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*Mike Orsman
p. 47*

Surrey County Council.

ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH


INCLUDING

Reports to the Authorities of the United and
Separate Sanitary Districts, 1894,

OF

MEDICAL OFFICERS OF HEALTH

WITHIN THE COUNTY.



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ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH

INCLUDING THE

Reports to the Sanitary Authorities of the United
and Separate Sanitary Districts, 1894.

The issue of the Report for 1894 is rather later than that for 1893, for reasons already explained to the Council.

The wish of the Council has been expressed that the County Report for Surrey should be issued before the termination of the first half of the year following that to which the Report chiefly relates. To make this possible it is necessary to again request the District Medical Officers of Health to send in their reports at a somewhat earlier date. One of the reports was not forwarded to the Clerk of the County Council till April 25th. It is true that it represented work of an exceptionally good character and the pamphlet was accompanied by a letter from the medical officer of health fully explaining the delay. It should, however, be understood that all the district reports are expected before the termination of the first quarter of the year following that to which they severally relate.

The present is a suitable occasion for remarking that the Statistical Table, known as K² 3 (A) for 1895, which must be filled up according to the regulations of the Local Government Board, might, with advantage, receive the attention of medical officers of health, quite early in the month of January, 1896. The lists of deaths at "public institutions," which the Authorities of the asylums, work-houses, hospitals, &c., are good enough to furnish, might also be issued earlier—say within the first two or three weeks of 1896, so as to enable the corrections for deaths, not properly belonging to the districts in which they occur, to be

carried out. By this means the verification of the returns, adjustment of differences, &c., might be carried on and completed during the first six or eight weeks of the year. If these arrangements could be carried out the whole of the District reports in complete form might be received at the County Hall before Lady-day, 1896, and it might then be possible to present the County Report at the May Meeting of the Council next year.

In order to facilitate references to special subjects, such as "Water Supply," "Progress in Hospital Provision," "Scavenging," &c., the parts of the several District Reports relating thereto, are grouped together on the plan which was partially adopted in the County Report for 1893. The following is the order in which the subjects are taken in the present Report for 1894.

- I.—Summarized statement of the work of the County Medical Officer in 1894.
- II.—Sanitary Administration.
- III.—County Death Rate and Statistics.
- IV.—Working of the Notification Act.
- V.—Epidemic Diseases.
- VI.—Preventive Measures.
- VII.—Hospital Provision.
- VIII.—Water Supply.
- IX.—Housing of the Working Classes Act.
- X.—New Buildings, Bye-Laws and Supervision.
- XI.—House Sanitation Generally.
- XII.—Regulated Trades.
- XIII.—River Pollution from Trade Effluents. Nuisances.
- XIV.—Drainage, Sewerage, and Sewage Disposal.
- XV.—Cleansing or Scavenging.
- XVI.—Public Conveniences, Mortuaries and Cemeteries.
- XVII.—Quarterly Reports of Dr. Stevenson, the County Analyst to the Council.
- XVIII.—Quarterly Reports of Professor Axe to the Council.
- XIX.—Concluding Remarks.

1.—Summarized Statement of the
Work of the County Medical
Officer in 1894.

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I.—SUMMARIZED STATEMENT OF THE WORK OF THE COUNTY MEDICAL OFFICER OF HEALTH IN 1894.

This comes under four heads—(a) Advising and Conferring. (b) Inspections and making Special Inquiries. (c) Corresponding. (d) Reporting and giving Evidence.

(a) CONFERENCES, &c.—Besides attending the Meetings of the Council and Committees to which I have been specially summoned, and the “Weekly Conventions” at the County Hall, I have conferred with the Medical Officer of Health for the United Districts, and the Medical Officers for the several Districts on numerous occasions, sometimes at their request and sometimes at my own suggestion. Appointments of this kind have been most often made at a spot within the Districts concerned, chiefly for the convenience of the medical officers of health who are in general practice. These Conferences or Consultations, entered in my Official Diary for 1894, were 73 in number. They referred to the following Districts:—Barnes, Richmond, Wimbledon, Ham, Kingston Rural, New Malden, Surbiton, Egham, Farnham, Frimley, Hambledon, Godalming, Guildford, Guildford Rural, Woking, Leatherhead, Dorking Rural, Epsom Rural, Sutton, Carshalton, Croydon Rural, Godstone Rural. They related to the following among other subjects, viz.: Outbreaks of Infectious Diseases, Typhoid Fever, Diphtheria, Scarlet Fever and Small-pox; Establishment and Management of Isolation Hospitals; the Powers of the Public Health Acts; School Inspection; House Sanitation; Housing of the Working Classes; Schemes for Sewage Disposal, &c.; Cemeteries; River Pollution; Orders of the Local Government Board.

In addition to the above, I attended (by the desire of the Chairman) an Inquiry, held by the County Council, respecting the proposal to form a Local Board for Merton,

(b) INSPECTION.—This has related partly to the Official Duties enumerated above. It has also related to Sources of Water Supply and the Purification of Rivers. As in previous years the work under this head has included the discovery or detection of cases of River Pollution by sewage and manufacturing refuse. This important work will now be carried on systematically and under much more favourable conditions than were possible before by the staff of the Thames Conservancy, who have acquired greatly enlarged powers for the purpose of preventing the pollution of the Thames and its Tributaries. The functions of County Councils as regards River-pollution throughout the Thames Valley remain the same. It is probable that in Surrey, the Council, will desire to assist the Conservancy Board in the direction in which they can best do so, viz: by helping the Board to determine the cases of River-pollution, that are of importance from a public health point of view. They will probably also desire to assist District Councils by reporting on methods of disposal of sewage or refuse (liquid and solid), now in vogue in various parts of England.

In addition to the above-mentioned Inspections, which have been chiefly on the Rivers Wey, Wandle, Mole, and Blackwater, I have had the following Special Inquiries to make, which have necessarily involved a great deal of inspection.

- (i.) As to alleged Insanitary Houses, Mitcham
- (ii.) „ „ „ „ „ Wallington
- (iii.) „ „ the condition of Dairy Farms (from which milk was supplied to Richmond) in Buckinghamshire
- (iv.) „ „ Sewage Works at Aldershot (Hampshire)
- (v.) „ „ Sewage Marsh, North Camp (Hampshire)
- (vi.) „ „ the sanitary condition of the Village of Shalford Surrey, which necessitated the inspection of 435 houses.

I have also, with the County Surveyor, inspected a few of the Police Stations with regard to their Sanitary Arrangements, and have conferred with him thereon.

(c) CORRESPONDENCE.—This includes all the letters written by myself on questions large and small relating to Public Health. A certain proportion of these are in answer to letters marked "Private," referring to outbreaks of infectious illness, and other matters, respecting which too much publicity is generally considered undesirable. The most urgent summonses received—as for example that relating to the occurrence of Smallpox at the Farnham workhouse—necessitated full and frequent telegraphic communication.

(d.) REPORTING AND GIVING EVIDENCE.—This includes the Special Reports in the Quarterly Volumes of the Council. The Report which was issued in May, 1894, entitled "Annual Report of the County Medical Officer of Health, &c., 1893," and the "Interim Letters or Reports" to the Chairman of the Sanitary Committee.

In addition to the above I prepared (by request from the representatives of the Eighth International Congress of Hygiene and Demography), at my own expense, a Report representing the most recent knowledge in England, respecting the complicated and still obscure subject of the Etiology of Diphtheria. This Report was presented at Budapesth. I had the honour to receive the thanks of the Council for the same.

I have lately been requested to prepare a further Report for the Council on the efficacy of measures of Prevention and Treatment of Diphtheria as now practised. This Report will be presented as soon as the circumstances permit.

The question of the conditions, under which it was deemed proper that I should attend to give evidence on behalf of District Authorities at "Trials" or "Government Inquiries" was

several times under discussion in 1894. The Cases in which, with the sanction of the Council, I appeared as a witness, or was ready to give evidence if called, were :—

The Case of the Banstead Hospital Site.

„ „ Houses at Mitcham.

„ „ Aldershot Sewage Disposal Works.

„ „ Thames Conservancy Bill.

In order to prevent misunderstanding on this subject in the future, the following instruction was drawn up in November by the Representatives of the Council for my direction. It has since been incorporated in the Standing Orders, and is here quoted.

117. “The County Medical Officer of Heath shall, as far as practicable, attend all Local Government Board Inquiries into matters relating to the Public Health of the County, at which in his opinion his presence would be useful, or which he is invited to attend by any of the Local Authorities interested, primarily for the purpose of affording to the Inspector holding the same any information he has in his power to give upon the general subject, and of reporting to the Sanitary Committee.

“He shall not appear as a witness on either side, except in those cases where his advice has been sought by the Local Authorities, and given to them after consultation with, and with the consent of, the Sanitary Committee.”

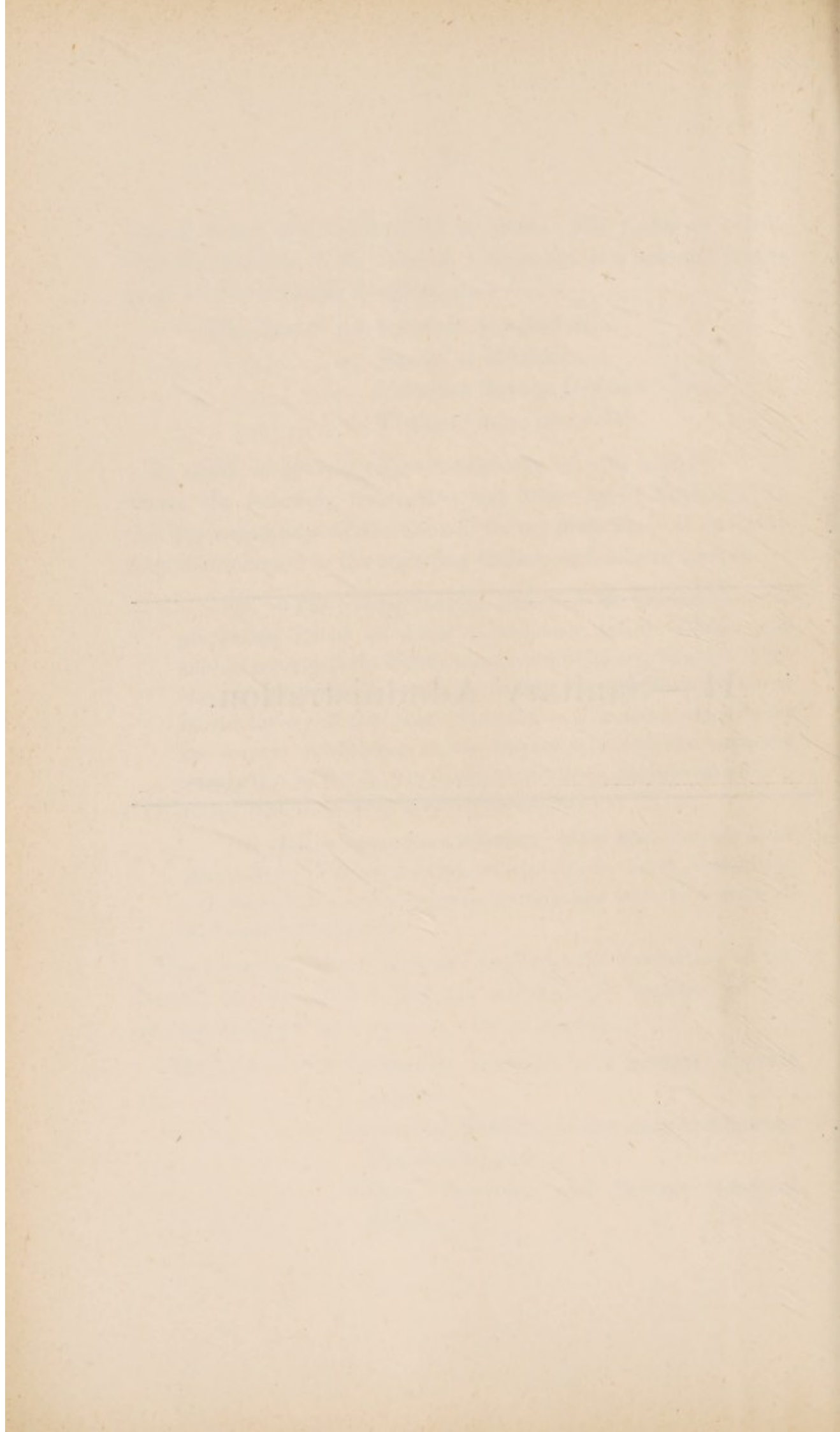
The Cases in which I attended Inquiries by instruction of the Council, but in which I had not received the Sanction of the Council to appear as a witness, were as follows :—

The Case of the Carshalton Sewerage and Sewage Disposal Scheme.

„ „ Cheam and Cuddington Sewerage and Sewage Disposal Scheme.

„ „ Woking Sewerage and Sewage Disposal Scheme,

II.—Sanitary Administration.



II.—SANITARY ADMINISTRATION.

The knowledge that I have gained by a long and varied experience in sanitary administration has been at the service of medical officers of health in the County.

My colleague, Dr. Jacob, the experienced medical officer for the United District, has the same area and population as in former years, although by the operation of the Local Government Act, 1894, the number of different Authorities, to whom he reports, is somewhat increased.

The medical officer of health for the Croydon Rural District, who was appointed in 1893 on the "whole time" principle, has sought and obtained all the advice and assistance I could give him in the establishment and organization of his department. This is on the same basis as that of Nottingham and some other large towns (favourably known for the good organization of their Health Department), adapted of course to the requirements of a comparatively Rural District. The character of this work will be readily understood from a perusal of his excellent and practical Report recently issued by the Croydon Rural Sanitary Authority, considerable portions of which are quoted in this Report.

The medical officer of health for the Guildford Rural and Woking Districts, who, though not appointed on the "whole time" principle, has no connexion with "general practice," has also sought and obtained all the advice and assistance I could give him in the initiation of his work as a medical officer of a purely rural District. His work in school inspection and the application of the powers of the Public Health Act relating to infectious diseases is of great value to the District, and is useful as an example to other "Authorities." The important questions of Water Supply and Scavenging are also receiving adequate attention at his hands. Considerable portions of his excellent Report appear in these pages.

The Medical Officer of Health for the Borough of Kingston has conferred with me respecting the use of Death Rates and other statistical questions. His appointment is on a different footing to that of any other Medical Officer of Health in the County, inasmuch as the Corporation of Kingston have hitherto preferred not to receive the part-repayment of the Medical Officer's Salary out of the County Fund. I have signified my readiness to confer with the Medical Officer respecting other matters, such as the plan and scope of Annual Reports, water supply, &c.

I am able to record continued improvements in the Reports of the Medical Officers of Health throughout the County generally. Although, as a general rule, there is a wide difference between the Reports of gentlemen engaged in the general practice of the Medical Profession, and those who are making "Public Health" their life work. I am able this year, as was the case last year and the year before, to refer to one or two Reports of special merit. It seems to me that the Reports for 1894 of the Medical Officer of Health for the Rural District of Godstone (C. E. Oldman, B.A., M.B., Camb.), and of the Medical Officer of Health for the Urban District of Surbiton (M. Owen Coleman, M.D., D.P.H.), are conspicuous for the evidence they give of care and thought in their preparation.

On the other hand it is expected of me that I should indicate from time to time the Reports which are notably deficient. One such Report I indicated last year. It may become my duty (however disagreeable the task may be) to indicate another notoriously defective Report from an important District. There is reason to think that in this instance the scrutiny of the death returns made by registrars to the District Sanitary Authorities, which forms the basis of the estimation of Death-rates on which so much action is founded, is left almost entirely to the sanitary

inspector, who, although a most excellent Officer in his own Department, is, of course, not qualified for this duty. The matter is being made the subject of inquiry at present.

In some districts the Medical Officers of Health make periodical inspections of the whole, or of a considerable portion, of the area under their charge. In other districts the medical officer only appears to inspect when requested to give an opinion with reference to some particular nuisance or condition reported by the Sanitary Inspector. In some cases inquiries which are most necessary for public health purposes, which need special knowledge, and which ought to be conducted with tact and discrimination, are either let alone or entrusted to unqualified persons.

It would be misleading if I were to report the conditions of Public Health Administration in the county as everywhere satisfactory. There is yet a great deal to be done, and I do not see how substantial improvement can be brought about except on the lines I have suggested in a previous report, viz.:—the combination of two, three, or even four Districts of suitable size for the purposes of the appointment of a medical officer of health, even as they are now joined in some cases for the purposes of hospital provision.

In this place, a word of explanation may be given with regard to the synopsis. This is mainly intended for the use of the Sanitary Committee of the County Council, and refers especially to matters *that have been brought under their notice*. Some of the districts which appear to have many faults may, so far as the Medical Officer of Health is concerned, be far better attended to than other districts, inasmuch as it is owing to the zealous use of his powers and opportunities that their existence is brought to light. This remark applies especially to the sanitary condition of

houses, regulated trades, &c., respecting which the medical officer of the district is alone empowered to make inquiries and reports.

The following is a list of Medical Officers of Health in the County at the present time.

SURREY COUNTY COUNCIL.—Edward Seaton, M.D., The Limes, 56, North Side, Clapham Common, S.W.

THE UNITED DISTRICTS.—E. L. Jacob, B.A., Lond. : M.R.C.S., L.S.A., 8, Altenburg Gardens, Clapham Common, S.W.

The United Districts include the following :—

URBAN.			RURAL.		
	Area (in acres).	Estima- ted Popu- lations for 1893.		Area (in acres).	Estima- ted Popu- lations for 1893.
Sutton	1900	15,160	Epsom*	34,200	23,645
Epsom	4400	8,476	Chertsey† ...	42,100	34,274
Carshalton...	3000	5,633	Dorking	39,200	10,430
Dorking	1400	7,274	Reigate	44,000	14,600
Reigate	6000	24,402			

* Including Leatherhead, now a separate District Council.

† Including Chertsey Urban, Weybridge.

Egham in Surrey (population 10,187) remains part of the Berkshire combined district for which the Medical Officer of Health is Dr. Woodforde, Oak Bank, Spencer's Wood, Reading, Berks.

The following are the separate Districts :—

DISTRICT.	Area in Acres.	Population.	Name, Qualifications, and Residence of Medical Officer of Health.
Farnham, Rural	35,700	19,383	J. A. Lorimer, L.R.C.P., M.R.C.S., Farnham.
Farnham, Urban	800	5,576	S. J. Sloman, L.R.C.P., M.R.C.S., Farnham.
Hambledon, Rural ...	60,200	19,012	Geo. Hall, M.D., &c., Milford, near Godalming.
Guildford, Urban	600	14,645	J. Morton, M.B., Lond., &c., Guildford.
Guildford, Rural†.....	66,000	31,207	W. Wellington Lake, M.R.C.S., L.S.A., D.P.H., Guildford.
Godalming, Urban ...		8,743	W. Parson, M.R.C.S., M. & L.S.A., Godalming.
Kingston, Rural*	17,300	13,163	A. Senior, B.A., M.B., &c., Camb., Thames Ditton.
Kingston, Urban	1,100	28,454	H. Beale Collins, M.R.C.S., L.S.A., D.P.H., &c., Kingston.
Surbiton, Urban	1,000	10,271	M. O. Coleman, M.D., &c., D.P.H., Surbiton.
Wimbledon, Urban ...	3,200	28,436	E. Pocklington, M.R.C.S., L.S.A., Wimbledon.
East Molesey, Urban...	700	5,047	J. J. Knox, M.A., M.B., Camb., East Molesey.
Ham, Urban	Included in Kingston Rural	1,412	J. Donald, M.R.C.S., L.S.A., Kingston.
New Malden, Urban...	Ditto	3,688	E. Child, M.R.C.S., L.S.A., New Malden.
Croydon, Rural	21,900	27,703	L. D. Mair, M.D., Lond., D.P.H., Beddington.
Godstone, Rural** ...	44,000	17,273	C. E. Oldman, B.A., M.D., Camb., Bletchingley.
Barnes, Urban	4,400	15,423	J. Adams, M.D., &c., Barnes, S.W.
Richmond, Urban ...		28,230	J. T. Rowland, M.D., &c., Petersham.

The above estimates of population include those of Public Institutions, and the areas are approximately correct.

† The Woking area and population is included in the above. The whole District is sometimes called The West Surrey combined. Mr. Wellington Lake is the Medical Officer for the combination.

* Including Esher and the Dittons. Now a separate District Council; Southborough now part of Surbiton; Kingston Vale now joined to Coombe and Malden.

** Including Lingfield.

III.—County Death Rate and
Statistics.

III—County North Hales and

Station.

DR. JACOB'S TABLE.

Showing certain DEATH RATES, and the BIRTH RATES, in each Rural and Urban District of the Surrey Combined Sanitary District, during the year 1894, with the average Rates of the Ten Years 1884-93, and of the Ten Years 1874-83.

