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1903.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

BOROUGH OF MAIDSTONE.

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Borough of Maidstone.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1903.

To the Urban District Council.

MR. MAYOR AND GENTLEMEN,

The calculations in this report as in previous years are based on the assumption that the population of the Borough has increased during the year under review at the same rate as during the ten years of the last inter-censal period. This being so, the population as estimated at the middle of the year is 33,832.

From out of this population there were registered:—

Of Births	810
„ Deaths	438
„ Marriages	295

So that the rates per thousand per annum were:—

Of Births	23·9
„ Deaths	12·9
„ Marriages	8·7

BIRTHS.—Our Birth rate for the past year is 23·9; that for England and Wales during the same period being 28·4. In 1884 our Birth rate stood at 33·0, and since that year it has almost continuously been on the decline.

Of the Births, 428 were males and 382 females, giving an excess of 46 boys over girls. This number

includes 42 births of illegitimate children, shewing that 5 % of the births belong to this class; this is a higher rate than in 1902, when it was 4·4 %.

DEATHS.—The Annual Death Rate for Maidstone during the year was 12·9 per 1,000, whilst for England and Wales it was 15·4. This is the lowest death rate yet recorded for Maidstone, the average for the previous ten years being 16·1.

In Table I. of the Appendix to this Report, details of the Births and Deaths of the past year are given, together with the details and averages for the previous ten years.

In Table III. the 438 deaths are classified in their various age periods, and also under their respective causes of death.

The rate of Infantile Mortality, that is to say deaths under one year of age per 1,000 of births was 128, being the same as the average for the previous ten years. The rate for England and Wales was 132. The lowest quarter in Maidstone was the third, usually the highest, due doubtless to the absence of deaths from Summer Diarrhœa. The comparatively cold and exceedingly wet weather of the third quarter not being conducive to the presence of this common and fatal malady among infants. (*See Table, page 3*).

PHTHISIS and other tubercular diseases account for 45 deaths, giving a rate of 1·33 per thousand of inhabitants. This is lower than last year, when it was 1·66, the previous year to this being 1·84.

INFLUENZA is apparently diminishing in severity, last year there being but three deaths certified as being due directly to this malady.

Deaths per 1,000 Births of Children under one year in Maidstone.

Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Whole Year.
1870	165	97	263	115	160
1871	258	107	278	117	190
1872	181	116	171	144	153
1873	136	118	246	127	157
1874	182	93	261	119	164
1875	187	106	157	165	154
1876	147	112	141	98	124
1877	211	140	187	84	155
1878	161	176	209	155	175
1879	135	145	122	165	142
Average	176.3	121.0	203.5	128.9	157.4
1880	135	120	229	118	153
1881	120	119	122	64	106
1882	138	110	100	151	125
1883	218	79	122	139	138
1884	189	78	159	125	138
1885	140	75	187	139	133
1886	118	105	191	166	142
1887	80	59	158	114	103
1888	167	136	167	145	154
1889	132	99	173	137	135
Average	143.7	98.0	160.8	129.8	132.7
1890	136	117	93	113	115
1891	140	113	150	157	140
1892	128	87	110	80	102
1893	64	90	222	80	111
1894	167	119	112	116	128
1895	133	62	172	157	129
1896	156	82	129	162	133
1897	143	80	219	100	138
1898	153	89	234	155	152
1899	81	58	239	197	129
Average	130	89	168	131	127
1900	108	87	143	128	115
1901	157	73	162	104	132
1902	130	60	106	145	117
1903	147	141	97	123	128

WHOOPING COUGH was somewhat more prevalent than usual, there being nine deaths, all occurring in children under five years of age. The presence of the malady amongst the Scholars attending the Tovil National Schools necessitated the closure of these

Schools from April 20th to May 11th. The malady also manifested itself at the Willington Schools, and these Schools were closed from the 2nd to the 23rd of May.

MEASLES caused 11 deaths. The malady did not attack any particular School, and in consequence it was not considered necessary to advise that any School should be closed.

DIARRHŒA.—The deaths from this malady were six. Again a very low record in consequence of the cold and wet summer. The comparative absence of Diarrhœa in infants, accounts for the low rate of infantile mortality during the third quarter, when it was 97 per 1,000 births, this being the lowest in this quarter for the past 12 years.

NOTIFIABLE DISEASES.

SCARLET FEVER.

Quarter.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Previous 10 Years' average.
1st	30	37	19	8	14	2	17	8	6	22	12	16
2nd ..	90	18	9	14	9	5	17	19	17	9	10	20
3rd	79	27	13	11	4	4	22	7	34	7	5	20
4th	107	17	29	23	2	1	14	11	73	22	—	30
Year ..	306	99	70	56	29	12	70	45	130	60	27	87
Cases re- moved to Sanator' m.	124	45	47	35	17	8	31	34	75	47	25	46

There have been but 27 notifications during the year, this being the lowest number during the past five years, all the cases were of a benign character,

and no fatal result ensued. The houses in which the disease occurred were personally inspected, and the parents interviewed by myself, opportunity being taken to impress on all concerned the many advantages following removal to the Sanatorium. As a result all but two of the whole number of 27 consented to become inmates of the institution.

Above is a table giving particulars as to notifications of Scarlet Fever, and the number removed to the Sanatorium during the past 11 years.

TYPHOID FEVER.

Quarter.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Previous 10 Years' average.
1st	4	5	5	4	4	14	5	13	7	1	1	6
2nd ..	10	3	5	3	..	5	8	2	3	2	1	4
3rd	11	2	5	3	1280	8	4	2	4	3	2	132
4th	9	2	6	6	604	8	6	11	7	5	5	66
Year ..	34	12	21	16	1888	35	23	28	21	11	9	209

Typhoid Fever was notified nine times, eight occurring in East Maidstone, and one in West. Three of the former were in one family, and were clearly imported into Maidstone, the original case being removed from the Country into Maidstone for treatment. Of the remaining six, one was due to drinking water from a wayside stream, another was a case that had been notified during the previous year, and had suffered a relapse; one occurred in Barming Asylum among the patients, and when one bears in mind the habits of many lunatics, the cause is not far to seek; two were very mild cases, and the cause of these in common with the remaining one could not be satisfactorily traced. This record of Typhoid Fever is exceedingly

gratifying, it being the lowest number of cases yet notified in Maidstone.

DIPHTHERIA AND CROUP.

Quarter.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Previous 10 years' average.
1st	16	28	18	10	44	40	94	16	25	38	4	32
2nd ..	53	14	8	7	50	24	47	9	18	23	5	25
3rd....	43	17	16	9	83	80	36	9	14	15	2	32
4th....	46	13	30	27	34	96	72	16	25	13	5	37
Year ..	163	72	72	53	211	240	249	50	82	89	16	128
Removed to Sanator'm.	10	4	22	23	122	154	103	34	54	68	11	59

DIPHTHERIA.—Only 16 notifications were received throughout the whole year, and with one exception they were all primary cases. Five occurred in East, and 11 in West Maidstone, three terminated fatally, equalling a case mortality of 18·7; last year it was 10·2.

It will be seen by the accompanying chart that the number of Diphtheria cases for the past year is the lowest on record. The continued decrease extending over four years must be regarded as highly satisfactory, and speaks for itself of the good results proceeding mainly, I venture to say, from the various sanitary measures which have of late years been adopted with a view to relieving the Borough of its unenviable connection with this most contagious and deadly disease. I allude especially to the erection of numerous ventilating shafts along the line of sewers, and to the significant fact that during the last six years, no less than 3,387 water closets have been provided with water supply, and with apparatus for flushing.

In making this statement I am not unmindful of the fact that throughout the past year we had the hygienic advantage of an exceptionally heavy rainfall, which by flushing courts and alleys, drains and gullies, very greatly assisted the efforts we had been making to cleanse and purify the Town by similar means. But while giving full credit to the rainfall of the past year, it should be noted on the other hand that during the three years preceding the year just passed, and therefore prior to the help we have recently received from climatic causes, the number of Diphtheria cases had fallen from a yearly average in 1897-8-9 of 233 to an average in the years 1900-1-2 of only 77. In my last annual report I remarked with much satisfaction that "during the three years (1900-1-2) a total number of only 221 notifications had been received, whereas in the three preceding years (1897-8-9) no less than 700 cases were reported, thus shewing a decrease within the last three years of 479 cases." If we now take the last four years, and compare them with the preceding term of the same duration we find the decrease in that period amounts in the aggregate to more than 500 (516), giving a yearly average decrease of 129.

The value of the prompt removal of initial cases of Diphtheria as early as possible to your Sanatorium with the subsequent disinfection of the premises cannot be too highly estimated. In proof of this I would mention the fact that throughout the year there was only one instance in which a second case occurred in the same family or the same house; this single secondary case resulted from one which had not been sent to the Sanatorium, but had been treated at home. It was notified to me four weeks after the initial one.

