...	6°·6	26·30	·248	·079
Feb. 5th	2 Court, Skinner Street ...	6°·1	33·08	·081	·024
Mar. 5th	21 Court, Heneage Street ...	6°·1	31·36	·118	·022
April 10th	19 Court, Lancaster Street ...	6°·7	24·30	·303	·047
May 7th	9 Court, Fordrough Street ...	12°·2	21·46	·130	·044
June 12th	16 Court, Carver Street ...	20°·0	24·90	·143	·073
July 12th	12 Court, Bordesley Street ...	17°·2	20·20	·372	·081
Aug. 12th	27 Court, Sherlock Street ...	17°·7	33·80	·139	·031
Sep. 11th	6 Court, Vauxhall Road ...	16°·1	26·00	·141	·051
Oct. 11th	38, Gibb Street ...	11°·1	27·00	·238	·032
Nov. 13th	Rear of 29, Lord Street ...	6°·1	24·80	·355	·059
Dec. 13th	152, Sand Pits ...	3°·9	27·80	·374	·047
	Average results, 1878 ...	10°·8	26·75	·220	·050
	" " 1877 ...	10°·9	25·14	·279	·051
	" " 1876 ...	10°·0	25·13	·266	·063
	" " 1875 ...	9°·8	27·70	·285	·082
1878. WELL WATERS.					
Jan. 7th	Stone's Buildings, College St. (Whooping Cough) ...	...	87·0	...	rather large
" "	84 and 85, Aston Road (Measles) ...	...	95·0	...	"
" "	19 Court, Aston Road (Measles) ...	...	114·8	...	moderate
" "	Cellent Grove, Hooper Street (Scarlet Fever) ...	...	130·0	...	"
" "	Lee Crescent Ter., Lee Crescent (Whooping Cough) ...	...	80·8	...	rather large
" "	3 Ct., & No. 60, Up. Gough St. (Measles) ...	...	132·0	...	very large
" "	Springfield Terrace, Spring Street ...	...	66·0	...	moderate
" "	67, Gough Road ...	...	61·0	...	large
" 9th	3 and 4 Courts, Hollier St. (Whooping Cough) ...	...	195·8	...	very large
" "	St. Michael's Ter., Factory Rd. (Scarlet Fever) ...	...	122·0	...	"
" "	5 Court, Long St. (Whooping Cough) ...	...	229·8	...	moderate
" "	5 and 6 Courts, Kent Street North ...	...	196·0	...	large
" 10th	24 Court, Lower Tower Street (Whooping Cough) ...	...	211·0	...	very large
" "	13 Court Lancaster Street ...	...	246·0	...	"
" "	22 Court, Bordesley Street ...	...	162·8	...	very large
" "	5 Court, Newtown Row ...	...	267·0	...	...
" "	8 Court, Vauxhall Road (Scarlet Fever) ...	...	185·8	...	very large
" "	1 Court, Cotton Row ...	...	283·0	...	...
" 15th	20 Court, Alcester Street (Measles) ...	...	248·2	...	large
" "	13 and 15, Sun Street West (Whooping Cough) ...	...	61·1	...	"
" "	1 and 2, Florence Villas, Dolobran Rd. ...	...	62·0	...	very large
" "	3 and 4, " " " " ...	...	62·0	...	"
" "	361, Pershore Road ...	...	100·0	...	"
" "	363 and 364, Pershore Road ...	...	101·0	...	"
" 17th	22 Court, Gt. Russell Street (Fever) ...	...	94·2	...	"
" "	34 Court, Summer Lane (Whooping Cough) ...	...	234·0	...	"
" "	134, Icknield Square, and 261—265, Monument Road (Scarlet Fever) ...	...	69·0	...	moderate
" "	168 and 169, St. Vincent Street ...	...	76·0	...	"
" "	18 and 19, Cattell's Grove (Diarrhoea) ...	...	120·0	...	very large
" "	41 and 42, Austin Street (Whooping Cough) ...	...	79·4	...	rather large
" 22nd	58, Heath Street (Typhoid) ...	...	80·2	...	very large
" "	47 and 48, Icknield Sq. (Scarlet Fever) ...	...	113·0	...	...
" "	42 and 43, Lodge Road (Measles) ...	...	75·0	...	rather large
" "	1 Court, Sherlock Street ...	...	102·0	...	...
" "	37 and 38, Friston Street (Typhoid) ...	...	67·0	...	rather large
" "	11 Court, Barford St. (Whooping Cough) ...	...	363·4	...	"

EXPRESSED IN PARTS PER 100,000.

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·004	·341	·423	3120	1·9	8°·3	7°·7	16°·0	Clear
·002	·220	·245	1890	1·4	7°·4	10°·0	17°·4	Clear
·001	·209	·238	1780	1·4	9°·3	9°·5	18°·8	Clear
·002	·321	·369	2890	1·9	6°·1	7°·7	13°·8	Slightly turbid
·005	·220	·268	1920	1·9	4°·7	9°·3	14°·0	Turbid
·003	·198	·273	1680	1·9	7°·2	7°·3	14°·5	Clear
·004	·143	·227	1140	1·5	5°·9	6°·1	12°·0	Clear
·005	·209	·244	1810	1·7	13°·1	7°·1	20°·2	Clear
·002	·099	·151	686	1·7	7°·8	8°·7	16°·5	Slightly turbid
·003	·110	·144	800	1·5	10°·9	9°·3	20°·2	Clear
·003	·209	·270	1790	1·6	9°·0	6°·0	15°·0	Rather turbid
·003	·330	·379	3000	2·0	9°·1	10°·1	19°·2	Nearly Clear
·003	·217	·269	1870	1·78	9°·2	8°·2	17°·4	
·002	·261	·253	1690	1·65	7°·2	8°·3	15°·5	
·002	·230	·295	1990	1·71	6°·3	10°·2	16°·5	
·0025	·166	·250	1420	1·78	6°·9	12°·5	19°·4	
·006	2·20	2·205	21730	10·8	...	...	...	Clear
·007	1·10	1·106	10740	22·3	...	...	...	Clear
·004	·66	·663	6310	32·2	...	...	...	Clear
·048	6·60	6·639	66070	15·4	...	...	...	Clear
·003	3·30	3·33	33000	10·4	...	...	...	Clear
·004	3·08	3·083	30510	25·9	...	...	...	Clear
·004	2·86	2·863	28310	8·5	...	...	...	Clear
·005	1·32	1·324	12920	3·6	...	...	...	Clear
·004	6·05	6·053	60210	15·2	...	...	...	Clear
·005	6·71	6·722	66900	9·0	...	...	...	Clear
·004	10·56	10·563	105310	24·9	...	...	...	Clear
·004	6·60	6·603	65710	16·6	...	...	...	Clear
·006	10·56	10·563	105310	26·3	...	...	...	Clear
1·000	6·60	7·423	73910	41·5	...	...	...	Clear
·007	5·17	5·176	51440	16·5	...	...	...	Clear
·085	9·90	9·966	99400	46·0	...	...	...	Clear
·004	7·70	7·703	76710	12·1	...	...	...	Clear
·300	4·73	4·977	49450	53·7	...	...	...	Clear
·006	9·35	9·355	93230	31·2	...	...	...	Clear
·018	2·75	2·765	27330	8·1	...	...	...	Clear
·005	trace	...	0	1·9	...	...	...	Clear
·004	"	...	0	1·8	...	...	...	Clear
·006	3·52	3·525	34930	5·8	...	...	...	Clear
·006	3·52	3·525	34930	5·9	...	...	...	Clear
·008	2·75	2·756	27240	9·0	...	...	...	Clear
·003	2·42	2·422	23900	30·6	...	...	...	Clear
·004	2·53	2·533	25010	6·7	...	...	...	Clear
·002	3·74	3·742	37100	8·0	...	...	...	Clear
·004	3·30	3·303	22710	8·2	...	...	...	Clear
·004	2·31	2·313	22810	3·6	...	...	...	Clear
·007	3·30	3·506	32740	4·4	...	...	...	Clear
·250	4·40	4·606	45740	16·5	...	...	...	Clear
·005	3·52	3·524	34920	8·9	...	...	...	Clear
·030	3·96	3·985	39530	11·0	...	...	...	Clear
·006	3·41	3·415	33830	10·0	...	...	...	Clear
·020	3·52	3·536	35040	29·5	...	...	...	Clear

TABLE XV.

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS--(continued).				
Jan. 23rd	314 and 315, Coventry Road (Scarlet Fever) ...	...	171.2	...	rather large
" "	10 Court, Emily Street ...	...	208.0	...	very excessive
" "	140—145, Grange Road ...	...	131.0	...	large
" "	114 and 115, Greenway Street ...	...	96.0	...	very large
" "	24 Court, Darwin Street ...	...	202.0	...	"
" "	48 and 49, Hawkes Street ...	...	101.4	...	"
" 28th	53 Court, Farm Street ...	...	261.2	...	"
" "	62 and 63, Long Acre ...	...	156.0	...	"
" "	Claremont Place, Dolobran Road ...	...	50.0	...	"
" "	Hampstead Place, Dolobran Road, (Whooping Cough) ...	...	56.0	...	rather large
" "	1, Winson Green Road ...	...	99.0	...	...
" 30th	111 and 112, Sampson Road... ..	...	111.2	...	very large
" "	64 and 65, George Street West, and 37 Court, Prescott St. (Typhoid) ...	...	39.0	...	moderate
" "	53 and 54, Park Road ...	...	198.0	...	very large
Feb. 1st	17 Court, Bell Barn Road (Fever) ...	...	140.0	...	rather large
" "	27 Court, New John St. (Scarlet Fever) ...	...	190.4	...	...
" 5th	Back 100, Cuckoo Road ...	...	133.2	...	very large
" "	101—105, Cuckoo Road ...	...	128.0	...	"
" "	1, Lorne Terrace, Argyle Street ...	...	82.0	...	...
" "	2, Lorne Terrace, Argyle Street ...	...	80.0	...	...
" "	4 and 5, Sampson Road ...	...	120.0	...	very large
" "	The Hollies and The Laurels, Hickman Road... ..	...	72.4	...	...
" 15th	9 Court, Navigation Street ...	...	141.0	...	very large
" "	12 Court, Suffolk Street ...	...	112.0	...	...
" "	4 Court, Ryland Street, and 7 Court, Darwin Street ...	...	322.2	...	...
" "	13 Court, Lombard st Street ...	...	203.0	...	very large
" "	1 Court, Upper Highgate Street, and 8 Court, Leopold Street (Whooping Cough) ...	...	136.0	...	"
" "	41—45, Oughton Place (Whooping Cough) ...	...	163.4	...	"
" 20th	8 and 9, Frank Street (Typhoid) ...	...	178.6	...	"
" "	43, Priestley Road (Typhoid) ...	...	75.8	...	"
" "	12 Court, Cheapside (Diarrhoea) ...	...	321.8	...	"
" 21st	23 & 24 Courts, Wheeler St. (Scarlet Fever) ...	...	166.0	...	...
" "	23 & 24 Courts, Wheeler St. (Scarlet Fever) ...	...	54.8	...	...
" "	117, Great King Street (Scarlet Fever) ...	...	165.4	...	...
" 25th	17 and 18, Newdegate Street ...	...	159.6	...	...
" "	2 Court, Meriden Street (Whooping Cough) ...	...	202.8	...	...
" "	8 Court, New Canal Street (Diarrhoea) ...	...	919.1	...	...
" 26th	5 Court, Allison Street ...	...	334.0	...	...
" "	245 & 246, Bell Barn Road (Scarlet Fever) ...	...	66.8	...	rather large
" "	42 Court, Cromwell Street ...	...	197.4	...	very large
" 27th	1 Court, Tower St. (1st pump) (Scarlet Fever) ...	...	152.6	...	very large
" "	1 Court, Tower St. (2nd pump) (Scarlet Fever) ...	...	165.8	...	...
" "	22—25, Rodway St. (Whooping Cough) ...	...	47.8	...	moderate
" "	36—41, All Saints' Road ...	...	102.0	...	very large
" "	2 Court, Farm Street (Fever) ...	...	135.8	...	...
" "	23—25, Piddock St. (Whooping Cough) ...	...	148.4	...	very large

continued).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·800	7·81	8·470	84380	18·1	...	...	...	Clear
·008	4·40	4·406	43740	15·4	...	...	...	Clear
·006	3·08	3·085	30530	8·8	...	...	...	Clear
·009	4·62	4·627	45950	9·0	...	...	...	Clear
·050	5·50	5·541	55090	22·1	...	...	...	Clear
·008	3·30	3·306	32740	9·0	...	...	...	Clear
1·120	3·41	4·330	43000	31·9	...	...	...	Clear
·145	3·30	3·337	33050	23·6	...	...	...	Clear
·010	trace	...	...	1·4	...	...	...	Clear
·007	"	...	...	2·2	...	...	...	Clear
·040	·55	·583	5510	22·4	...	...	...	Slightly turbid odour of naphtha
·009	trace	...	0	16·0	...	...	...	Slightly turbid
·004	1·10	1·103	10710	5·4	...	...	...	Clear
·008	11·00	11·007	109750	22·8	...	...	...	Clear
·016	7·15	7·163	71310	15·7	...	...	...	Clear
·100	5·50	5·582	55500	21·8	...	...	...	Clear
·006	4·40	4·405	43730	8·8	...	...	...	Clear
·006	7·15	7·155	71230	8·8	...	...	...	Clear
·046	1·87	1·908	18760	6·7	...	...	...	Clear
·015	1·21	1·716	17840	4·9	...	...	...	Clear
·005	1·87	1·874	18420	12·7	...	...	...	Clear
2·080	trace	1·706	16740	6·2	...	...	...	Turbid, yellow, odour of Sewage
·007	4·40	4·406	43740	23·0	...	...	...	Clear
·004	4·29	4·293	42610	11·3	...	...	...	Clear
·016	3·52	3·533	35010	23·2	...	...	...	Clear
·006	5·50	5·505	54730	19·8	...	...	...	Clear
·004	1·34	1·433	14010	14·2	...	...	...	Clear
·005	4·29	4·294	42920	10·0	...	...	...	Clear
·006	1·10	1·105	10730	14·4	...	...	...	Clear
·005	2·09	2·094	20620	1·7	...	...	...	Clear
·002	13·20	13·201	131690	35·0	...	...	...	Clear
2·050	6·16	7·841	78090	18·2	...	...	...	Clear
·120	1·54	1·639	16070	3·0	...	...	...	Clear
·250	6·16	6·366	63340	19·9	...	...	...	Clear
·450	6·93	7·301	72690	8·0	...	...	...	Clear, residue brown]
·540	8·25	8·694	86620	14·0	...	...	...	Clear
·030	6·60	6·625	65930	26·0	...	...	...	Clear
1·800	9·68	11·163	111310	53·5	...	...	...	Clear, residue brown
·004	2·53	2·533	25010	6·5	...	...	...	Clear
·005	7·70	7·704	76720	11·5	...	...	...	Clear
·005	8·80	8·804	87720	19·7	...	...	...	Clear
·150	5·61	5·733	57010	19·7	...	...	...	Clear
·002	2·09	2·091	20590	5·7	...	...	...	Clear
·010	4·40	4·408	43760	7·6	...	...	...	Clear
·530	6·38	6·815	67830	10·2	...	...	...	Clear
·005	7·37	7·374	73420	12·2	...	...	...	Clear