ENTIRE SANITARY DISTRICTS.	Estimated Population at middle of 1894.	Years.	BIRTHS. Rate per 1000 of the Popu- lation.	ANNUAL RATE OF MORTALITY. per 1000 of the POPULATION, FROM				Per centage of Deaths under 1 Year to Registered Births.	YEARS.	Number of Deaths from					
				ALL CAUSES.	The 7 Principal Zymotic Diseases.	Pulmon- ary Con- sumption.	Other Lung Diseases.			Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Fever.
ENTIRE DORKING UNION.	CHERTSEY RURAL (Entire Union). 34,600	1894	24.3	11.9	1.2	0.8	2.1	9	1894	16	2	8	8	3	3
		Mean of 10 years, 1884-93.	27.0	14.0	1.5	1.3	2.5	10	1893	20	2	12	13	5	20
		Mean of 10 years, 1874-83.	30.2	15.0	2.1	1.6	2.5	10	1892	4	1	11	9	1	10
									1891	2	2	3	18	2	13
									1890	4	1	1	12	4	9
									1889	5	1	8	3	7	12
									1888	10	4	8	3	6	6
									1887	11	10	11	1	25	
ENTIRE EPSOM UNION.	DORKING RURAL. 10,450	1894	23.2	12.2	0.9	1.1	2.4	7½	1894	3	1	3	1	1	1
		Mean of 10 years, 1884-93.	13.2	0.8	1.2	2.3	8½	8½	1893	1	8	1	1	2	
		Mean of 10 years, 1874-83.	30.1	14.8	1.0	1.3	2.1	10	1892	2	1	4	1	1	1
									1891	1	5	1	1	4	4
									1890	3	1	6	1	1	1
									1889	1	1	1	1	1	1
									1888	1	1	1	1	1	1
									1887	1	4	1	1	1	1
ENTIRE EPSOM UNION.	DORKING URBAN (Part of the Parish of Dorking). 7,300	1894	20.0	13.0	1.1	1.1	2.5	5½	1894	1	5	1	1	1	1
		Mean of 1 years, 1884-93.	24.4	14.5	1.1	1.4	2.6	8	1893	3	2	1	1	1	1
									1892	1	1	1	1	1	1
									1891	10	5	1	1	1	1
									1890	5	1	12	1	1	1
									1889	4	1	1	1	1	1
									1888	1	1	1	1	1	1
									1887	1	1	1	1	1	1
ENTIRE EPSOM UNION.	EPSOM RURAL. 20,600*	1894	23.5	12	0.9	0.8	2.3	12½	1894	4	3	8	1	2	2
		Mean of 10 years, 1884-93.	26.7	14.0	1.2	1.3	2.7	10	1893	8	8	8	2	4	4
		Mean of 10 years, 1874-83.	31.9	14.0	2.0	1.4	2.3	10½	1892	2	16	6	1	1	1
									1891	5	4	5	2	1	1
									1890	2	11	5	1	1	1
									1889	9	2	10	3	4	4
									1888	3	1	14	5	5	5
									1887	3	4	1	4	1	4
ENTIRE EPSOM UNION.	EPSOM URBAN (Parish of Epsom). 8,500	1894	21.5	12.2	0.24	1.2	1.3	12½	1894	1	1	1	1	1	1
		Mean of 10 years, 1884-93.	25.7	15.0	1.3	1.7	2.7	12	1893	2	1	1	1	1	1
		Mean of 10 years, 1874-83.	27.3	15.6	1.3	1.8	2.6	9½	1892	2	3	1	1	1	1
									1891	4	14	1	1	1	1
									1890	1	9	1	1	1	1
									1889	2	1	1	1	1	1
									1888	6	1	3	1	1	1
									1887	1	1	1	1	1	1
ENTIRE EPSOM UNION.	CARSHALTON URBAN (Parish of Carshalton). 5,600	1894	29.0	14.5	1.6	0.4	2.5	14	1894	8	1	1	1	1	1
		Mean of 10 years, 1884-93.	29.7	14.0	1.6	1.2	2.0	11½	1893	4	1	1	1	1	1
		Mean of 10 years, 1874-83.	32.7	16.8	2.8	1.5	2.5	13½	1892	6	2	1	1	1	1
									1891	6	2	1	1	1	1
									1890	2	1	2	1	1	1
									1889	2	1	5	1	1	1
									1888	1	1	1	1	1	1
									1887	1	1	1	1	1	1
ENTIRE REIGATE UNION.	SUTTON URBAN (Parish of Sutton). 13,000*	1894	24.4	9.4	1.5	0.6	1.6	9	1894	3	2	2	9	3	3
		Mean of 10 years, 1884-93.	28.0	12.7	1.4	1.1	1.9	11	1893	4	1	3	2	10	10
		Mean of 10 years, 1874-83.	35.2	15.9	2.5	1.5	2.0	11½	1892	1	1	2	3	8	8
									1891	1	1	1	1	1	1
									1890	2	4	1	1	1	1
									1889	4	3	14	1	3	3
									1888	1	1	1	1	1	1
									1887	2	1	1	1	1	1
ENTIRE REIGATE UNION.	REIGATE RURAL. 14,600	1894	24.0	10.7	0.3	0.8	1.6	8½	1894	1	1	1	1	1	1
		Mean of 10 years, 1884-93.	27.1	12.4	0.9	0.8	2.5	9½	1893	7	2	1	2	7	7
		Mean of 10 years, 1874-83.	31.8	14.7	1.4	1.2	2.9	10	1892	5	2	6	1	1	1
									1891	2	1	6	2	6	6
									1890	9	1	3	1	3	3
									1889	2	1	7	1	3	3
									1888	3	3	1	1	1	1
									1887	2	1	2	2	2	2
ENTIRE REIGATE UNION.	REIGATE URBAN (Borough of Reigate). 23,200*	1894	22.4	10.8	0.7	1.0	2.4	7	1894	3	1	6	1	6	6
		Mean of 10 years, 1884-93.	25.1	13.2	1.1	1.2	2.2	9½	1893	10	2	2	2	1	9
		Mean of 10 years, 1874-83.	29.5	15.7	1.4	1.8	2.5	9½	1892	2	2	8	1	2	2
									1891	1	1	7	1	3	3
									1890	1	2	6	7	4	4
									1889	19	1	14	1	4	4
									1888	2	9	4	2	2	2
									1887	3	9	5	1	1	1
ENTIRE REIGATE UNION.	ENTIRE DISTRICT. 137,850	1894	23.5	11.6	0.9	0.8	2.0	9½	1894	137	5	19	37	12	15
		Mean of 10 years, 1884-93.	26.6	13.7	1.1	1.2	2.5	9½	1893	154	11	35	32	14	62
		Mean of 10 years, 1874-83.	30.5	15.2	1.6	1.5	2.5	10½	1892	11	5	39	36	2	28
									1891	18	20	30	37	9	33
									1890	22	10	25	57	8	22
									1889	45	4	17	53	14	36
									1888	23	4	19	35	3	21
									1887	14	11	28	18	4	42

*Note.—The Population and Deaths at the Banstead Asylum, and at the Kensington and Chelsea District Schools in the Epsom Rural District; at the South Metropolitan District Schools in the Sutton Urban District; and at the Earlewood Asylum in the Reigate Urban District, have been excluded from the Table.
The Deaths in the Dorking, Epsom and Reigate Workhouses and Cottage Hospitals, of persons belonging to the adjoining Rural Sanitary Districts, have been transferred to those Districts.

III.--COUNTY DEATH-RATE AND STATISTICS.

I again refer to the carefully prepared Statistical Tables published in the Report for 1892, which will, it is hoped, prove useful for some time to come as a standard of comparison. These Statistics were repeatedly referred to in the "Kingston Borough Extension Scheme" and other important inquiries last year.

The County Death-rate for 1894 was 11·9 per 1000 persons living, being 2 per 1000 less than the average of the previous five years.

The mortality from Influenza and its consequences has further declined—the death-rate from Respiratory Diseases, being in 1894 for the Urban Surrey Districts 2·01, and for the Rural Surrey Districts 1·82, as compared with 2·45 and 1·98 respectively in 1893. This decline in mortality has been noted throughout England, so also has the decline in the mortality from Zymotic Diseases.

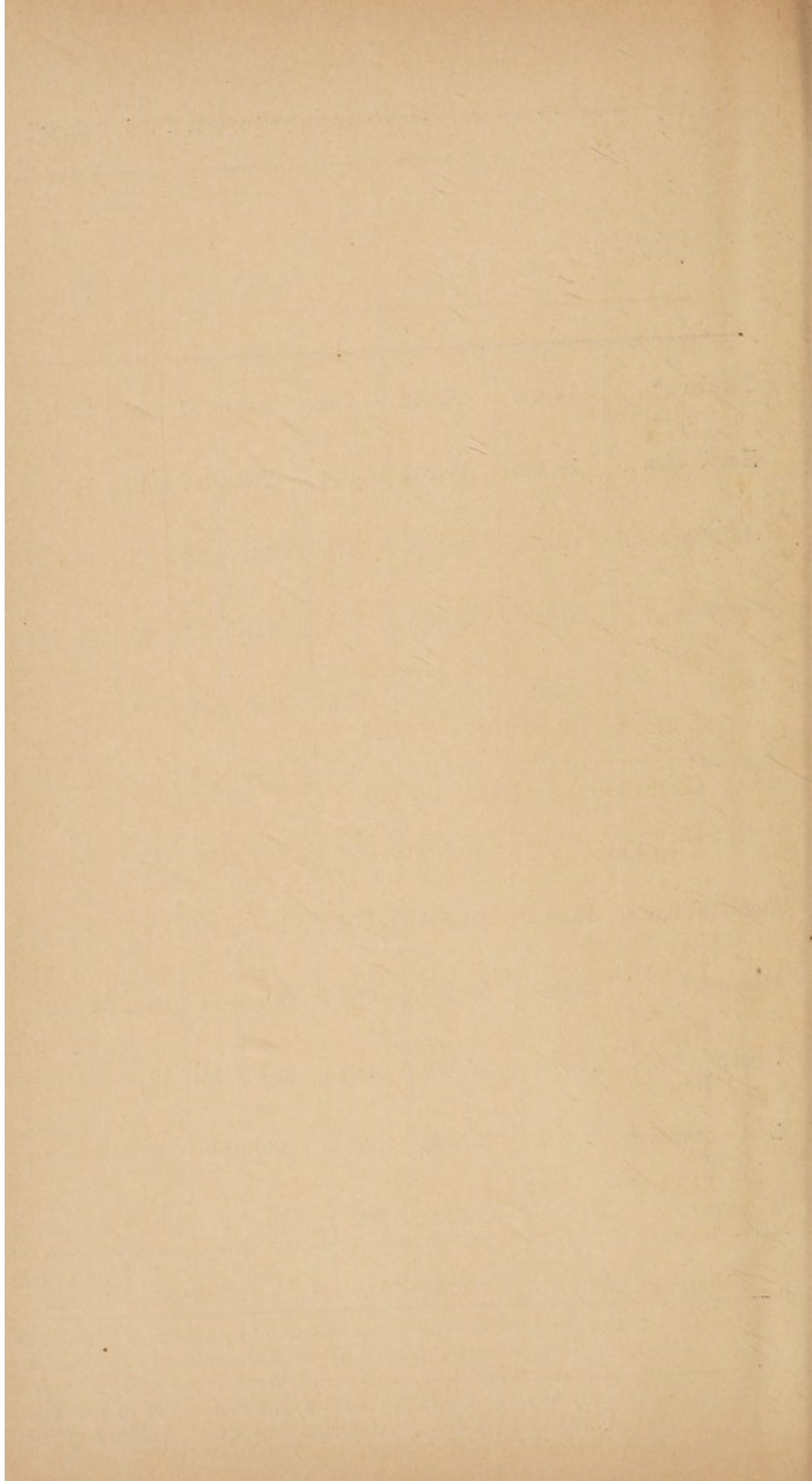
The important Statistical Tables A and B (which have been verified and carefully revised, where needful, after correspondence or conference with the Medical Officers of Health) are appended hereto, as is also Dr. Jacob's exceptionally valuable Table of Death-rates for a long series of years.

The following are the Birth-rates and Death-rates in the

Administrative County of Surrey for the four years 1889-92, and for the years 1893 and 1894 respectively.

	Average four years 1889-92.		Year 1893.		Year 1894.	
Birth-rate per 1000 living	...	26·2	...	25·6	...	24·6
Death-rate per 1000 living	...	14·1	...	14·1	...	11·9
Mortality of Infants under one year per 1000 Births	...	109	...	110	...	99

The County Returns for 1894 have been carefully revised with the District Medical Officers of Health, and are given here.—



(A)

TABLE A (Urban).

TABLE OF DEATHS during the year 1894, belonging to the Urban Sanitary Districts of Surrey; classified according to Diseases, Ages, and Localities, and showing also the Populations of such Localities, and the Births therein during the Year.

URBAN SANITARY DISTRICT.	POPULATION AT ALL AGES.		Registered Births.	MORTALITY FROM ALL CAUSES AT SPECIFIED AGES.								MORTALITY FROM SPECIFIED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																							
	Census, 1901.	Estimated to middle of 1904.		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.	12.	13.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipela.	Measles.	Whooping Cough.	Measles and Diphtheria.	Erysipela Fever.	Ame.	Typhoid.	Typhus.	Hæmorrhage.	All other Fevers.	Total.		
																	Typhus.	Ex. erie or Typhoid.	Continued.	Relapsing.	Intermittent.														
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	33.	34.	35.	
Farnham ...	5,545	5,641	133	92	16	3	2	7	33	31	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Guildford ...	14,316	15,024	355	201	45	19	6	10	67	54	Under 5 5 upwds.	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Godalming ...	8,117	8,907	195	98	17	9	5	7	33	27	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Woking* ...	9,776	9,332	274	104	34	14	5	3	22	26	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dorking ...	7,132	7,359	143	97	8	12	4	6	30	37	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epsom ...	8,417	8,643	183	113	23	3	6	6	40	35	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sutton* ...	11,987	13,591	317	122	28	15	6	8	33	32	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Carshalton ...	5,425	5,694	162	83	23	10	2	3	18	27	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kingston ...	27,050	29,236	878	426	104	57	15	22	119	109	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wimbledon ...	25,761	29,684	794	318	82	36	19	21	94	63	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
East Molesey ...	4,066	5,219	116	52	12	1	...	2	24	13	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ham ...	1,393	1,413	38	17	5	4	1	...	6	1	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
New Malden ...	3,437	3,798	110	42	15	1	3	2	9	12	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Surbiton ...	10,052	10,320	210	116	22	5	4	6	46	33	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Reigate* ...	21,885	24,104	519	255	37	27	20	15	87	69	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Richmond ...	26,875	28,756	651	361	78	36	20	17	105	105	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barnes ...	14,673	15,827	367	186	47	21	4	9	52	53	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	206,516	222,548	5,445	2,683	596	273	122	144	818	730	Under 5 5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* For the purposes of this Table and Table B, the following Public Institutions are excluded from the Urban Sanitary Districts in which they are situated:—

The Convict Prisons from Woking; The South Metropolitan District Schools from Sutton; Epsom Asylum from Reigate.

+ In estimating the populations shown in column 3 of Tables A, and used for calculating the rates in Tables B, allowance has been made, as follows, for certain other Public Institutions than those enumerated in Note *:—The population of each Union Workhouse has been distributed proportionally among all the Sanitary areas in the Union; and the population of the County Lunatic Asylum in Woking Urban District has been similarly distributed among all the Sanitary areas in the County.

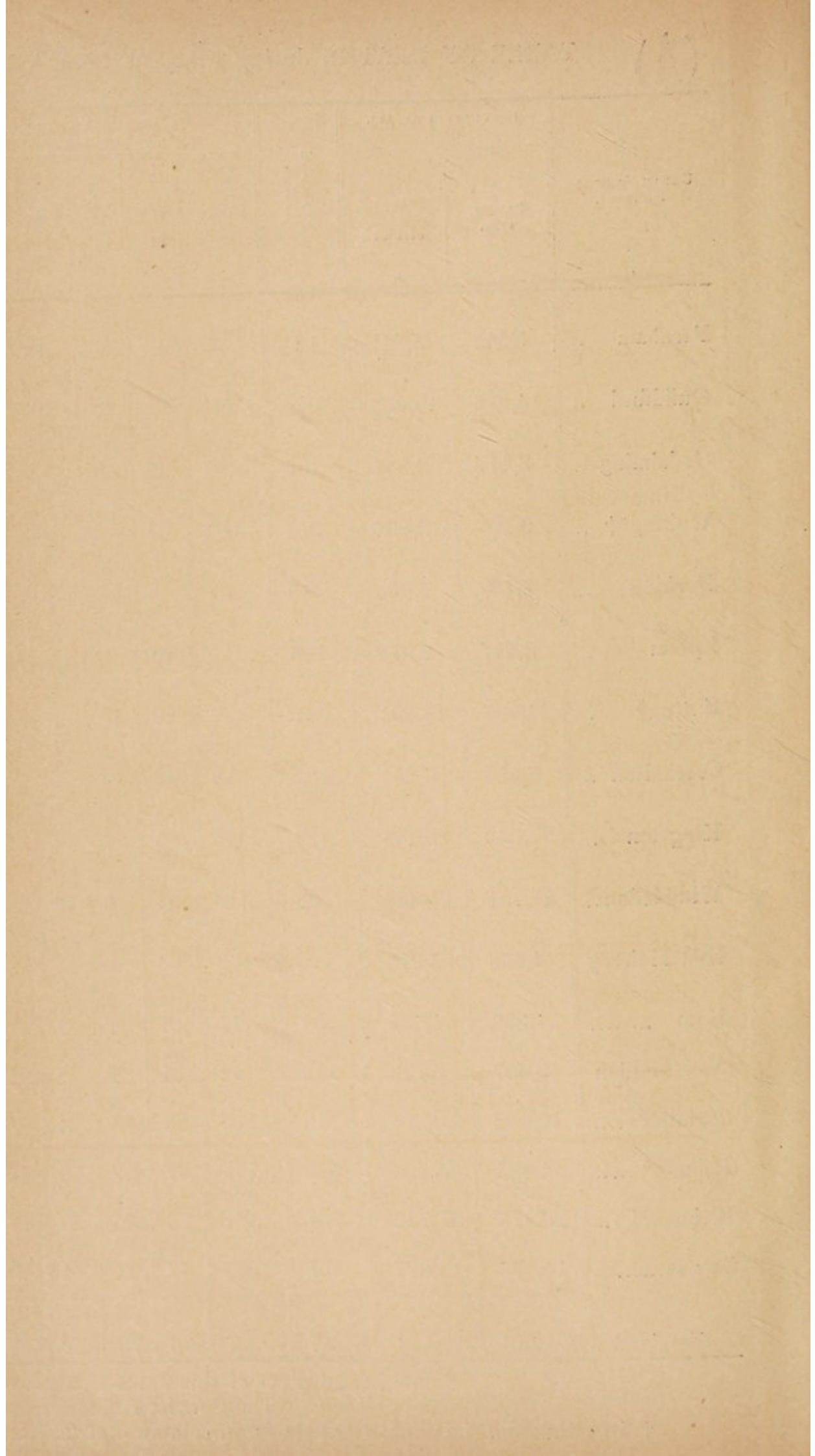


TABLE B (Rural) 1894. —Density, Birth-rate, General Death-rate, Infant Mortality, Death-rates at various Ages, Death-rates from the principal Zymotic Diseases, and from Diseases of the Respiratory Organs.

RURAL SANITARY DISTRICT.	Persons per acre (estimated).	Birth-rate to 1000 persons living.	Death-rate to 1 00 per-sons living.	Deaths of Infants under one year to 1000 Births.	DEATH-RATES TO 1000 LIVING.			DEATH-RATES TO 1000 LIVING AT ALL AGES.											
					At ages 1-15.	At ages 15-65.	At 65 years of age and upwards.	Principal Zymotic Diseases.	Small- pox.	Measles.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Whooping Cough.	Fever.	Diarrhoea and Dysentery.	Pneumonia.	Respiratory Diseases.	
Farnham*	...	0.55	27.5	12.6	9½	5.4	7.4	76.2	0.96	...	0.10	...	0.41	0.05	0.10	0.10	0.20	0.66	1.47
Hambledon	...	0.31	26.1	10.4	34	3.4	7.4	66.4	0.57	...	0.05	0.05	0.15	...	...	0.11	0.21	0.47	1.50
Guildford*	...	(?)	22.4	10.6	70	4.2	6.4	71.0	0.76	...	0.05	...	0.47	0.05	...	0.05	0.14	1.15	1.39
Chertsey	...	0.82	24.0	12.0	92	6.1	6.0	82.5	1.24	...	0.45	0.06	0.23	0.09	0.23	0.09	0.09	0.74	2.09
Dorking	...	0.26	23.1	12.3	78	4.7	8.2	66.1	0.86	...	0.28	0.10	0.28	...	...	0.10	0.10	1.05	2.38
Epsom*	...	0.67	22.9	11.9	122	5.6	6.5	62.4	0.90	...	0.19	...	0.14	0.05	0.38	0.05	0.09	0.85	2.23
Kingston	...	1.06	21.3	12.1	115	4.4	8.6	65.6	1.56	...	0.52	...	0.15	...	0.37	0.22	0.30	0.74	1.94
Reigate	...	0.33	23.6	10.7	83	2.0	6.7	80.5	0.40	0.07	...	...	0.07	...	...	0.07	0.19	0.81	1.62
Croydon*	...	1.36	25.9	10.6	97	6.4	5.8	56.8	1.41	...	0.04	0.18	0.70	0.04	0.07	0.07	0.31	1.06	1.48
Godstone*	...	0.44	28.1	11.3	90	3.4	6.7	69.1	0.46	...	0.06	0.06	0.11	...	0.06	0.11	0.06	1.09	1.84
East Grinstead*	...	0.36	24.8	17.9	108	16.7	8.3	77.7	4.18	...	0.30	...	3.88	...	...	...	...	0.89	1.19
Windsor*	...	1.20	26.0	15.6	75	7.3	11.0	101.8	1.07	...	0.44	0.09	0.18	...	0.36	...	...	1.69	2.76
Total of above Districts	(?)	24.7	11.7	8.7	5.2	7.0	71.8	1.01	0.00	0.20	0.05	0.35	0.03	0.14	0.08	0.16	0.90	1.82	

* See foot note to Table A.