Towards the end of November, I received three notifications of cases of Diphtheria occurring among the scholars attending the second standard of the Maidstone Heath School. I visited the premises and inspected the scholars, discovering that some 13 of those in attendance had throat symptoms, although not actually suffering from Diphtheria. Under these circumstances I advised closure of the premises until after the Christmas holidays.

I have prepared the chart as opposite shewing in graphic form the marked diminution of Diphtheria. In the years 1897-8-9 the average number of cases was more than seven for every thousand of the inhabitants, whilst last year it was less than one in two thousand.

SMALL POX.

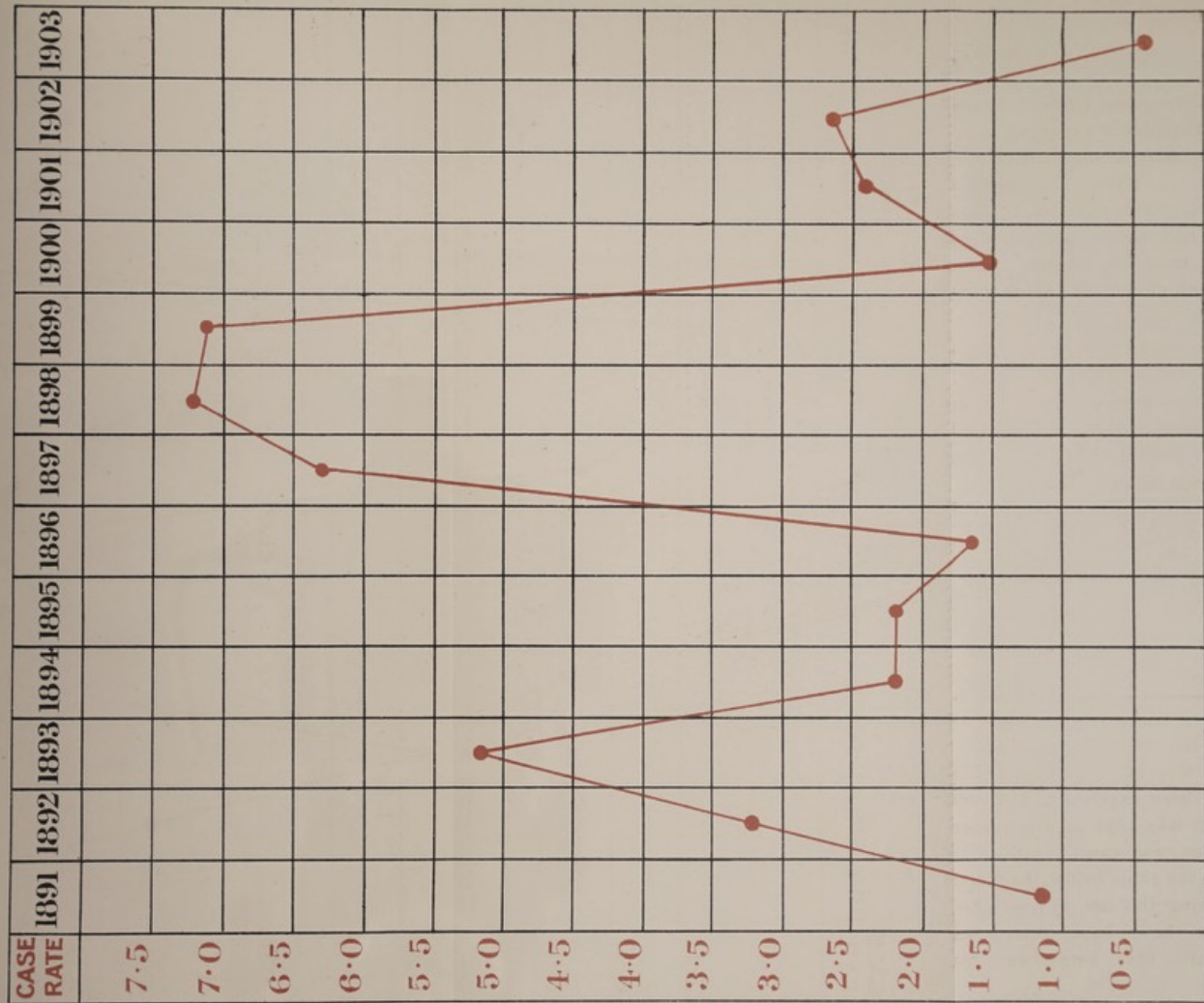
Quarter.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Previous 10 years' average.
1st ...	1	20	..	..	..	..	..	..	..	6	..	2.1
2nd ..	..	4	..	..	..	1	..	..	..	11	..	.5
3rd....	..	4	..	..	..	..	..	..	1	15	..	.5
4th....	1	1	..	..	..	..	..	1	2	..	..	.5
Year ..	2	29	..	..	..	1	..	1	3	32	..	3.6

No case of Small Pox has occurred in the Borough during the past year, but on several occasions I have been notified of the presence of persons returning to their homes who have been exposed to the contagion. In these cases a watch was kept on the suspect until the period of incubation was over.

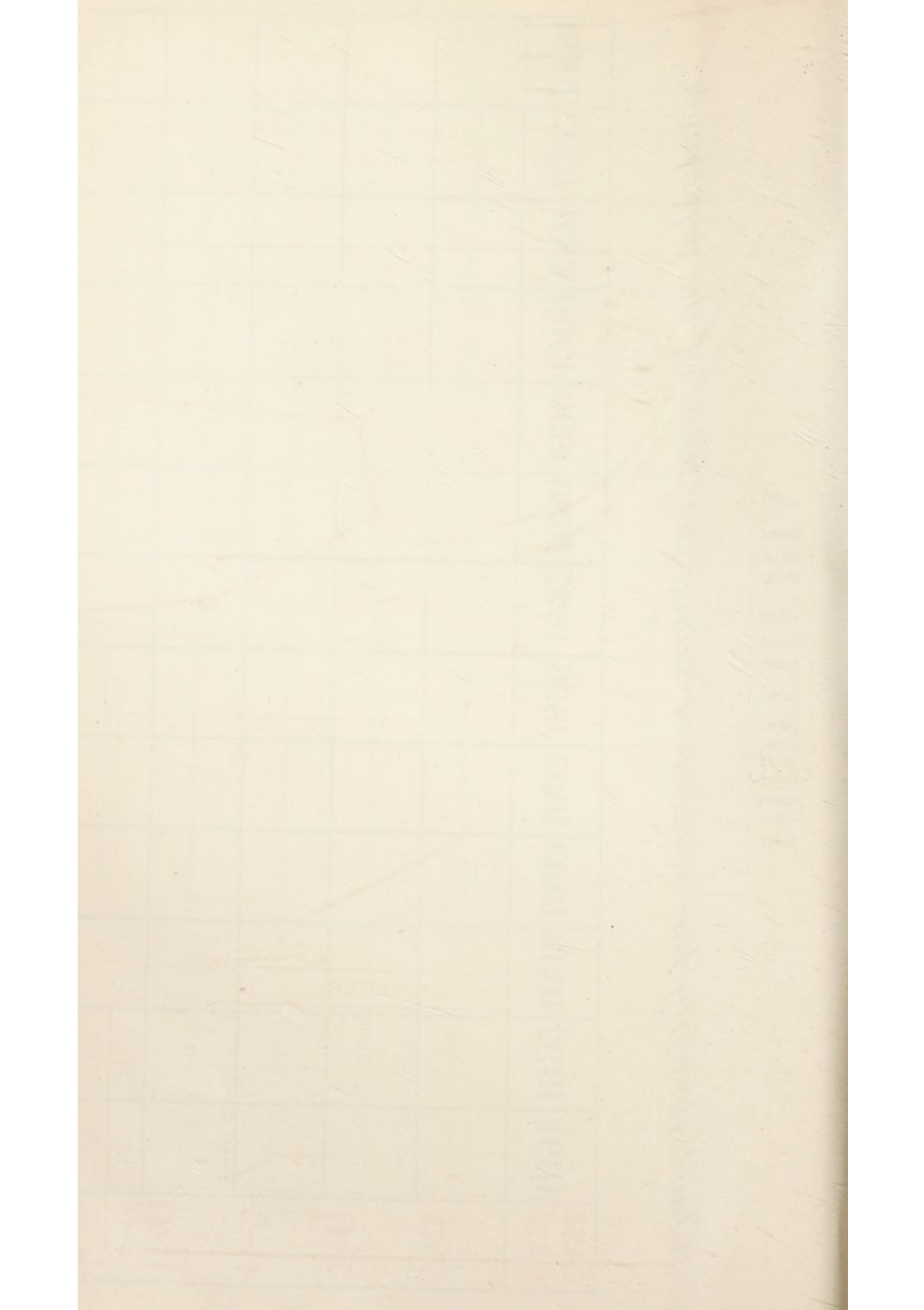
As will be seen from the table below, the Vaccination Acts in Maidstone during the last $2\frac{1}{2}$ years for which statistics are available, have been carried out with more satisfactory results than heretofore; but even

DIPHTHERIA

Chart shewing the number of cases per 1000 of the population.