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued).				
Mar. 5th	159 and 160, Ledsam St., and 171 and 172, St. Vincent St. (Scarlet Fever)	...	119.6	...	very large
" "	8 Court, Kent Street, (Scarlet Fever)	...	114.8	...	rather large
" "	40 & 41 Cts., Irving St. (Scarlet Fever)	...	105.8	...	moderate
" "	22 and 22½, Hick Street ...	...	132.0	...	rather large
" "	5, Glover Street (Diarrhoea) ...	...	222.0	...	very large
" "	2 Court, Lawley Street ...	...	244.4	...	"
" 7th	22, Friston Street (Scarlet Fever) ...	...	150.6	...	rather large
" "	38 and 39, Cambridge St. (Diarrhoea)	...	149.8	...	...
" "	14 & 15, Turner St. (Whooping Cough)	...	123.8	...	...
" "	43 and 44, Cregoe Street ...	...	146.0	...	large
" "	73 and 74, Summer Rd. (Diphtheria)	...	177.4	...	very large
" 15th	191 and 192, Cheapside ...	...	269.6	...	"
" "	62—68, William Edward Street ...	...	151.8	...	"
" "	22 and 23, Adelaide Street ...	...	108.0	...	moderate
" "	79—82, Bridge Street West ...	...	64.8	...	...
" "	12 Court, Inkerman Street ...	...	164.4	...	large
" 18th	101—105, Cuckoo Road ...	...	132.6	...	...
" "	Back 106, Cuckoo Rd. (Scarlet Fever)	...	90.8	...	very large
" "	33 and 34, Lee Crescent ...	...	42.0	...	moderate
" 19th	Edgbaston Ter., Bell Barn Rd. (Typhoid)	...	158.8	...	large
" "	13 Court, Bell Barn Road (Typhoid)...	...	164.4	...	rather large
" 22nd	79 and 80, Freeth Street (Diphtheria)	...	103.6	...	large
" "	9 and 10, Spring Hill ...	...	124.8	...	...
" "	110 and 111, Inkerman Street ...	...	81.8	...	...
" "	112 and 113, Inkerman Street ...	...	86.0	...	rather large
" 23rd	47 and 48, Great King Street ...	...	80.8	...	"
" "	82 & 83, Well St. (Whooping Cough)	...	123.9	...	...
" 26th	4 Court, Lennox Street (Fever) ...	...	107.6	...	moderate
" "	21 Court, Alcester Street ...	...	198.8	...	very large
" "	4 Court, Conybere Street (Measles) ...	...	174.8	...	small
" "	30—33, Sandy Lane (Small-pox) ...	...	122.0	...	small
" "	61 and 62, Main Street (Diarrhoea) ...	...	113.8	...	very large
" 29th	78 and 79, Well Street (Whooping Cough) ...	...	67.4	...	small
" "	19 Court, Bromsgrove Street...	...	146.6	...	very large
" "	18—20, Court, Bromsgrove Street ..	...	204.8	...	...
" "	6 Court, Lancaster Street (Diarrhoea)	...	148.0	...	...
" "	103 and 104, Bridge Street West ...	...	64.8	...	...
" "	97 and 98, Burbury Street ...	...	264.4	...	...
April 2nd	81 and 82, Balsall Heath Road ...	...	93.6	...	...
" "	68—70, Bloomsbury Place ...	...	197.6	...	very large
" "	11, Varna Road ...	...	129.0	...	"
" "	22 and 23, Henry Street ...	...	192.8	...	large
" "	154—159, Ashted Row (Typhoid) ...	...	204.4	...	very large
" "	1 Court, Canal Street (Scarlet Fever)	...	266.0	...	...
" 5th	104 and 105, Inkerman Street (Scarlet Fever) ...	...	114.6	...	very large
" "	117, Wheeley's Road ...	...	147.6	...	large
" "	1 Court, Palmer Street ...	...	251.0	...	very large
" "	62 and 63, Navigation Street ...	...	156.8	...	"
" "	5 Court, Curzon Street ...	...	72.4	...	...
" "	285 and 286, Watery Lane ...	...	146.0	...	large

(continued.)

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·009	9·68	9·687	96550	12·4	...	...	...	Clear
·009	6·60	6·607	65760	14·6	...	...	...	Clear
·005	5·39	5·394	53620	13·5	...	...	...	Clear
·005	1·98	1·984	19520	6·3	...	...	...	Turbid
·006	2·20	2·205	21730	48·1	...	...	...	Clear
·005	4·40	4·404	43720	27·9	...	...	...	Slightly turbid
·005	6·71	6·714	66820	14·0	...	...	...	Clear
·036	1·76	1·789	17570	37·3	...	...	...	Slightly turbid
·210	2·75	2·923	28910	1·1	...	...	...	Clear
·005	3·85	3·854	38220	16·2	...	...	...	Clear
·006	7·15	7·155	71230	12·6	...	...	...	Clear
·006	13·53	13·535	135330	30·5	...	...	...	Clear
·005	2·20	2·204	21720	13·2	...	...	...	Clear
·002	3·3	3·301	32690	8·5	...	...	...	Clear
·002	2·75	2·751	27190	8·1	...	...	...	Clear
·003	6·05	6·052	60204	10·8	...	...	...	Clear
·027	4·95	4·972	49400	9·0	...	...	...	Clear
·005	2·20	2·204	21720	8·5	...	...	...	Clear
·002	·88	·881	8490	4·2	...	...	...	Clear
·003	6·60	6·602	65700	12·1	...	...	...	Clear
·002	6·60	6·601	65690	72·5	...	...	...	Clear
·005	3·85	3·854	38220	12·0	...	...	...	Clear
·040	3·30	3·333	33010	26·0	...	...	...	Clear
·020	4·73	4·746	47140	8·0	...	...	...	Clear
·004	3·30	3·303	33710	7·0	...	...	...	Clear
·004	4·18	4·183	41510	10·1	...	...	...	Clear
·050	5·50	5·541	55091	15·8	...	...	...	Clear
·012	1·98	1·99	19680	9·7	...	...	...	Clear
·004	6·82	6·823	67910	31·0	...	...	...	Clear
·001	2·75	2·751	27190	14·9	...	...	...	Clear
·001	2·64	2·641	26090	6·3	...	...	...	Clear
·003	3·08	3·082	30500	8·5	...	...	...	Clear
·002	2·31	2·311	22890	9·3	...	...	...	Clear
·010	6·05	6·058	60260	18·5	...	...	...	Clear
·365	5·50	5·800	57680	26·6	...	...	...	Clear
·015	4·95	4·962	49300	20·9	...	...	...	Clear
·420	1·65	1·996	19640	13·0	...	...	...	Clear
2·850	12·10	14·44	144090	33·1	...	...	...	Clear
·800	1·98	2·640	26080	7·3	...	...	...	Clear
·007	14·30	14·306	142740	20·5	...	...	...	Clear
·003	3·30	3·302	32700	9·0	...	...	...	Clear
·004	3·52	3·523	34910	26·5	...	...	...	Clear
·004	7·15	7·153	71210	25·8	...	...	...	Clear
·150	6·05	6·173	61410	37·9	...	...	...	Turbid
·005	4·95	4·954	49220	11·8	...	...	...	Clear
·003	3·52	3·523	34900	35·0	...	...	...	Clear
·006	12·10	12·105	120730	36·0	...	...	...	Clear
·012	5·50	5·510	54780	29·9	...	...	...	Clear
·050	2·97	3·011	29790	8·9	...	...	...	Clear
·005	6·38	6·384	63520	16·8	...	...	...	Clear

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued).				
April 9th	2 Court, Pershore Street ...	...	77.6	...	...
" "	Ryland Ter., Ryland Street, Deritend (Measles) ...	...	215.6	...	large
" "	8 Court, Vaughton Street (Scarlet Fever) ...	...	197.0	...	...
" "	23 and 24, Friston Street ...	...	116.0	...	rather large
" "	134, Icknield Square, and 339—343, Monument Road ...	...	72.4	...	large
" "	67 and 68, Dean Street (Whooping Cough) ...	...	74.0	...	...
" 12th	136 and 137, Inkerman Street ...	...	201.6	...	...
" "	140 and 141, Inkerman Street ...	...	156.6	...	...
" "	4 Court, Curzon Street (Scarlet Fever) ...	...	89.0	...	...
" "	14 Court, Bordesley Street ...	...	179.8	...	...
" "	23, Bordesley Street ...	...	112.4	...	very large
" "	...	...	86.0	...	...
" "	7 and 8, Adelaide Street ...	...	136.0	...	very large
" 15th	20, Cambridge Crescent ...	...	86.0	...	"
" "	137 and 138, Bath Row ...	...	134.6	...	...
" 18th	162 and 163, Bristol Street (Typhoid) ...	...	122.6	...	very large
" "	118 and 119, Wheeley's Road ...	...	163.0	...	"
" "	Back 71 & 72, South Road (Typhoid) ...	...	171.8	...	...
" "	20 and 21, Exeter Row ...	...	231.4	...	...
" "	3 Court, Norfolk Street (Diphtheria) ...	...	155.0	...	very large
" 25th	149 and 150, Well Street ...	...	67.6	...	...
" "	2 Court, Freeman Street (Fever) ...	...	173.6	...	...
" "	Victoria Terrace, Great King Street ...	...	135.0	...	...
" "	1 and 2, St. Martin's Lane ...	...	71.8	...	...
" 26th	85, Smallbrook Street ...	...	180.4	...	very large
" "	15 and 16, Bristol Street ...	...	158.0	...	...
" "	13 Court, Warwick Street (Diarrhœa) ...	...	234.6	...	moderate
" "	97 and 98, Coventry Road ...	...	121.6	...	very large
" "	Back 50, Bordesley Park Road ...	...	55.0	...	large
" "	314, Bradford Street (Scarlet Fever) ...	...	37.8	...	...
" "	Paradise Terrace, Darwin Street ...	...	184.4	...	very large
" "	Stoke Square, Hick Street (Typhoid) ...	...	118.0	...	"
May 1st	76 and 77, Long Acre, and 53 and 54, Railway Terrace (Scarlet Fever) ...	...	97.6	...	large
" "	79 and 80, Herbert Road (Whooping Cough) ...	...	107.4	...	"
" "	91—94, Lord Street ...	...	168.0	...	...
" "	17 Court, Nelson Street South, and 88 and 89, Sherlock Street (Scarlet Fever) ...	...	271.0	...	...
" "	11 Court, Navigation Street (Scarlet Fever) ...	...	178.0	...	very large
" "	146 and 147, Grange Road ...	...	136.0	...	...
" 3rd	214 and 215, Nechells Park Road ...	...	79.0	...	excessive
" "	228, Nechells Park Road ...	...	119.2	...	...
" "	29—32, Vale Street ...	...	287.0	...	...
" "	83, Smallbrook Street ...	...	169.0	...	very large
" "	84, Smallbrook Street ...	...	172.0	...	"
" "	1 Court, Henn's Walk ...	...	42.0	...	large
" 7th	28 and 29, Weston Street ...	...	178.0	...	...
" "	5 Court, Vale Street ...	...	251.4	...	...
" "	6 Court, Vale Street ...	...	368.0	...	...

(continued.)

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
1.500	2.09	3.320	32880	8.5	...	...	...	Clear
.004	3.30	3.303	32710	15.8	...	...	...	Clear
.500	4.51	4.920	48880	27.1	...	...	...	Clear
.004	6.49	6.493	64610	13.7	...	...	...	Clear
.008	3.85	3.857	38250	7.0	...	...	...	Clear
1.150	1.54	2.486	24540	5.3	...	...	...	Clear
3.300	14.30	17.016	169840	18.5	...	...	...	Clear
.750	10.45	11.066	110340	19.1	...	...	...	Clear
1.200	3.30	4.288	42560	11.3	...	...	...	Clear
.017	.22	.234	2020	25.1	...	...	...	Clear
.005	4.40	4.404	43720	11.3	...	...	...	Clear
.250	4.40	4.606	45740	7.9	...	...	...	Clear
.004	6.05	6.053	60210	9.9	...	...	...	Clear
.003	2.75	2.752	27200	5.1	...	...	...	Bright, with some particles
.050	6.05	6.091	60050	18.5	...	...	...	Turbid
.005	2.86	2.864	28320	9.4	...	...	...	Clear
.004	1.98	1.983	19510	42.0	...	...	...	Clear, with small particles
2.000	6.60	8.240	82180	13.2	...	...	...	Clear
.040	10.78	10.813	107810	23.2	...	...	...	Clear
.004	2.97	2.973	29410	36.2	...	...	...	Clear
.022	5.61	5.628	55960	10.5	...	...	...	Slightly turbid
.035	2.20	2.229	21970	31.0	...	...	...	Clear
2.500	5.83	7.889	78570	18.2	...	...	...	Clear
.028	1.98	2.003	19710	12.5	...	...	...	Turbid, contains many particles
.009	7.15	7.157	71250	22.6	...	...	...	Clear, contains many little particles
.065	8.80	8.853	88210	15.1	...	...	...	Clear
.003	7.70	7.702	76700	28.0	...	...	...	Clear
.002	2.09	2.092	20600	7.8	...	...	...	Clear
.006	.99	.995	9630	2.5	...	...	...	Clear
.230	0.0	.189	1570	2.3	...	...	...	Slightly turbid
.006	6.60	6.605	65730	18.0	...	...	...	Clear
.005	3.30	3.304	32720	6.2	...	...	...	Clear, many suspended particles
.008	3.30	3.306	32740	12.5	...	...	...	Clear, with many sus- pended particles
.005	4.51	4.514	44820	8.7	...	...	...	Clear
.410	3.96	4.298	42660	26.8	...	...	...	Clear
1.000	7.92	8.743	87110	29.5	...	...	...	Clear
.008	7.15	7.156	71240	35.0	...	...	...	Clear
.125	2.97	3.073	30410	8.1	...	...	...	Clear
.008	2.64	2.646	26140	5.4	...	...	...	Clear
1.650	5.50	6.853	68210	11.2	...	...	...	Clear
.240	11.99	12.188	121560	39.8	...	...	...	Clear
.005	6.05	6.054	60220	22.1	...	...	...	Clear
.004	5.72	5.723	56910	23.1	...	...	...	Clear
.005	.66	.664	6320	5.0	...	...	...	Clear
.400	5.72	6.050	60280	17.7	...	...	...	Clear
1.020	11.22	12.059	120270	29.5	...	...	...	Clear
.530	18.70	19.135	191030	44.4	...	...	...	Turbid

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued).				
May 7th	8 Court, Vale Street ... ..	...	259·0	...	...
" "	8 Court, Dudley Street ... ..	...	153·0	...	...
" "	7 and 8, Phillips Street (Diarrhœa) ...	...	116·0	...	rather large
" 8th	3 Court, Angelina Street ... ..	...	158·6	...	very large
" "	36 and 37, Ledsam Street ... ..	...	161·4	...	"
" "	156 and 157, Ledsam Street... ..	...	55·0	...	very large
" "	14 Court, Darwin St. (Scarlet Fever)	...	126·0	...	"
" "	15 Court, New Bartholomew Street...	...	101·0	...	...
" "	16 Court, New Bartholomew Street...	...	147·0	...	..
" 13th	Cottage Row, Bridge Street West ...	...	141·0	...	...
" "	70—71, Bridge Street West (Diarrhœa)	...	139·4	...	...
" 14th	5 Court, Little Ann Street .. ..	...	184·0	...	...
" "	2—10, Little Ann Street .. ..	...	108·0	...	...
" "	Back 43, Horse Fair ... ..	...	155·0	...	very large
" "	6 and 7, Cross Street... ..	...	186·0	...	"
" 17th	369 and 370, Pershore Road... ..	...	109·0	...	...
" "	377 and 378, Pershore Road... ..	...	87·4	...	...
" "	6 Court, Inge Street ... ..	...	290·0	...	...
" "	12 Court, Inge Street... ..	...	125·0	...	very large
" "	1 and 2 Courts, Pigott Street ... ..	...	207·0	...	...
" "	58—62, Smallbrook Street ... ..	...	209·0	...	...
" 22nd	33—35, Gough Road... ..	...	119·0	...	very large
" "	40 Court, Sherlock Street ... ..	...	114·4	...	...
" "	11 Court, Kent Street, and 30 Court, Gooch Street ... ..	...	182·0	...	very large
" "	6 Court, Hurst Street ... ..	...	144·0	...	large
" "	8 Court, Hill Street (Scarlet Fever) ...	...	181·0	...	very large
" 25th	357 and 358, Pershore Road... ..	...	143·6	...	"
" "	64 and 65, Bath Row ... ..	...	71·0	...	"
" "	66 and 67, Bath Row ... ..	...	65·4	...	"
" "	467 and 468, Park Road (Whooping Cough) ... ..	...	128·0	...	"
" "	89 and 90, Talbot Street (Diarrhœa)	...	108·0	...	moderate
" "	3 Court, Pershore Street ... ..	...	59·0	...	"
" "	15 Court, Navigation Street ... ..	...	186·0	...	very large
" 29th	87, Coventry Road (Typhoid) ... ..	...	95·0	...	"
" "	82 and 83, Friston Street ... ..	...	112·0	...	"
" "	2 Court, Baker Street... ..	...	170·0	...	...
" "	19 and 20, Hagley Road ... ..	...	35·0	...	...
" "	180, Hagley Road ... ..	...	67·0	...	very large
" "	4 Court, Holloway Head ... ..	...	126·0	...	large
June 6th	104, Warwick Street, and 19 Court, Alcester Street (Typhoid)... ..	...	197·0	...	...
" "	47 and 48, Princess Road ... ..	...	72·0	...	...
" "	7, Varna Road ... ..	...	135·0	...	very large
" "	247—250, Bradford Street ... ..	...	157·0	...	"
" "	Paget's Buildings, Baker St. (Diphtheria)	...	146·6	...	"
" "	12—15, Dawson Street (Typhoid) ...	...	154·0	...	...
" 7th	43 and 44, Thorp Street ... ..	...	161·0	...	large
" "	3 and 4, Edgbaston Street ... ..	...	148·0	...	...
" "	9 Court, Charles Henry Street ... ..	...	201·0	...	...
" "	93, Smallbrook Street ... ..	...	103·0	...	large

(continued.)

