

[Report of the Medical Officer of Health for Surbiton].

Contributors

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SURBITON
URBAN DISTRICT COUNCIL.



Nineteenth Annual Report
OF THE
MEDICAL OFFICER OF HEALTH,
1895.



Surbiton Urban District Council.

NINETEENTH ANNUAL REPORT

OF THE

Medical Officer of Health,

1895.

MR. CHAIRMAN AND GENTLEMEN,

In conformity with the regulations of the Local Government Board I have now to present to you my nineteenth Annual Report on the health and sanitary condition of the district under your care. This past year is a memorable one in the history of Surbiton, for on the 13th March the decision of the Local Government Board was announced as to whether Surbiton was to remain independent or to be absorbed in the Borough of Kingston-on-Thames. After an exhaustive inquiry, which must be still quite fresh in the memories of all of us, the verdict was given in favour of Surbiton, and naturally was received by the inhabitants with great rejoicing. Though the enquiry embraced questions of sanitation, and opinions were strongly expressed for and against, I do not propose to

dwell on any of the details affecting my department, but would merely express a hope that as near neighbours we shall always work in harmony whenever, in matters affecting the health and well-being of such important districts, points may arise that might be advantageously considered in common.

Alteration of
District.

In consequence mainly of their joint application, and after due enquiry, Hook and Tolworth were incorporated with Surbiton, the order taking effect from the first day of July, 1895. Southborough had been previously taken over on the 17th October, 1894. This has increased the area of Surbiton from 1000 to 2858 acres, and added a population according to the census of 1891 of 2126.

Mortality.

Dealing with Surbiton only, the deaths have been corrected by the additions of those who have died in public institutions elsewhere, as far as I have been able to get information respecting them, and by excluding from the local returns those properly belonging to other districts. Subject to these alterations, the number of deaths for the year 1895 is 116, of which number 109 were registered in Surbiton, 6 in the Cottage Hospital, and one at the County Lunatic Asylum at Brookwood. For 1894 the deaths were the same number, 116.

Death Rate.

The estimate as furnished me from the General Register Office for the increase of population to the middle of 1895 is 10,340, and on this basis the death rate is 11·21. This compares with 11·24 for the year before. During the same period the death rate for London was 19·8, and for all England and Wales 18·7.

Zymotic
Diseases.

The deaths from the seven principal Zymotic diseases were only three, being two from typhoid and one from diphtheria. There were no recorded deaths from smallpox, measles, whooping cough, scarlet fever or diarrhoea. This

gives a zymotic death rate of 0·29 per thousand, while that for England and Wales was 2·14 for the year.

Causes of Death.

Of these 117 deaths, 53 are males and 64 females. Thirty were 70 years and upwards, and eighteen were under one year of age. There died of phthisis 7, of other respiratory diseases 21 (including one of pneumonia in the County Asylum), of heart disease 17, of cancer 6, of influenza 9, of violence 5. There were 12 inquests during the year.

Births.

There is a falling off in the number of births from 210 in 1894 to 193 in 1895. Of these 94 were boys and 99 girls. The birth rate is therefore 18·6 per thousand, the rate for England and Wales being 30·3. The deaths of infants were in the ratio of 93·2 per thousand births registered.

The following are some particulars respecting the various diseases of the zymotic group :—

Small Pox.

No case of this disease is reported.

Enteric Fever.

There were five cases and two deaths. The first case of the year did not occur till October 3rd and was that of a gentleman who had been staying at one of the watering places on the South Coast. He was attended at home and subsequently disinfection was thoroughly done. There was no occasion for suspecting any local cause, in fact quite the contrary.

The second case was that of a male aged 28 who goes daily to his employment in London. He left work on November 11th, was removed to the Isolation Hospital to be under observation on the 16th, the diagnosis was made and notification sent on the 17th together with an explanatory letter from the Doctor in charge, who gave it as his opinion that “he contracted his illness outside

Surbiton." From subsequent enquiries I found this was in all probability the case, and nothing was found amiss in the house. The third case was almost certainly contracted in London, or at any rate away from home, and was of a most grave type from the first, as the patient died after only a few days illness. Following this was the case of a young man who really was residing in London and only occasionally coming down here to a house, for as I understand a few days at a time, the house being at the time only partly furnished; there was nothing about the sanitary conditions to justify suspicion. The fifth case and last was that of a boy from one of the public schools. The case was notified on December 27th, and the Doctor at the same time wrote me "I believe the case was imported from—School, where the patient has been until a week ago." Unhappily the illness proved fatal in the course of a week. I at once notified the Medical Officer of Health of the District in which this school is situated. In the preceding year there were 12 cases. There are points of resemblance in both years in the incidence of this disease such as the large majority being persons who either habitually or frequently leave home, and who have been doing so in the weeks immediately preceding their illness, and have thus had ample opportunities of becoming exposed to infection elsewhere. That being so, out of the 17 cases we naturally find a preponderance of males, the proportions being 12 to 5, and of the women 2 most certainly contracted it at seaport towns, returning home with illness upon them. Then in neither year is milk, water or food of any sort under suspicion, no evidence of any spread from personal infection, and no sanitary defects in the houses of a character to cause such disease or likely to do so, and no two cases in any one house. In short, while all care and watchfulness was required and given,

I have not found an atom of evidence in any one of these cases to justify the supposition that local defects of sanitation have anything to do with causation.

Measles. Have not prevailed extensively. There were but few cases and no deaths.

Whooping Cough. The same remarks apply to this disease.