Case Rate per 1000 of the population —



now, owing very largely to the conscientious objector clause, the number of children unprotected by vaccination from the liability to contract small pox is as high as 16.3 %.

Year.	Births.	Successfully Vaccinated.	Insusceptible to Vaccination.	Had Small Pox.	Died unvaccinated.	Number in respect of whom Certificates of Conscientious Objection have been received.	Vaccination postponed.	Removals.	Remaining.	Children not vaccinated (including cases postponed) per cent. per birth.
1898	716	314	1	..	84	27	41	69	180	44.2
1899	818	433	2	..	64	59	79	87	94	38.9
1900	825	420	1	..	61	35	35	81	192	53.6
1901	763	567	1	..	61	95	2	33	15	19.0
1902	815	649	3	..	63	71	10	16	3	12.2
1903*	411	305	1	..	38	54	7	5	1	16.3

* January to June.

The remaining diseases under the Notification Act are set forth in the following tables and do not call for special comment:—

ERYSIPELAS.

Quarter.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Previous 10 Years' average.
1st	14	13	2	5	2	6	9	3	3	6	10	6
2nd ..	13	4	2	3	2	4	6	5	3	5	4	4
3rd	15	5	7	5	2	7	2	3	3	6	5	5
4th	18	9	6	6	7	12	6	9	8	13	6	9
Year ..	60	31	17	19	13	29	23	20	17	30	25	25

PUERPERAL FEVER.

Quarter.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Previous 10 Years' average.
1st ...	2	3	1	3	3	..	1	..	1	..	1	1.4
2nd ..	2	2	..	..	..	..	1	..	..	1	3	.6
3rd	3	..	..	..	1	..	..	..	..	1	..	.5
4th	2	..	1	..	..	1	1	..	..	2	1	.7
Year ..	9	5	2	3	4	1	3	..	1	4	5	3.2

Reviewing the total number of notifications received during the year, it will at once be seen that the year is remarkable for the small amount of infectious disease present in our midst, only 82 notifications having been received, this being 190 less than the average of the previous 10 years. The notifications of Enteric Fever during the epidemic of 1897 are not included in these calculations.

The detail is set forth in the following tables:—

TOTAL NOTIFICATIONS.

Quarter.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Previous 10 Years' average.
1st ...	66	106	45	30	67	62	126	40	42	73	28	66
2nd ..	168	46	24	27	61	39	79	35	41	51	23	57
3rd ...	156	54	41	28	1370	99	64	21	56	47	14	193
4th....	183	42	72	63	647	118	99	48	115	55	17	144
Year ..	573	248	182	148	2145	318	368	144	254	226	82	460

DISEASE.	Previous 10 Years' average.	1903.
{ Diphtheria	128	16
{ Croup		
Scarlet Fever	87	27
{ Typhoid Fever	209	9
{ Continued Fever.....		
Erysipelas	25	25
Puerperal Fever	3.2	5
Small Pox	3.6	..

THE SANATORIUM.

During the year the following cases have been admitted for treatment, viz.:—

Diphtheria	11
Scarlet Fever.....	25

DIPHTHERIA.—Of the 11 cases admitted to the Sanatorium, three died, equalling a case mortality of 18·7 %. The type of the disease was thus seen to be severe, much more so indeed than last year when the mortality was only 4·4.

SCARLET FEVER.—The type of this disease continued to be of a mild character, not one death occurring. It is most satisfactory to note that of the 27 cases occurring within the whole of the Borough no less than 25 cases were treated in the Sanatorium; this of itself speaks well for the confidence that the inhabitants generally now place in the institution, and the desire they evince to be relieved of the attendant anxieties of isolating children for a period of some six weeks or two months, a precaution, which I need hardly say, is not and cannot be carried out in the limited accommodation of a small cottage.

The number of patients treated in the Sanatorium for the past year and for the previous ten years is as follows:—

DISEASE.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Previous 10 years' average.
Diphtheria	10	4	22	23	122	154	103	34	54	68	11	58
Scarlet Fever	124	45	47	35	17	8	31	34	75	47	25	46
Small Pox	2	28	...	...	...	1	...	1	2	31	...	6
Totals.....	136	77	69	58	139	163	134	69	131	146	36	110

The cost of rations for Staff and Patients is set forth in the following Table:—

Cost of Rations at the Sanatorium for Staff and Patients.

1903.	STAFF.			PATIENTS.				
MONTH.	NO. OF DAYS.	COST. £ s. d.			NO. OF DAYS.	COST. £ s. d.		
January	201	11	16	6	430	18	9	0·5
February	196	11	10	7·5	234	10	0	5
March	217	12	15	4	188	8	12	7
April.....	210	12	7	1	279	11	12	9
May	190	11	3	7	190	8	2	4
June	197	11	11	9	186	8	2	4·5
July	217	12	15	4	126	5	3	7
August.....	217	12	15	4	67	3	12	3·5
September	180	10	11	9	92	3	15	8
October	186	10	18	10·5	37	1	13	11
November	180	10	11	9	39	1	18	6
December.....	186	10	18	10·5	111	5	5	10·5
Total	2377	£139	16	9·5	1979	£86	9	4

GENERAL SANITARY CONDITION AND PROGRESS.

From Mr. Bunting, the Borough Surveyor, I learn that the following works of Sanitary interest have been carried out during 1902:—

New Houses erected	128
Buildings undergone alterations	18
Buildings of the Warehouse class erected .	35

The following Sewer extensions have been made:—

SOIL SEWERS.

Boxley Road	830ft. run.
Loose Road	420ft. „
King Edward Road	680ft. „

SURFACE WATER SEWERS.

Upper Stone Street	385ft. „
College Road	738ft. „
King Edward Road	680ft. „

The following Sewers have been removed and re-laid:—

SOIL SEWERS.

Bower Place	197ft. run.
St. Peter Street.....	499ft. „
Wellington Place	220ft. „

SURFACE WATER SEWER.

Upper Fant Road.....	692ft. „
Total.....	5341ft. „

The routine work of sanitary interest accomplished during the year is set forth in the following table compiled by Mr. Jackling, the chief Sanitary Inspector.

Table showing the number of Houses and other Premises dealt with by Notice or otherwise.

Houses reconstructed	72
Drains repaired or cleansed.....	326
Old Drains trapped from Sewer and Ventilated.....	13
Sink and other Waste Pipes disconnected from drains.....	15
Rain water Pipes disconnected from drains.....	5
Trapped Stoneware Gullies provided in lieu of defective brick and bell traps	77
Manure Pits constructed	4
Cesspools emptied, cleansed, and filled up	17
W.C.'s repaired or cleansed	343
Houses provided with new W.C.'s.....	36
W.C.'s provided with Water supply and Flushing Apparatus..	79
W.C. Basins without flushing rims removed, and new and sufficient Basins substituted	66
Flushing Apparatus Repaired.....	578
Old Pan Closets with containers and "D" traps removed	6
Soil Pipes removed outside Dwellings and ventilated	4
Soil Pipes ventilated	1
Construct or Repair Urinals	13
Remove Water in Cellars	3
Houses provided with Ashpits or Dustbins	93
Houses provided with Shooting or repaired.....	11
Houses Cleansed and Limewashed.....	17
House Roofs repaired	10
Back Yards of Dwellings provided with new Concrete or repaired	49
House Refuse removed on complaint	55
Houses supplied with Company's Water	14
Overcrowding	6
Remove Manure, &c.	5
Remove Pigeons, Poultry, and other animals.....	2
Miscellaneous	19
New Glazed Stoneware pipe Drainage laid	feet 5150
New Cast Iron pipe Drainage laid	feet 286

DAIRIES, COWSHEDS AND MILKSHOPS ORDER, 1885.—New regulations under the above Order have recently been made, and came into force on and after the 1st day of September, 1903. They provide for the inspection of cattle in dairies and for the due lighting, ventilating, cleaning, drainage, and water supply both of cow-sheds and dairies; also for the cleanliness of milk stores, milkshops, and milk vessels.

Frequent inspections have been made under the above order and the instructions issued to milk retailers have been carried out without resort to legal proceedings.

BAKE-HOUSE REGULATION ACT.—The underground bake-houses in the Borough have been dealt with under the Factory and Workshop Act, 1901, the other bake-houses have been regularly inspected, and instructions as to cleanliness, &c., have been complied with by the occupiers.

CANAL BOATS ACT.—The provisions under this Act have been duly complied with. No infectious disease of a severe character has occurred among the occupants of any of the barges coming to Maidstone.

FACTORY AND WORKSHOPS ACT, 1901.—Under the above Act it is incumbent upon the Medical Officer of Health to report to the Home Secretary in addition to the local administrative body on the working of the Act in his district.