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·420	9·35	9·696	96640	44·2	...	...	...	Clear
·425	5·06	5·410	53880	30·1	...	...	...	Clear
·014	3·52	3·531	34990	12·7	...	...	...	Clear
·006	2·42	2·425	23930	10·7	...	...	...	Clear, with many sus- pended particles
·007	8·14	8·146	81140	22·3	...	...	...	Clear
·012	1·65	1·660	16280	6·5	...	...	...	Clear
·009	3·30	3·307	32750	8·7	...	...	...	Clear
·030	1·32	1·567	15350	5·9	...	...	...	Clear
·035	4·62	4·910	48780	20·0	...	...	...	Clear
·125	4·62	4·623	45910	15·0	...	...	...	Clear
1·800	4·84	6·322	62900	11·8	...	...	...	Clear
·045	2·20	2·237	22050	21·8	...	...	...	Clear
·020	1·54	1·556	15240	10·5	...	...	...	Clear
·008	6·60	6·606	65740	17·6	...	...	...	Turbid
·003	5·50	5·502	54700	37·0	...	...	...	Clear
·050	3·74	3·781	37490	10·3	...	...	...	Turbid
·450	2·53	2·900	28680	4·2	...	...	...	Clear
1·600	12·65	13·967	139350	33·7	...	...	...
·011	7·70	7·709	76770	18·0	...	...	...	Clear
·004	7·81	7·813	77810	27·5	...	...	...	Clear
1·100	6·93	7·835	78020	29·9	...	...	...	Clear
·012	2·86	2·870	28380	9·1	...	...	...	Clear
1·500	3·30	4·530	44980	14·5	...	...	...	Clear
·010	5·06	5·068	50360	26·0	...	...	...	Clear
·006	5·50	5·505	54730	20·5	...	...	...	Clear
·013	6·16	6·171	61390	24·6	...	...	...	Clear
·005	3·85	3·854	38220	6·4	...	...	...	Clear
·005	3·30	3·304	32720	6·1	...	...	...	Clear
·007	3·41	3·416	33840	5·9	...	...	...	Clear
·006	7·15	7·155	71230	17·3	...	...	...	Clear
·011	3·52	3·529	34970	12·2	...	...	...	Clear
·004	1·10	1·103	10710	5·0	...	...	...	Clear
·005	4·40	4·404	43720	34·0	...	...	...	Clear
·008	2·75	2·757	27250	7·6	...	...	...	Numerous suspended particles
·003	6·60	6·602	65700	12·7	...	...	...	Clear
3·000	4·18	6·643	66110	19·9	...	...	...	Clear
·017	0·44	0·454	4220	2·8	...	...	...	Clear
·010	1·54	1·548	15160	4·2	...	...	...	Clear
·004	2·31	2·313	22810	24·0	...	...	...	Clear
·017	4·95	4·964	49320	23·6	...	...	...	Clear
·400	·11	·439	4070	6·0	...	...	...	Turbid
·010	5·61	5·618	55860	7·3	...	...	...	Clear
·012	6·16	6·170	61380	17·6	...	...	...	Clear
·010	6·05	6·058	60260	11·8	...	...	...	Clear
·030	6·27	6·295	62630	15·9	...	...	...	Clear
·002	6·71	6·712	66800	24·0	...	...	...	Clear
·420	5·50	5·846	58140	26·5	...	...	...	Clear
·600	4·95	5·394	53620	17·9	...	...	...	Clear
·009	4·29	4·297	42650	13·3	...	...	...	Clear

TABLE. XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued).				
June 8th	13—17, Angelina Street ...	...	99·6	...	very large
" "	1 Court, Ryland Street ...	...	218·0	...	"
" 13th	13 Court, Inkerman Street ...	...	175·0	..	"
" "	108 and 109, Inkerman Street ...	...	116·0	...	...
" "	9, Argyle Street ...	...	70·0	...	...
" "	17, Argyle Street ...	...	124·0	...	..
" "	155, Argyle Street ...	...	466·0	...	very large
" "	164, Argyle Street ...	...	56·0	...	"
" 14th	6, Adelaide Street ...	...	229·0	...	"
" "	8 Court, Lombard Street ...	...	180·0	...	"
" "	149, Vaughton Street... ..	...	105·0	...	moderate
" "	221, Alcester Street ...	...	265·0	...	large
" "	5 and 6, Edgbaston Street ...	...	108·6	...	...
" "	37—39½, Upper Dean Street, and 77,	...	92·0	...	...
" 19th	40—49, Aston Road (Measles) ...	...	276·0	...	...
" "	73 and 74, Caroline Street ...	...	104·0	...	large
" "	5, Alcester Street ...	...	329·0	...	...
" "	16 and 17 Courts, Alcester St. (Scarlet Fever)	...	206·0	...	very large
" "	Back 71 and 72, South Road (Typhoid)	...	123·6	...	"
" "	83—87, Emily Street ...	...	96·0	...	"
" 21st	26 Court, Tower Street ...	...	145·0	...	...
" "	10 and 11 Courts, Lower Hospital St.	...	90·0	...	very large
" "	10 and 11, Cuckoo Road ...	...	108·0	...	"
" "	12 and 13, Cuckoo Road (Scarlet Fever)	...	78·0	...	"
" "	285 and 286, Heath Street ...	...	148·6	...	...
" "	294, Heath Street ...	...	92·0	...	...
" 25th	74, Ford Street ...	...	113·0	...	...
" "	6 Court, Clarke Street ...	...	94·0	...	...
" "	Cambridge Place, Freeth Street ...	...	117·0	...	very large
" "	454 and 455, Park Road (Scarlet Fever)	...	141·0	...	"
" "	2 Court, and No. 11, Sherlock Street	...	166·6	...	...
" "	91, Varna Road ...	...	146·0	...	...
" 27th	64½ and 65, Well Street ...	...	113·0	...	...
" "	3, Princess Road ...	...	179·0	...	...
" "	4 and 5, Princess Road ...	...	183·0	...	...
" "	2 and 3 Courts, Blucher Street ...	...	188·0	...	...
" "	8 Court, Bridge Street West... ..	...	59·6	...	very large
" "	The Birchlands, Westfield Road ...	...	70·0	...	large
July 1st	80 and 81, Summer Road ...	...	171·0	...	...
" "	4 Court, Miles Street (top pump) ...	...	112·0	...	...
" "	4 Court, Miles Street (bottom pump)	...	135·0	...	...
" "	134 and 135, Aberdeen Street (Scarlet Fever)	...	131·0	...	...
" "	203 and 204, Icknield Port Rd. (Scarlet Fever)	...	122·0	...	very large
" "	82 and 84, Gough Road ...	...	100·0	...	"
" 5th	91 and 92, Pershore Street, and 33 and 34, Bromsgrove Street ...	...	205·0	...	...
" "	11 Court, Bromsgrove Street, and 54, Essex Street ...	...	196·0	...	...
" "	39 Court, Cheapside (Whooping Cough)	...	183·0	...	...
" "	15 Court, Alcester Street (Scarlet Fever)	...	147·0	...	large

(continued).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
.008	1.32	1.327	12950	6.8	...	...	...
.009	2.86	2.867	28350	18.3	...	...	...	Clear
.005	9.02	9.024	89920	16.3	...	...	...	Turbid
.610	6.71	7.212	71800	11.3	...	...	...	Clear
.090	1.21	1.284	12520	4.5	...	...	...	Clear
.150	2.31	2.433	24010	10.2	...	...	...	Clear, yellowish
.003	.66	.662	6300	2.0	...	...	...	Clear
.007	1.10	1.106	10740	2.3	...	...	...	Many suspended particles
.004	6.05	6.053	60210	32.5	...	...	...	Clear
.003	7.15	7.152	71200	14.0	...	...	...	Clear
.003	2.31	2.312	22800	11.5	...	...	...	Clear
.003	9.13	9.132	91000	40.5	...	...	...	Clear
.150	4.18	4.303	42710	18.0	...	...	...	Clear
.250	.66	.806	7740	12.3	...	...	...	Clear
1.300	trace	1.070	10380	48.0	...	...	...	Slightly turbid
.014	6.60	6.611	65790	11.8	...	...	...	Clear
.300	13.20	13.447	134150	59.8	...	...	...	Slightly turbid
.003	6.05	6.052	60200	8.4	...	...	...	Clear
.004	1.76	1.763	17310	23.6	...	...	...	Clear
.015	1.98	1.992	19600	6.9	...	...	...	Clear
.070	9.02	9.078	90460	26.0	...	...	...	Clear
.006	2.75	2.755	27230	10.7	...	...	...	Clear
.004	.88	.883	8510	7.0	...	...	...	Clear
.003	3.52	3.522	34900	3.8	...	...	...	Clear
.150	8.03	8.153	81210	19.0	...	...	...	Clear
.200	3.30	3.465	34330	6.2	...	...	...	Clear
.650	6.82	7.351	73190	13.9	...	...	...	Clear
2.000	0.77	2.417	23850	5.2	...	...	...	Clear, residue brown
.008	4.95	4.957	49250	11.5	...	...	...	Clear
.007	7.37	7.376	73440	11.9	...	...	...	Clear
3.200	4.95	7.585	49250	22.5	...	...	...	Clear
.019	2.09	2.106	20740	10.5	...	...	...	Clear, yellow
.013	4.73	4.742	47100	7.5	...	...	...	Clear
.250	5.17	5.376	53440	9.9	...	...	...	Clear
.260	5.06	5.274	52420	10.0	...	...	...	Clear
.020	8.58	8.596	85640	21.0	...	...	...	Clear
.005	1.65	1.654	16220	9.1	...	...	...	Clear
.003	1.76	1.762	17300	2.6	...	...	...	Clear
.350	8.47	8.758	87260	14.8	...	...	...	Clear
1.000	2.53	3.353	33210	12.0	...	...	...	Clear
.700	3.74	4.320	42880	11.6	...	...	...	Clear
2.500	6.27	8.329	82970	12.5	...	...	...	Clear
.009	6.60	6.606	65750	14.2	...	...	...	Clear
.010	1.76	1.768	17360	8.0	...	...	...	Clear, greenish
.500	8.25	8.660	86280	25.0	...	...	...
1.200	6.27	7.258	72260	26.5	...	...	...
.800	1.76	2.420	23980	23.5	...	...	...
.003	2.31	2.312	22800	9.5	...	...	...

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued).				
July 8th	29 Court, Summer Lane (Scarlet Fever)	...	172.6	...	very large
" "	15 Court, New John St. West (Fever)	...	224.0	...	...
" 9th	140 and 141, Varna Road ...	...	194.0	...	very large
" "	142, Varna Road ...	...	198.0	...	"
" "	120 & 121, Greenway Street (Typhoid)	...	124.0	...	"
" "	122—124, Greenway Street (Typhoid)	...	133.0	...	"
" "	13—15, Braithwaite Rd. (Scarlet Fever)	...	80.6	...	"
" "	50 and 51 Priestley Road ...	...	63.0	...	rather large.
" 11th	32 and 40, Summer Road (Whooping Cough) ...	...	82.0	...	very large
" "	1 Court, Sun Street ...	...	198.0	...	large
" 12th	45—48, Bloomsbury Place ...	...	183.0	...	very large
" "	Prospect Place, Holborn Hill (Diarrhoea)	...	151.0	...	...
" "	57 and 58, Varna Road ...	...	101.6	...	very large
" "	6 and 7, Spring Vale (Diarrhoea) ...	...	170.0	...	"
" 17th	440 and 441, Coventry Road ...	...	85.0	...	"
" 18th	Sent by Mr. Councillor Tait from Children's Hospital ...	...	72.0	...	"
" "	46 and 47, Priestley Road ...	...	57.0	...	"
" "	40 and 41, Friston street (Diarrhoea)	...	58.0	...	moderate
" "	44 Court, Bell Barn Road, and Oxford Place, Bell Barn Road (Typhoid)	...	149.0	...	"
" "	10 Court, Darwin Street (Typhoid) ...	...	129.0	...	large
" "	119, Digbeth (Typhoid) ...	...	289.0	...	"
" 19th	2 Court, Benacre Street ...	...	158.0	...	...
" "	14 and 15, Balsall Heath Road ...	...	88.0	...	...
" "	18 and 19, Balsall Heath Road ...	...	80.0	...	...
" "	142, Bromsgrove St. (Whooping Cough)	...	158.0	...	very large
" "	4 and 5, Johnstone Street ...	...	61.0	...	moderate
" "	56 and 57, Johnstone Street...	...	77.0	...	rather large.
" 23rd	15½, Caroline Street ...	...	176.0	...	very large
" "	75, Brearley Street West (Scarlet Fever)	...	177.0	...	...
" "	19 Court, Bradford Street ...	...	164.0	...	large
" "	4 and 5, Leopold Street ...	...	115.0	...	"
" "	56, Newtown Row ...	...	209.0	...	very large
" "	"The Cottage," Richmond Hill Road	...	45.0	...	"
" 26th	1 Court, Inkerman Street ...	...	170.0	...	"
" "	2 Court, Inkerman Street ...	...	166.0	...	"
" "	3 Court, Inkerman Street ...	...	162.0	...	"
" "	6 and 7, New Vauxhall Terrace, Duddeston Mill Road ...	...	75.0	...	large
" 27th	52 and 53, Stratford Road ...	...	76.0	...	very large
" "	165—169, Moseley Street ...	...	235.0	...	"
" "	17—24, New Church Street (Scarlet Fever) ...	...	192.0	...	large
" 30th	32 & 33, Bell Barn Road (Scarlet Fever) ...	...	132.0	...	...
" "	3 and 4, Hooper Street, and 12 and 13, Dudley Road ...	...	130.0	...	...
" "	114, Hope Street, and 25 Court, Hope Street (Scarlet Fever) ...	...	199.0	...	...
" "	Back 128, Spring Hill ...	...	273.0	...	...
" "	1 Court, Brearley Street, and 40 Court, Newtown Row ...	...	171.0	...	large

(continued).

Ammonia	Nitrogen as Nitrates, and Nitrites	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·003	4·29	4·292	42600	29·5	...	...	...
1·200	7·70	8·688	86560	21·3	...	...	...	Clear
·008	4·40	4·406	43740	10·0	...	...	...	Clear
·008	5·06	5·066	50340	10·5	...	...	...	Clear
·004	5·50	5·503	54710	15·0	...	...	...	Clear
·004	6·49	6·493	64610	13·8	...	...	...	Clear
·003	1·21	1·212	11800	5·2	...	...	...	Clear
·005	1·43	1·434	14020	4·5	...	...	...	Clear
·005	3·85	3·854	38220	6·2	...	...	...	Clear
·001	7·70	7·701	76690	20·0	...	...	...	Clear
·003	5·50	5·502	54700	17·8	...	...	...	Clear
1·500	3·56	4·860	48280	29·6	...	...	...	Clear
·006	1·87	1·875	18430	25·0	...	...	...	Clear
·005	1·54	1·544	15120	25·0	...	...	...	Clear
·007	1·98	1·985	19530	5·8	...	...	...	Clear
·004	1·87	1·873	18410	5·5	...	...	...	Turbid
·006	1·56	1·655	16230	3·5	...	...	...	Clear
·004	2·75	2·753	27210	7·8	...	...	...	Clear
·005	8·80	8·804	87720	15·9	...	...	...	Clear
·004	1·98	1·980	19510	8·3	...	...	...	Clear
·003	5·50	5·502	54700	57·0	...	...	...	Clear
·500	2·53	2·940	29080	13·3	...	...	...	Clear
·035	2·75	2·771	27470	6·1	...	...	...	Clear
·006	1·43	1·435	14030	4·8	...	...	...	Clear
·018	6·05	6·065	60330	19·5	...	...	...	Clear
·050	1·87	1·911	18790	4·0	...	...	...	Clear
·003	2·42	2·422	23800	7·5	...	...	...	Clear
·005	10·34	10·344	103120	26·6	...	...	...	Turbid
·060	8·80	8·849	88170	24·7	...	...	...	Clear
·005	5·61	5·614	55820	16·3	...	...	...	Clear
·007	2·53	2·536	25040	10·3	...	...	...	Clear
·006	8·69	8·695	86630	27·0	...	...	...	Clear
·007	1·43	1·435	14030	3·6	...	...	...	Clear
·004	8·80	8·803	87710	18·0	...	...	...	Clear
·004	8·38	8·363	83310	17·0	...	...	...	Clear
·004	7·92	7·923	78910	16·0	...	...	...	Clear
·005	3·52	3·524	34920	9·4	...	...	...	Clear
·005	2·42	2·424	23920	4·6	...	...	...	Clear
·006	6·71	6·715	66830	39·0	...	...	...	Clear
·004	6·93	6·933	69010	23·7	...	...	...	Clear
·050	4·40	4·441	44190	13·1	...	...	...	Clear
·200	6·60	6·765	67330	19·9	...	...	...	Clear
·045	·66	·697	6650	28·8	...	...	...	Turbid
3·000	15·40	17·869	178370	32·7	...	...	...	Clear
·012	8·25	8·260	82280	28·8	...	...	...	Clear