Diphtheria. There have been 12 cases in 12 houses, with one death, as against 20 cases occurring in 13 houses with 3 deaths during the previous twelvemonths. These have been distributed pretty equally throughout the year, cases having occurred in seven out of the twelve months. Two or three of them were reported as being of an exceedingly mild or very slight character. These very mild, almost transitory cases, are the dangerous ones for the community, because being so mild they are not always watched and treated with the extreme care that experience tells us such a disease, however mild, requires. It is undoubted that some of the cases are so slight that the disease is not recognised; they are not seen by a doctor, and no precautions whatever are taken. Such an individual can readily communicate the disease by personal contact, and of all the means the most personal and at the same time most natural and probable, is kissing. It should be a rule in all houses, never let a child or grown-up person with a sore throat, no matter what it may be called or be supposed to be, kiss or be kissed by another. If that rule, together with one or two obvious suggestions as to spoons, cups and such like, were rigidly enforced by parents, nurses and all in authority, much might be done towards checking outbreaks or preventing the dissemination of disease. The late board early in the year wisely sanctioned my making special arrangements for the supply of Anti-toxin to all

who might apply for it, and for information as to its use, as supplied by Doctor Armand Ruffer, and also for bacteriological examinations. I am pleased to be able to state that in several of the cases these privileges were utilised. Specimens from doubtful cases were submitted to bacteriological examination, and if the cultivation revealed a bacillus anti-toxin was resorted to. It is within my personal knowledge that some very severe cases were thus treated, and in every one improvements speedily set in. The general medical opinion, both home and continental, I believe I am correct in stating, seems shaping itself towards accepting this combined treatment as a distinct advance on all other methods, and as the mode of and dose for administration becomes more accurately formulated, it will probably be that no bacteriologically confirmed cases will be allowed to go from bad to worse without being afforded the benefits of such treatment. In the majority of cases no sanitary defects whatever were to be found. In one instance, however, the house drains were all being re-laid, and a young girl who had been living in the house was taken ill at that time. The following table records some facts in connection with the diphtheria cases of this and former years.

	Houses Invaded.	Cases.	Deaths.	Average Age per case.	Case Mortality, per cent.
1890	... 31	36*	3	19·5	8·3
1891	... 16	21	10	9·8	47·6
1892	... 14	16	1	18·1	6·2
1893	... 19	23	3	18·7	13·0
1894	... 13	20	3	17·3	15·0
1895	... 12	12	1	13·5	8·3

*27 of these cases were due to an infected milk supply.

Scarlet Fever.

A total of 18 cases and no deaths. These 18 or the majority of them are mostly connected cases, and not sporadic, and as the sequence continued into 1896 it is desirable that I should here recapitulate and put together in one narrative the substance of the various reports that I have made to you during the development of this small and localised outbreak up to the end of the year.

There was an entire immunity from scarlatina from the earlier part of the year until the middle of August, when two little children, brother and sister, contracted it somewhere. They were removed at once to the Isolation Hospital and all the usual precautions taken, and no further cases seem to have resulted from this.

On October 25th a case was reported of a child who had been attending St. Mark's Schools. She was removed forthwith to the Isolation Hospital and all necessary steps were taken to ensure no further spread of the disease.

On the 15th November a lad of 18 walked into the surgery on Victoria Terrace, complaining of sore throat, and on examination was found to have a well-developed attack of scarlatina, the rash showing freely. The case was at once reported to me, and I saw him myself, had him detained till the arrival of the ambulance, and then sent him to the Hospital. The source of infection in this case was ascertained later on, and will be referred to presently.

On Monday, November 18th, two cases were notified me at the same time, and I was at once struck with the fact that they were both young children of about the same age, 6 to 8 years, both were living in the same part of the district, and both were of the same class in life, and probably attended the same school. I then made up my

mind to inspect the schools if a third case appeared. As a matter of fact a third case had occurred that day, had been diagnosed in the morning, and had been sent in the ambulance in the afternoon to the Isolation Hospital, but I had no knowledge of it as no notification had up to that time been sent me. However, by the merest chance, at 12.30, on Tuesday the 19th, next day, I heard of this case, still un-notified, and immediately arranged to inspect the Infant School, and did so that afternoon to the number of 180, and as a result found amongst them a little boy of seven years, who was peeling profusely, both on feet and legs. The other children were dismissed, and I removed the boy myself to his home at Long Ditton, and there obtained the following interesting information from his mother:—

“Three weeks ago to-morrow, *i.e.* on October 30th
 “(the first case you will remember was notified on
 “October 25th), I noticed the boy to have a rash.
 “I put him in bed and kept him there till the
 “following Monday, November 4th, when I took
 “him to a doctor because he seemed so out of sorts
 “and had a gum-boil. I told the doctor of the
 “rash, but nothing was said as to its nature, and
 “I was not told to take any precautions. I was
 “given some medicine. On the Monday after that,
 “which would be November 11th, I sent him to
 “school, but he was sent back by the mistress
 “because his hands were peeling. I was to have
 “received a note from her, but it did not come. I
 “kept him at home for the remainder of the week
 “and sent him to school for the second time on the
 “following Monday, November 18th, and now to-
 “day you have brought him home. I had no idea
 “at all that he had scarlet fever.”

On November 20th, another case was notified to me, but I found on enquiry that the child had been ailing since the 15th or 16th, so she evidently belonged to the same group as those of November 18th, and who all probably contracted it at the same time from the visit to school on November 11th, of the Ditton boy, who at that time was peeling on his hands, he himself presumably having contracted it in school from the first case, that of October 25th. As a consequence of my inspection, I advised the school managers to close the Infant School for purposes of disinfection, and to avoid the aggregating together of children of a very susceptible age during the period in which it might be expected further cases would appear if the infection had spread. This advice was accepted and acted upon, and the school remained closed for the remainder of the term, and was re-opened on January 6th of this year.

Pursuing my enquiries, I found at the house where the young man lived who attended the surgery with scarlatina a child of four years of age. This child was taken ill on October 28th, and remained at home from school till November 8th, when she returned. From enquiries and personal examination I was satisfied that she had undoubtedly had the disease, and she was peeling when I saw her. No doctor had attended her. She clearly had communicated the disease to the lad, who on November 15th appeared at the surgery.

On November 26th, a young nurse at the Cottage Hospital was found to be ill. The next day it was ascertained she had scarlatina, so was removed to the Isolation Hospital. I can connect her in no very certain way with any of these cases.

After the lapse of a week two more cases appeared, one on December 4th, and the other on the 5th, both children attending the Infant School.

On December 18th a lad of 17 living at Surbiton Hill was notified and removed to the Hospital, and during the latter part of December there were four other cases in the lower part of Surbiton, for which at present I have been unable to find any adequate reason. There has been a second or subsidiary outbreak in the early part of 1896, a special report of which has been made to the Council, but of course further allusion to that cannot be made here. It is worthy of note that in connection with this outbreak two children were found to have had scarlet fever neither of whom had been seen by a doctor. A third case at present unreported has also come to my knowledge.