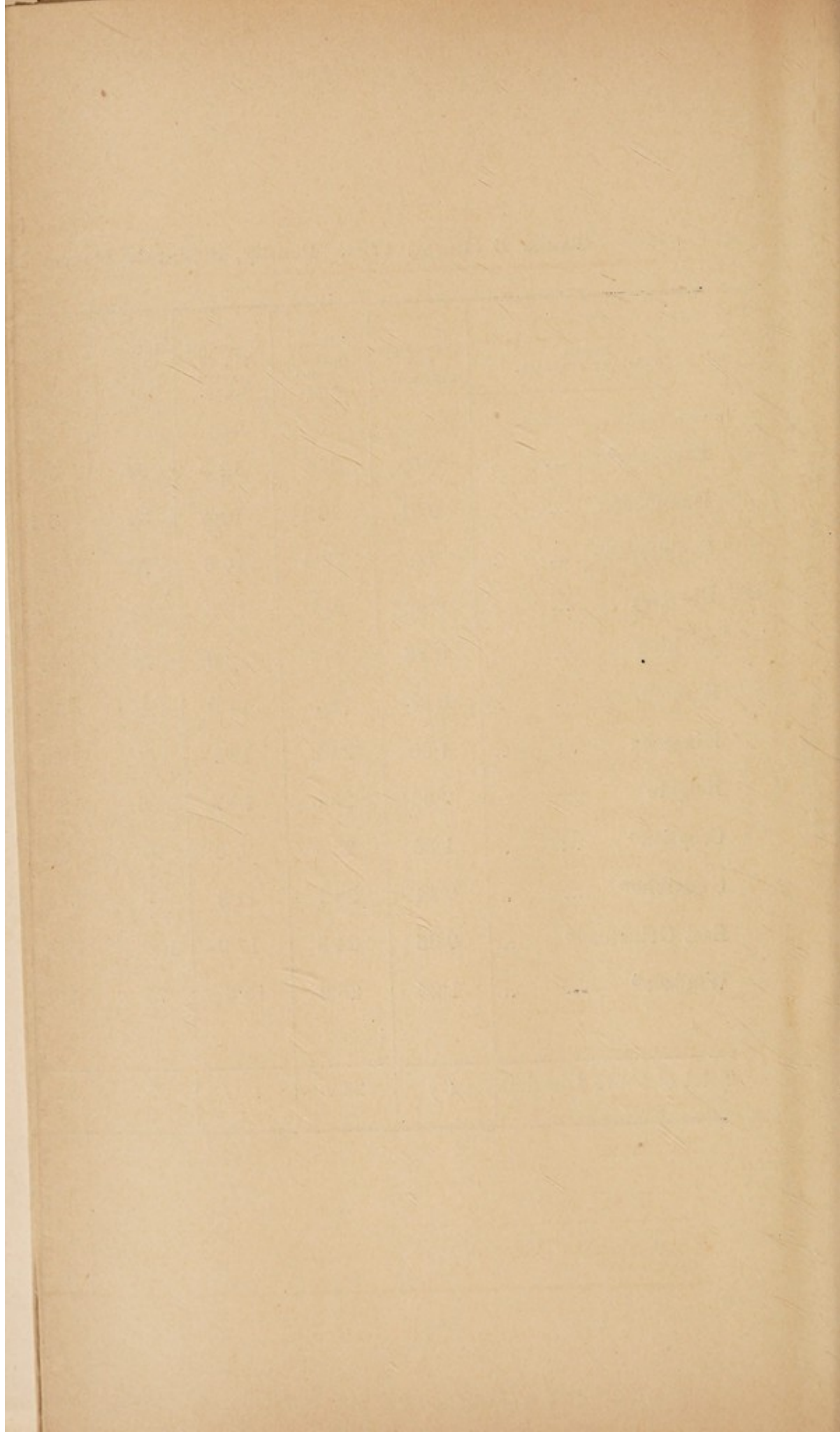


TABLE B (Urban), 1894.—Density, Birth-rate, General Death-rate, Infant Mortality, Death-rates at various Ages, Death-rates from the principal Zymotic Diseases, and from Diseases of the Respiratory Organs.

URBAN SANITARY DISTRICT.	Persons per acre (estimated).	Birth-rate to 1000 persons living.	Death-rate to 1000 persons living.	Deaths of Infants under one year to 1000 Births.	DEATH-RATES TO 1000 LIVING.			DEATH-RATES TO 1000 LIVING AT ALL AGES.										
					At ages 1-13.	At ages 15-65.	At 65 years of age and upwards.	Principal Zymotic Diseases.	Small- pox.	Measles.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Whooping Cough.	Fever.	Diarrhoea and Dysentery.	Pneumonia.	Respiratory Diseases.
Farnham ...	7.51	23.6	16.3	120	2.8	11.7	101.0	0.35	...	...	...	...	...	0.35	...	...	0.71	1.95
Guildford ...	25.33	23.6	13.4	127	5.6	8.2	74.0	1.00	...	...	0.07	0.33	...	0.40	...	0.20	1.73	2.13
Godalming ...	(?)	21.0	11.0	87	4.0	7.4	59.3	0.22	...	0.22	...	...	...	...	...	...	0.79	2.36
Woking* ...	1.14	29.4	11.1	121	5.9	4.6	51.8	0.96	...	...	...	0.32	...	0.53	0.11	...	0.64	0.96
Dorking ...	5.49	19.4	13.2	56	7.3	7.9	79.1	1.09	...	...	...	0.14	...	0.67	0.14	0.14	1.09	2.45
Epsom ...	2.01	21.2	13.1	126	3.5	8.6	71.6	0.24	...	...	...	0.12	...	0.12	...	...	1.16	1.74
Sutton* ...	8.26	23.3	9.0	88	5.0	4.8	58.5	1.62	...	0.22	0.15	0.15	0.22	0.66	0.22	...	0.59	1.47
Carshalton ...	1.92	28.5	14.6	142	6.3	6.2	93.8	1.58	...	1.40	...	...	...	...	0.18	...	0.35	2.46
Kingston ...	26.16	30.0	14.6	118	7.8	7.8	82.0	1.95	...	0.79	...	0.24	0.24	0.27	0.10	0.31	1.23	2.33
Wimbledon ...	8.99	26.7	10.7	103	5.9	6.2	55.5	1.11	...	0.20	...	0.34	...	0.27	0.10	0.20	0.77	1.85
East Molesey ...	6.55	22.2	10.0	103	0.6	7.9	50.2	...	...	...	...	...	...	...	...	...	1.72	1.34
Ham ...	9.57	26.9	12.0	132	10.1	7.4	13.9	0.71	...	...	...	0.71	...	...	...	...	1.42	4.05
New Malden ...	3.57	29.0	11.1	136	3.2	4.9	59.4	0.53	...	...	...	...	...	0.53	...	...	0.53	1.84
Surbiton ...	8.75	20.3	11.2	105	3.5	7.4	61.3	0.97	...	...	...	0.20	...	0.10	0.39	0.19	0.48	1.26
Reigate* ...	3.99	21.5	10.6	71	6.5	6.8	55.4	0.62	...	0.08	...	...	0.12	0.21	0.04	0.17	1.04	2.03
Richmond ...	(?)	22.6	12.6	120	7.5	6.4	65.6	1.01	...	0.17	...	0.14	0.17	0.39	...	0.14	0.83	2.16
Barnes ...	(?)	23.2	11.8	128	5.0	6.3	72.9	0.82	...	0.19	0.06	0.06	...	0.25	0.13	0.13	1.20	2.46
Total of above Districts	(?)	24.5	12.1	109	5.9	6.9	66.7	1.03	...	0.23	0.02	0.17	0.08	0.30	0.09	0.14	0.97	2.01

* See foot notes to Table A.

IV.—Working of the Notification
Act.

THE HISTORY OF THE

AMERICAN

IV.—WORKING OF THE NOTIFICATION ACT.

This Act is now in operation throughout the whole county, having been adopted in a voluntary manner under the influence of County opinion. It has been suggested that the Act should be made compulsory throughout England and Wales. It may, however, be objected that if the adoption of the Act is likely to lead to good results in Country Districts, it is to County Councils we must look for the formation of County opinion, under the influence of which District Councils will be led to adopt the Act.

In some Counties, Buckinghamshire for example, the effort to create County opinion, in matters that concern the Public Health, has failed. I am informed, on the very best authority, that the reason for this failure is the fear that possible publicity respecting the prevalence of Diphtheria and Scarlet Fever in certain localities would materially affect the interests of the dairy farmers. There are dairy farms in Buckinghamshire which are in a very insanitary condition, as I can testify having had occasion to visit them in 1894, in connection with a Scarlet Fever outbreak in Surrey. The case of Buckinghamshire may, therefore, be quoted in opposition to the view just expressed. But it might also be used as an argument against the principle of Local Self-Government altogether; for it is plain that Authorities who were forced to adopt Notification would not be likely to proceed with the necessary preventive measures without further coercion.

In the Report for 1893 I wrote as follows:—

“It is not likely that the adoption of an Act which affects the relation of Medical Practitioners to their Patients, and to each other in no small degree, should be entirely free from friction at

the first. It is, therefore, not suprising that a great deal of my attention has been required in deciding or advising on points of difficulty or dispute in which my special experience has been considered of value."

I am pleased to say the friction has been less in 1894 than in 1893, especially in the Farnham District.

During the year under notice arrangements have been successfully carried out for the issue of "Monthly Summaries of Notification Returns," so that now every Medical Officer of Health in the County is made acquainted with the existence of Epidemic Diseases in other parts of the County.

The sections of the Report immediately following deal chiefly with the distribution of Epidemic Diseases and the measures taken for their prevention.

V.—Epidemic Diseases.

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V. —EPIDEMIC DISEASES.

INFLUENZA.

This disease prevailed extensively during the early part of 1894. That it was of a milder type than that which prevailed in 1892 and 1893 is amply shown by the comparatively low general Death-rate in 1894, and by the diminished Death-rate from Respiratory diseases, which in 1894, did not exceed 2·01 per 1,000 of the population in the Urban and 1·82 per 1,000 of the population in the Rural Districts of Surrey.

MEASLES.

Measles like Influenza is not one of the diseases scheduled in the Notification Act.

In the Urban Districts of Surrey this disease gave rise to a Death-rate of 23 per 100,000 of the population, an increase of 5 on the Death-rate of 1893.

In the Rural Districts of Surrey, it gave rise to a Death-rate of 20 per 100,000 of the population, a decrease of 14 on the Death-rate of 1893.

WHOOPING COUGH.

In the Urban Districts this disease gave rise to a Death-rate of 30 per 100,000 of the population—double the rate of 1893.

In the Rural Districts it gave rise to a Death-rate of 14 per 100,000 of the population, a decrease of 8 on the Death-rate of 1893.

N.B.—The Death-rates quoted are in different proportions, viz., as follows:

General Death-rate	.. .. .	per 1,000 of the population.
„ „ Respiratory Diseases	.. „ „	„
„ „ Measles, Whooping Cough	.. „ „	„
„ „ and Diarrhoea, Scarlet	.. „ „	„
„ „ Fever and Diphtheria	.. „ 100,000	„ „

DIARRHŒA.

The low Death-rate from Diarrhœa (due to the character of the Summer and Autumn seasons) had appreciable influence in determining the low general Death-rate.

In the Urban Districts it was only 14 per 100,000 of the population, as compared with 51 in 1893.

In the Rural Districts it was 16 as compared with 38 in 1893.

I now proceed to give an account of the Notifiable Diseases in the following order :—Cholera, Smallpox, Scarlet Fever, Diphtheria and Membranous Croup, Enteric (Typhoid) Fever, Continued Fever, and Puerperal Fever.

CHOLERA.

No case of this Disease was reported in the County during 1894.

SMALL-POX.

We had another notable example in 1894 of the danger of the spread of this Disease at Workhouses through tramps.

The subject was specially discussed at a meeting convened for the purpose at Spring Gardens in July, 1894. The Report of the Meeting and the conclusions arrived at have been recently before the Council.

Barnes.—One case.

Richmond.—Six cases.

Wimbledon.—One case.

Kingston Urban.—Two cases of very mild character.

Kingston Rural.—No deaths.

New Malden.—None. Few cases of Chicken Pox.

Farnham Urban.—Four cases at the Workhouse ; in all probability infection introduced by a tramp.

Croydon Rural.—Two mild cases in April, at Kenley.

Reigate Urban.—One mild case brought from Merstham for treatment in the Isolation Hospital.

Reigate Rural.—One case in February at Salfords, Horley. On April 1st, one case at Jolliffe's Row, Merstham, followed by a second, removed to Reigate.

SCARLET FEVER.

The extremely low rate of mortality from this Disease in proportion to its wide spread prevalence is remarkable.

In the Urban Districts it only gave rise to a death-rate of 2 per 100,000 of the population. In the Borough of Richmond 246 cases without a single death were reported.

In the Rural Districts it only gave rise to a death-rate of 5 per 100,000 of the population.

The following Abstracts from District Reports show that it prevailed in all parts of the County.

Barnes.—Fifty-eight cases, of which 45 were removed to Hospital.

Richmond.—Two hundred and forty-six cases without a single death ; 52 of these were connected with a milk supply, which was stopped. The very large number of cases without a single death is most noteworthy.

Wimbledon.—Ninety-three cases, 71 of which were treated in the Isolation Hospital.

Kingston Urban.—Fifty-seven cases without a death. Several cases in connection with a private day school. Four cases sent into the Work-house from outside districts.

Kingston Rural.—No deaths.

New Malden.—Fifteen cases. Nine attended the same school.

Sarbiton.—Nine cases as against 94 for 1893. Five removed to hospital. Three occurred in one family.

East Molesey.—Eight cases, all of a mild type.

Chertsey.—One hundred and one cases in 63 houses, 83 cases removed from 51 houses to the Isolation Hospital. No fatal case. Cases distributed as follows: Purford, 11 (among pea-pickers); Byfleet, 5 (St. Nicholas' Home); Chertsey, 19; Addlestone, 22; Ottershaw, 5 (Isolation Hospital Servants, 3); Longcross, 3; Chobham, 1; Horsell, 7; Bagshot, 2; Windlesham, 8; Weybridge, 11; Hersham, 1; Oatlands, 3; Walton, 3.

Egham Rural.—One case.

Farnham Urban.—Twenty-one cases, 12 of which were removed to the Workhouse.

Farnham Rural.—Thirteen cases in Farnham, six in Frensham, one in Frimley, four in Ash, and four in Dockenfield. No deaths.

Hambledon.—Seventy-four cases—prevalent in Cranleigh, Shalford, Chiddingfold and Shamley Green—one death. The spread of the disease was attributed to school attendance.

Guildford Urban.—Fifty-seven cases and one death; no continuity traced until September 14th, when then commenced a series of cases amounting in all to 28, which ceased on October 15th. Traced to Charlotteville Board School, and one? Holy Trinity National School; 12 cases were removed to the Isolation Hospital.

Guildford Rural.—Forty-three cases in 31 houses, 24 patients removed to Isolation Hospital, of the 39 cases none fatal. One case in January at West Clandon and four at West Horsley. Seven in February; one at West Horsley, one at East Horsley, one at Perry Hill, Worplesdon, one at the master tailor's shop at the Barracks, Stoughton, one at Witley, one at Ripley, one at a farmhouse in the parish of St. Nicholas.

Seven in March; two at King Edward's School, Witley, one at a farmhouse, St. Nicholas, one at West Horsley, one at East Horsley, one at West Clandon, one at Ripley.

April, one at Merrow.

In May, one at King Edward's School, one at Ockham.

June, one at Witley, one at Van Lane, one in Stoke.

July, August and September, nine cases in eight houses, situated at Perry Hill, Oakham, Stoughton, West Clandon and Bellfields.

October, November and December, eight cases in four premises, viz :—Tuesley, Ockham Corner, East Horsley and Merrow. Of the 43 cases, 12 were said to be imported.

Woking Urban.—Forty-four cases in 31 premises, and 35 cases went to the hospital. Cases occurred at Knap Hill, Maybury Road, Guildford Road, Chertsey Road, Goldworth, East Side, Walton, Poole Roads, Canal Boathouse, Church street, Mayford and Kingfield, Woking Prison Quarters and Woking Village. Some of the cases were said to be imported.

Dorking Rural.—Nineteen cases, one death ; four cases at Hereford Cottages, Capel, in March at South Holmwood, in the schoolmaster's family. In November, fever and sore throats at Ironside Road and Leslie Road, Pixholme, and in the Dorking Urban District, suspected to be due to milk. Milk sellers found to be suffering from sore throats, and stopped.

Dorking Urban.—Eighteen cases in 11 houses, none fatal. Illnesses in October and November, connected with a milk supply previously noticed.

Epsom Rural.—Twenty-five cases (of which eight were at Ewell) in 18 houses—12 of the sick were treated in the Isolation Hospital. No deaths.

Epsom Urban.—Fourteen cases in 12 houses, none fatal ; three of the illnesses contracted out of the District ; two of the patients removed to the Isolation Hospital.

Sutton.—Thirty-five cases in 19 houses, two deaths—27 of the cases removed to hospital. A larger number than usual of the infected houses were of the better class.

Carshalton.—Six cases in six houses—Mill Lane, St. James's Road, North Street, Batt's Farm, the Wrythe and Mill Lane. No death.

Croydon Rural.—Eighty cases, five deaths, including two in the Croydon Infirmary, registered as due to Scarlatina and Diphtheria.

Nineteen cases occurred in Institutions, 12 being at the Holborn Schools, and seven in a charitable home in Merton Parish.

Reigate Urban.—Chiefly in the Eastern Ward, altogether 76 cases (two of which occurred in the Workhouse) were notified in 54 houses, eight of which were in the Western Ward, and 46 in the Eastern Ward—27 were removed to the Borough Hospital at New Pond Farm, eight to the Rural Hospital, three to Lodgings. Some of the illnesses were apparently contracted out of the District, none ended fatally, and some were so mild as not to be suspected until the third or fourth case had occurred in the family.

Reigate Rural.—In 18 houses, of which six are at Charlwood and the remaining 12 were distributed between eight other parishes. Altogether there were 33 cases, nine of which were removed to the Rural Isolation Hospital. None of the cases ended fatally.

Godstone.—Thirty cases in 21 houses, one death. Six cases at Caterham (two of which were at the Congregational School), one at Chelsham, two at Farleigh, three at Godstone, one at Limpsfield (Missionary Home from Winchester), 10 at Oxted in five houses, seven at Warlingham in five houses.

DIPHTHERIA.

(Including Membranous Croup).

This Disease is a far more serious item in the Zymotic Death-rate.

In the Urban Districts it gave rise to a death rate of 25 per 100,000 of the population.

In the Rural Districts it gave rise to a death-rate of 38 per 100,000 of the population. In the District of Croydon it was as high as 70.

Barnes.—Twenty-seven cases, of which 11 were taken to Hospital.

Richmond.—Fifteen cases with four deaths.

Wimbledon.—Forty-three cases, 10 of which were fatal. Twenty-seven were treated in the Infectious Hospital.

Ham.—One case.

Kingston Urban.—Forty-two cases and seven deaths. The majority of the cases arose in "modern houses built on concrete foundations with drains well laid and good sanitary appliances." There is nothing to account for local origin, and no traceable contagion.

Kingston Rural.—Two deaths.

New Malden.—Fourteen cases, five of which were attributed to defective drainage. A great many cases of follicular tonsillitis.

Surbiton.—Twenty cases in 13 houses, with three deaths. Six of the cases are demonstrated to be due to personal infection.

East Molesey.—One case, a mild attack.

Chertsey.—Fifty-eight cases in 49 houses. Twenty-nine removed from 23 houses to Isolation Hospital, where five of them died. Three also died at their homes. Cases were distributed as follows :—Chertsey, 2; Addlestone, 8; Ottershaw, 2; Chobham, 8; Horsell, 2; Weybridge, 2; Hersham, 22; Oatlands, 1; Walton, 4; Bagshot, 7. At Bagshot, Chobham, and Hersham the disease was of a somewhat severe type. The spread of the disease attributed to personal infection.

Egham and Thorpe.—Two cases.

Farnham Urban.—Four cases, two of which were in Beaver's Yard, where the drainage arrangements were very bad. Five cases admitted to the Infectious Wards of the Workhouse.

Farnham Rural.—Four cases in Farnham, six in Frensham, 29 in Frimleigh, 3 in Ash. Two cases of Croup in Farnham, and one in Frimleigh. In all 10 deaths, among the 45 cases of Diphtheria and Croup. Some of the cases occurred in a part of the Camberley District (Obelisk Street), where the ground is said to be water-logged.

Hambleton.—Twenty-four cases. Prevalent in Cranleigh, Shalford, Chiddingfold, and Shamley Green. Three deaths. At Cranleigh the spread of the disease is attributed to gross neglect of the ordinary precautions against infection.

Guildford Urban.—Sixty-four cases and five deaths. Continued presence of the disease attributed partly to the want of proper sewerage of the district, the use of cesspools, many of them old and foul, and

placed for the most part, even in houses very recently erected, too close to the houses.

Guildford Rural.—Forty cases in 28 houses, 29 sent to Isolation Hospital. Ten fatal cases.

January.—At Worplesdon, near a foul ditch, one case, one case at Stoke (imported), four cases at Holmbury St. Mary (imported), and one case at Stoughton.

February.—Five cases in four houses, four sent to hospital. Three cases previously infected at the village of Normandy, one at Stoughton imported from London, one at Merrow, also imported by a relative who had just returned from nursing a diphtheritic case without disinfecting her clothes.