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued).				
July 31st	170, Green Lane (Diphtheria) ...	...	76·0	...	very large
" "	71—76, Millward Street ...	...	36·0	...	large
Aug. 1st	Back 11, Parliament St. (Scarlet Fever) ...	...	100·0	...	very large
" "	Back 12, Parliament St. (Scarlet Fever) ...	...	99·0	...	"
" "	Brookfield Place, New Spring Street... ..	...	167·0	...	"
" "	141—144, New Spring Street ...	...	131·0	...	large
" 6th	13 and 14 Courts, New Town Row ...	...	164·0	...	very large
" "	32 Court, Irving Street (Diarrhoea) ...	...	136·6	...	"
" "	33 Court, Lower Tower Street (Whooping Cough) ...	...	174·0	...	...
" "	134, Varna Road (Diarrhoea)... ..	...	143·0	...	very large
" 7th	5 Court, Little Ann Street ...	...	179·0	...	...
" "	14, Oxford Street ...	...	242·0	...	very large
" 9th	94 & 95, Hingeston St. (Scarlet Fever) ...	...	53·0	...	rather large
" "	73—76, Main Street (Diarrhoea) ...	...	132·6	...	very large
" "	22 and 23, Erasmus Road, and 51—54, Auckland Road ...	...	78·0	...	...
" "	42—44, Lower Camden Street (Scarlet Fever) ...	...	89·0	...	very large
" "	57 and 58, Erasmus Road ...	...	89·0	...	"
" "	59 and 60, Erasmus Road ...	...	77·0	...	"
" 14th	16 Court, Great Barr St. (Diarrhoea) ...	...	289·0	...	...
" "	5 Court, Floodgate Street (Diarrhoea) ...	...	228·0	...	...
" "	Alma Place, Turner St. (Scarlet Fever) ...	...	98·0	...	very large
" "	52 and 53, Larches St. (Scarlet Fever) ...	...	179·0	...	"
" "	32, Camp Hill (Scarlet Fever) ...	...	168·0	...	"
" "	29—31, Braithwaite Road ...	...	102·0	...	"
" 21st	21—23, Bordesley Park Rd. (Typhoid) (1st Pump) ...	...	131·0	...	"
" "	21—23, Bordesley Park Rd. (Typhoid) (2nd Pump) ...	...	178·0	...	...
" "	Ladybird Terrace, Greenway St. (Typhoid) ...	...	122·0	...	very large
" "	66 and 67, White Road ...	...	31·0	...	"
" 22nd	26—24, Darwin Street (Scarlet Fever) ...	...	155·0	...	"
" "	Brompton Place, Larches St. (Typhoid) ...	...	84·6	...	"
" 26th	Alma Place, Turner Street (Soft Water Pump) ...	...	5·0	...	...
" "	Salford Place, Turner Street ...	...	80·0	...	very large
" "	Astwood Place, Turner Street ...	...	116·0	...	...
" "	25 Court, Moseley Street (Diarrhoea) ...	...	252·0	...	...
" "	167—172, Alcester Street ...	...	181·0	...	very large
" "	5 Court, Bordesley Park Road ...	...	64·0	...	"
" 30th	14 and 15, Dymoke Street (Typhoid) ...	...	252·0	...	"
" "	21 and 22, Dymoke St. (Scarlet Fever) ...	...	110·0	...	"
" 31st	15 Court, Great Barr St. (Scarlet Fever) ...	...	284·0	...	"
" "	9—11, Coventry Street ...	...	329·0	...	...
" "	Gladstone Terrace, South Road ...	...	100·0	...	...
" "	16 Court, Allison Street ...	...	50·0	...	very large
Sept. 4th	Thomason's Buildings. and No. 49, Heath Street (Typhoid) ...	...	54·0	...	...
" "	Rotton Park Terrace, and Helena Terrace, Osler Street ...	...	58·0	...	very large
" "	97 and 98, Irving Street (Diarrhoea)... ..	...	106·0	...	"
" "	1 Court, Manchester St. (Scarlet Fever) ...	...	247·0	...	...

(continued.)

Ammonia	Nitrogen as Nitrates and Nitrites.	Total combined Nitrogen.	Previous Sewage or Animal Contam- ination (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·012	1·87	1·884	18520	7·5	..	...	...	Slightly turbid
·005	1·43	1·434	14020	2·2	...	...	...	Clear
·006	5·06	5·065	50330	8·5	...	...	...	Clear
·005	2·53	2·534	25020	6·8	...	...	...
·011	8·25	8·259	82270	11·7	...	...	...
·013	6·71	6·720	66880	11·9	...	...	...
·007	6·05	6·056	60240	12·5	...	..	...	Clear
·004	6·80	6·823	67910	17·0	...	...	...	Clear
·026	8·80	8·281	87890	23·9	...	...	...	Clear
·007	1·76	1·766	16340	13·4	...	..	...	Clear
·210	2·86	3·033	30310	25·9	...	...	...	Clear
·006	2·86	2·865	28330	24·7	...	...	...	Clear
·007	1·43	1·436	14040	3·7	...	...	...	Clear
·012	6·05	6·460	60280	11·7	...	...	...	Clear
·035	2·57	2·779	27470	7·4	...	...	...	Clear
·005	2·97	2·977	29459	9·9	...	...	...	Clear
·009	2·97	2·977	29450	8·4	...	...	...	Clear
·050	1·76	1·801	17690	5·8	...	...	...	Clear
·050	4·40	4·441	44090	34·0	...	...	...	Clear
·035	2·20	2·229	21970	32·7	...	...	...	Clear
·006	3·45	3·855	38230	11·2	...	...	...	Clear
·005	7·04	7·044	70120	16·3	...	...	...	Clear
·002	6·05	6·052	60210	18·3	...	...	...	Clear
·003	·88	·882	8500	4·6	...	...	...	Clear
·004	1·54	1·543	15110	10·0	...	...	...	Clear, yellowish
·100	2·20	2·282	22500	18·5	...	...	...	Clear
·009	5·83	5·837	58050	14·2	...	...	...	Clear
·004	·55	·553	5210	1·1	...	...	...	Clear
·003	1·65	1·652	16200	25·3	...	...	...	Clear
·003	2·75	2·752	27210	8·4	...	...	...	Clear
·250	trace	·206	1740	0·4	...	...	...	Clear
·006	1·76	1·765	17330	6·3	...	...	...	Clear
·030	5·28	5·305	52730	11·2	...	...	...	Clear
2·200	2·53	4·335	43030	18·0	...	...	...	Clear
·008	7·70	7·706	76730	14·0	...	...	...	Clear
·005	·66	·664	6320	3·9	...	...	...	Clear
·010	5·64	5·948	59160	19·1	...	...	...	Turbid
·009	2·09	2·097	20650	7·0	...	...	...	Clear
·005	5·28	5·284	52520	38·6	...	...	...	Clear
1·200	8·25	9·238	92060	86·5	...	...	...	Clear
·016	1·43	1·453	14110	7·4	...	...	...
·010	1·32	1·328	12960	5·1	...	...	...
·190	1·32	1·476	14440	9·9	...	...	...
·009	1·87	1·877	18450	8·1	...	...	...
·008	4·95	4·956	49240	11·3	...	...	...
·500	7·15	7·560	75280	56·5	...	...	...

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued).				
Sep. 9th	5 Court, New John Street West (Scarlet Fever)	...	134·0	...	very large
" "	5 Court, Vere Street (Typhoid)	...	185·0	...	"
" 10th	2 Court, Mount St., Deritend (Typhoid)	...	114·0	...	moderate
" "	105 and 106, Bristol Street	...	142·0	...	very large
" "	4 Court, Warwick Street (Typhoid)	...	188·0	...	"
" "	10 and 11, Little King Street, and 32 Court, New John St. West (Scarlet Fever)	...	115·0	...	"
" "	11 Court, and 18, Well St. (Scarlet Fever and Diarrhoea)	...	103·0	...	...
" "	46 Court, Bell Barn Road	...	159·0	...	...
" 13th	41 Court, Newtown Row (Diarrhoea)	...	229·0	...	...
" "	438 & 439, New John St. West (Scarlet Fever)	...	124·0	...	very large
" "	8—12, Whitmore Street (Diphtheria)	...	108·0	...	"
" "	Tichborne Place, and Castro Place, Ford Street (Scarlet Fever)	...	104·0	...	...
" "	3 Court, Farm Street (Scarlet Fever)	...	91·0	...	large
" "	11 Court, Farm Street (Scarlet Fever)	...	101·0	...	very large
" 17th	55 and 56, Chattaway Street...	...	125·0	...	very large
" "	205 and 206, Watery Lane (Scarlet Fever and Diarrhoea)	...	125·0	...	...
" "	168—174, Well Street	...	148·6	...	very large
" "	7 and 8, Great Barr Street	...	288·0	...	"
" "	26 Court, Gt. Russell St. (Diarrhoea)	...	85·0	...	...
" "	3 Court, Oliver Street (Diarrhoea)	...	150·0	...	very large
" 20th	42 and 43, Bristol Road	...	102·0	...	large
" "	18 and 19, Kent Street (Typhoid)	...	120·0	...	...
" "	40 and 41 Courts, Spring Street	...	106·6	...	moderate
" 21st	2 Court, Vaughton Street	...	141·0	...	...
" "	6 Court, Highgate Street	...	169·0	...	large
" "	7 Court, Highgate Street	...	209·0	...	very large
" 24th	24—29, Anderton Road (Small Pox)	...	154·0	...	...
" "	46 and 47, Price Street (Scarlet Fever)	...	192·0	...	very large
" "	25 Court, Hatchett Street (Diarrhoea)	...	164·6	...	large
" "	33—36, Lawden Road (Diarrhoea)	...	162·0	...	...
" "	26 & 27, Sampson Rd. North (Diarrhoea)	...	61·0	...	very large
" "	130—132, Bordesley Park Road	...	72·0	...	"
" 26th	46 and 47, Ryland Street (Diarrhoea)	...	122·0	...	"
" "	16 Court, Thorp Street (Diarrhoea)	...	162·0	...	"
" "	41—45, Johnson Street	...	136·6	...	...
" "	46—49, Johnson Street	...	120·0	...	very large
" "	Magenta Place, Winson Green Road (Scarlet Fever)	...	88·0	...	...
" "	6 & 7 Courts, Vaughton St. (Diarrhoea)	...	137·0	...	very large
Oct. 1st	10 Court, Adelaide Street (Diarrhoea)	...	223·0	...	very large
" "	54, Lancaster Street	...	270·0	...	"
" "	63—67, Great Barr Street (Scarlet Fever)	...	334·0	...	...
" "	34 Court, Cheapside (Scarlet Fever)	...	206·0	...	very large
" "	254—258, Park Road (Diphtheria)	...	146·0	...	...
" "	36—43, Lower Dartmouth St. (Scarlet Fever)	...	162·0	...	...
" 3rd	32 Court, Irving Street	...	132·0	...	very large
" "	Houses occupied by Shaw and Pardoe, Dudley Road	...	80·0	...	...
" "	Houses occupied by Goodacre and Brindley, Dudley Road	...	80·6	...	large

(continued).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·005	6·60	6·604	65720	21·1	...	...	...
·007	3·08	3·085	30520	26·9	...	...	...	Clear
·002	2·64	2·641	26190	13·5	...	...	...	Clear
·004	2·75	2·753	27210	12·6	...	...	...	Clear
·005	3·19	3·194	31620	18·8	..	...	...	Clear
·004	6·27	6·273	62410	14·0	...	...	...	Turbid
·020	4·40	4·416	43840	16·9	...	...	...	Clear
·410	5·50	5·388	58060	15·8	...	...	...	Clear
·800	11·00	11·660	116380	35·5	...	...	...	Clear
·005	6·16	6·164	61320	19·2	...	...	...	Clear
·008	6·60	6·606	65740	10·7	...	...	...	Slightly turbid
·250	6·93	7·136	71040	14·9	...	...	...	Clear
·004	4·29	4·293	42610	7·1	...	...	...	Clear
·009	4·40	4·407	43750	11·7	...	...	...	Clear
·003	4·95	4·952	40200	4·4	...	...	...	Clear
·060	·44	·489	4570	9·3	...	...	...	Clear
·005	7·92	7·924	78920	20·5	...	...	...	Clear
·003	7·15	7·152	71200	39·5	...	...	...	Clear
·025	1·65	1·670	16380	11·5	...	...	...	Clear
·005	4·40	4·404	43720	13·5	...	...	...	Clear
·002	1·65	1·651	16190	6·4	...	...	...	Clear
2·000	·44	2·080	20480	19·0	...	...	...	Clear
·004	5·50	5·503	54710	13·4	...	...	...	Clear
·300	1·43	1·677	16450	13·8	...	...	...	Clear
·003	4·95	4·952	49200	15·4	...	...	...	Clear
·004	7·48	7·483	74510	20·5	...	...	...	Clear
1·650	7·70	9·058	90260	12·6	...	...	...	Clear
·015	3·20	3·212	31800	29·2	...	...	...	Clear
·007	9·46	9·466	94340	22·7	...	...	...	Clear
·520	3·96	4·388	43560	10·7	...	...	...	Clear
·005	1·54	1·544	15120	7·0	...	...	...	Clear
·015	1·32	1·330	13000	3·1	...	...	...	Clear
·005	3·08	3·084	30520	9·0	...	...	...	Clear
·008	7·48	7·486	74540	29·0	...	...	...	Clear
·450	4·40	4·771	47390	10·0	...	...	...	Clear
·006	3·08	3·085	30520	10·6	...	...	...	Clear
1·200	3·85	4·838	48060	14·3	...	...	...	Clear
·007	2·75	2·756	27240	12·6	...	...	...	Clear
·006	·9·35	9·355	93230	29·5	...	...	...	Clear
·009	7·15	7·157	71250	47·5	...	...	...	Clear
1·030	9·35	10·198	101660	46·3	...	...	...	Clear
·008	9·90	9·907	98750	25·0	...	...	...	Clear
·735	5·50	6·109	60770	16·2	...	...	...	Clear
·018	7·15	7·165	71330	19·2	...	...	...	Clear
·008	8·80	8·807	87750	16·6	...	...	...	Clear
3·400	2·75	5·880	58480	11·7	...	...	...	Very turbid, yellow, ocour of sewage
·008	5·28	5·286	52540	10·0	...	...	...	Clear

TABLE XV.—

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878. WELL WATERS—(continued).					
Oct. 3rd	6—8, Great Colmore Street ...	...	108·0	...	very large
" 4th	10 Court, Devon Street ...	...	67·0	...	rather large
" "	36 and 37, Devon Street ...	...	60·0	...	large
" 8th	121—125, Heneage St. (Scarlet Fever)	...	164·0	...	very large
" "	Bk. 56 & 57, Railway Terrace, Nechells	...	90·0	...	...
" "	345—350, Nechells Park Road ...	...	69·6	...	large
" "	54 and 55, Stratford Road (Typhoid)	...	106·0	...	"
" "	12 and 13, Adelaide Street, Vauxhall	...	103·0	...	very large
" "	65—72, Highgate Lane (Typhoid) ...	...	102·0	...	"
" 14th	5 and 6, Wordsworth Road ...	...	136·0	...	"
" "	14 and 15, Winson Green Road ...	...	120·0	...	very large
" "	12 and 13, Winson Green Road ...	...	106·6	...	...
" "	170, Green Lane ...	...	80·0	...	very large
" 15th	2 Court, Oughton Place (Scarlet Fever)	...	274·0	...	"
" "	32 and 33, Ladypool Lane ...	...	268·0	...	large
" 17th	Kelynge Terrace, Kelynge Street ...	...	76·0	...	...
" "	Hanley Terraces, Kelynge Street (Scarlet Fever)	...	68·0	...	rather large
" "	107 & 108, Ryland St. North (Diarrhoea)	...	140·6	...	large
" "	27, Navigation Street ...	...	294·0	...	very large
" "	39—41, Parker Street, and back 24, Bellis Street (Typhoid) ...	...	109·0	...	"
" "	Back 52, Garrison Lane (Scarlet Fever)	...	191·0	...	...
" 28th	108 & 109, New John St. West (Scarlet Fever)	...	132·0	...	excessive
" "	22, Court Well Street (Typhoid) ...	...	109·0	...	...
" "	311 and 312, Monument Road ...	...	87·6	...	...
" "	Noah's Buildings, Wheeley's Lane ...	...	164·0	...	...
" 31st	303, Pershore Road ...	...	69·0	...	very large
" "	390, Bristol Road ...	...	133·0	...	"
Nov. 1st	36 Court, Newtown Row (Scarlet Fever)	...	140·0	...	very large
" "	103, Steelhouse Lane (Typhoid) ...	...	192·0	...	large
" "	93—95, Floodgate Street ...	...	271·6	...	very large
" "	1 Court, Meriden St., ^{top} pump (Scarlet Fever)	...	90·0	...	...
" "	3 Court, Meriden St. (Scarlet Fever)	...	25·0	...	very large
" "	1 Court, Meriden Street, ^{bottom} pump (Scarlet Fever)	...	112·0	...	...
" 6th	12 and 13, Rodway St. (Scarlet Fever)	...	68·0	...	...
" "	16 Court, Smith Street (Scarlet Fever)	...	232·0	...	very large
" "	31—34, Ormond Street (Scarlet Fever)	...	208·6	...	...
" "	21 and 22, Cathcart Street (Typhoid)	...	180·0	...	very large
" "	23 and 24, Cathcart St. (Scarlet Fever)	...	134·0	...	...
" "	25 and 26, Cathcart Street ...	...	124·0	...	very large
" 13th	90 and 92, St. Luke's Road ...	...	147·4	...	"
" "	12 Court, Bissell Street (Typhoid) ...	...	156·0	...	very large
" "	85, Summer Lane (Diphtheria) ...	...	164·0	...	...
" "	47 and 48, Tillingham St. (Typhoid)	...	112·4	...	...
" "	20, Highgate Lane ...	...	135·4	...	...
" "	2 Court, Sun Street (Typhoid) ...	...	195·0	...	very large
" 18th	8, Kent Street North (Small-pox) ...	...	78·4	...	...
" "	130 and 131, Cregoe Street ...	...	134·0	...	very large
" "	16—21, Cregoe Street, and 7 Court, Latimer St. South (Scarlet Fever)	...	113·0	...	"
" "	2 Court, Burbury St. (Scarlet Fever)	...	261·4	...	...