A not unimportant lesson to be learnt from this outbreak is the unwisdom of an incompetent person taking upon him or herself to decide what a rash is or what it means. Doctors themselves are well aware of the difficulty, and few cases calling for accuracy of diagnosis give them more anxiety than the having to decide whether a rash or an eruption is or is not infectious. If this is the case, how presumptuous it must be for any unskilled man or woman to decide such a matter. Nevertheless, it is a thing done not unfrequently, and if the case turns out to be nothing, no evil results follow, but if in their wisdom these well-meaning people pronounce a rash to be of no consequence and it turns out to be scarlet fever and invades a score of homes they won't blame themselves, but shelter themselves behind their ignorance. I have seen this over and over again, and the dire consequences resulting from it. As a word of advice I would say, "don't let any mother, if she wishes to do as she would be done by, take upon herself

“to decide whether or no her child’s rash is infectious,
“but at once call in a medical man to assume the responsi-
“bility.”

Erysipelas. Two cases, but they call for no special notice.

Epidemic Influenza. This disease now seems to have “come to stay” for it again appeared almost suddenly on or about February 18th and continued throughout March and April. After that it seemingly disappeared, but occasional cases were reported during the latter part of November and December. There were nine deaths registered to this cause.

Notification Act. The following extract from the notification book serves to show the variations year by year in the number of infectious cases notifiable under the Act.

EXTRACT FROM NOTIFICATION BOOK.

Surbiton.

	Scarlet Fever.	Diphtheria & Membr. Croup.	Enteric Fever.	Puerperal Fever.	Erysi- pelas.	Contin. Fever.	Small Pox.	Totals.
1890	3	36	1	2	4	0	0	46
1891	3	21	1	0	10	0	0	35
1892	4	16	3	1	5	0	0	29
1893	94	23	5	2	15	2	1	142
1894	9	20	12	2	12	0	0	55
1895	18	12	5	0	2	0	0	37

Tolworth (Six months).

1895	3	1	1	0	1	0	0	6
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Hook and Southborough.

None.

I consider that the value of the Notification Act is abundantly shown in the report of the scarlet fever cases and how by means of information, especially when furnished at the earliest opportunity it is possible to limit the spread of the disease by the prompt closing of schools

and the removal of patients for proper isolation. It is perfectly obvious to all but the prejudiced that if the information obtainable under the Act had been withheld or had only tardily reached the Authorities, the outbreak at St. Mark's Schools would have assumed much larger dimensions and possibly have spread throughout the district.

Isolation
Hospital.

The number of cases admitted to the Isolation Hospital last year is not particularly large, only 17 indeed, and they were mostly during the last six weeks of the year, being the scarlet fever cases already referred to. Owing to the disestablishment of the Kingston Rural Sanitary Authority, and a new disposition of many of the constituent districts, there is at present no settled governing board. To re-arrange this matter a Local Government Board Enquiry is shortly to be held, when the various districts interested will be heard as to their claims, and a permanent settlement arrived at; consequently under these circumstances I cannot with propriety say much. However, I may be permitted to say that the privilege to Surbiton of being able to send a large number of the infectious sick into thorough and effective isolation has been of the utmost advantage to the community, and of inestimable benefit to the patients themselves. Having been admitted to a certain proportionate use of the hospital upon agreed terms, but without any voice in the management, we were merely tenants, and it was of no use I found to suggest any alterations or improvements; but whatever our footing may be in the future it will be necessary to have a different system of disinfection. The present method is that of dry heat obtained by gas, and known as Dr. Schollick's. In the light of experience that system has been long since condemned as unreliable, and super-heated

steam is now the only process sanctioned by the Metropolitan Asylums Board for use in their hospitals. As a result of this I have never but once made use of it for the disinfection of bedding and clothing, though in numerous instances it would have been of great benefit to have had the services of a trustworthy disinfecter. Another gain would be the putting of the hospital into telephonic communication with the Council's offices. Relatives would I am sure much appreciate this, and the saving of time in obtaining the ambulance would also be considerable. No doubt these and other improvements will all be adopted before long. In connection with the removal of cases there is of course a natural repugnance on the part of parents to part with children when ill, but I must say that experience and better knowledge have succeeded to a much greater extent than I at first anticipated in breaking down the obstacles that ignorance and prejudice at first opposed to such unwelcome modes of treatment. The great care and kindness bestowed on these little ones by the Matron and staff have contributed in no small degree to this sweeping away of objections and rendering the obtaining of consent to removal an easier matter on the part of myself and other medical men than it might otherwise have been.

The following table refers to cases admitted since we have had the right to send patients.

	Scarlet Fever	Diphtheria	Typhoid.	Small Pox	Erysipelas.	Total.
1893	35	6	3	1	0	45
1894	5	6	2	0	0	13
1895	14	2	1	0	0	17

Tolworth.

1895	2	0	0	0	1	3
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Mortuary.

In 1892 I first referred in my annual report to the necessity of a mortuary for this district, and since then have, year by year, brought the matter forward again. As far as I am aware it has never been once taken into consideration at this Board, but nevertheless, I have no hesitation whatever in again mentioning it and urging you to find the necessary time to consider whether it cannot be arranged for. The reasons I gave last year still hold good. They are in my last year's report, but as they can be put forward now with added force, I repeat them. "In the matter of accidents or deaths necessitating an inquest the Coroner has for some time past taken to ordering the removal of the body in nearly all instances to the mortuary at Kingston, and then holding the inquest in that town. This is a subject of very considerable importance to relatives, witnesses, jury and medical men, as the distance, one to two miles or more, and the bringing back of the body in many cases, involves expense and much waste of time. But in addition to this the Infectious Disease (Prevention) Act, 1890, adopted by your Board, requires the removal of bodies under certain circumstances to a mortuary. I do not know what right or powers, if any, we have of access to the Kingston mortuary for the purposes of the Act, *i.e.* those dying of infectious diseases, but I think the matter should be arranged for in some more suitable way than at present, and better and more convenient premises provided in our own district than those we have to put up with at present."