The Act has thrown a considerable amount of increased responsibility on the Health Department and it may be of interest to state that the Act deals with four classes of places, viz.:—(1) Factories; (2) Domestic Factories; (3) Workshops, including Domestic

Workshops; (4) and Work-places. For the purposes of the Act, a factory is a place where mechanical power is employed; in a workshop no such mechanical power is used. Domestic factories and domestic workshops are broadly speaking private houses used for purposes of carrying on work, which would otherwise be carried on in a factory or workshop. A work-place is mentioned for the first time in this Act and includes such places as stable-yards, kitchens of restaurants and other places not being private houses where people habitually carry on work.

A register of all workshops in the District has been kept up, as far as possible, in which a record of the cubic space is entered, with the number of work-people allowed to work in each shop. These facts are communicated to the occupier and frequent inspections have been made to see that the regulations as regards cleanliness, air space (250 cubic feet per person, 400 cubic feet during overtime), ventilation and drainage are complied with. Under the Act lists of home-workers, giving their names and addresses are required to be furnished twice yearly, 1st February and 1st August, and copies kept at the place of business. This is with the object of enabling the houses of these people to be inspected as regards cleanliness, air space, &c., and also with the view of checking the spread of infectious disease. At present there is great laxity in returning these particulars, but on receipt of them the houses are duly inspected and any sanitary or other defects remedied.

UNDERGROUND BAKE-HOUSES.—Section 101 of the Act prohibits the use of underground bake-houses after January 1st, 1904, unless they were so used at

the passing of this Act in 1901, and are certified by the District Council as suitable, having regard to construction, light, ventilation, and in all other respects.

Regulations were duly submitted to your Council and approved a copy being forwarded to the occupiers of the ten underground bake-houses in Maidstone. As an outcome of this two have been closed it being practically impossible to make them comply with these regulations; one remains unoccupied; six have had such structural alterations made that they now comply with the regulations, and in due course will receive the usual certificate of suitability, while one is still engaging our attention as to its capability of being made suitable.

METEOROLOGY.

The detail of meteorological observations is set forth in the appendix. The mean reading of the barometer for the year is 30.16 inches, the highest monthly means being for July, 30.43, and the lowest for January, 29.93. The hottest month was July, giving a mean of the maximum readings of the thermometer in the shade of 71.0, and a mean of the minimum readings of 52.0 while the coldest month was December, with a mean of maximum readings of 38.0, and a mean of the minimum readings of 30°. The prevailing winds were S.W., there being 94 days on which the wind was in this quarter. The total rainfall for the year was 37.56 inches, the heaviest amount falling in July, viz., 6.25 inches, while during February and December the amount registered was 1.16 inches and 1.54 inches respectively.

WATER REPORT.

The Borough has been supplied throughout the year with water derived from springs in [the rag-stone at Ewell and from springs in the chalk at Cossington and Boarley. In addition to these supplies, the Borough was receiving water, from January to July, from the deep well at Forstal.

Frequent inspections have been made of the gathering grounds at COSSINGTON. The fences are all in excellent order, the guard houses are standing wear and tear well, and in the enclosures all dead wood and snags have been removed from the soil in the hollow in which these springheads are situated. From the construction and elevation of the several guard-houses, it is impossible for any storm-water to gain access to the manhole. The slight rise of albuminoid ammonia that occurs in this supply is derived from the dense vegetation that covers the surface of the natural filtering medium. The supply from this source was so ample during the latter half of the year that it was not necessary to pump any from the deep well at Forstal.

This supply of water has been chemically examined 43 times during the year. On 26 of these occasions the specimens were collected from the main as near as possible to the gathering grounds, and on no occasion was there evidence, as far as chemical examination could detect, of any marked deviation from the usual standard of this supply. The remaining 17 specimens were collected from various houses in the area supplied by this water; here also the water maintained a constant composition. It is slightly softer than the

other supply from the chalk, viz., Boarley, and contain less nitrogen as nitrates.

AT BOARLEY the springs throughout the year have been in capital order. The turf covering the wells and reservoir is close and unbroken.

The land immediately surrounding No. 1 gathering ground is now covered with pasture, and planted up with gorse and other shrubs, the whole being fenced off from the surrounding arable land. The fences and guard houses of the four gathering grounds are in good repair, and with the exception of a few mole holes in the gathering ground situated on the extreme East, they were all clean and well looked after.

Forty-nine specimens of this supply have been chemically examined, and on all occasions the water maintained a high degree of organic purity, and remained stable in composition, shewing that this supply is dependent on deep springs situated in the chalk, and is not affected chemically by the rainfall.

The water from the deep well at FORSTAL was supplied from January to July and was analysed thirteen times, the specimens being drawn from the main inside the well. The results on all occasions were satisfactory from a chemical point of view, but in January and again in July the water became slightly turbid, due to the admixture of oxide of iron derived from the strata through which the well has been sunk, and subsequently converted into carbonate of iron, this producing a brownish discoloration. Before this supply is delivered to the consumer it becomes mixed with that derived from Cossington, it being pumped into the reservoir at Barming, from which it flows by gravitation to the consumer.

In the early part of the year complaints were received from the neighbourhood of Upper Fant that the water here was turbid. This in some measure was due to dead ends, and these have now been coupled up, which will, it is hoped, prevent a recurrence of this condition.

The mixed supply of Cossington and Forstal water was chemically examined 27 times, and on all occasions the results obtained corresponded to the chemical composition of the individual waters.

THE EWELL WATER.—I have from time to time visited the reservoir and the filter beds at Farleigh. All the water derived from this source has been filtered before delivery, and the filter beds have been working well throughout the year. The reservoir and filters are so protected by a parapet that it is impossible for surface water to gain access from the surrounding higher ground. I have examined the clear water tank holding the water immediately before it flows into the pump hole prior to being pumped into the mains, and on all occasions I found it well protected from surface influences, the water being clear, with no scum on the surface or deposit at the bottom. The water has been chemically examined 53 times, and with one exception, viz., in April, the water remained uniformly clear and of a high standard of organic purity.

The detail of the various Chemical Analyses, 185 in number, appears in the Appendix. I have brought together in a table as below the average results of the Weekly Analyses of the year, and this forms the Local Standard of Purity of the water.

NAME OF SUPPLY.	BOARLEY.	COSSINGTON.	EWELL.	FORSTAL.	COSSINGTON AND FORSTAL MIXED.
Total Solids	41·3	39·5	40·9	43·2	43·8
Chlorine	2·4	2·5	3·0	3·1	2·4
Nitrogen as Nitrates	·597	·421	·523	·061	·333
Free Ammonia	·00	·00	·00	·00	·00
Albuminoid Ammonia	·00	·00	·009	·00	·00
Oxygen absorbed in 4 hours	·004	·006	·006	·006	·005
Hardness, Total	2·07	19·9	20·0	24·9	21·4
„ Perm.	6·0	5·4	6·5	7·2	5·9
Colour and appearance in 2-foot tube	clear	clear	clear	clear	clear
Smell	none	none	none	none	none
Phosphoric Acid	none	none	none	none	none

☛ All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million.

QUEEN'S ROAD SUPPLY OF WATER.—As mentioned in my report of last year the water here was of a very inferior quality and deficient in quantity. On one occasion the water drawn from a well situated in Sling's Wood was so grossly contaminated that it was necessary to prohibit the use of this supply until the well had been cleansed.

Arrangements are now in hand and will I am informed by the Engineer of the Waterworks Company be shortly completed to supply this high-level area with water derived from Ewell, and pumped into a reservoir situated on the highest part of this ground from whence it will flow by gravitation to the surrounding houses. For emergencies and during flood times at Ewell, the water will be pumped from the reservoir at Barming, this reservoir being supplied with water from Cossington.

WATER FROM PRIVATE WELLS.—In consequence of a case of Diphtheria occurring in the Broadway the water supply was enquired into and found to be

derived from a well situate in the adjoining yard. The water on analysis was not satisfactory, the occupier was instructed accordingly and advised to boil it before use. That derived from Sling's Wood and Church Street, Tovil, were both grossly contaminated and arrangements are being made for the Company's water to be laid on.

Below is a table giving the results of these Analyses:—

1903.	Source.	Total.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot tube.	Smell.	Phosphoric Acid.
					Free.	Alb.		Total.	Perm.			
April 28	Pump, Broadway	75.0	3.7	1.444	.00	.03	.003	25.4	12.3	clear	none	none
June 8	Hills' Cottages.	73.6	3.6	1.111	.00	.01	—	27.8	11.6	*	„	free
Aug. 8	Sutton Road ...	40.9	3.0	.732	.02	.01	.008	20.8	5.6	clear	„	free
Oct. 17	Hills' Well	78.0	4.4	.678	.00	.01	.010	27.0	13.5	clear	„	none
Nov. 2	Sling's Wood ...	53.2	9.5	.217	.07	.06	.02	25.2	10.0	†	„	free
Dec. 21	Church Street, Tovil	75.3	9.6	.164	.00	.03	.004	22.1	12.8	clear	„	none

* Very slight discolouration. † Very turbid, with brown deposit.

MIDWIVES ACT, 1902.