(continued).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Anima Contam- ination. (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·006	6·60	6·605	65730	13·5	...	...	...	Clear
·005	3·30	3·304	32720	7·8	...	...	...	Clear
·006	2·86	2·865	28330	6·5	...	...	...	Clear
·018	7·48	7·495	74630	20·0	...	...	...	Clear
·006	2·86	2·865	28330	12·0	...	...	...	Clear
·006	2·75	2·755	27230	3·5	...	...	...	Clear
·003	3·30	3·302	32700	4·9	...	...	...	Clear
·004	5·39	5·393	53610	7·0	...	...	...	Clear
·003	·99	·992	9600	7·5	...	...	...	Slightly turbid
·006	4·51	4·515	44830	14·5	...	...	...	Clear
·325	7·71	6·977	69450	15·0	...	...	...	Clear
·010	5·28	5·288	52560	17·8	...	...	...	Clear
·007	2·09	2·096	20640	7·1	...	...	...	Clear
·004	6·82	6·823	67910	17·5	...	...	...	Clear
·150	6·05	6·173	61410	4·9	...	...	...	Clear, yellow
·004	2·75	2·753	27210	4·9	...	...	...	Clear
·005	2·53	2·534	25020	5·4	...	...	...	Clear
·003	6·60	6·602	65700	22·5	...	...	...	Clear
·015	16·72	16·832	168000	40·8	...	...	...	Clear
1·650	4·95	6·308	62760	12·5	...	...	...	Clear
·009	4·07	4·077	40450	12·0	...	...	...	Clear
·020	4·40	4·416	43840	20·0	...	...	...	Clear
1·150	3·52	4·466	44340	15·1	...	...	...	Clear
1·900	4·18	5·745	57130	9·7	...	...	...	Clear
·024	1·43	1·450	14180	47·1	...	...	...	Clear
·010	·66	·668	6360	4·5	...	...	...	Clear
·007	3·19	3·196	31640	9·1	...	...	...	Clear
·007	7·59	7·596	75640	19·3	...	...	...	Clear
·006	6·93	6·935	69020	23·8	...	...	...	Clear
·680	4·62	5·180	51480	45·7	...	...	...	Clear
·008	2·75	2·756	27240	5·8	...	...	...	Clear
·052	·11	·153	1210	1·2	...	...	...	Turbid
·820	3·30	3·976	39440	13·0	...	...	...	Clear
·006	3·41	3·415	33830	10·2	...	...	...	Clear
2·100	13·31	15·032	150000	25·0	...	...	...	Clear
·012	1·10	1·110	10880	34·1	...	...	...	Clear
·950	9·90	10·681	106490	13·5	...	...	...	Clear
·007	5·50	5·506	54740	6·9	...	...	...	Clear
·005	4·62	4·624	45920	6·7	...	...	...	Clear
·008	3·30	3·306	32740	11·2	...	...	...	Clear
1·450	4·62	5·814	57820	14·5	...	...	...	Clear
·052	7·70	7·743	77110	25·3	...	...	...	Clear
·058	3·52	3·568	35360	6·1	...	...	...	Clear
·005	4·62	4·624	45920	8·2	...	...	...	Clear
·019	4·29	4·306	42740	26·4	...	...	...	Clear
·014	3·02	3·029	29970	8·0	...	...	...	Clear
·005	8·25	8·254	82220	16·6	...	...	...	Clear
·005	5·17	5·174	51420	13·8	...	...	...	Clear
1·300	16·28	17·350	173180	38·0	..	...	...	Clear

TABLE XV

Date of Receipt of Sample.	DESCRIPTION.	Temp. C.	Total solid Impurity.	Organic Carbon.	Organic Nitrogen.
1878.	WELL WATERS—(continued).				
Nov. 18th	4 and 5, Mount Street (Small-pox) ...	...	157.4	...	...
" "	8 and 9, Little King Street, and 250, New John St. West (Scarlet Fever) ...	...	87.0	...	very large
" 20th	70—72, Dollman Street ...	...	115.4	...	...
" "	48—53, Leopold St. (Scarlet Fever) ...	...	99.0	...	large
" "	4 and 5 Courts, Inkerman St. (Scarlet Fever) ...	...	150.0	...	...
" "	29—31, Emily Street (Scarlet Fever) ...	...	232.4	...	very large
" "	306, Pershore Road ...	...	72.4	...	"
" "	307, Pershore Road (Typhoid) ...	...	66.0	...	"
" 22nd	1—7, Lilly Green ...	...	360.4	...	"
" "	139 and 140, Sampson Road (Scarlet Fever) ...	...	101.0	...	"
" "	1 Court, Norfolk Street ...	...	43.0	...	"
" "	3 Court, Little Edward Street (Scarlet Fever) ...	...	245.4	...	...
" "	Windsor Terrace, Ravenhurst Street ...	...	155.4	...	...
" "	32 and 33, Anderton Road ...	...	90.0	...	very large
" 29th	2 and 3, Stafford Street (Scarlet Fever) ...	...	112.4	...	"
" "	6 and 7, Highgate Place, Moseley Road ...	...	159.0	...	"
" "	Shipway Terrace, Highgate St. (Scarlet Fever) ...	...	180.0	...	"
" 30th	17, Montpellier Street ...	...	133.8	...	"
" "	5 Court, Emily Street (Scarlet Fever) ...	...	181.4	...	large
" "	3 & 4 Courts, Emily St. (Scarlet Fever) ...	...	227.0	...	very large
Dec. 5th	21 & 22 Courts, Brearley St. West (Scarlet Fever) ...	...	134.4	...	...
" "	18 Court, Well Street ...	...	95.0	...	...
" "	104 & 105, Rupert St. (Scarlet Fever) ...	...	156.0	...	very large
" "	Back 7, Bull Ring ...	...	151.4	...	...
" "	2—10, Cregoe Street (Scarlet Fever) ...	...	135.4	...	very large
" "	132—136, Cregoe Street ...	...	141.0	...	"
" 9th	18 and 19, Bloomsbury Street ...	...	82.4	...	"
" "	15, Speedwell Road ...	...	101.0	...	"
" "	2, Poplar Avenue, Sandon Road ...	...	50.0	...	"
" "	12 Court, Lee Bank Road (Scarlet Fever) ...	...	105.4	...	"
" "	10—12, Spring Street ...	...	263.4	...	...
" "	44 and 45, Inkerman Street ...	...	197.0	...	very large
" 12th	Prospect Place, Holborn Hill ...	...	144.4	...	...
" 20th	9—13, Wordsworth Road ...	...	98.4	...	...
" "	49 and 50, Wordsworth Road ...	...	108.0	...	very large
" 21st	69 and 70, Cheapside ...	...	356.0	...	"
" "	12, Court, Milk Street (Scarlet Fever) ...	...	235.4	...	"
" "	44—46, New Canal Street ...	...	197.4	...	"
" "	Back 19, Park Lane ...	...	292.0	...	...
" 30th	448 & 449, New John St. West (Measles) ...	...	148.4	...	...
" "	5—7, Dymoke Street (Scarlet Fever) ...	...	151.0	...	very large
" "	73—78, Newtown Row (Scarlet Fever) ...	...	122.0	...	...
" "	93—95, Emily Street (Scarlet Fever) ...	...	95.4	...	...
" "	46—49, Johnson Street ...	...	161.4	...	...
" "	41—45, Johnson Street ...	...	156.0	...	...

(continued).

Ammonia	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contam- ination (Estimated)	Chlorine.	Hardness.			REMARKS.
					Tempor- ary.	Perman- ent.	Total.	
·019	6·01	6·066	60340	14·0	...	...	...	Clear
·005	4·62	4·624	45920	9·7	...	...	...	Clear
·085	4·40	4·470	44380	7·0	...	...	...	Clear
·004	1·76	1·763	17310	7·6	...	...	...	Clear
·620	3·96	4·470	44380	18·1	...	...	...	Clear
·005	6·60	6·604	65720	16·7	...	...	...	Clear
·005	·44	·444	4120	7·1	...	...	...	Clear
·004	·55	·553	5210	6·9	...	...	...	Clear
·015	10·01	10·02	99900	40·8	...	...	...	Slightly turbid
·011	0·09	2·099	20670	10·8	...	...	...	Clear
·006	·77	·775	7430	3·9	...	...	...	Clear
·190	6·82	6·976	69440	20·2	...	...	...	Clear
·480	7·15	7·545	75130	11·3	...	...	...	Clear
·005	1·32	1·324	12920	3·0	...	...	...	Clear
·013	3·19	3·200	31680	16·8	...	...	...	Clear
·009	3·63	3·637	36050	12·0	...	...	...	Clear
·003	2·09	2·092	20600	10·9	...	...	...	Clear
·004	4·29	4·293	42610	10·8	...	...	...	Clear
·003	3·74	3·742	37100	12·1	...	...	...	Clear
·002	5·17	5·171	51390	13·8	...	...	...	Clear
·650	4·51	5·045	50130	16·5	...	...	...	Clear
·028	3·30	3·323	32910	13·9	...	...	...	Clear
·007	1·87	1·876	18420	6·7	...	...	...	Clear
·125	4·40	4·503	44710	29·0	...	...	...	Clear
·010	6·05	6·058	60260	17·2	...	...	...	Clear
·018	7·70	7·715	76830	18·5	...	...	...	Clear
·014	1·54	1·551	15190	8·7	...	...	...	Clear
·016	1·43	1·443	14120	7·8	...	...	...	Clear
·008	1·87	1·877	18450	4·8	...	...	...	Clear
·010	6·05	6·058	60260	10·4	...	...	...	Clear
1·200	10·45	11·438	114060	24·5	...	...	...	Clear
·025	9·90	9·920	98880	13·7	...	...	...	Clear
3·400	2·42	5·218	51860	25·3	...	...	...	Clear, some suspended particles
2·000	·44	2·080	20580	7·5	...	...	...	Turbid
·008	3·41	3·416	33840	9·1	...	...	...	Turbid
·005	18·70	18·704	186720	44·1	...	...	...	Clear
·010	4·95	4·958	49260	24·2	...	...	...	Clear
·010	7·04	7·048	70160	27·1	...	...	...	Clear
·650	9·24	9·775	97430	44·5	...	...	...	Clear
·020	5·28	5·296	52640	19·8	...	...	...	Clear
·008	3·85	3·856	38240	14·4	...	...	...	Clear
·150	4·40	4·523	44910	12·3	...	...	...	Clear
·017	1·54	1·554	15220	3·9	...	...	...	Clear
·090	4·95	5·024	49920	12·8	...	...	...	Clear
·075	7·92	7·982	79500	7·0	...	...	...	Clear

TABLE XVI.

RETURN FOR THE PERIOD 1ST JULY, 1877, TO 30TH JUNE, 1878, 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. " Success-fully Vac-cinated."	Col. 11.		Col. 13. " Dead, Unvac-ci-nated."	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.		
			" Insus-ceptible of Vaccination"	" Had Smallpox."						
1	2	3	4	5	6	8	9	10	11	
Birmingham - - -	9,763	8,033	9	—	940	93	8	679	1	
Aston (within the Borough)	5,653	4,695	—	—	517	67	16	330	28	
Edgbaston (" ")	505	388	2	—	20	46	3	19	27	

Table of the Number of Deaths occurring in each Street in the Borough of
Birmingham during the Year 1878.