Since then our acreage has been nearly trebled, and the distances are consequently much further. I have just recently had an experience that justifies me fully in pressing this matter upon you, and to which I will refer at some future time if the opportunity offers, but I may briefly

mention that had it not been that there was a mortuary of some sort at Long Ditton, of which I made use, rightly or wrongly, it would have happened that a family of eight persons, six of them children, living under very poor circumstances in a four-roomed cottage in Tolworth, would have been condemned to retain for at least two or three days, until they could be buried, two dead bodies, one of which was notified to have died of diphtheria.

The section of the Infectious Disease (Prevention) Act, 1890, referred to above is as follows.

PROHIBITING RETENTION OF DEAD BODIES IN CERTAIN CASES.

“ 8.—No person without the sanction in writing of the “ Medical Officer of Health or of a registered medical “ practitioner, shall retain unburied elsewhere than in a “ public mortuary or in a room not used at the time as a “ dwelling place, sleeping place, or workroom, for more “ than forty-eight hours, the body of any person who has “ died of any infectious disease.”

Cottage Hospital

From the report just issued by the Surbiton Cottage Hospital it appears that during the past 12 months 253 patients were admitted for treatment as against 220 in 1894.

Of these :—

102	came from	Surbiton.
95	„ „	Kingston.
12	„ „	Ditton.
11	„ „	Hook.
8	„ „	Tolworth.

and the remaining 25 from 12 other places.

An analysis of the cases shows that 216 were discharged as cured or relieved, 5 were unrelieved, 18 remain in hospital, and 14 died.

These results are eminently satisfactory and must be gratifying to all concerned, Committee, Staff, Medical and Nursing, Patients and Subscribers.

General Sanitary
Work.

In a review of the sanitary occurrences of the year the first matter that presents itself was the frost of February and March, and the consequent interference with the regular water supply, and its effects upon the sanitation and health of the district. Though it entailed great hardship, great expense, and great discomfort upon all classes, it certainly cannot be held responsible for any special illness, either during that time or afterwards, nor did the scanty supply of water seem directly or indirectly to influence public health. Referring to my notes I see under date February 10th, "intensely cold week, less sick on my list than I ever remember at this time of year," and again on the 13th; "temperature 11 degrees Fahrenheit last night, very little general illness in spite of intense cold, "about three-quarters of the houses frozen out, frost 3 feet "into the ground." On that same date I visited the manager of the Lambeth Water Works, Mr. Waite, and suggested to him that he should supply the poorer districts with water, the Council to find the carts, and the Water Company the horses and labour. This he readily agreed to, and the surveyor superintended the carrying out of the work, the Council subsequently sanctioning the arrangements. At the earliest opportunity such flushing of the drains as was possible was resorted to, and the steam fire engine was requisitioned, being placed on the Promenade to pump water from the river into the main outfall sewer. As bearing on sanitary deficiencies and the

popular error that bad smells are of themselves quite sufficient to breed disease, the state of matters in almost every one's house during that long frost, and the unprecedented water famine that accompanied it, is quite fresh in the minds of all, yet though olfactory nuisances were the order of the day—and night—in numberless instances, it is an absolute fact that there was no excessive amount of illness attributable to this cause, nor was there a single typhoid case at that time as a consequence, in fact the first case as already mentioned did not appear until the beginning of October. There were but few houses indeed that had water all through the frost, and the majority were compelled to go, often long distances, to fetch the minimum amount they could do with. Drains were not flushed for weeks on end, and in many cases the soil pipes were blocked and frozen. Of course I am not holding out that such a state of things is harmless, far from it, but the reason why so little mischief was done was fortuitously owing to the fact that the frost that caused the trouble also tended to minimise the possible evil consequences by arresting putrefaction. Heat and moisture are essential for promoting that, and intense frost holds these changes in suspension. Were it not so, there would probably have been, with such lack of efficient sanitation, any amount of diarrhoea, and possibly sore throats. The freezing of the water mains owing to the shallow depths at which many of them were laid, was, it is now admitted by the water companies, the cause of much of the inconvenience. It will be a great satisfaction to all householders to know that the Council have made satisfactory arrangements with the water company to do away altogether with the possibility of a recurrence of this evil. Many of the water mains have already been laid at a lower depth, more will be done during the present year, and the remainder next year.

Tolworth, Hook,
& Southborough.

In connection with the recently added portions of the district, Hook, Southborough and Tolworth, I am not in a position to report as fully as I hope to be at a later period. Attention has been given to these localities equally with Surbiton as regards complaints, the abatement of nuisances, and infectious illnesses, but there has not as yet been any systematic inspection. I have experienced no little difficulty in getting correct returns from the Registrars, owing apparently to an imperfect knowledge of the boundaries, especially in the matter of Southborough, and also as to the dates when these places were taken over, and for these reasons the vital statistics must be taken only as approximate. In all these districts there is a large proportion of cottage property, much of the more recently built being of a sort that I hope and feel sure will never be tolerated in the future. Also the condition of some of the side roads being private roads, in Southborough and Red Lion Lane, will require attention.

Drainage System

The drainage of the added districts is treated at a so-called sewage farm of about 11 acres, situate at the upper end of Red Lion Lane, Tolworth, which there receives by gravitation the sewage from Hook, Southborough and a portion of Long Ditton. These places are relieved by two outfall sewers provided with certain flushing arrangements, and their contents, after being discharged into a pump well, are raised by gas engines and passed on into settling tanks, being chemically treated on the way, the super-natant fluid, after I believe being filtered, flows over portions of the farm set apart to receive it, and the effluent discharges into a streamlet, which after passing under the Ewell Road near the Royal Oak, and by the Surbiton Hill Recreation Ground joins the Hoggs Mill River and so reaches the Thames. For some time past there were justifiable and recurrent

The Sewage
Farm.