March.—Three at Stoughton, Holmbury St. Mary, and Stoke, two at Worplesdon; another case at Stoke, and two more at Stoughton.

April.—One at Stoke, two at Stoughton, two at Worplesdon.

May.—One at Slyfield Green, one at Bisley Camp, one at Merrow.

July.—One at Send, one at Stoke, four at Stoughton.

October, November, December.—Three at Stoke, and three at St. Nicholas.

Of these 40 cases some 10 were said to be imported.

Woking Urban.—Nine cases in nine houses, four taken to Isolation Hospital. Three cases fatal. They occurred in Claremont Avenue, St. John's, Knaphill, Goldsworth Road, Sutton Ward.

Dorking Rural.—Twelve cases of Diphtheria and one of Membranous Croup, notified in 10 houses. Four deaths. Cases were at Capel village, Holmbury St. Mary, Pixholme, Wallace Wood, Abinger, Ockley, Westcott.

Dorking Urban.—Thirteen cases in 11 houses, one death. Those which occurred in April due to attendance in Infant School in Pixholme Lane.

Epsom Rural.—Ten cases in nine houses, three deaths. Of the nine houses three were at Leatherhead, three at Cheam, and three at

Cobham, Ashtead, and Chessington. Four of the illnesses contracted out of the district. Besides the recognized cases of Diphtheria, numerous cases of suspicious sore throat in some parts of the district, notably in February and March in St. John's Foundation School, Leatherhead, where a good many of the boys, some of whom were suffering or just recovering from measles, quickly failed with undoubted Diphtheria.

Epsom Urban.—One case in September in Burgheath Road (imported), one case in December in Victoria Place.

Sutton.—Five cases of Diphtheria (two fatal) and three of Membranous Croup (two deaths) in seven houses. No connection between the cases. No local sanitary defects.

Carshalton.—In August one case in Wilton Terrace, Beddington Corner.

Croydon Rural.—Sixty-four cases, including one Membranous Croup, were notified from 37 houses. The number of deaths was 21, including one from Membranous Croup. The incidence of the disease was almost entirely on a particular portion of Mitcham, and closely adjoining a portion of Merton.

Reigate Urban.—Seven cases, no deaths; three cases Croup, three deaths. In one case the illness was apparently caught from a boy who had a discharge from the nose in which the Diphtheria Bacillus was afterwards detected. Four of the eight infected houses were situated at Earlswood.

Reigate Rural.—Fourteen cases occurred at Outwood, Burstow, in seven houses (no deaths). February, March, April and May.—Six cases were reported in six houses in other parts; one at Merstham in January (fatal); one at Buckland in February; one at Charlwood; one at Horley; one at Chaldon in September; and one at Smallfields, Burstow, in November.

Godstone.—Twenty five cases in 19 houses in eight localities, two deaths; one at Bletchingley (attending Outwood School); three at Caterham (two in Buclewood Road, associated with insanitary surroundings, one a school teacher); one at Godstone (on Blindley Heath); eight at Horne in three houses (most of the cases associated with insanitary

surroundings); two at Limpsfield (one at the Village and one at the Church Missionary Home); two at Oxted (in Hailing's, now amidst very insanitary surroundings, sore throats very prevalent amongst the tenants of the cottages); three in Tandridge (two cases at one house near the cage in very insanitary surroundings, the third due to contagion); four at Warlingham (associated with local defects of sanitation).

Lingfield.—A serious outbreak occurred in the Spring, of which there is no very clear account in the Report of the Medical Officer of Health. He refers generally to the insanitary condition of the Village

ENTERIC (TYPHOID) FEVER.

This Disease usually gives rise to a small mortality in Surrey, but however small it may be it is valuable as an index of sanitary conditions.

In the Urban Districts it gave rise to a death-rate of 9 per 100,000 of the population.

In the Rural Districts it gave rise to a death-rate of 8 per 100,000 of the population.

Barnes.—Ten cases, three in Mortlake and seven in Barnes.

Richmond.—Ten cases, one imported, three in Richmond Hospital, and seven remained at home. There were no deaths.

Wimbledon.—Thirteen cases and three deaths. In four cases serious defects of drainage were found in the houses.

Kingston Urban.—Nine cases and two deaths. Five cases traceable to origins outside the Borough, four inside, all in one road.

Kingston Rural.—Three Typhoid.

New Malden.—Three cases in three houses, in one of which there was sanitary defect.

Surbiton.—Twelve cases and four deaths. Three of the cases were referred to Kingston, leaving nine belonging to Surbiton, a rather large proportion. Some of them were said to have contracted the disease elsewhere.

East Molesey.—One case, attributed to defective sanitary arrangement of the house.

Chertsey.—Eleven cases, in four of which the probable source of infection was said to be uncertain. In six it was out of the district, and in one not traceable.

Farnham Urban.—One case, traceable to the insanitary condition of the waiting room of the railway station.

Farnham Rural.—One death attributed to this disease.

Hambledon.—Four cases with two deaths. Three were at Witley, of which one was imported from Caterham, the second connected with sanitary defects, in the third the drain from the cesspool was stopped. The water supply of the district is said to be bad.

Guildford Urban.—Four cases, no death.

Guildford Rural.—One case at Send (imported), one from Godalming, one at Albury.

Woking Urban.—Four cases, one death, one case in January in Woking Village, one case in St. John's, one case in Station Ward, one case at Mayford Industrial School.

Dorking Rural.—In February, one case at Oakwood, Ockley (local defects of drainage). In August, one imported case at South Holmwood, one at Chalkpit Cottages, Mickleham, followed by a second.

Dorking Urban.—In April, one case in Falkland Road; in May, one case at Wathen Road; in October, one case in Deane Street.

Epsom Rural.—Eight cases, in three of which serious sanitary defects were found in the houses. In two cases, the disease was imported.

Epsom Urban.—In October, one case in Pikeshill (imported); in November, one case in Church Street, and in December, one case in West Hill. In the last two cases, the patients had partaken of uncooked oysters.

Sutton.—Six cases in six houses, three deaths. In two of the houses there were defects; in one case, raw oysters had been eaten.

Carshalton.—Five cases, in one, drainage defects were discovered in the houses, in two, raw oysters had been eaten, the time corresponding with the infection.

Croydon Rural.—Twelve cases, three persons who had arrived in the district actually suffering from the disease, or who were attacked within a few days, and therefore, could not have contracted the disease in the district. There were two other cases which might also have been contracted outside the district.

Four of the 12 cases occurred in Wallington, one in Purley, two in Kenley, two in Mitcham, and two in Merton. Two deaths.

Reigate Urban.—An outbreak at the Asylum of St. Anne's School, at Redhill. Cause not definitely ascertained, drainage very bad. One case at Redhill in Nov., contracted elsewhere, and in Dec., one case in Cromwell Road, Redhill. No local cause for illness.

Reigate Rural.—Seven cases, one death. In two houses, there were serious sanitary defects. Two of the cases were imported.

Godstone.—There was an outbreak at the Caterham Asylum and Barracks, which was specially reported upon. There were no cases at Caterham outside the Asylum and Barracks. The other cases in the district were as follows :—One at Chelsham (possibly contracted elsewhere) ; one at Tandridge (origin obscure) ; two at Warlingham (one of which was contracted outside).

PUERPERAL FEVER.

There were altogether eleven deaths registered as due to this preventable cause in Surrey during 1894.

VI.—Preventive Measures.

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VI.—PREVENTIVE MEASURES.

Under this heading I propose to briefly recapitulate the chief preventive measures which are adopted in the County. Obviously they must arise mainly from the enquiries, information, advice and action of the Medical Officer for the District. In my last Annual Report, I referred especially to the growing importance of this work, and to the fact that its value is by degrees coming to be more generally recognised. It is with pleasure that I am able now to refer to the reports of Medical Officers of Health in the County, showing that their respective Authorities look to the Medical Officer of Health as the person who is best able to advise them as to the direction in which they should take action.

It is plainly laid down under the orders of the Local Government Board, that the principal duties of the Medical Officer of Health are that he should inform himself as far as practicable, respecting all influences affecting the public health within the District, and that he should inquire into and ascertain by such means as are at his disposal, the cause, origin, and distribution of these diseases within the District, and ascertain to what extent the same have depended on conditions favourable to removal or mitigation, and subsequently that he shall advise the Sanitary Authority thereon.

If Sanitary Authorities will bear in mind that these are the principal functions of a Medical Officer of Health, more rapid advances will be made in the adoption of measures for preventing illness which is of a disabling, and, at the same time, preventable character.

The Measures of Precaution which are at the present day practicable and which are immediately preventive may be classed as follows :

- (1) General Precautions.
- (2) School Precautions.
- (3) Milk Precautions.
- (4) Water Precautions.

General Precautions.—The following account, which is taken from Dr. Jacob's Report, on one of the united group of districts, summarises the action which is generally taken to prevent the spread of disease :—

“The houses infected with Small Pox, Scarlet Fever, Enteric Fever, Croup, or Diphtheria, were visited ; isolation of the sick was inculcated, and was assisted by the removal of ten to the Authority's Hospital, and of one to the Isolation Hospital in the Borough of Reigate. Disinfectants for use during illness were in most cases supplied and their proper use explained ; the water supply, when suspected, was analysed ; all nuisances and sanitary defects, discovered upon the premises, were remedied as far as was practicable ; and, after the illnesses were over, notices to cleanse and disinfect the infected rooms and their contents were served in most instances. Many rooms were personally fumigated by the Inspector. At several houses infected articles were destroyed and compensation given, under Sec. 121 of the Public Health Act, 1875. Infected articles were also removed from the houses of the poor and disinfected, at the cost of the Sanitary Authority.

School Precautions.—These relate chiefly to the prevention of Diphtheria and Scarlet Fever. Under this head there is nothing to record from the Reports of the Medical Officer of Health of Barnes, Richmond, Wimbledon, New Malden, East Molesey, Godalming.

At Kingston the Medical Officer of Health has taken active measures with regard to Schools, both as regards their sanitary conditions of lighting, ventilation and drainage, and the exclusion of children who are likely to be carriers of infection. At Surbiton also the Medical Officer of Health reports some very important observations on the spread of disease through Schools.

At Farnham the Medical Officer records the circumstances under which he obtained leave to inspect the scholars of a school at a time when Scarlet Fever was prevailing. In the Boys' School he found one was (A) undoubtedly desquamating, and in the Infants' School he found one child (H) whom he considered doubtful, and whom, when he found that his sisters were in the Infectious Wards of the Union suffering

from Scarlet Fever, he treated as a case of the disease, and kept at home till he was satisfied that his desquamation was finished. In the Farnham Rural District action was taken. This is within my knowledge, but the Medical Officer has omitted to report. In the Hambledon Rural District the closure of schools is made a great point of, but apparently little is done in the way of ensuring exclusion from schools of the children who are likely to be carriers of infection. At Guildford a series of cases of Scarlet Fever were said to be clearly traceable to schools. It was found necessary to examine every child in the Infants' Department of these schools, and to trace home all children who had been away from school for a few days. In the Guildford Rural District very important action in a new direction has been taken. It is described fully in the excellent Report of the Medical Officer of Health, p.p. 18 & 19, to whom it is due that he should be quoted fully :—

“ As to Scarlet Fever. I have visited (with one or two rare exceptions where quite unnecessary) every infected house and every possibly infected house. I have put myself in immediate communication with the School Authorities. I have stopped all school attendance from every infected house and every possibly infected house. I have not resorted to the closure of schools for Scarlet Fever during the whole of the year, though I know they are sometimes the means of propagation of the disease. It seems to me, as it does to the well-known Medical Officer of Health of Maidstone (Mr. M. A. Adams, F.R.C.S.), that closing school, for this disease, is seldom necessary, and often mischievous, and that having every infected case under supervision, there is less risk incurred in keeping the other children together at school and under discipline, and intelligent observation, than by sending them home to run loose into the villages and streets and out of sight, and beyond the reach of discipline. Anyhow I have completely checked, in the way I have described, every outbreak during the past year.

“ As to Diphtheria. During the year I kept a careful supervision over the throats of nearly all the children attending school,

and printed notices were sent to every school in recently infected districts, and school managers and attendance officers were asked to exercise the greatest precaution on the re-assembly of the scholars after holidays. During the past year, after the re-assembly of the schools, I have, as far as possible, personally examined the throats of the children attending the principal schools, and sometimes at the homes of the children where "Sore Throat" has been prevalent, but more especially at the schools themselves. At the latter I adopt the following method:—Armed with a couple of nickel-plated tongue depressors, a few clean towels, and a laryngeal mirror, I ask for one or two basins of hot water, which I frequently change. Whilst examining the throat with one tongue depressor the other remains in the water, and in this way I systematically examine, at suitable times, every child attending school, and I rigidly exclude every child where there is the least suspicion of

Sore Throat," and with few exceptions I have been able to keep these cases from school till the throat has become normal. If the Diphtheria bacillus is available, the chances of a normal throat being attacked is nothing compared to what would occur in the presence of sore throats generally. In some cases of enlarged tonsils and elongated uvulæ I have advised removal, and this has usually been adopted where recommended. It is obvious that if the schools are attended only by children with normal throats the risk of infection by Diphtheria is minimised, and given that the Medical Officer of Health only has the time, an inspection of the schools on first assembling after holidays must be an invaluable preventive method. I can say very positively, that since I have adopted this measure, I have noticed a marked absence of Diphtheria, or, anyhow, a remarkable diminution of the disease in those districts where the disease was formerly so persistently prevalent. I need scarcely say I visited all the initial cases, and absolutely excluded all members of the infected houses from schools. Further, it should be noted, that having all the throat cases under supervision and discipline, occasion does not seem to arise for closing the schools, and I have not closed one single school for Diphtheria in any district during the past year. On the other

band, I naturally play havoc with the school attendances in weeding out all the throat cases, however trivial ; and it is high time the Educational Acts were adapted to the times, and that if the School Grants are made according to the average attendances, that those cases, in the interests of the Public Health, excluded from attendance by the Medical Officer of Health, or by other medical certificate, should count as though they were actually attending during the whole of the absence prescribed.

The same practice is carried out in the Woking Urban District.

In the Croydon District reference has already been made to important inquiries in connection with schools. At Oxted and other villages in the Godstone District the influence of schools in propagating infectious diseases is commented upon.

Milk Precautions.—The Medical Officer of the Richmond District reports on an outbreak of Scarlet Fever traceable to milk. The facts have already been reported to the County Council (May, 1894). The outbreak was due to milk which came from Buckinghamshire, and the case illustrates the necessity for insisting upon proper precautions being carried out at Dairy Farms. Buckinghamshire is a County where there are a great many Dairy Farms. It is notorious that Sanitary precautions in that County are generally neglected. There were 52 persons who were attacked with the Fever. The action taken with regard to dairies, cow sheds, and milk shops for the purpose of preventing infection in milk, and maintaining them in a good sanitary condition is recorded separately, but is mentioned in this connection as having a direct influence in the prevention of disease.

Water Precautions.—The inquiries under this head have been very extensive, *vide* the part of the Report referring to water supply. The subject of the typhoid fever outbreak at the Barracks and Asylum, Caterham, has received my special attention.

VII. --Hospital Provision.

VII. — *Historical Provision.*

VII.—HOSPITAL PROVISION.

I regret that I am not able to record any accomplished facts in the direction of Hospital Provision during the year under notice; nevertheless, the subject has received a very great deal of attention. We may hope that the time is approaching when the very difficult problems connected with the provision of Isolation Hospitals will be solved. The value of Isolation as a means of preventing Small Pox and Scarlet Fever is almost universally admitted by Medical Authorities, but at the same time, the difficulty in securing the necessary provision seems to increase rather than diminish.

The year under notice has been fruitful of discussion, especially in connection with the proposals for Hospital sites. It is only necessary to refer to the discussions as to the provision of sites for Richmond Borough, in combination with Heston and Isleworth, Kingston, Wimbledon, and for the joint Districts of Carshalton, Sutton and Epsom Rural, to show that the Authorities of the County have been by no means inactive in this direction. We cannot, however, record that there has been any immediate result in this direction, except in the case of the Banstead Hospital, and the comparatively small improvement that is being made in connection with the Woking, Guildford and Godalming Joint Hospital.

In Barnes, 45 cases of Scarlet Fever and 11 of Diphtheria were received into the Isolation Hospital; in addition to which 24 cases of Scarlet Fever were admitted from the Richmond Sanatorium, making in all 80 cases treated in Hospital during the year. The Hospital is at times too full.

In Wimbledon 99 persons were admitted to the Hospital, 71 of whom were suffering from Scarlet Fever, 27 Diphtheria and one from Small Pox. This Hospital has several times been reported as very unsuitable.

Tolworth Hospital is now available not only for Kingston Rural District, but also for Surbiton. There were admitted from this latter district five cases of Scarlet Fever, six of Diphtheria, and two of Typhoid Fever.

In the Chertsey District, Dr. Jacob records, in his usually careful manner, the number of houses invaded and the number of cases which occurred, and the number of cases removed, from Scarlet Fever and Diphtheria, to the newly established Isolation Hospital.

In the Farnham Districts the only provision for Infectious Cases is that at the Workhouse.

Two inquiries were held in the Guildford, Godalming and Woking District by the Local Government Board ; one to adapt the Provisional Order to the representation of the newly-constituted Woking Urban Districts and the other for sanction to borrow £8,000 for additional Hospital provision. In the same District, serious difficulty has arisen in connection with the purchase of a cottage and about 3 acres of ground in an isolated position on Whitemoor Common, in the Parish of Worplesdon, for the purpose of Small Pox Isolation. The case is *sub judice*.

The Dorking Urban and Rural Districts continue to be without any hospital accommodation, although its necessity has been frequently urged upon them.

The Epsom Rural, Leatherhead, Carshalton and Sutton Districts have, after inquiry and lengthy discussion, acquired the site for the erection of a Hospital at Banstead, and have formally submitted plans of the proposed building to the Local Government Board, who, at a Conference with the deputation, suggested certain modifications of them, which were to receive the further consideration of the Joint Board.

No information is contained in the Report of the Medical Officer of Health as to the working of the separate Hospital for the Epsom Urban District.

The Report for the Reigate Rural District contains the account of the number of cases admitted year by year to the Sanitary Authorities Hospital. Nine patients were moved to the Hospital from the Borough in 1894, and the Temporary Isolation Hospital, belonging to the

Borough, was reserved for such cases of Smallpox as might occur in either Sanitary District.

"In February the Local Government Board caused an inquiry, to be held at the Workhouse, into the application of the Sanitary Authority for leave to borrow £2500 for the provision at the Hospital of an additional pavilion, containing wards for twelve patients, rooms for the nurses, bath room, lavatory, and other offices ; and in May they intimated their intention to sanction the loan on condition that the Authority would also undertake : (a.) To enclose the Hospital Site with a substantial fence, in lieu of the existing quickset hedge. (b.) To apply the slop water to land, instead of letting it filter literally, as it did, through trenches of burnt ballast, &c. (c.) To provide a disinfecting apparatus on the premises, instead of sending the infected bedding, &c., away to be stoved. The Authority, however, did not feel justified in incurring this additional expense, and so nothing further has been done in the matter."—*Reigate Rural District Report*, p. 8.

In the Godstone District the question of Hospital provision is still under consideration.

There are several things which are worth notice in

the history of the city of London.

The first thing which is worth notice is the

fact that the city of London was founded

by the Romans in the year 43 AD.

The second thing which is worth notice is the

fact that the city of London was the

capital of the British Empire for many

years.

The third thing which is worth notice is the

fact that the city of London was the

center of the world's commerce for many

years.

The fourth thing which is worth notice is the

fact that the city of London was the

center of the world's culture for many

years.

The fifth thing which is worth notice is the

fact that the city of London was the

center of the world's science for many

years.

The sixth thing which is worth notice is the

fact that the city of London was the

center of the world's art for many

years.

The seventh thing which is worth notice is the

fact that the city of London was the

center of the world's music for many

years.

The eighth thing which is worth notice is the

fact that the city of London was the

center of the world's literature for many

years.

The ninth thing which is worth notice is the

fact that the city of London was the

center of the world's philosophy for many

years.

VIII.—Water Supply.

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VIII.—WATER SUPPLY.

The subject of the Water Supply in various parts of the County is always important and has become critically so of late. At the time of writing this Report, which includes the year under notice, and the early part of the present year (1894-1895), events have occurred which make it specially desirable to gather together the reports on this subject.

The floods which took place at the latter part of 1894, followed as they were by the extraordinary frosts at the beginning of 1895, have very seriously affected questions of water supply, and make the record of the past twelve months exceptional. At the present time there is under the consideration of Parliament one of the most important Bills which have ever been brought forward by a Municipality, namely, that which relates to the transfer of the undertakings of the Southwark and Vauxhall and Lambeth Water Companies to the London County Council. This Bill immediately affects the part of the County which is supplied by the Water Companies. The Surrey County Council has taken action in a direction which is calculated to secure great benefits to the County from a public health point of view. Added to this the question of the supplies of water from the chalk, and the alleged possibility of their contamination by means that are little understood, has been very prominently under notice in this County during the year. The probability of future extension of works, for the purposes of larger increase of supply from the chalk in various parts of the County, *e.g.*, the neighbourhoods of Epsom, Leatherhead, Clandon, Guildford, Richmond, &c., is a question of rapidly growing importance. I propose to treat this subject under certain headings, viz.:—

- (a.) Absence or Deficiency of Water Supply.
- (b.) Water Supply derived from Surface Wells and liable to Pollution.
- (c.) River Water Supplies.
- (d.) Water Supplies from Deep Wells in the Chalk formation.
- (e.) Other (future) sources of Water Supply in the County.