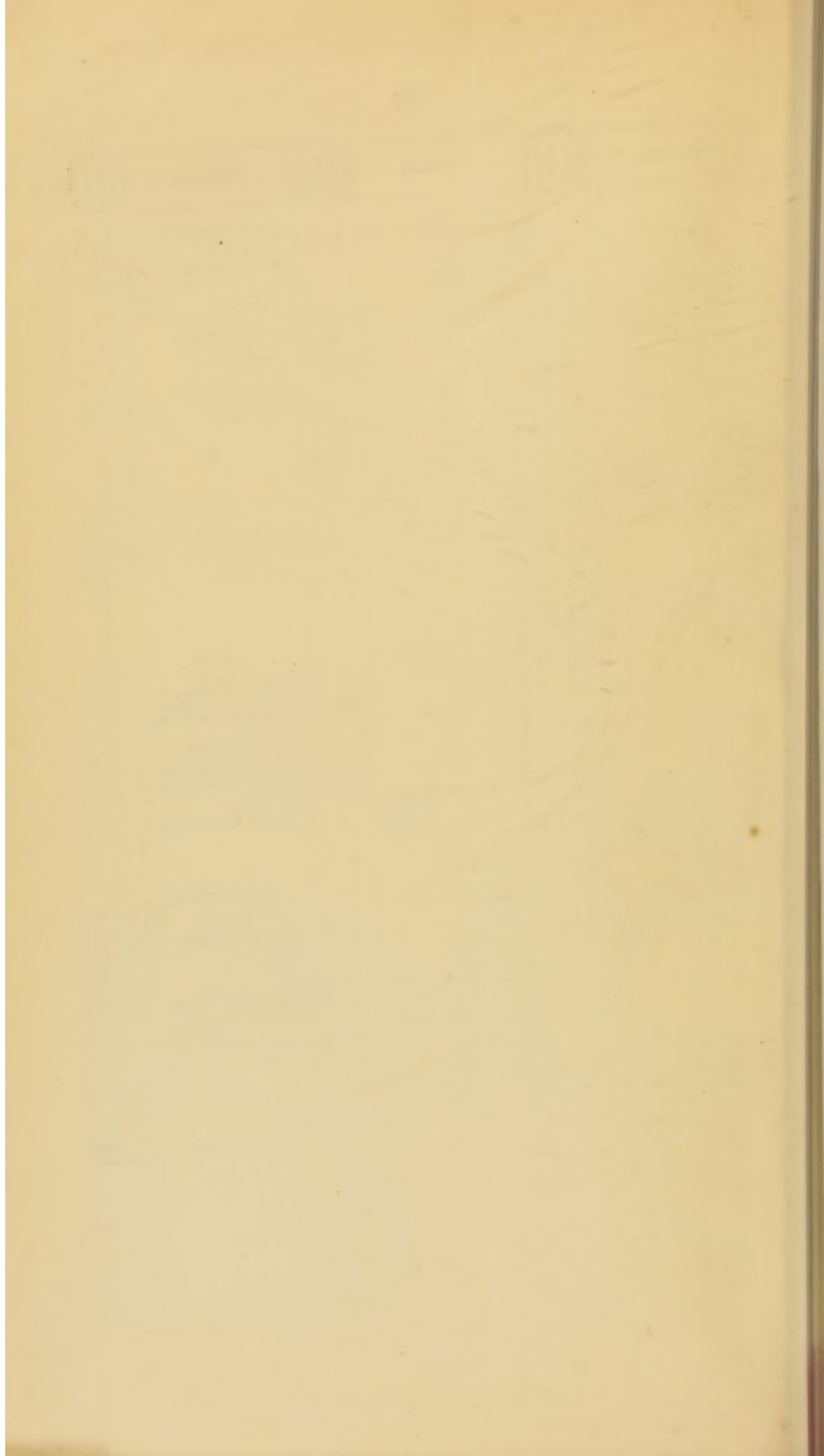
STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases
A			Bath Row	12	5	C		
Abberley Street	2	2	Bath Street	12	5	Calthorpe Road	1	1
Abbey Street	10	15	Beach Street	1	7	Cambridge Crescent ..	1	1
Aberdeeh Street	6	6	Beak Street	12	3	Cambridge Street	3	2
A. B. Row	2	3	Beatrice Crescent ..			Camden Drive		
Adam Street	4	6	Beaufort Road	1	7	Camden Grove		
Adderley Street	2	3	Belgrave Road	12	5	Camden Street	17	40
Adelaide Street, Deritend	4	6	Bell Barn Road	8	41	Camp Hill	12	7
Adelaide St., Duddeston	2	3	Bellis Street	1	6	Camp Street	3	2
Albert Street, Deritend ..	1	5	Bell Street		2	Canal Street		5
Albert Street, All Saints'		1	Belmont Passage		4	Cannon Street		1
Albert Street, St. Martin's			Belmont Row	3	7	Cape Lane		
Albion Street		2	Benacre Street	8	28	Cape Street		
Alcester Street	8	20	Bennett's Hill	1	3	Cardigan Street	5	11
Alexandra Road			Berkeley Street		1	Carlisle Street	12	2
Alexandra Street		5	Berner's Street	1	2	Caroline Street	1	5
Alfred Street			Beswick Street		1	Carpenter Road		2
Allcock Street	3	8	Betholom Row		1	Carr's Lane		
Allesley Street			Birchall Street	1	5	Cartland Road	1	3
Allison Street	6	26	Bird Lane		1	Carver Street	5	14
All Saints' Road	2	4	Bishopgate Street ..	4	20	Castle Street, St. Martin		1
All Sai ts' Street		2	Bishop St., St. Martin's ..	3	14	Castle Street, Deritend ..		2
Alma Crescent		3	Bishop Street, St. Mary's	3	7	Cathcart Street	3	7
Alma Street			Bishop Street South ..		3	Cato Street	1	9
Alston Street	3	5	Bissell Street	11	13	Cato Street North ..	1	6
Ampton Road	1		Blake Lane			Cattell Road	8	18
Anderton Road		5	Blews Street		6	Cattell Grove	1	3
Anderton Street	2	5	Blews Street West ..	2	4	Cecil Street	11	11
Andover Street			Bloomsbury	1	10	Centre Row		1
Angelina Street	2	11	Bloomsbury Street ..	2	15	Chad Road		1
Ann Street			Blucher Street	2	6	Chapel House Street ..		1
Argyle Street	4	5	Bolton Road	4	17	Chandos Road		1
Armoury Road			Bolton Street		1	Chapel Street	3	6
Arsenal Street		1	Bond Street		5	Chapman Road	1	2
Arthur Road			Bordesley Green	5	20	Charles Arthur Street ..	3	11
Arthur Street	8	13	Bordesley Green Road ..		1	Charles Henry Street ..	5	37
Ashted Row	11	10	Bordesley Park Road ..	6	27	Charlotte Road	1	1
Aston Brook Street			Bordesley Street	16	18	Charlotte Street		3
Aston Road	9	38	Bow Street	3	7	Chattaway Street	2	2
Aston Street	4	14	Bowyer Street	2	1	Cheapside	19	41
Asylum Road		3	Bracebridge Street ..	7	7	Cheatham Street		2
Athole Street		1	Bradford Street	6	36	Chequer's Walk	2	4
Atlas Street	1	1	Braithwaite Road		3	Cherry Street		2
Auckland Road	1	2	Branston Street	4	9	Cherry Wood Lane ..		1
Augusta Street	2	5	Brasshouse Passage ..		2	Chester St., Ladywood ..	8	16
Augustus Road			Brass Street	2	6	Chester St., Duddeston ..	3	4
Austin Street	1		Bread Lane	1	3	Cheston Road		
Avenue Road		2	Bread Street, St. Paul's		1	Christ Church Passage ..		2
B			Bread Street, St. Martin's		1	Church Road, All Saints'	1	4
Bacchus Road		6	Brearley Street	7	24	Church Road, Duddeston		3
Bagot Street	5	10	Brearley Street West ..	7	20	Church Road, Edgbaston		1
Bailey Street	1	2	Brewery St., Deritend ..			Church Street	1	5
Baker Street	2	8	Brewery St., St. Mary's	2	6	Clarendon Road	5	3
Balloon Street		2	Brewery St., Duddeston	1	14	Clark Street	3	16
Balsall Heath Road ..		5	Brickiln Street	1	3	Claverdon Street	2	9
Balsall Street	1	3	Bridge Road			Claybrook Street	2	1
Banbury Street		3	Bridge Street, Duddeston		1	Clement Street	1	
Barford Street	10	27	Bridge Street, St. Thomas	1		Cleve Terrace		1
Barford Street South ..	7	9	Bridge Street West ..	3	45	Clissold Street		4
Barker Street	11	2	Bristol Road	1	13	Cliveland Street	3	5
Barlow's Road		1	Bristol Street	3	22	Coach Yard		1
Barn Street	4	19	Broad Street	13	16	Coleman Street	7	19
Barraek Street			Bromsgrove Street ..	0	21	Coleshill Street	6	14
Barr Street	6	8	Brookfield Road			College Street	5	7
Barr Street West	2	6	Brook Road		1	Colmore Row		1
Bartholomew Row		2	Brook Street		2	Commercial Street ..	1	
Bartholomew Street ..	4	10	Broom Street	1		Communication Row ..	3	5
Baskerville Passage ..			Brueton's Street			Congreve Street		1
Baskerville Place	1		Buckingham Street ..	5	16	Constitution Hill	2	8
Bath Passage			Buck Street		3	Conybere Street	3	18
			Bullock Road		1	Cooksey Road	4	8
			Bullock Street	1	1	Cope Street	2	4
			Bull Ring		2	Coplow Street	2	5
			Bull Street		3	Cotton Row		
			Burbury Street	4	9			
			Butler Street	1	3			
			Butler Street South ..	1				

STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases
Hunter's Lane			Lees Street	2	1	Montgomery Street		1
Hunter's Vale	1	1	Legge Lane	1	3	Montpellier Street	1	2
Hurst Street	3	11	Legge Street	3	11	Monument Road	9	26
Hutton Street		1	Lench Street	13	13	Moore's Row	1	
Hyde Road	1	7	Lennox Street	9	10	Moorsom Street		
Hylton Street		1	Leopold Street	9	15	Moor Street	2	9
			Lichfield Street	1	6	Moreton Street	1	4
			Lilly Green	12	2	Morville Street	8	15
			Lingard Street	1	2	Moseley Road	7	24
			Lionel Street	2	16	Moseley Street	10	24
			Lister Street		6	Mott Street	6	8
			Little Ann Street	4	3	Mountfield Road		
			Little Barr Street	1	6	Mount Pleasant		
			Little Bow Street		1	Meriden Street	6	13
Icknield Port Road	26	28	Little Broom Street			Metchley Lane	2	1
Icknield Square	3	8	Little Cannon Street		3	Metchley Park Road		
Icknield Street	8	21	Little Cherry Street			Miles Street	4	17
Inge Street	5	11	Little Edward Street	2	1	Milk Street	4	10
Ingleby Street	1	16	Little Francis Street			Miller Street	14	8
Inkerman Street	5	11	Little Green Lane	8	16	Mill Lane		1
Irving Street	17	34	Little Hill Street			Mill Street, Duddleston		
Islington Row		5	Little King Street	1	12	Mill Street, Ladywood	2	6
Ivy Lane	1	2	Little Shadwell Street			Milton Street	5	6
			Little Wright Street			Milward Street		6
			Liverpool Street		1	Minories		
			Livery Street	7	11	Moat Lane		
J			Lloyd Street			Moat Row		3
			Lodge Road	10	33	Moillett Street		1
Jamaica Row		3	Lombard Street	2	13	Moland Street	7	17
James Street		1	London Prentice Street		5	Mole Street	1	5
Jenkin's Street			Long Acre	5	17	Mona Road		1
Jennen's Row			Longmore Street	4	2	Monmouth Street		1
Johnson Street			Long Street	2	13	Montague Road		
Johnstone Street	2	4	Lord Street	2	9	Montague Street	6	5
John Street	2	11	Louisa Street			Mount Street, St. Paul's		4
			Loveday Street	4	19	Mount Street, Deritend	4	4
			Love Lane	4	1	Mount St., Winson Green	1	3
			Lower Camden Street	3	13	Mount Street, Nechells	2	16
K			Lower Dartmouth Street	4	5	Musgrave Road	1	3
			Lower Darwin Street		1	Muntz Street	3	9
			Lower Essex Street	8	19			
			Lower Fazeley Street	1				
Keeley Street	2	2	Lower Hospital Street	2	7			
Kelynge Street	5	9	Lower Hurst Street	4	7	N		
Kendall Road			Lower Hurst Street East		1			
Kent Street	6	3	Lr. King Edward's Rd.	4	5	Navigation Street	5	7
Kent Street North	1	9	Lower Lawley Street	2	1	Nechells Park Road	6	31
Kenyon Street	3	10	Lower Lawrence Street			Nechells Place	1	4
Key Hill	2	10	Lower Loveday Street		2	Needham Street		
King Alfred's Place		4	Lower Pershore Street	2	4	Needless Alley		
King Edward's Place		2	Lower Russell Street		2	Nelson Street	5	5
King Edward's Road	2	12	Lowe Street		3	Nelson Street South	8	13
Kingston Road	1	4	Lower Temple Street		4	Nelson Street West	4	11
Kingston Row			Lower Tower Street	13	26	New Bartholomew Street	1	1
King Street	1	2	Lower Trinity Street		6	New Bond Street	1	7
Kyott's Lake Road		2	Lower Windsor Street	2	2	New Bridge Street		2
Kyrwick's Lane	2	13	Lowe Street			New Canal Street	7	14
			Loxton Street			New Church Street	5	6
			Ludgate Hill	1	4	Newdegate Street		
			Ludgate Hill Passage			New Edmund Street		12
L			Lapin Street	7	9	New England		
						New Hall Hill		3
Ladypool Lane	1	1	M			New Hall Street		6
Ladywell Passage						New Inkleys	5	9
Ladywell Walk						New John Street	13	21
Ladywood Grove		6				New John Street West	22	49
Ladywood Road	5	26	Macdonald St., St. Geo.	2	6	New Market Street	1	
Lancaster Street	8	16	Macdonald St., St. Mrtn's	1	7	New Meeting Street	1	
Lander Street			Main Street	4	8	New Spring Street	3	7
Langley Road			Malvern Hill Road	5	6	New Street		3
Lansdown Street	1	4	Manchester Street	5	3	New Summer Street	10	10
Larches Street	5	9	Manor Road		1	Newton Street	1	1
Latimer Street	1	2	Market Street	1	1	Newtown Row	8	36
Latimer Street South	12	22	Mark Lane		3	Nile Street		
Lawden Road		1	Marroway Street		1	Nineveh Road		
Lawley Street	4	15	Marshall Street		1	Noel Road		2
Lawrence Street	7	23	Marshall Street South			Norfolk Road		1
Lease Lane	1	1	Mary Ann Street	1	3	Norfolk Street	2	1
Ledsam Street	4	10	Mary Street			Norman Street		8
Lee Bank Road	3	24	Masshouse Lane (St. Mrtn)		3	Northampton Street		6
Lee Crescent	1	9	Masshouse Lane, Edgbstn			Northbrook Street	2	2
Lee Mount			Meadow Road			Northumberland Street	3	2
Leek Street		1	Meeting House Yard	1	1	North Warwick Street		

STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases
Northwood Street ..	8	6				St. Paul's Square ..	1	1
North Street ..						St. Peter's Place ..		
Norton Street ..	12	4	R			St. Philip's Churchyard ..		1
Nova Scotia Street ..		12				St. Stephen's Street ..		
Nursery Road ..						St. Vincent's Street ..	5	16
						Scholefield Street ..	3	21
O						Scotland Passage ..		
						Scotland Street ..		1
						Scott Street ..		
						Seymour Street ..		6
						Shadwell Street ..	2	2
						Shakespeare Road ..	10	9
Oakley Road ..		2				Sheepcote Lane ..		5
Old Cross Street ..	1	4				Sheepcote Street ..	6	10
Old Inkleys ..	2	3				Sheep Street ..	5	12
Old Meeting Street ..	1					Sherborne Street ..	8	29
Old Square ..						Sherlock Street ..	20	37
Oliver Road ..		3				Shutt Lane ..		
Oliver Street ..	5	8				Silver Street ..	1	1
Oozells Street ..		2				Sir Harry's Road ..		1
Oozells Street North ..		1				Skinner Lane ..		8
Ormond Street ..	2	3				Skinner Street ..		2
Osler Street ..	5	8				Slaney Street ..	1	8
Oughton Place ..	1	3				Sloe Lane ..		
Outlet Road ..						Smallbrook Street ..	3	7
Owen Street ..	2	1				Smithfield Passage ..		2
Oxford Street ..	1	8				Smithfield Street ..		
Oxygen Street ..	1	2				Smith St., St. George's ..	5	9
						Smith Street, Duddleston ..	1	3
P						Snake Street ..		7
						Snow Hill ..	2	12
						Soho Road ..		6
						Somerset Road ..		
						Somerset Street ..	1	
Paddington Street ..	1	7				South Road ..	6	8
Pakenham Road ..		3				Spark Street ..		2
Palmer Street ..	12	7				Speaking Stile Walk ..	1	
Parade ..	2	6				Speedwell Road ..	1	
Paradise Street ..						Spencer Street ..	1	4
Parker Street ..	2	6				Spical Street ..		
Park Lane ..	1	2				Spon Terrace ..		
Park Road, All Saints' ..	12	45				Spooner Street ..		2
Park Road, Edgbaston ..						Springfield Street ..	9	8
Park Street ..	4	10				Spring Hill ..	6	15
Parliament Street ..	2	6				Spring Hill Passage ..		
Paternoster Row ..						Spring Road ..		5
Pebble Mill Road ..	1	5	S			Spring Vale ..	1	
Peel Street ..	4	6				Stafford Street ..		5
Penn Street, Deritend ..	1	3				Staniforth Street ..	7	24
Penn Street, Duddleston ..	1	4				Stannmore Road ..		1
Pershore Road ..		7				Station Road ..		1
Pershore Street ..		4				Steelhouse Lane ..	5	25
Phillip's St., St. Martin's ..		1				Stephenson Place ..		
Phillip's St. George's ..	3	3				Stephenson Street ..		
Pickford Street ..	1	6				Steward Street ..	10	18
Piddock Street ..	1	1				Stewart Street ..		
Pigott Street ..	2	10				Stirling Road ..		
Pinfold Street ..		1				Stoke Street ..	6	11
Pitney Street ..						Stone Yard (Deritend) ..	1	
Pitford Street ..	1	2				Stone Yard (Edgbaston) ..		
Plough and Harrow Road ..						Stoney Lane ..		
Pope Street ..	3	10				Stour Street ..	5	11
Poplar Avenue East ..						Stratford Place ..		
Poplar Avenue West ..						Stratford Road ..	4	16
Porchester Street ..	1	3				Stratford Street ..	2	6
Portland Road ..		1				Suffolk Street ..	7	18
Potter Street ..		3				Summerfield Road ..	4	
Poultry ..						Summer Hill Road ..	3	4
Powell Street ..		3				Summer Hill Street ..	8	9
Prescott Street ..	4	7				Summer Hill Terrace ..		2
Price Street ..	5	14				Summer Lane ..	17	39
Priestley Road ..	6	1				Summer Road ..		
Primrose Hill ..		1				Summer Row ..	5	9
Princes Row ..						Summer St., Edgbaston ..		4
Princes Street ..	2	3				Summer St. St. Phillips ..	4	4
Princess Road ..		1				Sun Street ..		2
Princip Street ..	4	8				Sun Street West ..	1	2
Priory Road ..						Sutton Street ..		4
Pritchett's Lane ..						Swallow Street ..	2	2
Pritchett Street ..	10	19				Swan Passage ..		
Proctor Street ..	2	4				Sydenham Road ..		
Prospect Row ..	1	2						