complaints of bad smells near the Tolworth Police Station, and many suggestions had been made as to the cause, and various things tried as remedies, but in the end it was ascertained that the culvert under the Ditton Road being at a lower level had become foul. This was cleansed and structurally altered, and is now no longer a nuisance. When the farm was taken over the effluent was exceedingly bad and offensive, and the Thames Conservancy having become aware of this, were taking action. Since then the Surveyor has brought about a very considerable improvement, but an improvement that cannot be considered likely to be enduring until some further radical change in the treatment and disposal at the works is made. Perhaps the locality was the only one available, but at any rate it is far from a suitable one in its present condition for the method used. The most satisfactory land treatment of sewage is that of Intermittent Downward Filtration—explained by the term used—and is supposed to accommodate the sewage of from three to five thousand persons per acre, according to the efficiency of the chemical precipitation of solids and subsequent filtration, but this requires a sufficiency of thoroughly porous soil properly underdrained. Broad Irrigation means “the distribution of sewage over a large “surface of ordinary agricultural ground having in view a “maximum growth of vegetation (consistently with due “purification) for the amount of sewage supplied.” Neither of these two processes are capable of being adopted in their entirety at Tolworth, owing to the soil not being of a sufficiently porous character and for other reasons, so the system made use of is that of Filtration which is “the “concentration—after precipitation and chemical treat- “ment—of sewage at short intervals on an area of “specially chosen ground as small as will absorb and “cleanse it, not excluding vegetation, but making the “produce of secondary importance.”

In the case of the Tolworth Farm in its present state, the conditions requisite for ensuring the enduring success of this treatment are wanting. Firstly, because the soil is not of a suitable character. There is on the surface ordinary agricultural soil of an average depth, so I am informed, of about 12 inches, and beneath this is a dense layer of brick clay, consequently though the sewage be well screened or have its solids well precipitated and the fluid part well filtered, yet the soil is so shallow that it speedily becomes saturated, and the sewage in considerable quantities flows away laterally unpurified, overflows in fact to join the effluent from land filtration and finds its way into the neighbouring stream. Secondly, the soil is not underdrained at a depth of at least six feet, nor underdrained at all. Now owing to the configuration of the natural easements for land water, *i.e.* watercourses, the ground thereabouts is not nearly so well drained as might be, but probably if these watercourses were cleansed, deepened, and perhaps added to, the sub-soil drainage would be generally improved, and at least the escape of the abnormal excess of water, sewage water, on the Farm, would be facilitated by reason of the greater dryness of the ground. As it is, the Farm is comparatively easily waterlogged, and I believe its efficiency is greatly impaired for want of this relief. On the opposite side to this sewage farm, separated only by a 20 foot road, there is large and prosperous Brick-yard and on the other side of the Farm, between it and the Hook Road, there called Hook Vale, is another Brick-field.

Between these, and in a direct line is the farm. The depth of soil varies from about 14 inches on the Hook Road side to about 3 inches on that abutting on Tolworth Lane. The depth of the underlying clay is about 120 to

130 feet and is of an exceedingly stiff and impervious character so that too much must not be expected to result from drainage operations.

This being the formation and character of the land, it strikes the ordinary observer as a singular place for a sewage farm, the essence of which is or should be to absorb sewage, to work off the products, nitrates especially, in vegetation, and discharge the effluent rendered innocuous by filtration through the soil into running water. This has up to recently been the condition of matters, and the problem of what modification or alteration of the existing state of things should be adopted so as to be the most economical and at the same time meet the requirements of the district and the Thames Conservancy and mitigate the nuisance complained of, has been receiving the earnest consideration of the Council. One proposal was to raise the surface by burning and carting ashes on to it, and so increase the depth of soil and add to or refresh its purifying powers. The other was a system of deep drainage. The latter has been adopted and will be given a trial, it is hoped with satisfactory results.

The following are such vital statistics as I have been able to compile :—

Tolworth.

The population and census of 1891 was 979. Since that time building has been going on rapidly, and in estimating the present population at 1000 it must be well within the mark, but for ordinary purposes that will serve. The deaths for the half-year were nine, being 5 males and 4 females. This will give a death rate of 18 per thousand per annum. The births during the same period were 18, 8 boys, 10 girls, which will give a birth rate of 36 per thousand.

Southborough

The population here was 729 in 1891, and for these purposes I have estimated an increase that raises it to 750. There were only 3 deaths returned as having been registered during the year, and if this is the case the death rate would be 4 per thousand. The births being 14, 9 boys and 5 girls, would be at the rate of 18·6 per thousand.

Hook.

The census return of population is 418, and no death is returned by the Registrar for the last half-year, but there is one to be apportioned to it in the case of an inmate of Brookwood County Lunatic Asylum, aged 71 years. This makes the death rate at 4·7 per thousand per annum. The births for the half-year are 2 boys and 3 girls, a total of 5, with a birth rate of 23·9.

Sanitary Inspector's Report.

In relinquishing office, Mr. Mather in his report dwells with pardonable pride on the great and continued improvement in the District in sanitary matters effected during his term of office. I can quite endorse all that he says and could add very materially to it, and now that the increase of the District makes it physically impossible for one man to properly and personally carry out the duties heretofore so ably done, he hands over the office of inspector to his successor with—as far as Surbiton is concerned—the back of the work broken. During his time all wells and cess-pools as far as known have been abolished, new and well constructed sewers have been laid down, and a very considerable portion indeed of the district has been re-sewered according to up-to-date experience in lieu of the old brick sewers of a bye-gone generation. I wish to add my most ungrudging testimony to the zeal and ability which he has ever shown in the carrying out of the duties pertaining to his office as far as they have come under my observation,

and I trust that in the future we shall still have the advantage of his experience and co-operation.

I am, Gentlemen,

Yours obediently,

OWEN COLEMAN, M.D., D.P.H.,

Medical Officer of Health.

March 16th, 1896.