(a.) *Absence or Deficiency of Water Supply.*

Under this head I would refer specially to the Reports for the Hambledon and Farnham Districts respectively, in both of which the absence or deficiency of proper water supply in such places as Haslemere, Milford, Chiddingfold, and Camberley, is again and again commented upon. These are typical cases of fair sized villages (or small towns) in which the water supply is notably defective.

I must also refer to the very serious case which is given in the Croydon Rural District Report, from which the following passages are quoted :—

“ The Sanitary Authority, in consequence of reports made to them, requested the East Surrey Water Company to extend their mains for the benefit of several houses at Coulsdon Common supplied by rain water. Upon this request being complied with a notice was duly served upon the owner to connect the houses with the extended main.

“ After some delay the necessary pipes were laid, and fittings and taps supplied in the various houses, but as soon as the water was turned on from the main it was turned off by order of the owner.

“ This proceeding was reported to the District Council at its first meeting, and the owner was called upon to comply with the notice, but at the close of the year the occupiers of these houses were still consuming rain water, which is stored in underground tanks, is possessed of distinct odour and taste, always thick, and very thick when disturbed by a shower of rain, and moreover in which are animalculæ visible to the naked eye.”—*Croydon Rural District Report*, p. 40.

On the other hand, in the Godstone District the Authority has been successful in securing a good supply for the villages of Blechingley and Crowhurst, where the supply had previously been very defective.

(b.) *Surface Wells, liable to Pollution.*

In many parts of Surrey, although good water supply is easily obtainable, the surface wells are still permitted to be used, notwithstanding

that in many cases they give evidence of serious pollution. In some districts close to London, which are of an Urban or Suburban character, well waters are still in use. Thus the Medical Officer of Health for Barnes reports upon 61 houses thus supplied with water which was unfit for domestic purposes. The Medical Officers of Health for Ham, Kingston Urban and Kingston Rural, report upon polluted well waters.

“Nine samples of water were analysed and four were found very bad, and the wells ordered to be closed. Several samples of water from the Company’s main were analysed and found to be fairly good; a constant supply, however, is greatly needed, especially for the poorer class of houses.”—*Kingston Urban District Report*, 1894.

In the rural parts of Surrey the use of surface well water is still very general, although in many of these districts, as for example at Shalford, a far purer supply is very easily obtainable. The Reports for Chertsey, Farnham, Hambledon, Guildford, Guildford Rural, Dorking Rural, Epsom Rural, Croydon Rural, Reigate Urban and Rural, and Godstone Rural, deal with this important subject at considerable length. Dr. Jacob, following his usual practice, gives the results of his analyses of water, classifying them as good, suspicious or bad. The amount of analytical work thus voluntarily performed by the Medical Officer of Health for the United Districts is considerable. Thus in the Chertsey District alone, which in 1894 included besides Weybridge the following places:—Addlestone, Ottershaw, Chertsey Town, Byfleet, Chobham, Windlesham, Horsell, Hersham, and Walton—as many as 61 samples of water were analysed. In this same district it appears that out of 50 cases reported on as bad or suspicious, in 16 the wells were closed and water was taken from the Water Company, and in three others improvements were made. The remaining 31 cases have still to be reported upon.—*Chertsey Rural District Report*, p. 10. The village of Westcott in Dorking Rural District is also reported as having a very unsatisfactory supply.—*Dorking Rural District Report*, pp. 6 & 7.

Dr. Jacob, Dr. Woodforde, and other Medical Officers, record the active measures that were taken at Chertsey, Egham, and Thorpe, to prevent the use for drinking purposes of well waters, which had

become highly polluted in consequence of the floods in November and December.

(c.) *River Water Supplies.*

The need for extending the supplies from the Lambeth and Southwark and Vauxhall Companies, and the West Surrey and South-West Suburban Companies is referred to in the Reports. There is no evidence of the floods of 1894 having produced any ill effects as regards the health of the County so far as the river water supplies are concerned. The prevalence of diarrhoea is commented upon in the East Molesey District, but it is ascribed to other causes.

Reference is made not only to the need for extension of the supply from the River Water Companies for the purpose of substituting a good water supply for one that is obviously polluted (such as that from surface wells) but to the desirability as well of a constant supply, in order to do away with cisterns, except for closet purposes.—*New Malden District Report.*

In other districts reference is made to the number of hand-flushed water closets, showing that the water supply for sanitary purposes is far too limited.

The extension of the mains of the Egham Water Company towards Thorpe is also recorded by Dr. Woodforde (Letter March 21, 1895).

Water from Deep Wells in Chalk Formation.

In the town of Richmond some progress has been made towards extending the use of the Chalk water supply :—

“The work at the new Deep Well at the Terrace Gardens during the year has made some progress, the adits have been extended by 245 feet, and the total quantity of water pumped from January to December, 1894, for the whole year, was 80,323,409 gallons. The water of Deep Wells is cool in summer, and more equal in temperature at all times than that from

superficial sources. That of the River Companies taken from the Thames, ranges from 35° in winter to 68° in summer.”—*Richmond Urban District Report*, p. 26.

At Guildford an increase of supply is in contemplation, and it has been decided to fit more modern and also duplicate machinery in the old Town Mill recently acquired by the Authority. With regard to this, Dr. Morton reports :—

“Whatever may be done to increase the supply, I hope no attempt will be made to meddle with the present well by deepening it, otherwise, should an attempt be made it can only end in failure ; the water would of necessity during the carrying out of the works run great risk of contamination. If a greater quantity is found necessary, a new well should be sunk.”—*Guildford Urban District Report*.

The Reports for the Districts of Woking and Guildford Rural contain some valuable information respecting the Water Supply of the whole District. The parts of the Report referring to the Water supplies from the Chalk are as follows :—

“*The Woking Water Company*.—The Company obtains its supply of water from a well sunk at a point on the northern slope of the Albury Downs, a little to the south of the main road from Epsom, where the chalk is at the surface.

“This well was sunk in 1883 to a depth of a little more than 100 feet, from which shaft a large supply of water has since been drawn.

“This supply has been augmented by driving horizontal galleries in the chalk in a westerly direction across the slope of the beds, and 30,000 to 40,000 gallons an hour can now be pumped from this station.

“In the exceptionally dry summer of 1887, and subsequently, the Company found it advisable to augment its supply by sinking shafts and driving horizontal galleries from them in the chalk south of the village of West Horsley, where an additional

Pumping Station has been erected, increasing the supply by upwards of 200,000 gallons per day, from a length of about 1800 feet of horizontal galleries.

“At a moderate computation based on the assumption that 8 inches of rainfall per annum can be made available over the Company's gathering ground, the average daily quantity of water eventually available for pumping will exceed 2,000,000 gallons per diem.

“The Company's district stretches from Fox Hills and Chobham Ridges on the west to Pyrford, Ockham, and to beyond East Horsley on the east, and from the summit of the Hackhurst and Albury Downs on the south, to the villages of Bisley and Horsell on the north.

“The supply of water to this Company's District is at present adequate in quantity, and is of undoubtedly good quality, and there is every reasonable prospect of the supply being increased as the consumption increases in the District.

“The water has been frequently analysed with most satisfactory results. It is well aerated and free from organic impurity, but it is rather charged with lime salts. One or two of the large Institutions in the Parish have adopted measures for extracting a great proportion of these salts, so diminishing the hardness and rendering the water all the better adapted for washing and culinary purposes. The process does not appreciably alter the taste, though it affects the aëration and beautiful lustre of the water.

“The other sources of supply are from wells in the District, which are all shallow, few being more than 20 feet deep, and many much less than that. The water reaching these wells is consequently almost entirely surface water, and is therefore easily contaminated by leaky cesspits, &c. Wherever the Company's mains exist, owners of old and new property should be urged to obtain this valuable water supply.

“The history of all nations of which we possess any record, proves that as they advanced in the scale of civilisation they made greater efforts to supply their communities with an abundance of

pure water. In each case it would appear that the cumulative experience of ages had taught the same lesson—that perfect health could not be attained without the use of considerable quantities of water, and that for many purposes it was imperatively necessary that the water should be hygienically pure.”—*Woking Urban District Report*, pp. 5 & 6.

In the Epsom Urban District the subject of the Water Supply has received great attention :—

“In March the Local Government Board caused an enquiry to be held at Epsom, by one of their Inspectors, into the application, which the Sanitary Authority had made in the previous year, for sanction to borrow £14,000 for sinking another Tube Well at their Water Works, and for providing new Boilers, Engines and Pumps, a new Rising Main, a Distributing Main, an additional Reservoir on the Downs, and other Works of Water Supply. The Scheme was opposed by some of the Ratepayers for various reasons, but chiefly on the ground that Water Works ought not to be retained on their present site in the town, because the drainage from the graves in the Cemetery (which is on the chalk), and the sewage escaping from defective drains and sewers in the chalk, may rapidly find its way through fissures in the chalk down to the water level, and, owing to the direction of the flow of the underground water in the chalk, may be carried towards the Water Works and may pollute the water which is distributed from the works. In due course the Sanitary Authority were advised by the Board to consult an Engineer upon this question and upon the details of the scheme, and they commissioned Mr. Hodson, C.E., to advise them upon the matter. This gentleman, accordingly, presented a Report in September, in which he dealt exhaustively with this question, and decided in favour of retaining the Water Works where they now are, with the adoption of special precautions against any contamination of the water. His Report was accompanied by one from Professor E. Frankland, which contained a statement of the very satisfactory results which he had obtained by a chemical and bacteriological examination of samples

of water from the well at the Water Works. Mr. Hodson was then commissioned to prepare detailed plans and estimates of works which he would suggest for execution, with a view to a further application to the Local Government Board. In the meantime the Sanitary Authority with the sanction of the Board had ordered the new boilers, engines and pumps, and these were in process of erection at the Water Works when the year closed.”
—*Epsom Urban District Report*, p. 4.

In the Epsom Rural, Sutton, and Carshalton Districts, the sources of water supply have also received great attention in connection with the proposal to establish a “Joint Isolation Hospital” at Banstead, and the strong opposition to which that proposal gave rise, as well as in connection with the agitation against the existence of any cemeteries in the chalk formation of this District.

“In February the Local Government Board caused an enquiry to be held at Sutton into the application of the Epsom (rural), Sutton, and Carshalton Joint Hospital Boards (on which the Authority of this District has five representatives), to sanction a loan for the purchase of eight acres of land in the Parish of Cuddington as a site for this hospital. The proposal was strongly opposed, among others, by the Sutton District Water Company, who contended, though the land is $2\frac{1}{2}$ miles from their Works, that the sewage of the Hospital would rapidly find its way, through fissures in the chalk, down to the water-level (which is 150 feet below the surface of the site), and would pollute the springs or reservoirs in the chalk from which their water-supply is derived. In November, however, the Board sanctioned the purchase of the land for this purpose on condition, first, that the surface-soil overlying the chalk on an acre of the land should be increased to a thickness of 4 feet, and that this acre should be devoted to the purification of the sewage.”—*Sutton Urban District Report*, p. 5.

The sources of supply in the Croydon District are thus referred to :—

“The mains of several Water Companies extend through the different parishes in the district, and form the main source of

supply to the inhabitants. Part of Addington is supplied from the Waterworks belonging to the Croydon Corporation ; Kenley and Purley, in Coulsdon Parish, and Sanderstead, are supplied by the East Surrey Water Company : Beddington, Wallington, Woodmansterne, and Morden, by the Sutton Water Company ; and Mitcham and Merton by the Lambeth Water Company.

“ Other sources of supply, such as deep wells, artesian wells, and shallow surface wells, exist in various parts, and in eight cases have been analysed by Dr. Stevenson. Five of these water supplies were condemned by him as unfit for drinking purposes, Water Company’s Water being in each case substituted ; one was stated to be suspicious, while the remaining two were certified to be of high organic purity.”—*Croydon Rural District Report*, p. 39.

In the Reigate District during the year, the East Surrey Water Company extended their mains to Battle Bridge, Redhill, where the supply of water was much needed, but only one block of five houses have as yet been supplied from them.—*Reigate Urban District Report*, p. 10.

The Well at the Caterham Asylum.—The question of the possibility of the contamination of this well at its source is still the subject of investigation. Special reference is made elsewhere to the outbreak of Typhoid Fever at the Asylum and the Barracks.*

Other Sources of Water Supply.

The following suggestive remarks are made by the Medical Officer of Health in his Report on Water Supply in the Tillingbourne Valley :—

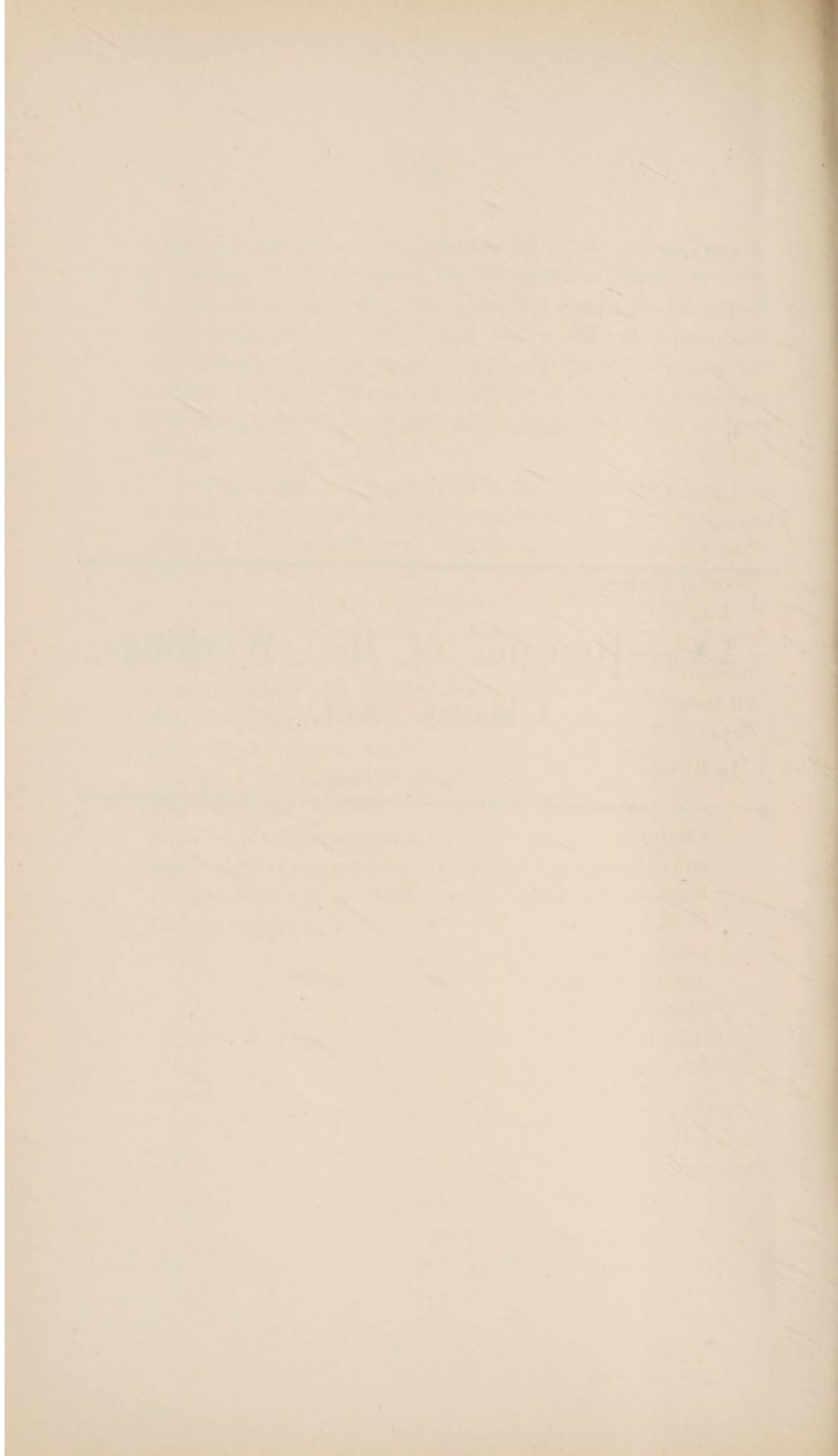
“ *Village Works at Shere.*—Reginald Bray, Esq., Recorder for Guildford, on his large and beautiful estate at Shere, has sunk two wells near the Tillingbourne, which are practically collecting tanks. The supply is derived from the hill springs. The water is of excellent quality and is pumped by water-power from the

* This Report is deferred owing to delay in receiving a Copy of the Report from Mr. Baldwin Latham, C.E., to the Metropolitan Asylums Board.

adjacent Tillingbourne into a reservoir of 100,000 gallons capacity, at a height of 275 feet above the Tillingbourne stream, or about 500 feet above sea level. Thence with a system of $2\frac{1}{2}$ miles of 3-inch bore cast-iron mains, and half a mile of 1-inch bore wrought-iron pipes, he supplies not only his own mansion and cottages, but many houses in the villages of Gomshall and Shere. The plant, however, is not sufficient to supply the whole of these villages.

"*Deep wells* are not numerous in the district, but where they do exist pure water is generally found, though at Wood Street and Ockham there has been great difficulty in obtaining good water—salts of lime and magnesium having been found in such quantities as to render the water unwholesome. On the other hand, in the valley of the Tillingbourne at Gomshall, Shere, and Albury, artesian wells have been sunk at depths of about 75 feet into the lower greensand and Folkestone strata for the extensive water-cress cultivations in this neighbourhood. A constant supply of some of the purest water in England can thus be easily obtained. It is somewhat surprising that a pipe supply of this excellent water has not been adopted as an enterprise for the whole of the Tillingbourne valley. Messrs. Gilligan & Sons supply their tannery works at Gomshall and several neighbouring cottages from one of these artesian wells."—*Guildford Rural District Report*, p. 9

IX.—Housing of the Working
Classes Act.



IX.—HOUSING OF THE WORKING CLASSES ACT.

The most important work which is done for the improvement of the dwellings of the working classes in the county is that which is reported on under the head of cleansing, scavenging, removal of nuisances improvements of water supply, and the operation of bye-laws. The present section is reserved for the reports of special house to house inquiries.

In Barnes there has been a fair amount of house inspection. The houses, known as Gloucester Cottages, Hampton Square, Mortlake, have been thoroughly repaired. The backyards of 15 houses at Rock Avenue, Mortlake, have been properly made up and drained, and new flushing tanks provided to the closets throughout. Twenty-eight houses in Derby Road and Stanley Road, Mortlake, have been re-drained. Altogether, 472 nuisances have been dealt with in the year, but there have been no houses reported on under the Act.—*Barnes Urban District Report*, p. 8.

In Richmond the number of nuisances reported on is 1362.

“Under the provisions of the Housing of the Working Classes Act, a proposal has been adopted by the Town Council, and land secured for building cottages. A contract has been let for the erection of Artisans’ Dwellings thereon, thus securing in the future better means than at present exist of housing persons who may be compulsorily displaced by any action taken under the “Housing of the Working Classes Act,” or by the closing of any houses of that kind, which it may not be desirable should be occupied on account of health or otherwise.”—*Richmond Urban District Report*, pp. 24 & 29.

In the Wimbledon District the summary of nuisances dealt with during the year, under the supervision of Mr. Mayne, the Sanitary Inspector, amount to 1817, details of which are given in his report.

“A block of 23 houses between the Russell, Pelham, Palmerston, and Dryden Roads, have been put into thorough repair, and new drainage and sanitary fittings provided throughout. Some of

the internal surfaces of the walls were very filthy and had as many as 10 coats of decomposing wall paper on them. Similar work was done to a row of eight houses in the Thurstan Road, and to

Twelve houses situated in the Pelham Road.				
Nine	"	"	"	South Road.
Five	"	"	"	" "
Three	"	"	"	Palmerston Road.
Four	"	"	"	" "
Five	"	"	"	Durham Road.
Seven	"	"	"	Kingston Road.
Six	"	"	"	Haydon's Road.
Five	"	"	"	High Street.
Six	"	"	"	Herbert Road.
Four	"	"	"	Worple Road.

A large number of single houses and pairs of houses have been re-drained in various parts of the district."

"In consequence of complaints it was thought advisable to make a house to house inspection of South Place, with a view to dealing with any houses which should be condemned, on sanitary grounds, under the "Housing of the Working Classes Act, 1890." This inspection was made in April, and a report, with a plan of the houses, was submitted to the Sanitary Committee on May 2nd. A notice under the above act was served on the owner by order of the Local Board on May 12th, but although a good deal of correspondence has been going on between the Board and the owner, nothing had been done to remedy the defects at the end of the year.

"Notices were served under the same Act on the owners of nine houses in South Road, and six houses in the Haydon's Road, and both were complied with."

"Last year a notice was served upon Mr. Oldham (the owner of No. 2, St. Mark's Place), requiring him to do certain important Sanitary work upon the premises. This notice, however, was not complied with, and proceedings were taken in the South Western Police Court. The

magistrates made an order, and the work was ultimately carried out by the Board at a cost of £39. On being applied to for payment Mr. Oldham appealed to the Local Government Board. An inquiry was held by one of their Inspectors, at which the matter was very fully discussed, Mr. Oldham being represented by counsel. The appeal was dismissed by the Local Government Board, who confirmed the Local Board's claim."—*Wimbledon Urban District Report*, pp. 10, 12 and 15.

"In the Kingston Urban District, the Abstract of notices for the year 1894, shows that in all 631 Nuisances have been dealt with. There have been 170 visits of Inspection for the purpose of improving House Sanitation, reported on by the Medical Officer of Health personally; this was independent of 172 visits of Inspection in connection with the occurrence of illness. There are no Special Reports this year under the Housing of the Working Classes Act."—*Kingston Urban District Report*, p. 37.