STREETS.			STREETS.			STREETS.		
	Zymotic Diseases	Other Diseases		Zymotic Diseases	Other Diseases		Zymotic Diseases	Other Diseases
T			Vauxhall Road	9	22	Winson Green Road ..	6	14
Talbot Street		16	Vauxhall Street	1	5	Winson Street	2	5
Talfourd Street	3	4	Vere Street	5	9	Witton Street	3	7
Tanter Street	3	6	Vicarage Road			Woodbourne Road ..		
Taylor Street	3	5	Victoria Grove		1	Woodcock Street ..	4	9
Temple Field Street ..	4	5	Victoria Street		4	Wood Street, St. Thomas'		
Temple Row			Villa Street	1	5	Wood Street, Ladywood	1	
Temple Row West ..			Villiers Street	1	3	Worcester Street ..		
Temple Street		3	Vine Street		1	Worcester Wharf ..	1	1
Tenby Street		3	Vittoria Street		2	Wordsworth Road ..		1
Tenby Street North ..	1	2	Vyse Street		4	Wrentham Street ..	6	14
Tennant Street	6	15	W			Wright Street	3	5
Theodore Street	1	9	Walter Street	1	4	Wrottesley Street ..		1
Theresa Road		2	Ward Street	1	12	Wyndham Road		2
Thimble Mill Lane ..	2	10	Warner Street	1	3	Wynn Street	3	18
Thomas St., St. Mary's ..	4	6	Warstone Lane	5	21	X		
Thomas Street, Deritend			Warstone Parade East ..		2	Y		
Thorp Street	4	7	Warstone Parade West ..			Yew Tree Road		1
Tillingham Street ..	2	6	Warwick House Passage ..			York Passage		
Tindal Street	5	6	Warwick Street	7	13	York Road		1
Tonk Street		2	Washington Street ..	1	3	York Street		2
Tower Street	10	30	Waterloo Street		2	Z		
Trafalgar Road			Water Street	3	14	ADDENDA.		
Trent Street	1	6	Waterworks Road ..	3	2	Bordesley Station ..		5
Trinity Terrace			Watery Lane	18	18	Rotton Park Reservoir ..		1
Turner Street	11	8	Watts Road		1	Soho Railway Station ..		1
Tyndall Street		6	Weaman Row	6	15	Birmingham and Warwick		
U			Weaman Street	1	1	Canal	4	
Unett Street	4	24	Wellesley Street ..			Snow Hill Station ..		1
Union Passage		3	Wellington Passage ..			Pebble Mill Pool ..		2
Union Street		1	Wellington Road ..		4	Old Birmingham Canal ..		3
Union Terrace			Wellington Street ..	5	8	Hockley Railway Station		2
Upper Dean Street ..		1	Well Lane			River Rea		2
Upper Gough Street ..	1	6	Well Street	10	24	The Arcade		1
Upper Highgate Street ..	2	3	Westbourne Road ..			Vauxhall Railway Station		1
Upper Hockley Street ..	1	1	Western Road			AT INSTITUTIONS.		
Upper Hospital Street ..	6	16	Westfield Road			General Hospital ..	19	182
Upper Marshall Street ..	3	2	Westley Street		3	Queen's Hospital ..	7	121
Upper Mill Lane ..			Weston Street		2	Children's Hospital ..	42	65
Upper Priory	1		Wharf Lane	1	2	Workhouse	12	523
Upper Ryland Road ..	3	6	Wharf St., St. Thomas'	5	10	Asylum		76
Upper Tower Street ..			Wharf Street, Deritend ..			Gaol		6
Upper Trinity Street ..	4	8	Wharf Street, Duddeston	1	4	Borough Hospital ..	71	1
Upper Windsor Street ..	9	14	Wharf Street, All Saints'	2	1	Homœopathic Hospital ..	1	2
V			Wharton Street		7	Women's Hospital,		
Vale Street			Wheeler Street	9	15	Crescent		7
Varna Road	3	6	Wheeler's Lane	2	3	Deaf and Dumb Institu-		
Vaughton Street	3	18	Wheley's Road	1	7	tion		1
Vaughton Street South ..	1	2	White Lion Passage ..			TOTALS		
Vauxhall Grove	1	2	White Road	2	3		2421	7241
			Whitmore Road		9			
			Whitmore Street	2	9			
			Whittall Street		6			
			Wiggin Street					
			William Edward Street ..	2	6			
			William Henry Street ..	1	1			
			William St., St. Thomas'	7	18			
			William Street, Deritend	2	1			
			William Street North ..	3	3			
			Willis Street	5	9			
			Wilton Street	1	2			
			Windmill Hill		3			
			Windmill Street	3	2			
			Windsor Street	1				

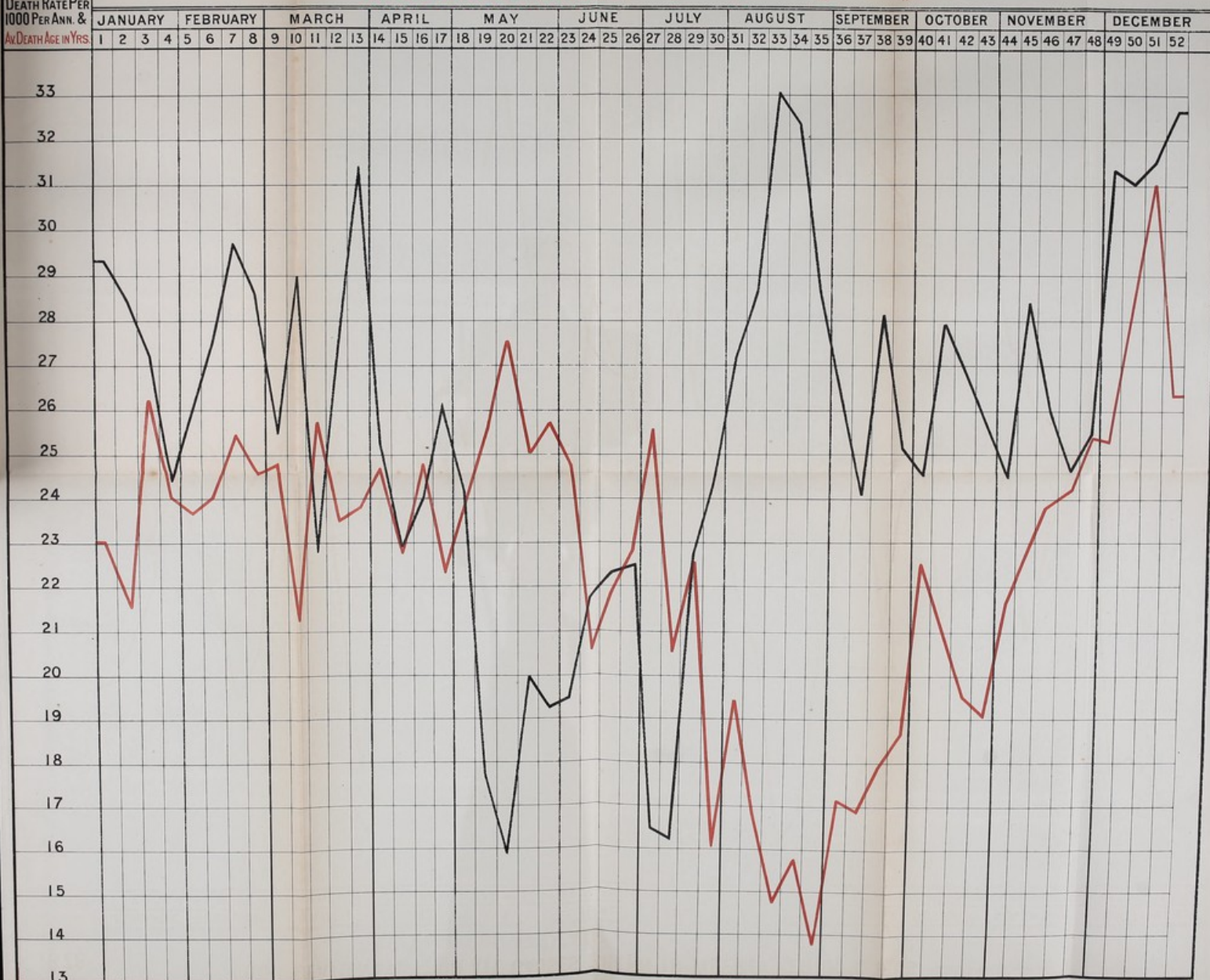
Grand Total ... 9662



1878

TOTAL DEATH RATE FROM ALL CAUSES SHEWN IN WEEKLY PERIODS. THUS
 AVERAGE AGE AT DEATH " " " " " "

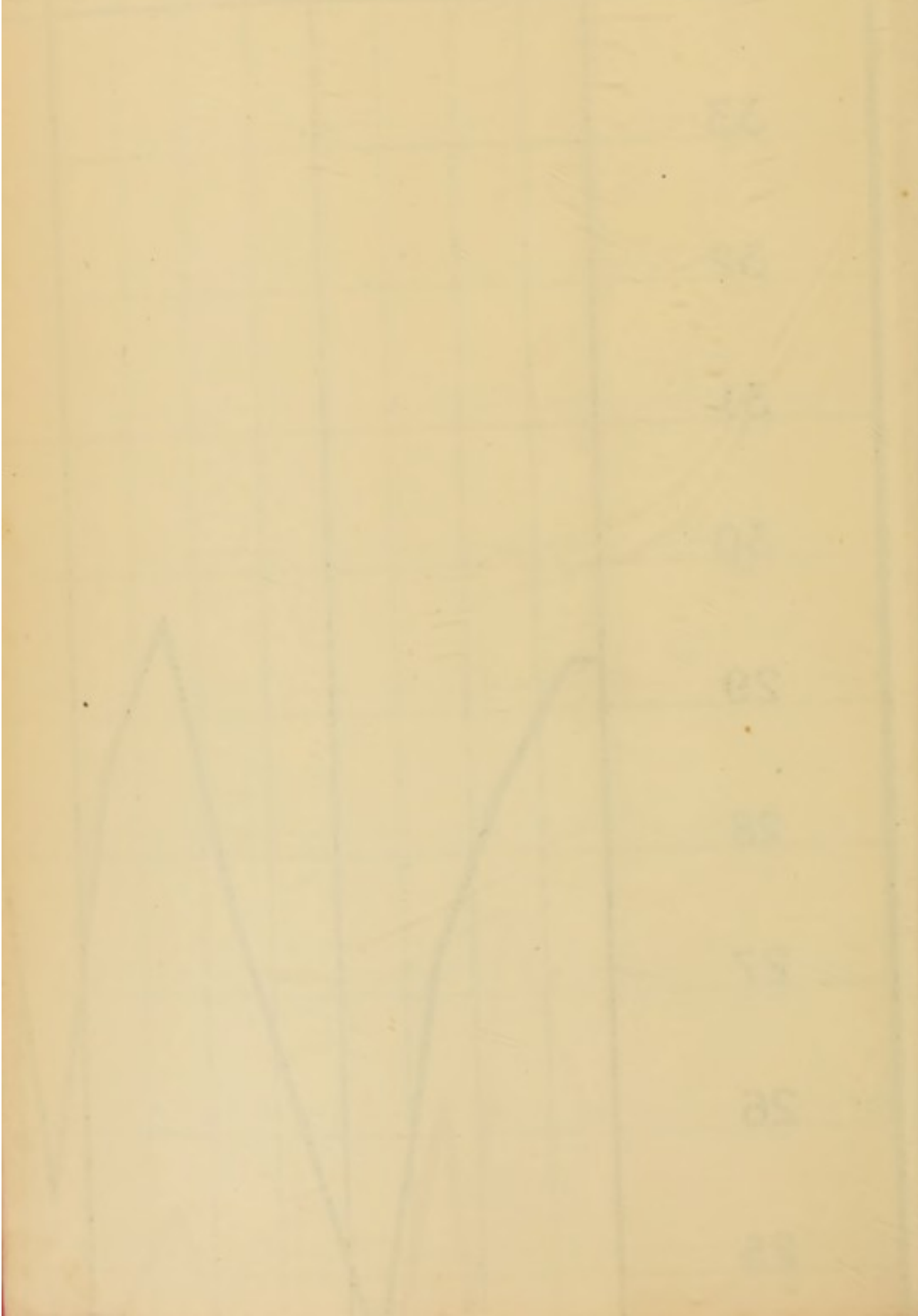
DEATH RATE PER
 1000 PER ANN. &
 Av. DEATH AGE IN YRS.



1878

1878

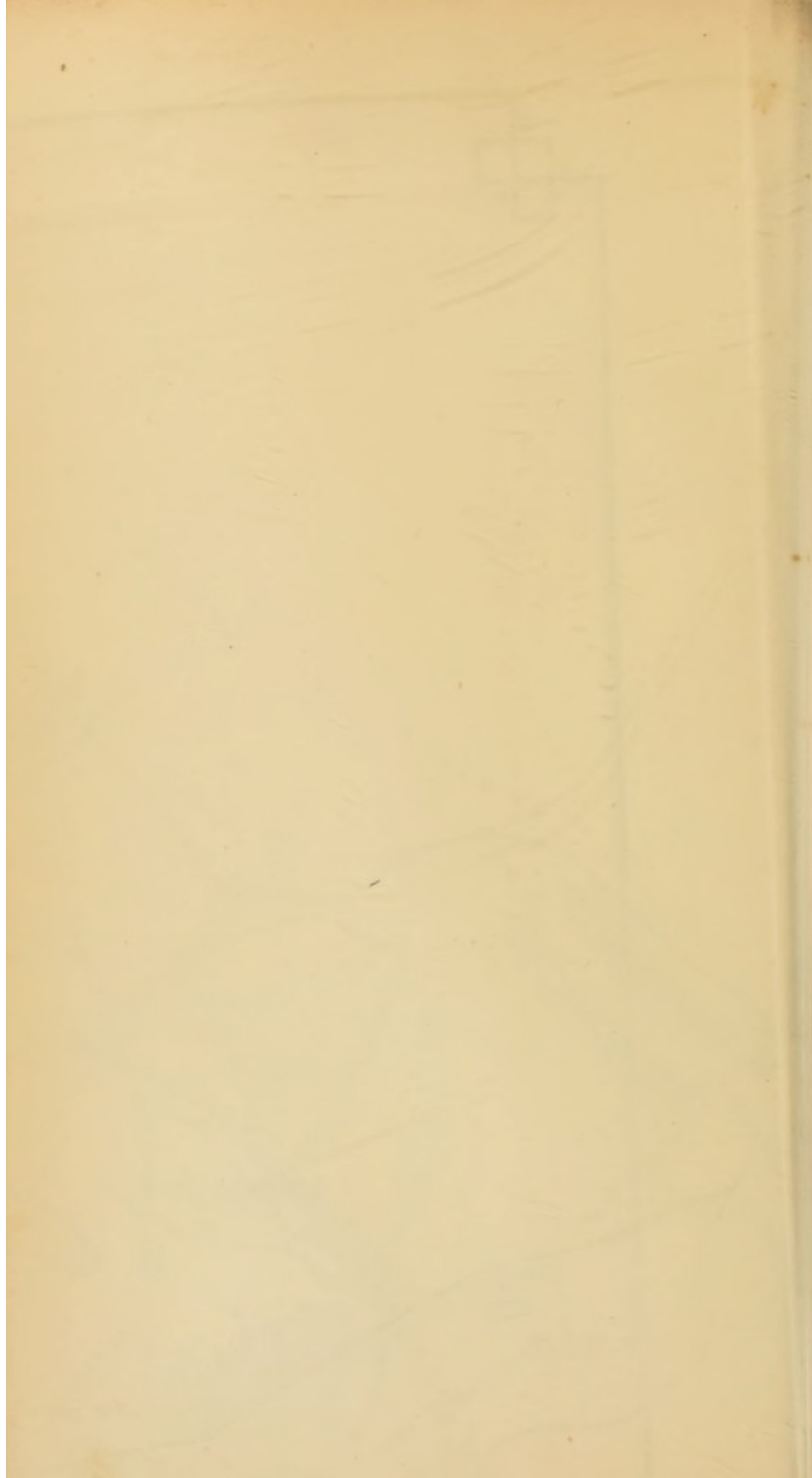
DECEMBER 25
JANUARY 1
FEBRUARY 1
MARCH 1
APRIL 1
MAY 1
JUNE 1
JULY 1
AUGUST 1
SEPTEMBER 1
OCTOBER 1
NOVEMBER 1
DECEMBER 1



MAP OF THE BOROUGH OF BIRMINGHAM, 1879.

NOTE . THE SPOTS REPRESENT THE NUMBER OF DEATHS (54) FROM MEASLES IN 1878.