The following is the Report for 1895 of the Sanitary Inspector :—

MR. CHAIRMAN AND GENTLEMEN,

In making my last Annual Report as the Sanitary Inspector, after nearly 25 years service, it is somewhat satisfactory to me to relinquish the position and the discharge of the duties connected therewith at a time when the average death rate for the last 13 years is recorded as low as 11·21 per 1000, and I may take this opportunity of observing that results of this high standard are not obtained without considerable expenditure and many years of close practical attention to all the various departments affecting the health of the district under your charge, such as the construction of new and improved sewers, the improved methods of flushing drains and sewers, and the removal of old accumulations, the searching out and closing of many ancient privies, foul cesspools, and wells containing contaminated water unfit for drinking purposes, the abolition of nuisances arising from slaughter houses, animals

improperly kept, and the offensive accumulations arising therefrom, the more rapid collection and removal of house refuse, the making up and paving of many dirty, unsanitary and neglected streets and the general maintenance and cleansing of the roads in the district. At the time of accepting the office, the performance of my duties was checked with much prejudice, ignorance and opposition, and I was unsupported by the healthy, popular, and sensible opinion of good sanitation so largely entertained at the present time. The suggestion for good sanitation was generally received with disfavour and modern ideas thereon at that time was regarded as those of a faddist. The closing of a well containing contaminated water was looked upon as a most arbitrary act, and the abolition of a cesspool as a retrograde movement in drainage. Time has fortunately made immense changes in these directions, and if I were to give full details of the work done and the steady progress made in all matters affecting the sanitary welfare of the district during this long period it would disclose particulars of considerable magnitude affecting the removal of nuisances so great as to be almost incredible to the present Council.

I have again to record the exceedingly satisfactory sanitary condition of the district for the past twelve months. The personal complaints of the residents as to nuisances arising from their own or adjacent premises amount only to 5 for the year, which is highly satisfactory; and the circumstance that no legal proceedings have been necessary for enforcing the abatement of the nuisances which have come under my notice, affords practical proof of the growing desire for better sanitation and that the advice and assistance offered by the Sanitary Inspector are very largely welcomed.

The recent extension of the district, by including Hook, Southborough and Tolworth, has embraced a large number of dwellings of the labouring class, abutting on unmade roads which are generally speaking not in the highest sanitary condition, and afford a playground, not of the most desirable character, for young children. The state of these approaches is such that the ordinary process of sweeping and cleansing cannot be resorted to, and not being under the control of the Council there is frequently the grossest abuses perpetrated by some of the thoughtless occupants of the houses abutting upon them; the refuse matter from their dwellings is scattered over these open spaces and churned up with moisture by the traffic into an unhealthy quagmire. It is consequently important in considering the general health of the district that these localities should not be forgotten by the Council. There is satisfactory evidence of the good work done in this respect a few years ago at the approaches to cottages from Alpha Road, and I am fully satisfied that the clean and wholesome surroundings thus given to the houses of the poor have resulted in a diminution of sickness and disease.

The acquisition of land and the erection of dwellings for the labouring classes on open and healthy sites is another matter well deserving the attention of the Council in their future deliberations. There is at the present time a dearth of this character of houses which leads to high rents and to much overcrowding and unavoidable difficulties, whereas, if the number of cottages was increased by the construction of healthy houses let under well considered regulations at the lowest possible rents, it would be the most practical and successful method of destroying the existing monopoly, and lead to the introduction of rules of order and cleanliness, the observance of which would,

in due course, bear ample evidence in the health records of the district, of their efficiency and the advantages to be obtained from such a scheme.

The adoption of more perfect systems of sanitation for old houses has been gradually progressing, and although the number of these premises re-drained during the past year is about 50 per cent less than in the previous one, my recommendations have been more readily accepted and acted upon than in previous years.

The Draft of the Building Bye-Laws, which have been revised for giving the Council greater control over Sanitary works and for preventing the occupation of new premises before being certified as complete, is still before the Local Government Board awaiting confirmation.

The main sewers of the district have been under careful observation throughout the year and, with the exception of some partial stoppages arising from fractures in the old fashioned and obsolete sewer at South Bank, no hitch or difficulty of any kind has occurred to interfere with the efficient working of the Council's excellent system of sewage carriers.

The row of cottages, known as Minniedale, has engaged my attention during the past year, and although much money has been expended from time to time in altering and improving the drainage, it is soon rendered useless owing to neglect arising from the inability of the owner to bear the constantly recurring expense. The time has arrived when the Council may consider the desirability of giving them some relief under the drainage rates by adopting a miniature scheme for more effectually draining these premises and the disposal of the sewage. I have

always had grave apprehension that difficulties might at any time arise in the badly drained part of the district in which the property is situated.

The more frequent periods adopted for the collection and removal of the house refuse of the district is a matter on which many of the residents have expressed their high approval, and the decision of the Council to make the collection in future once in every interval of seven days throughout the year will be received with great satisfaction notwithstanding the additional charge which the increased work will bring upon the rates.

INSPECTOR'S REPORT OF SANITARY WORK COMPLETED,
DURING 1895.

	No. of complaints received during the year	...	...	5
	No. of inspections of houses, premises, &c.	...	...	139
	No. of re-inspections of houses and premises, &c.	...	...	111
	No. of cesspools abolished	...	...	0
	No. of house drains tested	...	...	11
	No. of beddings destroyed	...	...	1
Results of Inspection.	Orders issued for sanitary amendments of houses and premises	...	...	27
	Houses, &c., cleansed, repaired, white-washed	...	...	0
	Houses disinfected after infectious illness	...	...	15
	Houses re-drained	...	...	21
House Drains.	House drains repaired, cleansed, trapped, &c.	...	...	14
	Ventilated	...	...	2
Privies and W.C.'s.	Repaired, &c.	...	...	2
	Supplied with water	...	...	17
	New provided	...	...	3

Dust Bins.	{	New provided	14
	{	Repaired, covered, &c.	0
Water Supply.	{	Wells condemned	0
	{	Cisterns (new) erected	3
	{	Cisterns cleansed, repaired and covered	2
	{	Waste pipes connected with drains, &c., done away with	0
Miscellaneous.	{	Dust removal—No. of communications received and attended to	123
	{	Removal of accumulations of dung, stagnant water, animal and other refuse	2
	{	Animals removed being improperly kept	2
Regularly Inspected.	{	Bake-houses	12
	{	Licensed cowsheds	14
	{	„ slaughter houses	1
	{	Legal proceedings, <i>e.g.</i> , summonses	0