In the Kingston Rural District, the condition of the houses at Kingston Vale and other parts which require attention have not been reported on this year, owing possibly to changes in the constitution of the District and in the appointments of Sanitary Officials.

"In Surbiton, the number of Nuisances dealt with are not classified as in the case of some other of the reports, but appear to amount to 262. There is no report under the Housing of the Working Classes Act."—*Surbiton Urban District Report*, pp. 14 and 15.

In East Molesey 90 Nuisances appear to have been dealt with. There are no reports under the Housing of the Working Classes Act; 177 houses, which were flooded in November, received special attention.

"The flooding of the Thames in November and December, besides playing havoc with property, was the precursor of a very serious epidemic of Diarrhoea, many cases being of a severe type. A public caution was issued to the inhabitants, calling their attention to the probable pollution of well-water with sewage matter, and warning them of the danger of drinking such water. At the subsidence of the floods, the fire-engine was of much service in pumping water from basements and cellars;

and, under the supervision of the Inspector of Nuisances, a staff of men made a house to house visitation of those portions of the District which had been inundated, the flooded premises being thoroughly disinfected. This practically stopped the epidemic which has been attributed to the pollution of drinking water supplied by the Water Company, but which, in my opinion, was generally due to the presence in the flood water of sewage matter from Cesspools, many of which, in this District, were overflowing at the time; the epidemic was certainly most severe in that portion of the District which was inundated."—*East Molesey Urban District Report*, pp. 4 and 6.

In Chertsey the number of nuisances reported upon by the Inspector, Mr. W. Durrant, amount to 643. Among other matters which engaged the attention of the authority and other officers were the following:—The damp, unwholesome, dilapidated condition of many cottages in all parts of the district, which was to some extent dealt with by notice under the Housing of the Working Classes Act, 1890, and in several by notices under the Public Health Act, 1875. The damp unwholesome condition of numerous houses at Chertsey and elsewhere, which were inundated by the unhealthy floods which took place in November.—*Chertsey Rural District Report*, p. 15.

No further report has yet been received from the Medical Officer of Health for Egham (Dr. Woodforde of Reading) respecting the condition of "The Sand-pits," Englefield Green. Dr. Woodforde reports by letter (dated March 21st, 1895) that, after the floods in November, special 'house to house' visitation, followed by measures of cleansing and disinfection, was carried out by his advice and under the supervision of Mr. Menzies.

The report for Farnham contains no account of the nuisances that have been dealt with. The Medical Officer is strongly of opinion that there is a great need for water being laid on to premises for flushing the water closets. [N.B.—In this opinion I entirely concur.] Four houses in Red Lion Lane were inspected, and 2 of them were condemned under the Housing of the Working Classes Act; the houses are no longer inhabited, but have not been pulled down.

In the Farnham Rural District no report is made of the nuisances dealt with, and no report is made under the Housing of the Working Classes Act.

In the Hambledon Rural District the need for improved cleansing, scavenging, and better methods of slop water and excrement disposal is briefly reported. No houses were reported on under the Housing of the Working Classes Act.

The following extract relates to house to house inspection at Shalford :—

“ I made a house to house inspection of all the infected houses and districts, and furnished a Report to the Local Government Board and one to the Rural Sanitary Authority. This Report related to the water supply, milk supply, disposal of slop water and sink drainage, and outdoor and indoor sanitary arrangements. In this inspection I found several defects in the sanitation of the houses, which have since been remedied, but I could not find any definite cause to account for the outbreak of Scarlet Fever. Later in the year a very complete house to house inspection was made by Dr. Seaton, myself and Mr. Simmonds. About 435 houses were examined. A large proportion of these houses required systematic attention on account of sanitary defects of varying importance, a certain proportion required immediate attention on account of defects which were dangerous to public health. There were cases in which the water supply was liable to contamination by the soakage from privies, notwithstanding that a good and wholesome water supply was ready to hand, some of these privies had loose-brick cesspools, containing accumulated excremental and liquid filth in dangerous proximity to the wells, which were only loosely bricked. In some cases these wells were only separated from the privy by a few feet. In past inspections I have reported to the Authority the danger of such sanitary arrangements, and in some cases these privies have been converted into earth closets. A complete report was furnished to the Authority of the above inspection, and steps were taken immediately to remedy the defects, with the result that 71 privies

were converted into earth closets. Alterations in sink drains had been effected, cesspools removed further from dwelling houses, and water laid on to several houses which before used wells. In past reports I have urged the necessity of an efficient scheme of getting rid of the sewage and excremental filth, and it is necessary that the Sanitary Authority should take steps to provide a workable and effective scavenging scheme as pointed out by Dr. Seaton and myself. Shalford is well suited for the dry method of sanitation, as there are :—

259 houses with garden area under $\frac{1}{8}$ acre.					
118	"	"	"	"	$\frac{1}{4}$ "
22	"	"	"	"	$\frac{1}{2}$ "
11	"	"	"	"	over $\frac{1}{2}$ & 1 acre.
25	"	"	"	"	of 1 acre."

Hambleton Rural District Report, p. 6.

The Medical Officer of Health for Godalming, reports as follows :—

"With the Sanitary Committee I have made a systematic inspection of nearly the whole of the District. Some of the cottages were deficient in light and ventilation, some had no provision for carrying the water from the roofs, in some there were no drains and in some the drains were stopped, many had pigstyes and poultry runs, and now and then we found collections of refuse.

"These defects and nuisances were ordered to be abated or removed. There was not sufficient closet accommodation to some of the cottages, and I think when the drainage works are completed water should be laid on to each closet, so that it may be flushed every time it is used.

"In some instances where there are large families too many sleep in one room, and as some of the bed rooms have no fireplace and small windows, and therefore no means of ventilation, the cubic space required for each person is not sufficient to insure health.

"I have on previous occasions called attention to the want of a mortuary, and I believe you have had under consideration the necessity for fitting up Public Lavatories in different parts of the district."—*Godalming Report, p. 1.*

Guildford Urban.—The schedule of work done by the Sanitary Inspector for Guildford Town, includes 213 notices, referring to 346 houses, served. There are 193 nuisances requiring structural alterations to be dealt with, and house to house inspections have been carried out in the following streets:—Chertsey Street, South Street, Castle Street, Tunsgate, Nightingale Road, King's Road, Onslow Road, Queen's Road, Eagle Road, Falcon Road, Finch Road, Stoke Fields, Stoke Grove, North Place, Drummond Road, Cooper Road, part of Guildford Park and Quarry Street, &c.—*Guildford Urban District Report*, p. 7.

Guildford Rural.—The number of nuisances reported and abated are 207. (*Annual Report*, p. 33, Mr. Dewhurst, Sanitary Inspector). The following extract from Dr. Lake's report relates to the Housing of the Working Classes Act, 1890 :—

“I again called the attention of the Authority to four cottages at May's Green, Ockham, which I reported in 1893 as being in a very insanitary condition, and without any water supply except from a pond. In October I visited the cottages, accompanied by the Medical Officer of Health for the county. The result of the conference was that I advised the Authority to take action forthwith under Part II., sec. 32. Some cottages in the village of Merrow were dealt with under the Public Health Act, 1875.

“In October I pointed out to the Authority the powers they had under Part III., and how important it was they should avail themselves of those powers, taking into consideration the depopulation of the rural districts.”—*Guildford Rural District Report*, pp. 26 and 33.

Special notice should be taken of this very important suggestion of the Medical Officer of Health.

Woking Urban.—Mr. Wooldridge, Surveyor and Sanitary Inspector, includes amongst the most important work of the nuisances and consequent improvement of the sanitary condition of the houses of the working classes, 193 cases in which privies, drains, cesspools, ditches, and accumulations of the deposits are removed. Forty old privies

were converted into earth closets. Housing of the Working Classes Act, 1890 :—

“ Eight houses at Knaphill which were condemned during the late Authority's tenure of office still remain unoccupied, no steps having been taken to render the premises habitable. Three other houses at Knaphill during the past year have been dealt with under Part II. (sec. 32) and made fit for habitation. In the Maybury Ward one house was pulled down owing to it being impossible to render it fit for habitation.”—*Woking Urban District Report*, pp. 24 and 26.

Dorking Rural.—The number of nuisances dealt with are 178. Mr. Rapley is the Sanitary Inspector. The serious nuisances at Westcott, Capel, and South Holmwood, are referred to by the Medical Officer of Health, p. 6. The number of houses reported closed as unfit for human habitation on service of notice by the Sanitary Authority are 2.—*Dorking Rural District Report*, p. 8.

Dorking Urban.—The number of nuisances dealt with are 266. Proceedings under Sections 30 and 32 of the Housing of the Working Classes Act, 1890, in compliance with notice of the Sanitary Authority, 6 cottages in the district which were in a dilapidated unwholesome condition were repaired and made wholesome, making a total of 112 houses which are so dealt with during the four years 1891 and 1894. —*Dorking Urban District Report*.

Epsom Rural, including Leatherhead.—The damp, unwholesome, condition of numerous cottages in the district is reported upon as having received attention (Annual Report, p. 6). No details are given with respect to the abatement of nuisances and improvement of house accommodation in Leatherhead. As to the Sanitary arrangements of Leatherhead generally, the following special report is made for the New Urban District Council by Dr. Jacob, the Medical Officer of Health :—

(a) “ The outlet of the House Drains is partly into wasting (i.e. dry stined) cesspools in the chalk, partly (by cesspool overflows or by direct discharge) into the Highway Board's drains, or other drains, which empty into the river Mole, and partly into some of the ditches and watercourses, which are consequently very foul,

and which also communicate with the Mole. The question of providing a system of sewers and of sewage disposal for the parish, so as to get rid of the cesspools and to stop the pollution of ditches and streams, was considered in the year 1882, was revived by the Parochial Committee two years ago, and is now engaging the attention of the District Council. The cleansing of cesspools is done by the owners or occupiers, as occasion requires. (b) Disposal of the excreta. Most of the out-door open cesspit privies have been converted into pail-closets, of which there are now more than 400 in the district, and the pails, with tight-fitting lids, are removed once a week, under contract, in specially constructed vans, to a dépôt near the extreme boundary of the parish, where they are cleansed and made ready for further use. There are also a good many water-closets in the district, those which are out-of doors, being mostly 'hand-flushed.' (c) As to Water Supply. About 413 houses are supplied with water from the mains of the Leatherhead Water Company, whose well is by the river-side, and has an artesian supply from deep springs in the chalk. Most of the remaining 370 houses are supplied from their own wells, many of which are liable to contamination by soakage from cesspools and other sources of pollution. (d) The removal of house-refuse once a fortnight from the houses in the district has been performed, during the last two years by a contractor. (e) Bye-laws relating to new streets and buildings have been in force in the district since 1880. (f) Bye-laws for the prevention of nuisances and for the regulation of slaughter houses have also been in force in the district since 1880."—*Leatherhead Urban District Report*, p. 3.

In Epsom the number of nuisances reported on and remedied were 42. There were no houses reported on under the Housing of the Working Classes Act.—(*Epsom Urban District Report*, p. 5.)

In Sutton Mr. J. Keal, Sanitary Inspector, gives a tabular statement of the nuisances discovered and abated during the past 11 years—1884 and 1894. The number of nuisances remedied in 1894 are 106. The number of houses closed as unfit for habitation are 7. No special report under the Housing of the Working Classes Act is made.—(*Sutton Urban District Report*, p. 8.)

Carshalton.—The number of nuisances remedied are 229. The Medical Officer of Health reports :—

“ A systematic inspection, or house to house visitation of certain parts of the District, which are most in need of it, including St. James's Road, St. John's Road, St. Andrew's Road, Levett's Rents, William Street, Harold Road, Wandle Mount, and West Street Lane, was frequently made by the Inspector of Nuisances and myself, and defects of closets, drainage, and dwellings were remedied as far as was practicable.”—(*Carshalton Urban District Report*, p. 4.)

Under the head of routine sanitary and house inspection, the Medical Officer of Health for the *Croydon Rural District* reports as follows :—

“ A great deal of work has been done during the year to improve the sanitary condition of premises by the Inspectors of Nuisances, under the supervision of, and in conjunction with, the Medical Officer of Health.

“ This work employs the whole time of two Inspectors, one giving his attention to the parishes of Mitcham, Merton, and Morden, with a population of nearly 16,000, and the other to the parishes of Addington, Sanderstead, Coulsdon, Woodmansterne, Wallington, and Beddington, with a population of over 12,000, scattered over a very wide area. Early in the year the Inspector of the latter portion of the District resigned his appointment, and Mr. W. Powell, who came from Southampton with excellent credentials, was appointed in his stead. He has, up to the present time, given satisfaction, and has done valuable work already, in bringing to light many conditions inimical to the health of the District, and both he and Mr. White, the Inspector of the other portion of the District, and an officer of long standing, have assiduously performed all the various duties which have devolved upon them. In the course of the year, the Sanitary Authority resolved that they should be provided with uniforms.

" The following is a summary of the work which has been done under the Health Department during the year :—

	Mr. White's District.	Mr. Powell's District.	Total.
Number of complaints received and attended to	76	88	164
Number of premises inspected	1217	832	2049
Total number of visits paid	2093	2295	4388
Nuisances discovered	312	289	601
,, abated without report	247	203	450
,, ,, after report	45	42	87
" Preliminary " notices served	312	181	493
Legal notices served	81	35	116
Notices followed by legal proceedings ...	1	1	2
CHARACTER OF WORK DONE—			
Houses cleansed and repaired generally ...	70	27	97
Houses ventilated..	1	2	3
Overcrowding abated	5	8	13
Defective roofs repaired	28	15	43
Houses under-pinned (damp-proof course inserted)	0	3	3
Eaves-gutters renewed or repaired	19	14	33
Water-closets renewed or repaired	83	33	116
Indoor soil-pipes abolished, and new ones provided outside and ventilated	3	3	6
" D " traps abolished	11	16	27
Water closets provided with water for flushing, and disconnected from domestic supply ...	40	27	67
Privies or earth closets converted into water closets	0	7	7
Privies reconstructed with small movable receptacles, or converted into earth closets ...	0	8	8
New receptacles provided for earth closets or privies	0	6	6
Bath, lavatory, and sink waste pipes disconnected from drain, and caused to discharge over gully traps	20	5	25
Houses supplied with water from a water main	21	4	25
Water tanks or cisterns cleansed or covered ...	28	13	41

	Mr. White's District.	Mr. Powell's District.	Total.
Yards of houses paved with impervious material	30	9	39
Paving of yards repaired	10	9	19
Ashpits or dustbins provided	36	17	53
" " cleansed and covered ...	17	15	32
Cesspools abolished and filled up	1	2	3
New cesspools provided	2	—	2
Drains tested with smoke test	28	8	36
" " " and found defective	25	7	32
Drains tested with water-test	4	13	17
" " " and found defective	4	10	14
Houses at which drains were reconstructed or new provided	33	13	46
Houses at which drains were cleansed, ventilated, trapped, or repaired	105	77	18
Drains cut off from discharging into water- courses	2	—	2
Stables provided with drainage	1	0	4
Premises from which animals improperly kept were removed	5	4	9
Seizures of unwholesome food	2	1	3
Convictions for selling	1	—	1
Urinals cleansed or repaired	2	1	3
" supplied with water for flushing ...	4	—	4
" re-constructed	7	—	7
Smoke nuisances abated	1	1	2
Offensive accumulations removed	15	11	16
Paving of piggeries repaired	3	1	4
Drainage " "	2	1	3
Infected houses fumigated and cleansed ...	96	15	111

" Besides the above, and resulting from house to house inspections made by the Medical Officer of Health with the Inspectors of Nuisances, ten houses were certified to be unfit for human habitation under the Housing of the Working Classes Act, 1890.

" A cottage in Woodmansterne was, in consequence, thoroughly repaired, four dwellings in Sanderstead are being replaced by new buildings, and as soon as the latter are completed, the former will be demolished; two dwellings in Beddington were closed

voluntarily by the owner ; and as to three dwellings in Addington the necessary notices in regard to them had not expired when the year closed.

“ There were also three houses at Purley dealt with under the Public Health Act, which were closed by the owner, and have since been demolished.

“ Application was made for “ closing orders ” in regard to the three houses in Mitcham (Piccadilly), referred to in the last annual report, and were granted on the evidence of the County Medical Officer and myself. Subsequently, in consequence of the air-space near these houses being considerably increased, the Sanitary Authority did not oppose the determination of the closing orders in regard to two of the houses.

“ The long standing nuisance caused by encampment of gipsies at Beddington Corner, Wallington, close to a considerable population, was, it is hoped, finally abated during the year. Notices were served on a great many individual gipsies, and followed in a number of instances by magisterial proceedings. Convictions were always obtained, accompanied by strong remarks from the Bench, and finally, with the assistance of the police, the ground was forcibly cleared ; for a time it was necessary to make special arrangements for watching the ground, but no attempt has been made for several months by the gipsies to regain possession of this land.

“ Other gipsy encampments have also required to be dealt with elsewhere, mainly in Merton and Mitcham.

In *Reigate* Mr. Nimrod Walter, Sanitary Inspector, reports 87 nuisances dealt with. The damp and unwholesome condition of certain cottages at Redhill, which were inundated by the water from the brook during the floods in November, are referred to. The sanitary condition of closets and urinals at the railway station was improved. The condition of the hand-flushed water closets is again drawn attention to. It is to be inferred from this and other reports that there are many houses that would properly come within the provisions of the Housing

of the Working Classes and other Acts relating to the improvement of dwellings.—(*Reigate Urban District Report*, p. 12.)

In Reigate Rural, Mr. Nimrod Walter reports upon 89 nuisances as being remedied. The need for flushing water closets is again referred to. There was no report on the Housing of the Working Classes Act.—(*Reigate Rural District Report*, p. 11.)

Godstone Rural. Mr. Barralet, Surveyor and Inspector, gives a carefully prepared tabular statement showing the amount of work that has been done in the several villages of the district. The number of premises inspected and re-inspected were 1477, the total number of nuisances abated 518, and the number of new buildings approved by the authorities are 118, the number of inspections of new buildings 242, and the number of certificates granted under the Public Health Water Act of 1878 were 34.

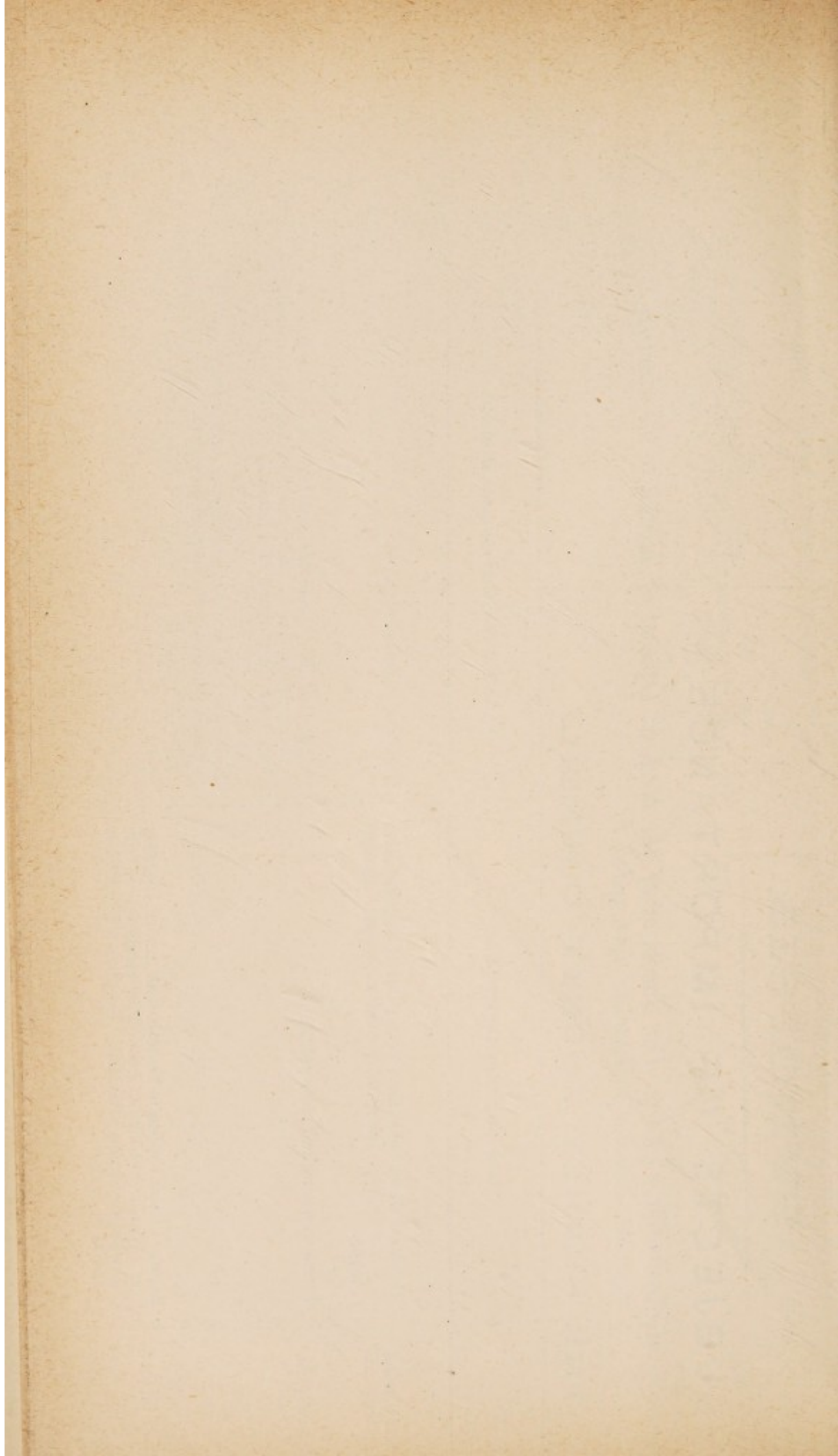
Two houses were closed under the Housing of the Working Classes Act at Warlingham.