Under the provisions of the above Act, the Maidstone Urban District Council becomes the Local Supervising Authority over all persons using the title of Midwife, or acting as such within the Borough. In order to give due notice of the requirements of the Act, and to obtain the names of those practising, an advertisement was inserted in the "Kent Messenger," under date of October 22nd, 1903, asking that the names of persons acting as Midwives within the district should be forwarded to your Medical Officer of Health.

In addition to this, personal enquiries were made of all medical men practising within the Borough who

might be cognisant of women acting as Midwives. As a result, 25 sent in their names for "registration."

A meeting of these nurses was held at the Town Hall on November 20th, 1903, when the provisions of the Act and the rules, as made by the Central Midwives' Board, regulating the practice of Midwives, were fully explained and a copy of the rules handed to each applicant, free of charge, together with a book of forms and certificates for use in applying for registration and an abstract of the Act.

The practice of each woman applying to be registered was personally enquired into, especially as regards the statement of having been in *bonâ-fide* practice as a Midwife for at least one year prior to July 31st, 1902.

Each one of the twenty-five had complied with this condition, but on enquiry as to previous training seven only could produce evidence of having had any regular instruction and training in a Hospital or Lying-in Institution. The absence of instruction, however, does not debar any of these women from using the title of Midwife until April, 1905, and these same untrained women may until April, 1910, attend women in childbirth habitually and for gain without being registered, provided they do not take or use the title of Midwife.

The privilege of being registered involves submission to the supervision of their work and compliance with certain rules. Nearly one half of the applicants referred to were not willing to submit to these conditions, and consequently only 14, approximately, will apply to be registered.

CONCLUSION.

Referring generally to the Public Health of the Borough during the past year, allow me to direct your attention to a few salient facts of practical interest—(1) Only nine cases of TYPHOID FEVER were notified during the whole year, being fewer than in any year since the Notification Act was adopted in 1890. (2) The notifications of Diphtheria were also considerably less than in any previous year, and have gradually fallen from 249 cases in the year 1899 to 16 cases in the past year. (3) The total number of notifiable Zymotic diseases during the year reached the very low figure of 82, being 190 less than the average of the previous ten years, after excluding the cases due to the Typhoid Epidemic.

These facts taken together enable me to report further that the total number of notifications of infectious disease for the past year and also the Annual Death Rate for all causes for the same period are the lowest the Borough has hitherto reached. They mark the year conspicuously as one in which the inhabitants have been largely protected from preventable disease and shew that the means adopted for improving the sanitation of the Borough have produced highly satisfactory results.

I have the honour to be,

Mr. Mayor and Gentlemen,

Your obedient Servant,

C. PYE OLIVER.

Westdene, Maidstone,

March 28th, 1904.

BOROUGH OF MAIDSTONE, 1903.

GENERAL SUMMARY.

POPULATION (estimated to the middle of 1903)		33,832
NUMBER OF INHABITED HOUSES		6,648
AVERAGE NUMBER OF PERSONS TO A HOUSE		5·04
AREA	{ East Maidstone 2019 acres West ,, 1989 ,, }	4008 acres
DENSITY.....		8·4 persons per acre
ANNUAL BIRTH RATE	per 1000	23·9
ANNUAL DEATH RATE	,,	12·94
ZYMOTIC DEATH RATE	,,	·88
PHTHISIS, & OTHER 'TUBERCULAR DISEASES' DEATH RATE	,,	1·33
RESPIRATORY DEATH RATE	,,	1·5
INFANTILE DEATH RATE PER 1000 BIRTHS		134
BIRTHS	{ Males 428 Females 382 }	810
DEATHS	{ Males 243 Females 195 } 438 { East Maidstone 227 West ,, 211 }	438
EXCESS OF BIRTHS OVER DEATHS		372

ELEVATION.—The population reside at a mean Elevation of 70 feet above the sea level, ranging from 20 to 120.

AREA.—The area of 4,008 acres is divided into two divisions, by Week Street, Gabriel's Hill, and Stone Street; all to the West, including the Western sides of those Streets, constituting West Maidstone; the Eastern portion forming East Maidstone.

TABLE I.—FOR WHOLE DISTRICT.

YEAR.	Population estimated to middle of each year.	BIRTHS.		TOTAL DEATHS REGISTERED.				TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	Deaths of Non-residents registered in Public Institutions.	Deaths of Residents registered in Public Institutions belonging to the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
		Number.	Rate.*	Under 1 Year of Age.		At all Ages.					Number.	Rate.*
				Number.	Rate per 1,000 Births register'd.	Number.	Rate.*					
1	2	3	4	5	6	7	8	9	10	11	12	13
1893.	32,458	791	21.04	87	111	621	19.1	238	150	57	528	16.1
1894.	32,585	862	26.45	110	128	679	20.8	229	164	55	575	17.6
1895.	32,714	830	23.57	107	129	667	20.3	230	165	46	502	15.3
1896.	32,846	818	24.90	108	133	649	19.7	200	150	38	499	15.1
1897.	32,982	765	23.19	105	138	848	25.7	279	242	50†	656	19.8
1898.	33,121	714	21.55	108	152	660	20.5	236	214	50†	496	15.4
1899.	33,262	820	24.65	106	129	702	21.1	179	168	50†	578	17.3
1900.	33,305	813	24.41	94	115	710	21.3	313	215	53	548	16.4
1901.	33,548	762	22.71	101	132	640	19.0	272	197	39	482	14.3
1902.	33,717	792	23.50	92	117	632	18.5	313	222	60	470	14.2
Averages for years 1893-1902.	33,053	796	23.59	101	128	680	20.6	248	188	49	533	16.1
1903.	33,832	810	23.94	104	128	617	18.2	260	227	48	438	12.9

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population. † Estimated.

NOTE.—The deaths included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there—these institutions are: (1) The Kent County Asylum, Barming; (2) West Kent General Hospital, Maidstone; (3) Ophthalmic Hospital, Maidstone; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere, viz.: Union Workhouse, Coxheath.

The "Public institutions" taken into account for the purposes of these Tables are those into which persons are habitually received on account of infirmity, such as hospitals, workhouses and lunatic asylums.

Area of District in acres }
(exclusive of area } 4,008 acres.
covered by water.)

Total population at all ages 33,516 } At Census
Number of inhabited houses 6,648 }
Average number of persons per house 5.04 } of 1901.

TABLE II.
Cases of Infectious Disease Notified during the Year 1903.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.				No. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.	
	At all Ages.	At Ages—Years.						East Maidstone	West Maidstone	East Maidstone	West Maidstone		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and up-wards.						
Small Pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	16	..	3	12	1	..	..	5	11	4	7	..	..
Membranous Croup..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	25	1	1	2	2	15	4	11	14	..	..	..	..
Scarlet Fever	27	1	3	19	3	1	..	12	15	10	15	..	..
Typhus Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	9	..	..	3	1	5	..	7	2	..	..	..	..
Relapsing Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	5	..	..	..	..	5	..	4	1	..	..	..	..
Plague .....	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	82	2	7	36	7	26	4	39	43	14	22	..	..

H—denotes that the Isolation Hospital for Infectious Diseases is situated in West Maidstone.

TABLE III.

Causes of, and Ages at, Death during Year 1903.

CAUSES OF DEATH.	DEATHS IN WHOLE DISTRICT AT SUBJINED AGES.							DEATHS IN LOCALITIES (AT ALL AGES).		DEATHS IN PUBLIC INSTITUTIONS
	All Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	East Maidstone	West Maidstone	
Small Pox .....	...	...	...	...	...	...	...	...	...	...
Measles	11	5	5	1	...	...	...	3	8	...
Scarlet Fever .....	...	...	...	...	...	...	...	...	...	...
Typhus Fever .....	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	3	...	...	...	...	1	2	2	1	...
Whooping Cough.....	9	6	3	...	...	...	...	6	3	...
Diphtheria, Membranous Croup ...	3	...	2	1	...	...	...	...	3	2
Croup .....	...	...	...	...	...	...	...	...	...	...
Enteric Fever	1	...	...	...	...	1	...	1	...	1
Asiatic Cholera.....	...	...	...	...	...	...	...	...	...	...
Diarrhœa, Dysentery	6	4	...	...	...	...	2	4	2	...
Epidemic or Zymotic Enteritis .....	...	...	...	...	...	...	...	...	...	...
Enteritis.....	1	...	...	...	...	1	...	1	...	1
Other continued Fevers .....	...	...	...	...	...	...	...	...	...	...
Erysipelas	1	...	...	...	...	1	...	...	1	...
Puerperal Fever	2	...	...	...	...	2	...	...	2	1
Other Septic Diseases	1	...	...	...	...	1	...	1	...	5
Intermittent Fever and Malarial Cachexia .....	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Meninges.....	1	...	1	...	...	...	...	1	...	2
Tuberculosis of Lungs	38	...	1	1	10	24	2	17	21	55
Other forms of Tuberculosis	6	...	...	1	1	4	...	4	2	11
Alcoholism.....	...	...	...	...	...	...	...	...	...	...
Cancer.....	24	...	...	...	...	14	10	19	5	6
Premature Birth.....	20	20	...	...	...	...	...	9	11	...
Developmental Diseases	1	1	...	...	...	...	...	1	...	...
Old Age	38	...	...	...	...	...	38	21	17	...
Meningitis.....	8	1	2	4	1	...	...	4	4	...
Inflammation & Softening of Brain.	3	...	...	...	...	...	3	...	3	...
Organic Diseases of Heart	44	...	...	2	2	24	16	18	26	50
Acute Bronchitis	14	8	3	...	...	3	...	7	7	2
Chronic Bronchitis	12	...	...	...	...	2	10	5	7	6
Lobar (Croupous) Pneumonia.....	11	...	...	...	2	6	3	8	3	13
Lobular (Broncho-) Pneumonia	15	5	8	1	...	...	1	8	7	2
Diseases of Stomach	5	1	...	...	...	4	...	3	2	...
Obstruction of Intestines.....	...	...	...	...	...	...	...	...	...	1
Cirrosis of Liver	7	...	...	...	...	5	2	4	3	1
Nephritis and Bright's Disease	12	...	1	...	...	10	1	7	5	12
Tumours and Other Affections of Female Genital Organs .....	...	...	...	...	...	...	...	...	...	...
Accidents & Diseases of Parturition.	5	...	...	...	3	2	...	2	3	...
Deaths by Accident or Negligence..	11	4	1	2	...	3	1	7	4	8
Deaths by Suicide	5	...	...	...	...	4	1	1	4	...
Deaths from Ill-defined Causes	15	7	...	...	...	7	1	9	6	1
All other Causes	105	45	5	2	...	24	29	54	51	80
All Causes.....	438	107	32	15	19	143	122	227	211	260