I am, Gentlemen,

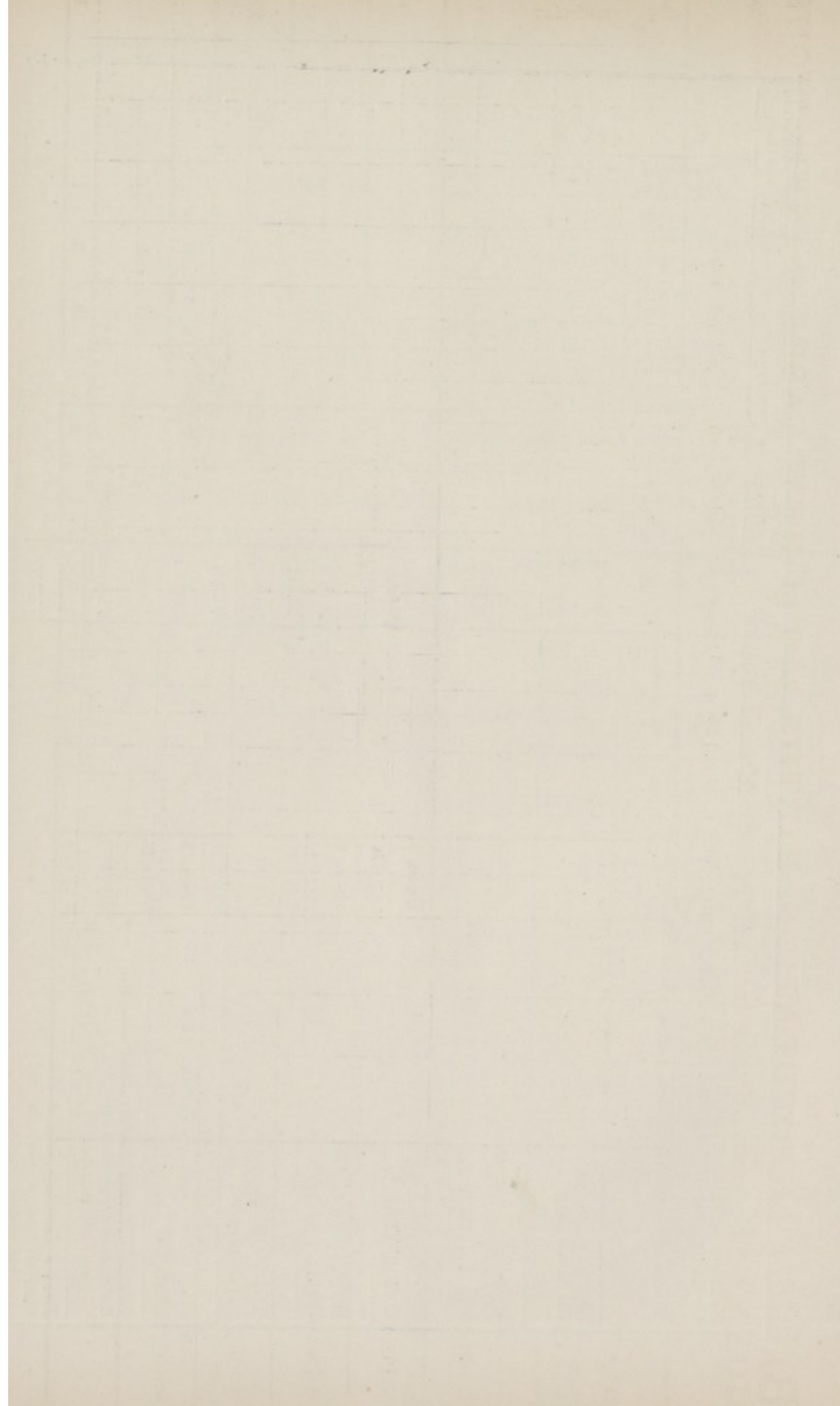
Yours obediently,

SAMUEL MATHER.

February 18th, 1896.

(A) *TABLE OF DEATHS during the Year 1895, in the Surbiton Urban District, classified according to DISEASES, AGES, and LOCALITIES.*

NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.										
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Under 5	Diphtheria.	Enteric or Typhoid	Rheumatic Fever	Phthisis.	Bronchitis, Pneumonia and Pleurisy.	Heart Disease	Influenza.	Injuries.	All Other Diseases.	TOTAL.
SURBITON	109	18	1	7	5	40	39	Under 5					3	1	3		12	19
								5 upwds.	1	2		7	14	16	6	4	40	90
COTTAGE HOSPITAL....	15			1	3	11		Under 5										
								5 upwds.				1	3	1		2	8	15
HOOK	0							Under 5										
								5 upwds.										
SOUTHBOROUGH	3	1	1			1		Under 5					1				1	2
								5 upwds.									1	1
TOLWORTH	9	3		1	1	4		Under 5										
								5 upwds.			1	3	1				4	9
TOTALS	136	22	2	8	9	48	40	Under 5					4	1	3		13	21
								5 upwds.	1	2	1	11	18	17	6	6	53	115
Deaths occurring outside the district among persons belonging thereto.	2					1	1	Under 5										
								5 upwds.					1				1	2
Deaths occurring within the district among persons not belonging thereto.	9			1		8		Under 5										
								5 upwds.				1	1	1		1	5	9



(B) *TABLE OF POPULATION, BIRTHS, and of NEW CASES of INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1895, in the Surbiton Urban District; classified according to DISEASES, AGES, and LOCALITIES.*

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.							Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.						
	Census, 1891.	Estimated to middle of 1895.			Smallpox.	Scarlatina.	Diphtheria	Enteric or Typhoid.	Continued.	Puerperal.	Erysipelas.	Smallpox.	Scarlatina.	Diphtheria	Enteric or Typhoid.	Continued.	Puerperal.	Erysipelas.
SURBITON	10050	10340	193	Under 5 5 upwds.		4 13	2 10				2		2 11		1			
COTTAGE HOSPITAL				Under 5 5 upwds.														
TOLWORTH	979	1000	36	Under 5 5 upwds.		1 2					1		1 1					1
HOOK	418	430	10	Under 5 5 upwds.														
SOUTHBOROUGH	729	750	14	Under 5 5 upwds.														
TOTALS	12176	12520	253	Under 5 5 upwds.		5 16	2 11				3		3 13		2 1			1