The Medical Officer of Health reports under the Housing of the Working Classes Act as follows :—

“Proceedings were taken under this Act with a view to closing the house known as “Brickfield Cottage” as being unfit for human habitation, which, after much delay and attendance before the Magistrates at Godstone, were successful, and the order was granted by them to carry out the same ; also Batts Cottage, on Batts Farm, belonging to the same owner.”—*Godstone Rural District Report*, pp. 22 and 29.)

Contained in Reports of the County Medical Officer and of Dr. Jacob, or of the Medical Officers of Health to the nineteen separate Sanitary Districts forwarded to

• The History of the "Worcester Park Scheme" is indicative of the extreme reactions of a Sanitary Authority to deal with its dilemma. Notwithstanding the fact that the Worcester Park Sanitary Authority was not a member of the Metropolitan Sanitary Board, it was nevertheless obliged to answer to the Board for its actions. In answer to a letter from the Board dated 18th April 1891, the Sanitary Authority stated that it was "not prepared to follow in the footsteps of the Sanitary Authorities of the City of London and the County of Middlesex in the matter of the Worcester Park Sanitary Scheme, as it is not a member of the Metropolitan Sanitary Board, and it is not a member of the Metropolitan Sanitary Board, and it is not a member of the Metropolitan Sanitary Board."



X.—New Buildings, Bye-Laws, &c.
Supervision.

*New Buildings, The-Laws, &c.
Superintention.*

X.—NEW BUILDINGS, BYE-LAWS, &c. SUPERVISION.

Barnes Urban Sanitary District	...	...	No report.
Richmond ...	...	...	Do.
Wimbledon	...	...	Do.
Ham ...	...	...	Do.
Kingston Urban	...	...	Do.
Kingston Rural (Esher and the Dittons)	...	...	Do.
New Malden Urban ...	...	...	Do.
East Molesey Urban	...	...	Do.
Egham ...	...	...	Do.
Farnham Urban	...	...	Do.
Farnham Rural	...	...	Do.
Godalming Urban	...	...	Do.

At Surbiton the number of plans passed was 37 ; the number of houses completed, 21 ; legal proceedings taken, 0.

In the Chertsey Rural District, the number of new buildings for which plans were submitted for approval was 135 ; the number of new streets, 2 ; number of legal proceedings taken, 0. It is noteworthy that during 11 years plans have been submitted for 1,583 houses and in no single case have legal proceedings been taken !

In the Hambledon Rural District, the Surveyor, Mr. Lunn, reports :—The number of plans submitted was 50 ; the number of proceedings taken, 0 ; the number of plans rejected, 3. Mr. Lunn reports that although no legal proceedings have been taken, he has had considerable difficulty in securing compliance with regulations. He also reports that in dealing with buildings in the parish of Cranleigh, all steps are taken to prevent surface or rain water being conveyed to the sewerage system. It is most important, from the “sewage treatment” point of view, that this should be done everywhere.

In Guildford Town, Building Bye-laws have not yet been adopted, owing to the sewerage works not yet having been completed. The speedy adoption of these bye-laws is very necessary, for the district has practically no bye-laws at present in existence.—*Guildford Urban District Report.*

In the Guildford Rural District, Mr. Dewhurst reports 30 plans submitted, and no proceedings, and the bye-laws are only operative in part of the district. In April, 1893, the Sanitary Authority discussed and negatived the proposal to apply to the Local Government Board to invest it with power to make bye-laws under Section 157 of the Public Health Act, 1875, relating to new streets and buildings in the remaining parts of their district.—*Guildford Rural District Report.*

Woking. Building bye-laws were framed on the lines of the model bye-laws and received the sanction of the Local Government Board.—*Woking Urban District Report.*

In the Dorking Rural District, 25 plans for new buildings were submitted for approval. No proceedings.—*Dorking Rural District Report.*

In Dorking Town, 25 sets of plans were submitted for approval. No proceedings.—*Dorking Urban District Report.*

In the Epsom Rural District, Mr. Searles Wood, Surveyor, for Cheam and Ewell, and Mr. Mather, the Surveyor for Leatherhead, report, that the number of plans submitted for approval was 25. There appear never to have been any proceedings taken for the enforcement of bye-laws since 1883 !

In Epsom Town, 69 plans of buildings were submitted for approval. No proceedings were recorded.—*Epsom Urban District Report.*

In Sutton Town, 89 plans were submitted for approval. No proceedings were recorded.—*Sutton Urban District Report.*

In Carshalton, 54 plans were submitted for approval, and *proceedings were taken in three cases.* It appears that in this district proceedings

had before been taken in the year 1892 in two cases, making five cases in all during the last 12 years.—*Carshalton Urban District Report*.

In the Croydon Rural District, 125 plans of new buildings were submitted, the number approved was 79, disapproved 46. Plans for drains to 20 new houses were submitted, approved 9, disapproved 11. Plans of 5 iron buildings were submitted, number approved 4. In the case of 17 buildings plans for drainage were submitted, of these 11 were approved. The bye-laws are only applicable to part of the district. No proceedings were recorded.—*Croydon Rural District Report*.

In Reigate Town the number of plans for new houses and other buildings and additions to existing buildings submitted was 193, of which 163 were approved and 29 were disapproved. No further proceedings were recorded.—*Reigate Urban District Report*.

In the Reigate Rural District the number of new buildings for which plans were submitted was 51. No proceedings were recorded.—*Reigate Rural District Report*.

In the Godstone Rural District, Mr. Barralet reports that the number of new buildings approved by the Authority was 118, the number of inspections of new buildings was 242, the number of certificates granted under the Public Health Water Act, 1878, was 34. No proceedings were recorded.—*Godstone Rural District Report*.

In connection with the above reports attention is particularly directed to the facts that bye-laws are by no means generally in operation throughout the district. Thus, in some town districts, there are no means of preventing the erection of houses without proper curtilage and other requisites for health. In some rural districts there are no means of preventing the erection of houses with damp foundations, at too low a level for proper drainage, without sufficient superficial area (garden) attached, and without provision for proper water closets or dry closets, viz.:—either earth closets or privies, constructed on sanitary principles. Attention is, moreover, especially directed to the fact that in hardly any districts are there any proceedings ever taken to enforce the bye-laws.

It is too much to suppose that in the Chertsey District, for example, in which it is reported that 1,383 plans of buildings have been submitted during the last few years, there has never been a case in which further proceedings were necessary to enforce the provisions of the bye-laws. For the purpose of carrying out bye-laws, independent inspection is absolutely necessary. In some Districts the Sanitary Inspector is also the Inspector of new buildings, an arrangement which, if it can possibly be avoided, is for obvious reasons undesirable. This point was brought prominently under notice in the case of the inquiry into the proposals of the Kingston Town Council, for the extension of the Borough boundaries by the inclusion of Surbiton.

XI.—House Sanitation Generally.

THE
HISTORY
OF
THE
CITY
OF
NEW
YORK
FROM
1624
TO
1898
BY
JOHN
B. HOGAN
AND
JAMES
M. SMITH
NEW
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1898

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1898

XI.—HOUSE SANITATION GENERALLY.

Under this head there is little to report in 1894. The case of Surbiton was again brought very prominently under notice.

It will be remembered that the report in which the County Council drew attention to the desirability of making better arrangements for the inspection and improvement of the sanitary condition of houses let on lease was, in 1892, referred specially to Surbiton. It is to be regretted that the Surbiton Sanitary Authority had not seen its way to carry out the suggestions of the County Council by the end of 1894. Surbiton is no exception to other districts in the neighbourhood in the matter of house sanitation; it is probable that at Barnes, at Richmond, at Wimbledon, and at Kingston and New Malden there exists the same necessity for house inspection. It is, however, in Surbiton that the question has first arisen in Surrey. There can be no doubt whatever that it is desirable on public grounds to maintain a proper Sanitary supervision of houses of all classes. The subject will need, therefore, to be kept before the notice of the County Council.

THE HISTORY OF THE

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XII.—Regulated Trades.

Robert T. Anderson - 117

XII.—REGULATED TRADES.

In the Reports for the following Districts no information is given.

KINGSTON RURAL SANITARY DISTRICT.—No Report.

EGHAM.—No Report.

FARNHAM URBAN SANITARY DISTRICT.—No Report.

FARNHAM RURAL SANITARY DISTRICT.—No Report.

GODALMING URBAN SANITARY DISTRICT.—No Report.

EPSOM RURAL SANITARY DISTRICT.—No Report (owing to resignation of the Inspector.)

In the Reports of the following Districts partial information is given.

BARNES URBAN SANITARY DISTRICT.—Slaughter Houses, Cow Sheds, Dairies and Bakehouses reported as receiving attention.

RICHMOND URBAN SANITARY DISTRICT.—Ditto.

HAM URBAN SANITARY DISTRICT.—Ditto.

KINGSTON URBAN SANITARY DISTRICT.—Ditto.

NEW MALDEN URBAN SANITARY DISTRICT.—Ditto.

EAST MOLESEY URBAN SANITARY DISTRICT.—Ditto.

HAMBLEDON RURAL SANITARY DISTRICT.—Ditto.

EPSOM URBAN.—Ditto.

CARSHALTON URBAN.—Ditto.

SURBITON URBAN SANITARY DISTRICT.—Bakehouses 12, Licensed Cow Sheds 14, Slaughter Houses 1.

GUILDFORD URBAN SANITARY DISTRICT.—No. of trades reported by Mr. Lawrence Bradley as 233,

In the Reports of the following Districts fuller information is given, and is classified as follows :—

	No. of premises on register.	No. of visits to premises.	No. at which improvements have been carried out in lighting, ventilation, means of cleansing and water supply.	No. of cow sheds found in filthy condition.	No. of premises at which milk vessels were found unclean.
Chertsey ... ..	...	93	7	3	0
Guildford Rural. ...	73	105	6	5	1
Woking Urban ...	22	29	2	2	1
Dorking Rural ...	51	95	4	2	0
Dorking Urban ...	...	22	0	...	0
Reigate Urban ...	29	60	...	2	0
Reigate Rural.. ...	74	170	4		

WIMBLEDON.—A good deal of work has been done under this head by Mr. Mayne, the active Inspector.

BAKEHOUSES.

The Bakehouses, 22 in number, were inspected twice during the year, viz., in March and September.

Of these 4 required whitewashing, and one had an offensive accumulation of refuse outside the Bakehouse door.

Notices were served on the owners in each case, and were complied with.

It is satisfactory to note that these premises are on the whole kept in a very good condition.

DAIRIES, COW-SHEDS AND MILK SHOPS.

The Dairies, Cow-sheds and Milk Shops in the District have been inspected periodically and at intervals, and with a few exceptions have been found to be kept in accordance with the regulations.

There are 37 of these premises in the District, one having been registered during the year.

In 3 cases notices were sent for cow-sheds to be limewashed.

In 1 case the milk utensils were found to be improperly kept.

The usual notices were served on the owners and were complied with.

SLAUGHTER HOUSES.

The Slaughter Houses have been inspected frequently, and found to be kept in accordance with the Bye-laws.

Accumulations of manure from the lairs have been prevented, and the Slaughter Houses have been inspected when Slaughtering has been in progress, with a view to seeing that the new Bye-laws of 1894 have been complied with.

There are only 6 Slaughter Houses in the District, and 3 of these are not much used.

PIGGERIES.

A summons was issued in the South-Western Police Court against Mr. Spittle in respect of the nuisance caused by his piggeries in Durnsford Road, and Mr. Spittle was fined 40/- and costs. The nuisance, however, continued, and the Board obtained from the Attorney-General leave to take proceedings in the High Court in his name. The case was heard on the 6th and 7th of November, and an injunction was given against the defendant to prevent him committing the nuisance complained of.

Notices were served on the owners of piggeries in the North, South, and East Roads, to comply with the new Bye-laws, which prohibit the keeping of swine within 100 feet of a dwelling house.

The result was that in the East Road 3 piggeries containing 41 pigs were abolished.

In the North Road one piggery containing 17 pigs was removed to over 100 feet, and another with 5 pigs was abolished.

In the South Road 9 piggeries containing 57 pigs were dealt with; 5 were abolished, and 4 were re-erected outside the prescribed distance.

The keeping of pigs in such numbers in these roads was a serious nuisance, and it would be a good thing if the prohibitive distance was further extended to 150 feet.

The following is the account given, by the Medical Officer of Health for Croydon Rural, of the Regulated Trades in his district.

(a) DAIRIES, COWSHEDS, &c.

There are 57 premises registered under the Dairies, Cowsheds, and Milk-shops Order of 1885, five having been newly registered during 1894."

They are distributed as follows:—

Addington	2	Morden	2
Beddington	3	Sanderstead... ..	4
Coulsdon	15	Wallington	8
Merton	15	Woodmansterne	1
Mitcham	12		
		Total	57

The following are the particulars of inspections of these premises during the year:—

Total number of visits paid to cowsheds, &c....	317
Premises at which improvements in lighting, ventilation, drainage, paving, means of cleansing, or water supply were effected	13
Premises found unclean	20
Cases where notices for cleansing were necessary	4

Every cowshed in the District has also been accurately measured, to enable overcrowding to be checked. Eight hundred cubic feet is the space allowed for each cow by the regulations in force.

(b) SLAUGHTER HOUSES.

There are 20 premises, in which the slaughtering of animals for the food of man is carried on, of which 16 are regulated by the Bye-laws of the Council. Seven are registered, and nine are licensed, two new licenses, each for one year, having been granted in the year 1894.

The following are the particulars of the inspections of these premises made during the year :—

Number of visits paid	186
„ meat inspections	51
Premises at which improvements in lighting, ventilation, drainage, paving, water-supply, or means of cleansing have been effected	9
Premises found unclean	10
Verbal notices for cleansing complied with	10

The amended Bye-laws for slaughter-houses, and the proposal to extend them to all slaughter-houses, are still under consideration. A public slaughter-house for Mitcham and Merton is greatly needed, and would be of great benefit.

(c) BAKEHOUSES.

There are 24 bakehouses, to which 68 visits have been paid. Four of these premises are underground. In two cases, improvements in lighting and ventilation have been effected during the year, four premises were found unclean, two notices for cleansing being necessary.

(d) OFFENSIVE TRADES.

There is one slaughter-house used for the slaughtering of horses, and other animals not intended for the food of man ; and in conjunction with this business, the offensive trade of “boiling” is carried on. These premises were first licensed many years ago, and at the close of 1893 the proprietors had given an undertaking not to carry on any “boiling” process until the permission of the Authority had been given. Apparatus was constructed with a view to minimising the nuisance arising from this process, and, after consideration, the necessary permission was given. The apparatus resembles other apparatus, of a similar nature, in that it is not altogether successful, and occasionally nuisance has been caused. The District Council is now empowered to grant or refuse the future license for the use of these premises upon the expiration of the present license.

At the commencement of the year there were two “gut-factories,” but, happily, one has disappeared, mainly in con-

sequence of the successful prosecution instituted in the previous year. The remaining one is situated in the midst of a considerable population, and is occasionally productive of very serious nuisance. It has received frequent attention, and has been the subject of more than one report.

Besides these premises, there is a large number of "piggeries," which, especially when "boiling" of refuse food is carried on as well, are the source of considerable offence. In the case of a large newly-established piggery in Morden, great complaint was made, but the nuisance has almost disappeared with the adoption of apparatus for destroying by fire the offensive fumes given off from the boiling tanks.

These piggeries ought to receive more constant supervision than they now can, and it would also be very useful if a series of Bye-laws for their regulation could be devised.

(e) FACTORIES AND WORKSHOPS.

All the known factories and workshops have been inspected by Mr. Butterworth, who was engaged to take the place of the Inspectors during their absence on annual leave, and remained for some weeks for this work, and to assist in house inspection. It appears that there are over 50 premises of this nature, for the supervision of which, in regard to certain sanitary matters, the District Council is responsible.

At Sutton the slaughter houses are frequently inspected. Bakehouses, 12 in number, also inspected. Notices served on the occupiers, 4, which were found in an unclean or insanitary condition, requiring them to cleanse them. Dairies, cow-sheds, and milk shops—number of premises inspected 16, visits paid 64, improvements carried out 4, no vessels found in an unclean state.

In the Godstone Rural District Mr. Baralet reports the number of cow-sheds, dairies, and milk shops on the Register as 48, the number of inspections as 270, the number of premises cleansed and lime whited after notice as 21.

XIII.—River Pollution from Trade
Effluents. Nuisances.

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XIII.—RIVER POLLUTION FROM TRADE EFFLUENTS. —NUISANCES.

The following passages from the Report of the Croydon Rural Medical Officer relate to River Pollution in his District:—

The condition of that portion of the river Wandle which traverses the District, and that of its various tributaries, has received careful attention during the year, and they have been under close observation from time to time.

Complaint was made early in the year that sewage was, by some means, finding its way into the river at Beddington, from the adjoining Corporation Sewage Farm. Examination revealed that when a certain plot was being irrigated, an increased volume of water found its way into a neighbouring surface-water drain, which finally discharged into the river. An analysis of this water showed that it consisted, largely, of very imperfectly purified sewage.

Since the pollution was discovered, care has, I believe, been taken not to irrigate the land near the drain in question, and it is understood that permanent alterations are about to be made, to prevent any danger of pollution in future.

The pollution from the chemical factory at Lonesome, in Mitcham, referred to on page 35 of the last Annual Report, has been under observation several times, and the proprietors, after great delay, have constructed filtering apparatus to prevent the pollution of the watercourse by the chemical effluents. However, there is every reason to fear that it has not answered expectations, and that additional precautions will be necessary.

An uncommon pollution in connection with another chemical factory came to light during the year. A pond near this factory was noticed to be distinctly tinged with a yellow colour, and water pumped from an adjoining gravel-pit was also bright yellow. Inspection of the factory showed that, although a connection with a sewer was in existence, the "washings of nitro-naphthalene" had been allowed to discharge into an unused ditch, and that the

colouring matter had finally reached the subsoil water. There was no evidence to show that this pollution was injurious to cattle or poultry, and, although stopped at once at its source, the colouring matter is still occasionally pumped out with the subsoil water.

The pollution of the "Pyl Brook," a tributary of the Beverley Brook, at Raynes Park, was also under consideration during the year. Until recently, when sewage works were constructed, the whole of the Sutton sewage was discharged into this brook; and even now an appreciable portion of it still discharges into it. A Special Report was laid before the Sanitary Authority, detailing this source of pollution as well as other less important ones. The pollution from Sutton still remains, but after a conference between the members of the Sutton Local Board, the Sanitary Authority, and Dr. Seaton, it was arranged that, if the pollution had not disappeared by April, steps would be taken to divert the contents of the brook at the Sutton Sewage Works, and purify them there.

Complaints have occasionally been received of pollution of the river between Beddington Corner and Mitcham, by manufacturing effluents, and even, as alleged, by sewage matter from the Croydon Farm, at Beddington.

This portion of the river is under frequent observation, and it may safely be said that its condition is not very bad, nor so bad as it was; the existence, however of a Fishing Association here renders any slight pollution an important consideration.

In connection with this subject, the occurrence of "flooding" from overflow of streams last November may be recorded here. The most serious flooding occurred at Beddington Corner, and at Merton Abbey. Flooding was almost universal at that time of the year, but much might be done in this District, by strengthening the banks of streams in various places, and enlarging communicating culverts, to prevent future occurrences of this sort.

BYFLEET.—Refuse from Brewery.

CHERTSEY.—Road Drain.

GODALMING.—Effluents from Tanneries.

GUILDFORD RURAL.—Effluent from the Catteshall Paper Mills and Compton and Langton Laundries.