TABLE IV.—BOARLEY WATER.

Source of Sample.	Date of Collection.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.			Hardness.		Colour and appearance in 2-foot Tube.	Smell.	Phosphoric Acid.
					Free.	Albu- minoid.	Oxygen absorbed in 4 hrs. at 80° F.	Total.	Perman't.			
Sandling Road ...	Jan. 5th...	39.8	2.8	.612	.00	.01	.005	26.4	8.1	clear	none	none
" "	" 19th...	39.2	2.4	.602	.01	.01	.003	26.5	8.3	"	"	"
" "	" 26th...	49.0	2.3	.584	.00	.01	.003	22.0	7.2	"	"	v.s.l.t.
" "	Feb. 2nd...	45.9	2.6	.691	.00	.00	.004	23.5	7.9	"	"	traces
20, Brewer Street	" 9th...	48.1	2.5	.405	.00	.01	.003	25.3	9.5	"	"	traces
Sandling Road ...	" 16th...	44.0	2.4	.502	.00	.01	.003	24.8	6.0	"	"	v.s.l.t.
Union Street	" 23rd...	40.2	2.4	.613	.00	.01	.004	25.0	8.7	"	"	"
Sandling Road ...	Mar. 3rd...	38.0	2.5	.578	.00	.02	.003	27.8	7.1	"	"	"
Randall Street ...	" 9th...	37.6	2.5	.823	.00	.01	.003	21.8	5.9	"	"	"
Sandling Road ...	" 16th...	44.4	2.4	.807	.01	.01	.005	19.2	5.6	"	"	free
Union Street	" 23rd...	39.4	2.4	.672	.00	.01	.003	21.2	5.6	"	"	"
Sandling Road ...	" 30th...	42.4	2.4	.636	.00	.03	.003	18.7	4.9	"	"	"
31, King Street...	Apr. 6th...	32.6	2.5	.724	.00	.00	.003	19.9	6.2	"	"	"
Sandling Road ...	" 13th...	40.0	2.4	.763	.00	.00	.003	17.2	5.4	"	"	"
" "	" 27th...	37.6	2.4	.588	.00	.00	.003	19.0	5.4	"	"	"
38, Sandling Road	May 4th...	40.4	2.6	.617	.00	.02	.004	19.0	4.7	"	"	"
Sandling Road ...	" 11th...	37.4	2.5	.514	.00	.00	.003	19.0	5.0	"	"	"
16, Boxley Road ...	" 18th...	34.6	2.3	.481	.00	.00	.004	19.6	4.5	"	"	"
Sandling Road ...	" 25th...	39.6	2.5	.732	.00	.00	.004	20.7	5.2	"	"	"
7, Boxley Road...	June 2nd...	46.6	2.6	.778	.00	.00	.004	19.8	5.7	"	"	"
Sandling Road ...	" 8th...	45.4	2.6	.617	.00	.01	.004	20.0	5.9	"	"	"
23, Perryfield St..	" 16th...	45.4	2.7	.876	.00	.00	.004	19.0	4.9	"	"	"
Sandling Road ...	" 22nd...	45.0	2.5	.865	.00	.00	.004	21.6	6.6	"	"	"
90, Sandling Road	" 29th...	41.6	2.6	.942	.00	.01	.005	19.4	5.5	"	"	"
Sandling Road ...	July 6th...	40.0	2.5	.765	.00	.00	.004	20.0	5.7	"	"	"
3, Hope Street ...	" 13th...	40.6	2.5	.674	.01	.02	.006	18.4	5.2	"	"	"
Sandling Road ...	" 20th...	42.6	2.6	.777	.00	.01	.005	19.4	5.7	"	"	"
20, Albert Street.	" 27th...	40.7	2.7	.709	.00	.00	.004	20.0	5.8	"	"	"
Sandling Road ...	Aug. 4th...	41.8	2.6	.734	.00	.00	.004	20.6	5.3	"	"	"
Sharp's Yard	" 11th...	42.7	2.4	.827	.00	.01	.007	19.2	5.0	"	"	"
Sandling Road ...	" 18th...	44.4	2.5	.860	.00	.00	.005	19.8	5.4	"	"	"
24, Scott Street...	" 24th...	40.7	2.5	.772	.00	.01	.008	19.1	4.6	"	"	"
Sandling Road ...	" 31th...	40.5	2.5	.503	.00	.00	.009	26.8	7.7	"	"	"
50, Sandling Road	Sept. 7th...	42.2	2.6	.471	.00	.00	.004	27.0	5.6	"	"	"
Sandling Road ...	" 14th...	41.8	2.5	.576	.00	.02	.005	19.6	6.0	"	"	v.s.l.t.
Perry Street	" 21st...	40.6	2.5	.544	.00	.01	.008	18.0	5.3	"	"	free
Sandling Road ...	" 28th...	45.6	2.6	.415	.00	.02	.007	20.2	6.3	"	"	"
7, Woollett Street	Oct. 5th...	41.6	2.5	.559	.00	.01	.007	19.6	5.3	"	"	"
Sandling Road ...	" 13th...	42.4	2.5	.464	.01	.02	.008	19.4	5.8	"	"	"
19, Brewer Street	" 19th...	36.6	2.5	.559	.00	.01	.005	20.4	5.7	"	"	"
Sandling Road ...	" 26th...	40.0	2.5	.337	.00	.01	.006	19.0	5.5	"	"	"
24, Alexandra St.	Nov. 2nd...	42.5	2.5	.382	.00	.00	.007	19.0	6.1	"	"	"
Sandling Road ...	" 10th...	41.5	2.5	.411	.01	.01	.006	19.8	5.9	"	"	v.s.l.t.
" "	" 23rd...	41.3	2.4	.493	.00	.00	.005	19.9	5.5	"	"	abs'nt
Sharp's Yard, King Street ...	" 30th...	41.0	2.6	.197	.00	.00	.003	18.5	5.1	"	"	none
Sandling Road ...	Dec. 7th...	40.8	2.6	.559	.00	.00	.005	19.9	5.9	"	"	"
2, Astley Street..	" 14th...	40.8	2.7	.329	.00	.01	.003	18.7	7.3	"	"	"
Sandling Road ...	" 21st...	39.5	2.5	.230	.00	.00	.006	21.2	6.8	"	"	"
95, Union Street..	" 28th...	40.0	2.7	.164	.00	.01	.006	19.8	8.3	"	"	"
Mean results for 1903.		41.3	2.4	.597	.00	.00	.004	20.7	6.0	clear	none	none

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million.

TABLE V.—COSSINGTON WATER.