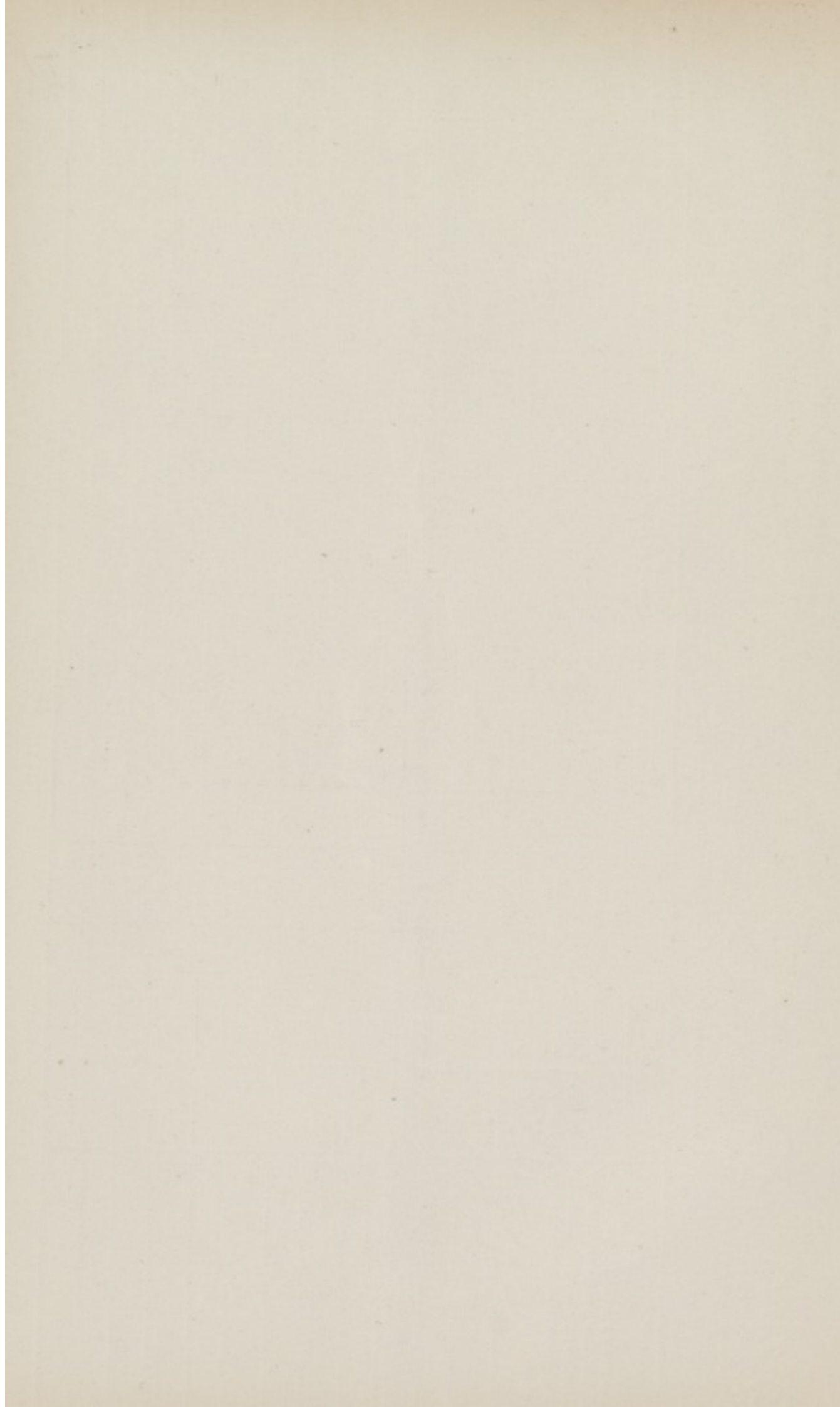


TABLE I.—*Summary of Births and Deaths and Mortality from certain Classes of Diseases for 13 years.*

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Zymotic Diseases	4	15	4	8	6	10	2	6	12	4	7	10	3
Total Deaths	111	125	104	123	108	137	100	110	136	121	122	116	116
Death Rate	10·8	11·9	9·7	11·4	10·0	12·6	9·09	10·0	13·5	11·9	11·8	11·24	11·21
Mortality from Phthisis	12	10	12	7	5	14	8	7	6	10	4	5	7
„ „ other Lung Diseases	15	27	16	27	27	16	11	17	32	21	25	15	21
„ „ Heart Diseases	14	14	12	8	16	19	17	17	7	11	19	12	17
„ „ Cancer	2	1	2	3	4	2	9	5	2	6	7	9	6
„ „ Violence	1	1	1	4	3	8	1	5	4	3	6	6	5
Total Births	236	221	222	206	200	209	192	166	210	218	186	210	193
Birth Rate	23·0	21·0	20·7	19·2	18·5	19·3	17·4	15·09	20·8	21·5	18·2	20·3	18·6

TABLE II.—*Deaths from seven chief Zymotic Diseases for 13 years.*

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Small Pox	0	0	0	0	0	0	0	0	0	0	0	0	0
Measles	0	0	0	1	3	2	1	1	0	1	0	0	0
Scarlet Fever	1	4	0	0	1	0	0	0	0	0	3	0	0
Whooping Cough	0	6	2	1	0	2	0	2	2	2	0	1	0
Diphtheria	0	4	2	0	2	4	1	3	10	1	3	3	1
Fever, Typhus	0	0	0	0	0	0	0	0	0	0	0	0	0
„ Enteric	1	0	0	1	0	2	0	0	0	0	1	4	2
Diarrhoea	2	1	0	5	0	2	0	0	0	0	0	2	0
Deaths from 7 chief Zymotic Diseases ..	4	15	4	8	6	12	2	6	12	4	7	10	3
Death Rate from 7 chief Zymotic Diseases	·3	1·4	·46	·74	0·5	0·92	0·18	0·54	1·1	0·3	0·6	0·97	0·29
Total Death Rate	10·8	11·9	9·7	11·4	10·	12·6	9·09	10·0	13·5	11·94	11·87	11·24	11·21
„ „ England and Wales	19·5	19·6	19·0	19·3	18·8	17·8	17·9		20·2	19·	19·2	16·6	18·7
„ „ Birth Rate	33·2	33·5	32·5	32·4	31·4						30·8		30·3