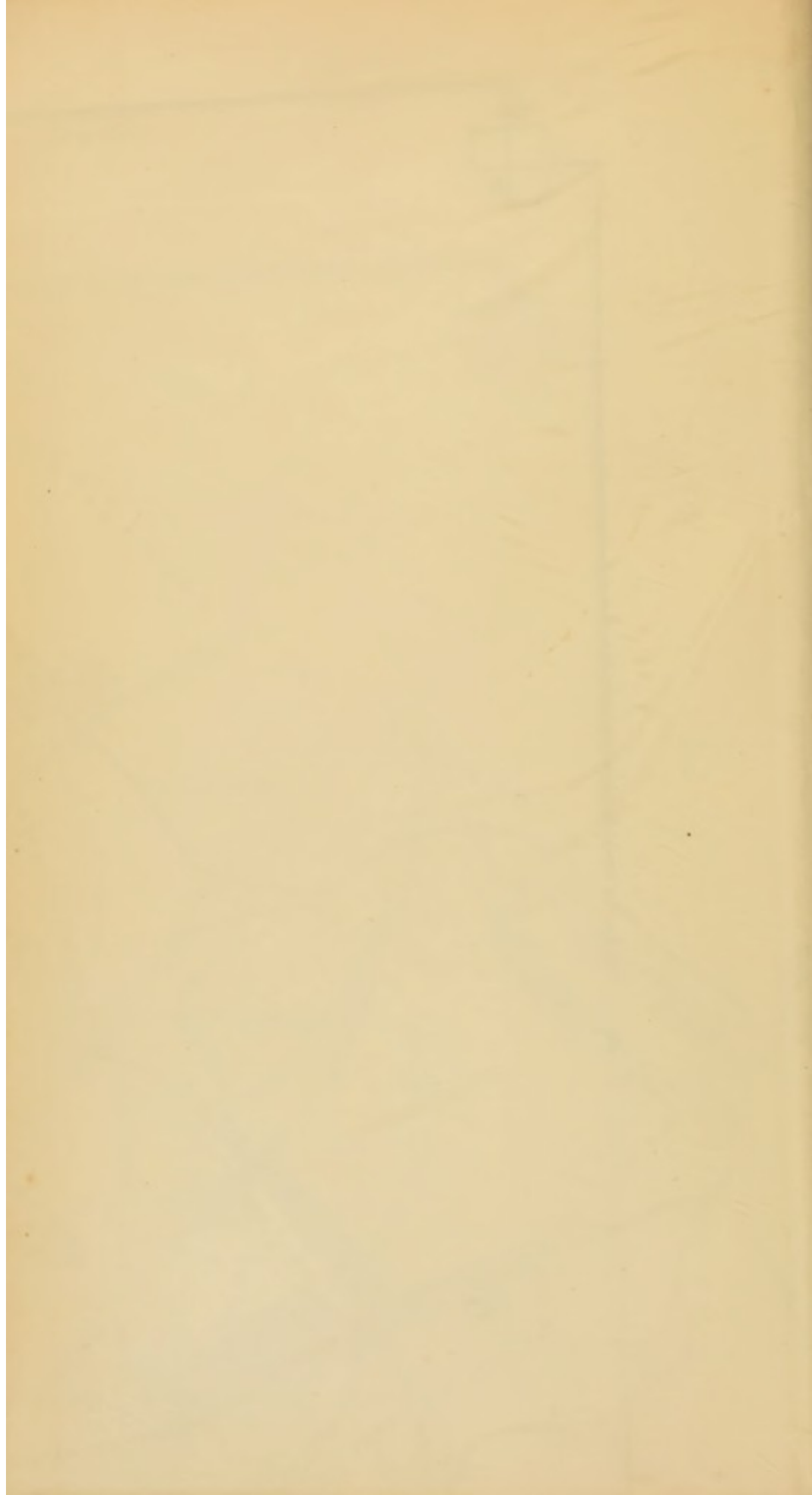


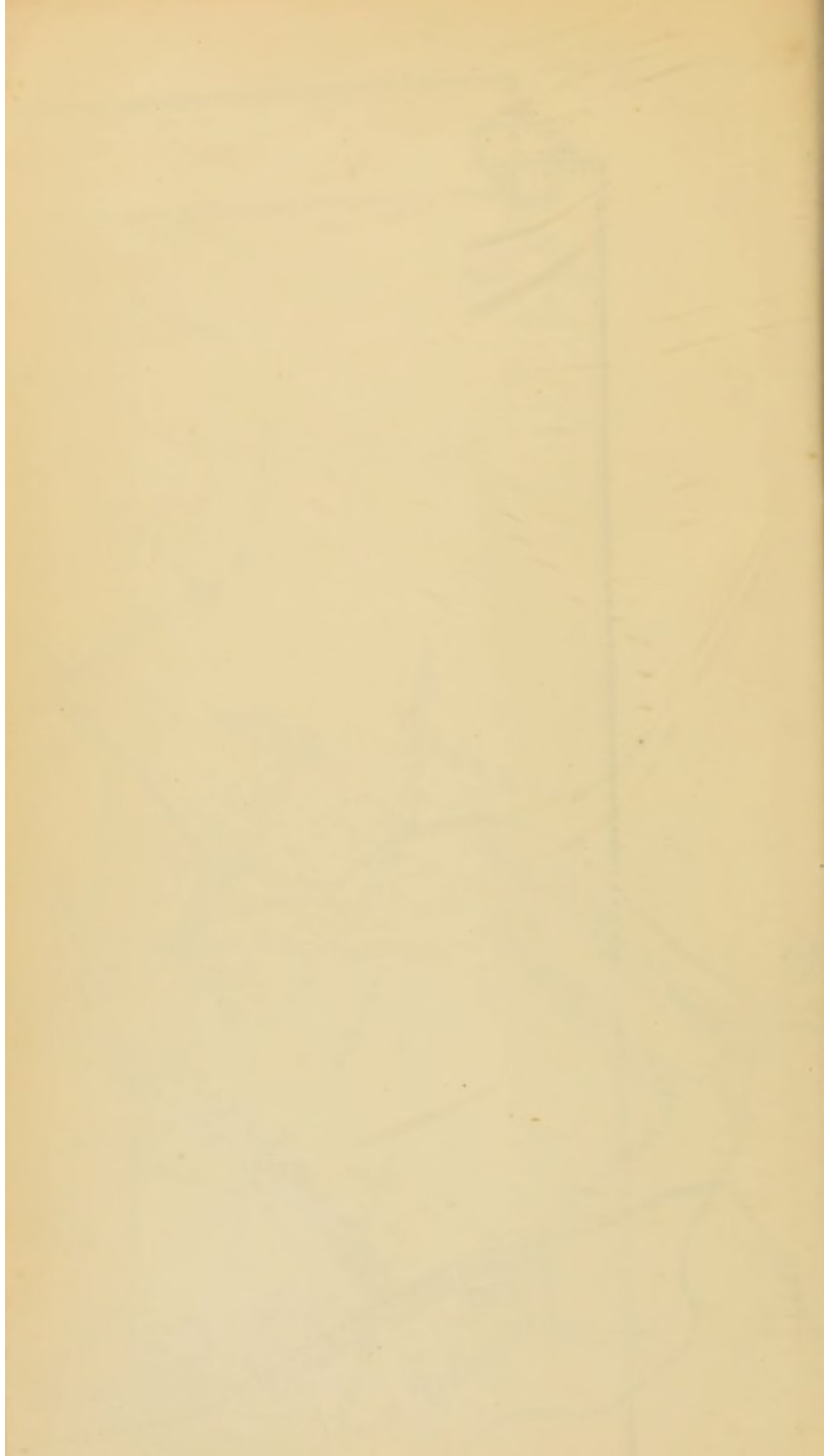


MAP OF THE BOROUGH OF BIRMINGHAM, 1879.

NOTE THE SPOTS REPRESENT THE NUMBER OF DEATHS (995) FROM
SCARLET FEVER IN 1878.







BOROUGH ANALYST'S LABORATORY,

PUBLIC OFFICE, BIRMINGHAM,

May 3rd, 1879.

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I beg to report that during the year 1878 I have analysed 158 articles of food and drink, of which the following are the particulars :—

No.	DATE.—1878.	ARTICLES.	REMARKS.
509—	Jan. 1st...	Milk.....	Adulterated with 16% of water. Private purchaser. No prosecution.
510—	Feb. 8th...	Milk..	Adulterated with 28% of water. Private purchaser. No prosecution.
511—	Mar. 15th...	Mustard	Genuine.
512—	" ..	Mustard	Genuine.
513—	" ..	Mustard	Genuine.
514—	" ..	Mustard	Genuine.
515—	" ..	Mustard	Genuine.
516—	" ..	Mustard	Genuine.
517—	Mar. 19 h...	Milk.....	Adulterated with 6% of water. Private purchaser.
518—	" ..	Tea	Genuine.
519—	" ..	Tea	Genuine.
520—	" ..	Tea	Genuine.
521—	" ..	Tea	Genuine.
522—	" ..	Tea	Genuine.
523—	" ..	Tea	Genuine.
524—	Mar. 26th...	Coffee	Genuine.
525—	" ..	Coffee	Adulterated with chicory.
526—	" ..	Coffee	Slightly adulterated.
527—	" ..	Coffee	Genuine.
528—	" ..	Coffee	Adulterated with chicory.
529—	" ..	Coffee	Genuine.
530—	Mar. 27th...	Milk.....	Genuine.
531—	" ..	Milk.....	Genuine.
532—	" ..	Milk.....	Genuine.
533—	" ..	Milk.....	Genuine.
534—	Mar. 29th...	Milk.....	Slightly Adulterated.
535—	" ..	Milk.....	Genuine.
536—	" ..	Milk.....	Adulterated with 75% of water, or upwards 8 parts of water added to 100 of milk.
537—	" ..	Milk.....	Genuine.
538—	April 29th...	Milk.....	Genuine.
539—	" ..	Milk.....	Nearly genuine.
540—	" ..	Milk.....	Adulterated with 7% of water.
541—	" ..	Milk.....	Adulterated with 8% of water.
542—	May 6th...	Black Tea	Genuine.
543—	" ..	Black Tea	Genuine.
544—	" ..	Black Tea	Genuine.
545—	May 7th...	Milk.....	Adulterated with 9.5 % of water.
546—	" ..	Milk.....	Adulterated with 6 % of water.
547—	" ..	Milk.....	Adulterated with 5 % of water.
548—	" ..	Milk.....	Nearly genuine.
549—	May 13th...	Black Tea	Genuine.
550—	" ..	Black Tea	Genuine.
551—	" ..	Black Tea	Genuine.
552—	" ..	Coffee	Genuine.
553—	" ..	Black Tea	Genuine.
554—	" ..	Coffee	Genuine.
555—	May 14th...	Milk.....	Adulterated with 11.3 % of water.
556—	May 20th...	Coffee ..	Genuine.
557—	" ..	Coffee	Genuine.

No.	DATE.—1878.	ARTICLES.	REMARKS.
558—	May 20th...	Coffee	Genuine.
559—	"	White Pepper.....	Genuine.
560—	"	Black Pepper	Adulterated with 5 % of Earthy matter.
561—	"	White Pepper.....	Genuine.
562—	"	Black Pepper	Adulterated with 6 % of Earthy matter.
563—	June 6th...	Ale	Genuine.
564—	"	Ale	Genuine.
565—	"	Ale	Contained 63 grains of Salt per gallon.
566—	June 25th...	Milk.....	Adulterated with 27% of water. Fined 20/- and costs.
567—	"	Milk.....	Adulterated with 19% of water. Fined 10/- [and costs.
568—	"	Milk.....	Genuine.
569—	"	Milk.....	Adulterated with 19.5 % of water.
570—	"	Milk.....	Genuine.
571—	"	Milk.....	Genuine.
572A—	July 9th...	Milk.....	Genuine.
573A—	"	Flour	Genuine.
572—	"	Flour	Genuine.
573—	"	Flour	Genuine.
574—	"	Flour	Genuine.
575—	"	Flour	Genuine.
576—	"	Flour	Genuine.
577—	"	Flour	Genuine.
578—	"	Flour	Genuine.
579—	"	Flour	Genuine.
580—	"	Flour	Genuine.
581—	"	Flour	Genuine.
582—	"	Milk.....	Genuine.
583—	"	Milk.....	Genuine.
584—	Aug. 24th...	Ale	Genuine.
585—	"	Ale	Contained 94.32 grains of salt per gallon.
586—	"	Ale	[Fined 20/- and costs.
587—	Aug. 26th...	Ale	Genuine.
588—	"	Ale	Genuine.
589—	"	Ale	Genuine.
590—	"	Ale	Genuine.
591—	Aug. 27th...	Ale	Genuine.
592—	"	Ale	Genuine.
593—	"	Ale	Genuine.
594—	"	Ale	Genuine.
595—	"	Ale	Genuine.
596—	Aug. 30th...	Gin	Genuine.
597—	"	Gin	Genuine.
598—	"	Gin	Genuine, nearly
599—	"	Gin	Genuine.
600—	"	Gin	Adulterated with Water, 28° under proof.
601—	"	Gin	Genuine.
602—	Aug. 31st...	Milk.....	Adulterated with 28 % of Water. Case dismissed through an informality.
603—	"	Milk.....	Adulterated with 10 % of Water.
604—	"	Milk.....	Genuine.
605—	"	Milk.....	Genuine.
606—	Sept. 6th...	Milk.....	Adulterated with 16 % of Water, and Cream abstracted. Case dismissed through an informality.
607—	Sept. 9th...	Milk.....	Adulterated with 22 % of Water. Ditto.
608—	"	Milk.....	Adulterated with 12 % of Water. Ditto.
609—	"	Milk.....	Adulterated with 20 % of Water. Ditto.
610—	"	Milk.....	Adulterated with 18 % of Water. Ditto.
611—	Sept. 12th...	Gin	Genuine.
612—	"	Gin	Genuine.
613—	"	Gin	Genuine.
614—	"	Gin	Adulterated with Water, 28° under proof.
615—	"	Gin	Genuine.
616—	"	Gin	Genuine.

No.	DATE.—1878.	ARTICLES.	REMARKS.
617—	Oct. 3rd	Butter	Genuine.
618—	"	Butter	Genuine.
619—	Oct. 8th	Milk	Adulterated with 8·5 % of Water.
620—	"	Butter	Genuine.
621—	"	Butter	Genuine.
622—	"	Butter	Genuine.
623—	"	Butter	Genuine.
624—	"	Butter	Genuine.
625—	"	Butter	Genuine.
626—	"	Butter	Genuine.
627—	"	Butter	Genuine.
628—	"	Butter	Genuine.
629—	"	Butter	Genuine.
630—	Dec. 2nd	Sherry	Genuine.
631—	"	Sherry	Genuine.
632—	"	Sherry	Genuine.
633—	"	Sherry	Genuine.
634—	"	Sherry	Genuine.
635—	"	Sherry	Genuine.
636—	Dec. 6th	Milk	Adulterated with 22 % of Water. Fined 10/-
637—	"	Milk	Genuine. [and costs.
638—	"	Milk	Adulterated with 13 % of Water. Fined
639—	Dec. 14th	Coffee	Genuine. [2/6 and costs.
640—	"	Coffee	Genuine.
641—	"	Coffee	Genuine.
642—	"	Coffee	Genuine.
643—	"	Coffee	Genuine.
644—	"	Coffee	Genuine.
645—	Dec. 19th	Mustard	Genuine.
646—	"	Pepper	Genuine.
647—	"	Mustard	Genuine.
648—	"	Pepper	Genuine.
649—	"	Mustard	Genuine.
650—	"	Pepper	Genuine.
651—	"	Mustard	Genuine.
652—	"	Pepper	Genuine.
653—	Dec. 19th	Mustard	Adulterated with 25 % of Wheat Flour and Turmeric.
654—	"	Pepper	Genuine.
655—	"	Mustard	Genuine.
656—	"	Pepper	Genuine.
657—	"	Mustard	Genuine.
658—	"	Pepper	Genuine.
659—	"	Mustard	Genuine.
660—	"	Pepper	Genuine.
661—	"	Mustard	Genuine.
662—	"	Pepper	Genuine.
663—	"	Mustard	Genuine.
664—	"	Pepper	Genuine.

The articles examined comprised—

42	Samples of Milk.
17	" Coffee.
16	" Mustard.
15	" Ale.
14	" Pepper.
13	" Tea.
12	" Gin.
12	" Butter.
11	" Flour.
6	" Sherry.
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Total	158
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Out of the 158 samples examined, 34, or upwards of 21 per cent., were adulterated.

Of the 42 samples of Milk, so many as 24, or 57 per cent, had been diluted with water and in one instance a portion of the cream had also been abstracted.

Three of the 17 samples of Coffee were more or less adulterated with Chicory, while one of the 16 samples of Mustard contained 25 per cent. of Wheat Flour and Turmeric.

In two of the samples of Ale analysed there was an excessive quantity of Salt, and in two of the Peppers I found a larger quantity of mineral matter than is naturally present in genuine samples of this condiment.

Two of the samples of Gin were below the allowed standard of strength. The samples of Tea, Butter, Flour, and Sherry were all genuine.

I remain,

Mr. Chairman and Gentlemen,

Your obedient Servant,

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