Source of Sample.	Date of Collection.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot tube.	Smell.	Phosphoric Acid.
					Free.	Albuminoid.		Total.	Perman't.			
Near Gath. Gnds.	Jan. 12th...	38.2	2.6	.621	.01	.01	.004	23.4	7.1	clear	none	none
"	" 26th...	38.5	2.4	.740	.00	.02	.005	23.0	6.5	"	"	v.s.l.t.
"	Feb. 9th...	37.8	2.4	.598	.00	.01	.004	29.1	8.8	"	"	traces
"	" 23rd...	34.2	2.2	.312	.00	.01	.003	24.6	7.7	"	"	v.s.l.t.
"	Mar. 9th...	35.2	2.2	.461	.01	.02	.006	19.8	4.8	"	"	free
"	" 23rd...	35.8	2.1	.395	.01	.02	.006	19.6	4.3	"	"	"
"	April 6th...	38.2	2.3	.416	.00	.01	.006	18.5	5.7	"	"	"
"	" 20th...	40.2	2.3	.477	.00	.01	.005	17.6	4.3	"	"	"
"	May 4th...	41.2	2.2	.350	.00	.00	.006	17.8	3.7	"	"	"
"	" 18th...	34.8	2.4	.520	.00	.01	.005	20.4	3.7	"	"	"
"	June 2nd...	40.0	2.5	.444	.00	.01	.006	19.0	4.9	"	"	"
"	" 16th...	42.4	2.3	.485	.00	.00	.006	18.4	6.5	"	"	"
Medway Street...	" 16th...	42.6	2.6	.246	.00	.01	.007	19.6	5.5	"	"	"
24, Ch.-st., Tovil.	" 22nd...	37.6	2.5	.464	.01	.01	.007	20.8	5.7	"	"	"
Near Gath. Gnds.	" 29th...	43.2	2.4	.526	.00	.00	.007	19.6	4.9	"	"	"
124, Tonbridge Rd.	" 29th...	46.4	2.4	.543	.00	.00	.007	19.8	4.6	"	"	"
Near Gath. Gnds.	July 13th...	42.8	2.3	.427	.01	.00	.005	18.2	4.9	"	"	"
"	" 27th...	42.8	2.3	.460	.00	.02	.007	19.6	5.2	"	"	"
40, Up. Fant Rd.	" 27th...	43.1	2.4	.485	.00	.02	.007	19.8	5.4	"	"	"
St. Luke's Vic'ge.	Aug. 4th...	43.2	2.4	.468	.00	.01	.005	20.0	4.8	"	"	"
Near Gath. Gnds.	" 11th...	40.8	2.2	.485	.00	.01	.008	19.6	4.5	"	"	"
Muir Road	" 11th...	41.2	2.2	.448	.00	.01	.009	19.0	4.8	"	"	"
198, Up. Fant Rd.	" 18th...	40.8	2.3	.448	.00	.01	.007	19.0	4.6	"	"	"
Near Gath. Gnds.	" 24th...	39.8	2.3	.415	.00	.01	.009	18.4	5.1	"	"	"
44, Faith Street...	" 31st...	36.5	2.8	.460	.00	.02	.008	24.7	6.9	"	"	"
Near Gath. Gnds.	Sept. 7th...	37.2	2.4	.251	.005	.008	.007	27.4	4.7	"	"	"
65, Up. Fant Rd.	" 14th...	38.8	2.3	.271	.00	.00	.008	20.4	4.8	"	"	"
Near Gath. Gnds.	" 21st...	41.0	2.3	.370	.00	.01	.006	18.1	4.0	"	"	"
40, Ch.-st., Tovil.	" 28th...	43.8	2.3	.283	.00	.00	.008	19.6	4.7	"	"	"
Near Gath. Gnds.	Oct. 5th...	39.2	2.3	.271	.00	.00	.008	19.2	5.5	"	"	"
155, Milton Street	" 13th...	40.2	2.3	.246	.00	.00	.009	18.4	5.5	"	"	"
Near Gath. Gnds.	" 18th...	42.8	2.3	.444	.00	.01	.008	18.2	6.2	"	"	"
26, Canning St....	" 26th...	41.6	2.3	.189	.00	.01	.008	18.0	5.8	"	"	"
Near Gath. Gnds.	Nov. 2nd...	41.6	2.3	.254	.00	.00	.008	18.8	5.6	"	"	"
5, Union Street...	" 10th...	41.6	2.4	.345	.00	.01	.008	20.4	5.3	"	"	"
Near Gath. Gnds.	" 16th...	41.8	2.2	.460	.00	.01	.006	17.8	6.0	"	"	"
26, John Street...	" 16th...	41.6	2.2	.460	.00	.01	.008	17.9	6.0	"	"	traces
25, Hedley Street	" 23rd...	35.8	2.4	.164	.00	.00	.007	18.8	4.9	"	"	trace
Near Gath. Gnds.	" 30th...	35.0	2.4	.230	.00	.00	.008	17.8	5.9	"	"	none
47, Wheeler St. ...	Dec. 7th...	35.8	2.3	.395	.00	.03	.001	18.8	5.7	"	"	"
Near Gath. Gnds.	" 14th...	35.8	2.4	.441	.00	.01	.005	18.4	7.1	"	"	"
23, Fairmeadow...	" 21st...	34.6	2.6	.263	.00	.01	.005	21.5	6.7	"	"	"
Near Gath. Gnds.	" 28th...	35.7	2.8	.106	.00	.02	.005	19.8	6.9	"	"	"
Mean results for 1903.		39.5	2.5	.421	.00	.00	.006	19.9	5.4	clear	none	free

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million,

TABLE VI.—EWELL WATER.

Source of Sample.	Date of Collection.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot tube.	Smell.	Phosphoric Acid.
					Free.	Albuminoid.		Total.	Perman't.			
Farleigh Lane ...	Jan. 5th...	37.6	3.3	.707	.00	.01	.004	25.1	9.2	clear	none	none
"	" 12th...	40.1	4.0	.847	.00	.01	.005	23.8	7.4	"	"	"
"	" 19th...	38.6	3.2	.792	.005	.01	.004	26.2	9.2	"	"	"
"	" 26th...	47.0	3.2	.681	.00	.01	.002	20.7	7.0	"	"	v. sl. t.
"	Feb. 2nd...	42.0	3.1	.634	.00	.03	.007	22.5	11.6	"	"	free
"	" 9th...	38.7	3.0	.350	.00	.01	.003	25.7	11.4	"	"	traces
"	" 16th...	45.4	3.4	.534	.00	.01	.005	24.0	7.8	"	"	v. sl. t.
"	" 23rd...	37.0	3.2	.625	.00	.00	.002	25.2	9.4	"	"	"
"	Mar. 3rd...	39.8	3.0	.389	.00	.01	.005	23.4	10.0	"	"	"
"	" 9th...	36.6	3.2	.538	.00	.01	.004	17.6	7.9	"	"	free
"	" 16th...	42.4	3.1	.749	.00	.00	.003	18.8	7.2	"	"	"
"	" 23rd...	41.0	3.1	.748	.00	.00	.003	17.6	5.1	"	"	"
"	" 30th...	33.4	3.1	.674	.00	.01	.006	17.6	5.3	"	"	"
"	April 5th...	39.8	3.0	.740	.00	.00	.006	19.0	7.1	"	"	"
"	" 20th...	39.2	3.1	.696	.00	.00	.004	15.2	6.6	"	"	"
"	" 27th...	37.2	3.1	.678	.00	.05	.008	16.0	5.2	v. sl. t.	"	"
"	May 4th...	38.4	3.2	.510	.00	.01	.005	16.4	5.9	clear	"	"
"	" 11th...	43.0	3.2	.386	.00	.01	.005	17.0	4.8	"	"	"
"	" 18th...	39.7	3.1	.596	.00	.00	.005	17.4	5.5	"	"	"
"	" 26th...	38.7	3.3	.718	.00	.00	.007	21.2	5.6	"	"	"
"	June 2nd...	38.2	3.2	.464	.01	.02	.005	18.4	6.1	"	"	"
"	" 8th...	48.0	3.2	.572	.00	.01	.007	17.8	5.7	"	"	"
"	" 16th...	41.4	3.2	.637	.01	.01	.006	18.0	4.6	"	"	"
"	" 22nd...	40.8	3.1	.723	.01	.00	.006	19.2	6.5	"	"	"
"	" 29th...	45.4	3.2	.633	.00	.00	.006	18.2	5.4	"	"	"
"	July 6th...	42.4	3.2	.597	.00	.00	.006	18.2	6.2	"	"	"
"	" 13th...	39.9	3.1	.502	.00	.00	.004	17.2	5.3	"	"	"
"	" 20th...	43.0	2.3	.444	.02	.04	.010	19.0	5.1	"	"	"
"	" 22nd...	43.4	3.2	.625	.00	.01	.007	18.6	5.8	"	"	"
"	" 27th...	41.6	3.1	.567	.00	.01	.009	18.4	5.3	"	"	"
"	Aug. 4th...	40.6	3.2	.672	.00	.01	.007	19.6	5.3	"	"	"
"	" 11th...	43.6	3.1	.582	.00	.01	.007	18.4	5.8	"	"	"
Half Yoke Farm.	" 18th...	42.6	3.1	.567	.00	.00	.009	17.8	5.6	"	"	"
Farleigh Lane ...	" 24th...	42.6	3.2	.596	.00	.01	.009	17.4	5.9	"	"	"
"	" 31st...	41.0	3.2	.449	.00	.01	.005	24.8	9.4	"	"	sl. tr.
"	Sept. 7th...	34.4	2.4	.372	.00	.01	.009	25.7	5.9	"	"	abs'nt
"	" 14th...	46.0	2.4	.333	.00	.02	.009	19.8	4.6	"	"	free
"	" 21st...	37.6	2.5	.288	.01	.02	.009	19.2	4.2	"	"	"
"	" 28th...	40.8	3.0	.263	.00	.01	.009	19.2	5.3	"	"	"
"	Oct. 5th...	46.0	2.5	.230	.00	.00	.007	20.2	5.2	"	"	"
"	" 13th...	49.4	2.5	.329	.00	.01	.007	20.0	4.7	"	"	"
"	" 18th...	48.4	3.1	.304	.00	.02	.008	17.4	5.8	"	"	"
"	" 26th...	39.8	2.3	.164	.00	.01	.009	18.6	5.0	"	"	"
"	Nov. 2nd...	38.2	2.4	.370	.00	.01	.009	18.4	5.2	"	"	"
"	" 10th...	39.2	3.1	.391	.00	.01	.008	18.6	5.5	"	"	"
"	" 16th...	38.2	3.1	.559	.00	.02	.009	18.0	9.1	"	"	abs'nt
"	" 23rd...	41.0	3.2	.493	.00	.00	.008	18.1	6.8	"	"	"
"	" 30th...	40.0	2.9	.175	.00	.00	.009	18.0	5.7	"	"	none
"	Dec. 7th...	41.0	2.4	.444	.00	.01	.007	19.8	5.6	"	"	"
"	" 14th...	41.1	3.1	.609	.00	.00	.005	18.1	7.9	"	"	nil
"	" 21st...	40.0	3.2	.181	.00	.01	.004	19.8	7.8	"	"	none
"	" 28th...	39.5	2.9	.148	.00	.01	.007	20.6	7.4	"	"	abs'nt
Mean results for 1903.		40.9	3.0	.523	.00	.009	.006	20.0	6.5	clear	none	free

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million.

TABLE VII.—FORSTAL WATER.

Source of Sample.	Date of Collection.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot Tube.	Smell.	Phosphoric Acid.
					Free.	Albuminoid.		Total.	Perman't.			
Well	Jan. 5th...	44.3	3.2	.060	.01	.01	.002	27.2	9.2	clear	none	none
"	" 19th...	40.4	3.4	.06	.00	.01	.005	27.5	9.1	sl. t'd.	"	"
"	Feb. 2nd...	45.8	2.8	.037	.00	.02	.006	29.6	9.7	clear	"	free
"	" 16th...	44.4	3.1	.049	.01	.01	.005	29.3	8.9	"	"	v.sl.t.
"	Mar. 3rd...	42.1	3.1	.049	.00	.00	.006	30.2	8.6	"	"	none
"	" 16th...	39.8	3.2	.098	.01	.01	.007	23.8	6.9	"	"	free
"	" 30th...	46.0	3.0	.065	.01	.02	.003	27.0	8.8	"	"	"
"	Apr. 13th...	42.5	3.0	.017	.00	.01	.005	18.8	6.1	"	"	"
"	" 27th...	41.4	3.2	.098	.00	.01	.009	21.6	4.5	"	"	"
"	May 11th...	48.7	3.2	.086	.00	.00	.006	22.6	4.8	"	"	"
"	" 26th...	39.8	3.2	.092	.00	.00	.009	19.0	5.0	"	"	"
"	June 8th...	48.6	3.1	.069	.00	.00	.008	24.2	6.8	sl.b.d.	"	"
"	July 6th...	44.0	3.1	.070	.00	.01	.007	23.0	6.1	sl.dis.	"	"
Mean results for 1903.		43.2	3.1	.061	.00	.00	.006	24.9	7.2	clear	none	free

TABLE VIII.—COSSINGTON AND FORSTAL MIXED WATER.

Source of Sample.	Date of Collection.	Total Solids.	Chlorine.	Nitrogen as Nitrates.	Ammonia.		Oxygen absorbed in 4 hrs. at 80° F.	Hardness.		Colour and appearance in 2-foot Tube.	Smell.	Phosphoric Acid.
					Free.	Albuminoid.		Total.	Perman't.			
58, London Road	Jan. 5th...	42.1	2.6	.378	.005	.01	.006	22.9	7.4	clear	none	none
St. Faith Street...	" 12th...	39.1	2.6	.329	.00	.01	.003	25.0	6.9	"	"	"
53, L. Stone Street	" 19th...	37.4	2.5	.330	.00	.02	.002	24.2	7.4	"	"	"
Heath Cottages...	" 26th...	37.6	2.7	.246	.00	.02	.004	23.7	6.7	"	"	v.sl.t.
7, Albion Place ...	Feb. 2nd...	41.7	2.4	.366	.00	.01	.006	23.6	7.2	"	"	"
13, Market Street	" 9th...	45.8	2.8	.153	.00	.02	.006	25.5	7.4	"	"	free
Well Road	" 16th...	39.8	2.3	.320	.01	.01	.005	23.1	6.2	"	"	v.sl.t.
Hart Street.....	" 23rd...	34.8	2.4	.224	.00	.01	.003	26.4	8.1	"	"	"
126, U. Fant Rd..	Mar. 3rd...	36.0	2.6	.306	.00	.00	.004	26.6	7.6	"	"	"
James Street	" 9th...	40.2	2.6	.153	.00	.01	.006	20.4	6.3	"	"	free
Waterside	" 16th...	38.6	2.5	.334	.00	.02	.006	21.4	5.3	"	"	"
Market Street ...	" 23rd...	39.1	2.5	.172	.00	.01	.005	22.0	6.7	"	"	"
57, Hardy Street.	" 30th...	44.4	2.5	.251	.00	.01	.005	21.5	5.0	"	"	"
6, Whitehall Pl'ce	Apr. 6th...	37.6	2.4	.218	.00	.00	.007	17.0	5.4	"	"	"
Mill Street	" 13th...	34.6	2.1	.321	.00	.00	.004	17.0	5.0	"	"	"
97, Milton Street.	" 20th...	37.0	2.5	.230	.00	.00	.005	19.4	4.7	"	"	"
57, U. Fant Road	" 20th...	39.8	2.5	.246	.00	.00	.005	20.0	4.7	"	"	"
Dann's Yard	" 27th...	44.1	2.5	.559	.00	.01	.004	19.2	5.8	"	"	"
59, St. Faith St. .	May 4th...	40.4	2.5	.609	.00	.01	.004	18.4	4.7	"	"	"
54, Milton Street.	" 11th...	39.6	2.6	.271	.00	.00	.008	20.8	5.0	"	"	"
10, Havock Lane.	" 18th...	40.2	2.5	.658	.00	.01	.009	20.8	4.5	"	"	"
Hart Street.....	" 26th...	40.2	2.4	.400	.00	.01	.006	19.8	4.7	"	"	"
Medway Street...	June 2nd...	43.6	2.7	.185	.00	.00	.007	22.2	5.0	"	"	"
"	" 8th...	48.4	2.5	.617	.00	.00	.005	20.6	6.1	"	"	"
99, U. Fant Road	July 6th...	43.4	2.5	.251	.00	.01	.006	21.2	5.4	"	"	"
"	" 13th...	41.7	2.4	.349	.00	.02	.006	17.8	5.8	"	"	"
"	" 20th...	43.2	2.1	.526	.00	.01	.006	19.4	5.4	"	"	"
Mean results for 1903.		43.8	2.4	.333	.00	.00	.005	21.4	5.9	clear	none	free

All results are given in parts per hundred thousand, except Free and Albuminoid Ammonia, which are in parts per million.

TABLE IX.—MONTHLY RECORD OF METEOROLOGY.

MONTHS.	Mean Reading of the Barometer.	Mean of Max. of Thermometer in Shade. Degrees.	Mean of Min. of Thermometer in Shade. Degrees.	RELATIVE PROPORTION OF WIND.								RAINFALL.
				N.	N.E.	N.W.	S.	S.W.	S.E.	E.	W.	
January	29.93	41	34	.. 2	2	1	4	12	7	3	2	2.07
February	30.32	44	37	.. 2	2	1	6	12	2	..	3	1.16
March	30.16	50	37	.. 4	..	..	8	13	6	..	4	2.49
April	30.18	49	36	.. 4	4	5	2	4	2	1	8	2.13
May	30.11	61	43	5	6	2	3	7	4	..	4	3.55
June	30.18	65	44	7	4	2	5	3	2	3	4	5.51
July	30.43	71	52	1	1	2	8	9	3	..	7	6.25
August	30.02	67	50	.. 1	..	3	4	14	4	..	6	2.84
September ...	30.22	63	45	.. 1	2	4	4	5	7	2	5	2.09
October	29.94	58	44	.. 3	..	..	6	9	11	..	5	5.59
November	30.31	47	36	.. 3	3	3	2	3	5	1	11	2.34
December.....	30.15	38	30	2	2	4	1	3	10	8	..	1.54
Means	30.16	54	41	25	26	27	53	94	67	18	59	37.56