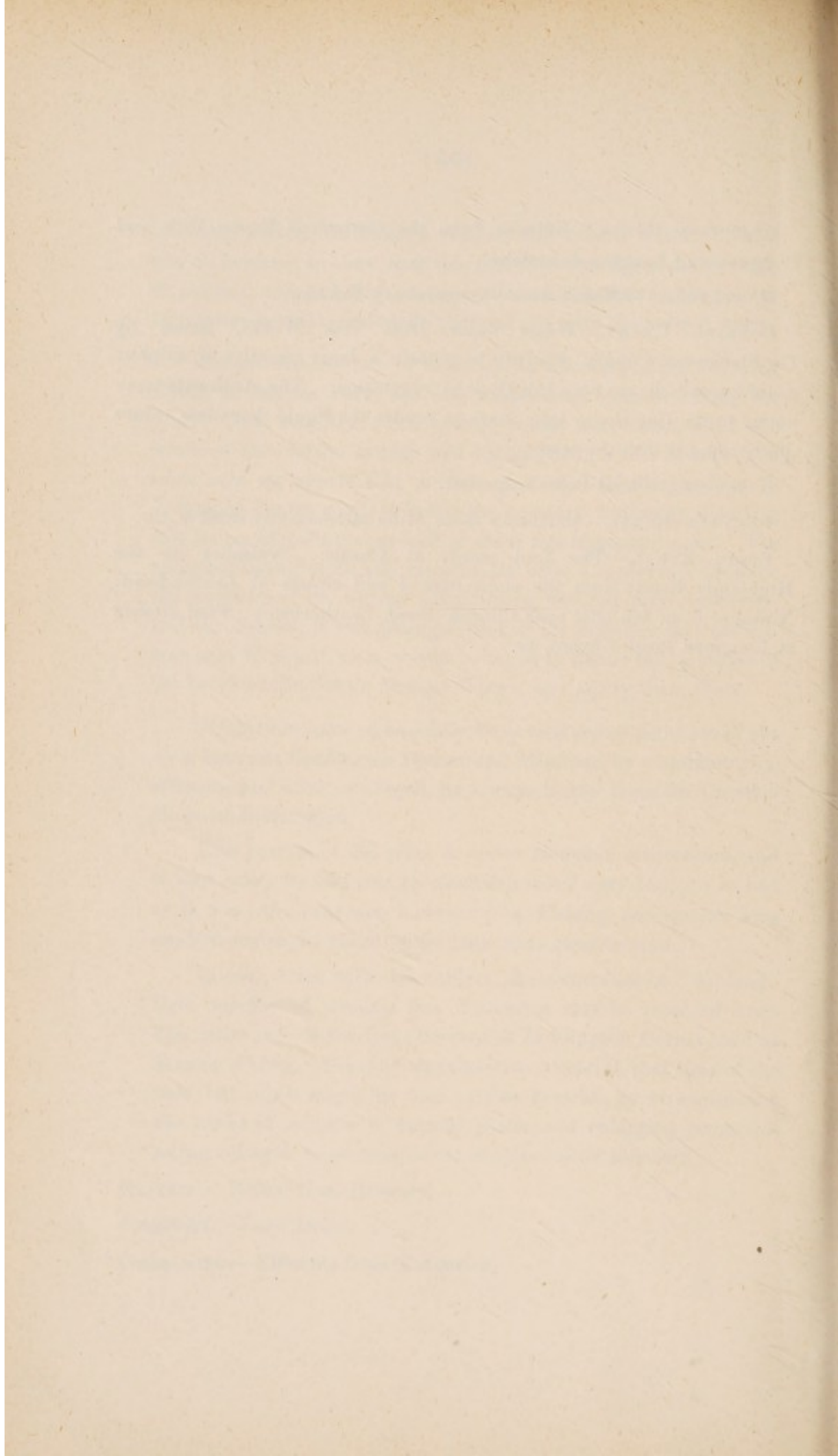
HAMBLEDON.—Effluent from Summersbury Tannery.

DORKING URBAN.—Waste water from Gas Works, found by Dr. Stevenson, County Analyst, to contain a large quantity of sulphur cyanides, which are very injurious to vegetation. The Authority gave notice to the Gas Co. to take steps to render the liquid harmless before discharging it into the sewer.

KINGSTON.—Canal Boats inspected.

FARNHAM RURAL.—Bartram's Bone Mills satisfactorily dealt with.

EPSOM RURAL.—The foul ponds at Cheam. Nuisance on the Highlands Estate from the emptyings of pail closets at Leatherhead. Nuisance from fish offal near Clinton Road, Leatherhead. Foul ditches at Longford Road, Cheam, &c.



XIV. — Public Conveniences,
Mortuaries and Cemeteries.

XII. — Bible. — Commentaries.

See also *Annotations and Explanations*.

XIV.—PUBLIC CONVENIENCES, MORTUARIES, AND CEMETERIES.

BARNES.—Mortuary kept in good order.

RICHMOND.—Public Conveniences required.

GODALMING.—Need for Mortuary and Public Conveniences.

SUTTON.—Inquiries as to Cemeteries in the chalk formation.

REIGATE.—Escape at times from Gas Works at Redhill, it was especially noticeable when the Company were manufacturing Sulphate of Ammonia from ammoniacal liquor.

NUTFIELD.—Cemetery at Nutfield. At the suggestion of Dr. Hoffman, of the Burials Department of the Home Office, Dr. Jacob inspected the proposed site for this Cemetery, the soil of which is more or less dense clay. He reported in favour of under drainage.

Some nuisance at Railway Stations from the traffic in manure in various Districts.

XV.—Drainage, Sewerage, and Sewage
Disposal.

XV.—DRAINAGE, SEWERAGE, AND SEWAGE DISPOSAL.

“The subjects of Drainage, Sewerage and Sewage Disposal have received more and more attention every year, not only for the sake of improving the sanitary condition of the districts immediately concerned, but also because it has become necessary to prevent River Pollution.

“At Richmond there has been an extension of sewerage works, and of the method of ventilation for the sewers by sewer gas destructors fitted with extension-proof furnaces especially referred to.”—*Richmond Urban District Report*, p. 23.

“At Wimbledon the provision of a storm-overflow, three feet in diameter from Hayden’s Road, nearly opposite Effra Road to the Wandle, is mentioned. Another overflow from the middle level sewer to the storm water sewer at the bottom of the Downs, in order to relieve the flooding that takes place in the Worple Road is referred to.

“As regards sewage treatment, the chemical part of this treatment has throughout the year been effected by lime, and an addition of copperas during the summer months, which has effected a considerable saving on the cost of the former treatment.”—*Wimbledon Urban District Report*.

The New Malden Medical Officer of Health reports to the Authority :—

“Your Sewage Works have been much improved of late, and seem from evidence given at the recent inquiries, to be quite capable of taking in the extra sewage of Coombe and Old Malden. If well managed, and well looked after, there is no reason that the works should be at all offensive to the immediate neighbourhood. I am of opinion, however, that constant pumping of the sewage, so as to ensure its delivery in a perfectly fresh state for treatment, before any decomposition takes place, is absolutely essential. In order to secure these results, and in order also to secure an effluent which will prove perfectly satisfactory at all times, I would recommend that an eminent consulting engineer, who has given the treatment of sewage his particular attention, be retained to advise the Board from time to time. It would also be well for the

effluent to flow over white glazed bricks or tiles before discharging into the river."—*New Malden Urban District Report*, p. 9.

The Surbiton, Kingston, and Kingston Rural Reports of 1894, are defective in information as regards the working of the sewerage and sewage disposal systems.

At East Molesey the main drainage system is shortly to come into operation :

At Weybridge and Oatlands.—“The task of making the necessary sewers with their man-holes, lamp-holes, and flushing tanks, in these contributory places, and of doing the proposed works at the pumping station in Weybridge Lane, was completed during the year. The works at the outfall (which is half a mile outside the Parish of Weybridge), including the rising main from the pumping station, the erection of the precipitating tanks and of the buildings for the sludge presses, and for the machinery for mixing the chemicals and for working the presses, the formation of the carriers for distributing the clarified sewage over the land, the under-drainage of the land, &c., &c., were also in a very forward state at the close of the year. For flushing the sewers, water will be pumped from the well at the pumping station through small iron pipes (which have been laid over the sewers) into the tanks at the heads of the different sewers. When the West Surrey Water Company heard that the Sanitary Authority were carrying out this work, instead of coming to them for water for flushing the sewers, they applied to the Chancery Division of the High Court for an Injunction to restrain the Authority from going on with it, on the ground that the Authority were constructing water works for the supply of water to their district, within the limits of the Company's supply, in contravention of the provisions of Sec. 52 of the Public Health Act of 1875. The Court, however, was of opinion that the Authority were not doing anything which they were prohibited from doing by that section, or any other section of the Public Health Act, and dismissed the action with costs.”—*Chertsey Rural District Report*, p. 11.

In the Report of the Farnham Rural District special reference is made to the Sewage Works immediately adjoining at Aldershot, North Camp, and Farnborough, all of them situated in the County of Hampshire. These subjects have been specially dealt with in Reports that have been fully before the Council.

The Report for the Farnham Urban District contains no information as to the working of the sewerage and sewage disposal systems.

The Village of Cranleigh in the Hambledon District is an exceptional instance in Surrey of a small village community which has dealt with the sewage difficulty on the water carriage system, and the experience of this village will be watched with great interest.

The Godalming Urban Sewerage and Sewage Disposal Works are approaching completion.

The works at Guildford are actually in operation.

The question of the provision of a sewerage system for Woking has received, and is at the present time receiving special attention. The necessity of a scheme for the benefit of the thickly-populated parts of the district, as well as for the prevention of river pollution is generally admitted. The subject is not at present in a stage to be reported upon.

The following parts of the Report of the Medical Officer for the Guildford Rural District refer especially to the defective condition of the sewerage and sewage disposal of Ripley :—

“ The Village of Ripley is provided with sewers constructed of stoneware pipes varying in size from 6 inches to 12 inches in diameter.

“ At frequent intervals in the line of sewers there are catch-pits formed below the line of invert for the purpose of retaining the solids, and these catch-pits require cleansing at frequent intervals, which is done by a contractor. The sewers were not intended to receive the discharges from the water closets, but a very large number do discharge into the sewers. About twelve months ago some regulations were adopted, making it compulsory that the Surveyor should see every drain connected to the sewer, and since that time no more water closets have been connected to the sewers, cesspools having to be provided. The Village is, therefore,

in the peculiar position of having a system of sewers, and also having to provide cesspools.

"Owing to the slight gradients and the frequent break of the current in the sewers by the sunk catch-pits the sewers are not self-cleansing, and rely for flushing on the rain water from the roads.

"No attempt at ventilation is made. In a small system of sewers like this it is surprising to find there are two outfalls, and consequently two places where the sewage must be treated before being turned into the streams. One of these, at Homewood Farm, receives by far the larger amount of sewage, and is about two acres in extent. The ground has never been properly prepared, and there are no precipitation tanks. The crude sewage has been discharging on this piece of ground, receiving no proper attention for several years, until the ground is in an altogether unfit state to receive the sewage.

"The other outfall is on Ripley Green, where small precipitation tanks are provided, and the sewage, after being allowed to precipitate, is passed on to about $\frac{3}{4}$ of an acre of ground, a portion of which is under-drained at a depth of about 8 feet. The sewage is distributed on the surface, and filtering through the ground, is discharged as a clear effluent."

The following parts of the same report refer especially to the Sanitary condition of Gomshall and Shere and the Pollution of the Tillingbourne Brook :—

"On the 24th January, the Local Government Board issued a Memorandum as to Col. Ducat's Report with regard to the Enquiry held by the Board at Shere in September, 1893. As a result of the Enquiry, the Board were strongly of opinion that a comprehensive sewerage scheme for the above contributory place was the only solution of the difficulty. The Board considered it necessary that the sewage should be conveyed to some distance from the dwellings by drains, and then subjected to a proper system of filtration, including land treatment, and they would not consent to the provision of dumb-wells or garden irrigation on account of the porous nature of the soil, and the danger of getting

the well contaminated, from which most of the drinking water is obtained.

Colonel Ducat made a further inspection of the villages on the 27th November last year, and in December the Local Government Board wrote to the Clerk of the Guildford Rural Sanitary Authority, forwarding copies of an order issued by the Board on December 22nd, with reference to the provision of sewers in the villages of Gomshall and Shere. The Board having considered the Report of their Inspector, Colonel Ducat, R.E., relative to the complaint that the Rural Sanitary Authority had made default in providing sufficient sewers, the Board found that there had been default, and issued an Order directing the Authority to perform their duty within three calendar months from the date of the Order, so far as it related to the villages of Gomshall and Shere."

—*Guildford Rural District Report*, p. 31.

As to the Works of Sewage Disposal in Dorking Urban District during the year, the new outfall works which were finished during the previous year, comprising a conversion of 4 acres of stiff clay soil into an artificial filter of sand, gravel, and surface soil, and the provision of machinery for mixing some of the chemicals and for lifting the clarified sewage by a Shone's Ejector on to a high filtration level, and the construction of additional sludge pits were found to act very satisfactorily. The land was never over-burdened with water, the effluent was good, and the sludge was pressed as frequently as was requisite.—*Dorking Urban Report*, p. 5.

Leatherhead was in 1894 included in the District of the Epsom Rural Sanitary Authority. The question of the provision of a drainage, sewerage, and sewage disposal scheme, which is urgently required, received special attention.

The following paragraph relates to the Pollution of the Beverley Brook at Worcester Park, which has been the subject of discussion for nearly a quarter of a century. As to the proposed work of sewerage and sewage disposal for the Parishes of Cheam and Cuddington :—

"Early in the year the Sanitary Authority re-opened negotiations with the Kingston Rural Sanitary Authority on the question of treating the sewage of these two parishes, and that of Old

Malden, on land in the latter parish, but nothing came of them. In March, after further consultation with their Engineer, Mr. Anstie, C.E., they applied to the Local Government Board for sanction to borrow £13,000 for carrying out the scheme which he had submitted in October, 1893, *i.e.*, for making the necessary sewers at Cheam and Cuddington, and for treating the sewage on land at the north-east corner of Cheam Parish. In May the Local Government Board caused an enquiry to be held at Cheam into the matter of the application, and evidence was given by the Engineer in favour of the scheme. In June, at the adjourned enquiry, evidence was given in opposition to it, on behalf of some of the ratepayers of Cheam. In July, the question of including Ewell in the scheme and of conveying the sewage of the three places to one outfall at Old Malden, was suggested to the Sanitary Authority, and they requested the Board to withhold for a time their decision on the scheme already submitted to them, but it appeared from a report, which they afterwards received from Mr. Anstie, that no saving of expense would be effected by the adoption of this larger joint scheme. It was, accordingly, abandoned, and, after the cost of the proposed works had been apportioned between the two places, the Local Government Board sanctioned the loan for the scheme which was laid before their Inspector in May."

The following paragraph relates to the proposed provision of sewers for Ewell :—

"In November the Sanitary Authority decided that sewers, with the necessary work for the disposal of the sewage, ought to be provided for the populous parts of this parish, and they invited engineers to submit schemes for this purpose, on or before December 22nd. Eighteen schemes were received, but there had not been time to consider them before the year closed."—(*Epsom Rural District Report*, p. 7.

The following paragraph from Dr. Jacob's report relates to the works of sewage disposal at Sutton :—

"The treatment of the sewage by precipitation with lime-water and solution of ferrous sulphate, then by filtration through

one of the artificial filters (of which there are three kinds—viz., one of sand, polarite, and gravel; one of sand and coke breeze; and one of sand and gravel), and, lastly, by passing the filtered effluent over the farm-land, was successfully continued during the year, the final effluent passing into the Pyl-brook being quite satisfactory. Owing, however, to the large number of houses which still drain into the old Highway Board's drains and into other drains communicating with the brook, the latter was still in a very foul state, of which complaints were made by the Croydon Rural Sanitary Authority and by the Surrey County Council. The Sanitary Authority accordingly felt that some action must be promptly taken to remedy this evil, but, beyond roughly filtering the brook-water through burnt ballast, had not decided what steps should be taken before the close of the year. Towards the end of the year an additional filter, 70 feet by 30 feet, was made at the farm by taking out the clay to a depth of 3 feet, turning it into ballast, and replacing it over the under-drains. Forty-four samples of the raw sewage, of the clarified or chemically treated sewage, of the under-drainage of the artificial filters, and of the final effluents, were sent to me for examination, and I found, firstly, that the raw sewage was of the average strength of domestic sewage; secondly, that the chemical or tank treatment of the sewage had reduced the quantity of dissolved organic matter to about half of that which the raw sewage contained, besides removing nearly all of the suspended matter; thirdly, that the effluents from the different kinds of artificial filters were generally fit to be discharged, without further treatment, into the Pyl-brook, and were nearly always equally good; and, fourthly, that the effluent from the under drains of the land was at times no better than that from the artificial filters—in other words, that the latter had not improved by passing through the land."—*Sutton Urban District Report*, pp. 6 & 7.

As to the proposed works of sewerage and sewage disposal for Carshalton, the extensive scheme of Mr. Baldwin Latham, C.E., for laying the sewers and for treatment of sewage on the land in the parish

of Mitcham had not been decided on by the Local Government Board, who hold their inquiry in the month of October.

Dr. Mair's excellent and painstaking report treats specially of the influence of works of sewerage upon public health. That part of the report is entitled to fuller notice and discussion than is possible in these pages. The following paragraph relates especially to conditions which urgently require attention.

"The question of improving the sewerage of the parishes of Beddington, Wallington, Mitcham, Merton, and Morden, and of remedying the defect at the sewage works, have been burning questions throughout the year 1894, and have been at almost every meeting under consideration in some form or another.

The report and opinions of Mr. Chatterton, who has been especially consulted as to the best means of remedying the defects of the present system are set out.

The heading back of the sewage in the sewers is in the opinion of the Medical Officer of Health a subject which requires immediate attention. In that opinion I entirely agree.

"In Reigate, important additional sewerage works have been carried out, including $1\frac{1}{2}$ miles of new sewers which have been laid and $\frac{3}{4}$ of a mile of old sewers taken up and relaid. As to the works of sewage disposal; before the end of the year the extensive outfall works for treating the whole sewage of the Borough by chemical precipitation tanks before passing it on to the land, and for pressing the sludge were completed and brought into operation, the chemical used being alumino ferric cake."—*Reigate Urban District Report*, p. 8.

At South Nutfield, after much vexatious negotiation, the Sanitary Authority agreed upon the terms upon which they were to lease the additional 2 acres of land for the treatment of the sewage at the outfall of the sewers at Hale Farm, for which they had unwillingly accepted the responsibility. They also effected some improvements during the

year in the arrangements for treating the sewage for the Nutfield Park sewage at the outfall of Theps Shaw.

At Merstham in February the Sanitary Authority received the sanction of the Local Government Board to the proposed additional works of sewerage and sewage disposal in the Parish, and in June they accepted the tender for carrying them out. The Contractor, however, did not get on with his work so well and so quickly as was expected, and had not completed it when the year closed.

In the Godstone District questions of sewerage for various parishes in the district have been under consideration, but no decision has yet been arrived at. In the meanwhile the scavenging of the district is very defective and gives rise to very serious complaints.

XVI.—Cleansing or Scavenging.

XVI.—Cleaning or Scrubbing.

XVI.—CLEANSING OR SCAVENGING.

(Including the disposal of Contents of Dry Closets, House Slop, and Cesspool Contents).

The Reports of the Medical Officers of Health are very incomplete in the account they give of the scavenging of the districts. This, no doubt, is due to the fact that the scavenging is grossly neglected, probably in many cases because the authorities, believing that a sewerage system is the only effective remedy, have already made up their minds to wait until the complaints arising from the neglect of scavenging are so urgent that a sewerage system is forced upon the district.

The Report of the Medical Officer of Health for the Guildford (Rural) and Woking Districts is the first of the reports that deals with the subject of scavenging in proportion to its merits ; he describes in detail the provision that has been made in the villages of Albury and Woking. At both these places there is probably ample room for further improvements in essential respects. Such improvements may be expected in due course ; in the meanwhile attention is drawn to the fact that the Guildford (Rural) and Woking Authorities are making an honest effort to prevent the genesis of Nuisances which are generally permitted to flourish in unsewered and practically unscavenged country districts. The Albury Scavenging Scheme is thus described by the Medical Officer of Health (Mr. Wellington Lake, D.P.H.)

“ This scheme is worked on the voluntary system by a Committee, and includes the collection and disposal of the contents of earth closets and cesspools, and the disposal of sink water.

“ *Earth Closets.*—In order to cope with the work of dealing with the excremental matter it has been found necessary to convert the privies formerly in use into earth closets. There are now about 38 in operation, and I think the time is not far distant when the whole of the privies in the village will be converted into earth closets,

"The receptacles which are movable are of galvanised iron, costing 4s. each, and are emptied twice a week by a cart and conveyed to land about $\frac{1}{2}$ a mile from the village, where the contents are used as manure. The collection is made between the hours of 6 and 7 a.m. ; the area used is a narrow strip about $\frac{1}{2}$ a mile long, and the working cost is 2d. per week per closet.

"*Cesspools.*—These receive the discharges from water closets only, and are of a capacity varying from 800 to 2750 gallons, and are constructed of brick work faced with cement. In the constructing of these cesspools considerable difficulty was experienced in dealing with the strong springs of water which were met with whilst the cesspools were in course of construction, and it was found necessary to resort to continual pumping day and night. Some of the springs were of considerable volume, and added materially to the cost of construction. It was, however, imperative that the cesspools and each joint of the drains should be perfectly watertight, otherwise the sub soil water would have encroached, and added considerably to the cost of emptying.

"A permanent iron suction pipe is fixed in each cesspool, terminating a little above the crown of the dome. This projecting pipe is fitted with a brass cap and gun-metal screw, and protected when not in use by a cast-iron cover. When the cesspool has to be emptied the sewage pump is placed near the pipe, the brass cap is removed, and a spiral suction hose attached by a brass union ; one end of the delivery hose is then fixed to the pump, and the other to the projecting inlet in the top of an air-tight sewage cart by similar brass unions. When these joints are properly secured, pumping proceeds without any offensive odours escaping. It takes about ten minutes to fill the cart (holding 250 gallons), and when it is full the hose is disconnected, the caps replaced, and the sewage carted to the farm, where it is mixed with soil and lime, and applied as manure to the land. Although provision is made for emptying the cesspools during the night, the Committee have not yet been asked to do so, as no nuisance has so far been experienced,

"There are 22 cesspools at present in use, serving 18 houses, and the sewage is over a narrow area about $1\frac{1}{2}$ miles long. The charge made for emptying is 2s. 6d. per load of 250 gallons. I cannot say what the cost of the construction of the cesspools has been, but the plant, consisting of one tumbrel cart, one air-tight sewage or cesspool cart, 22 pipes for cesspools, brass and iron caps, pump, suction and delivery hose, wrenches, &c., complete cost £100.

Disposal of Sink Water.—Sink water is conveyed by separate drains into settling tanks, from which it is discharged on to filter beds of stone and gravel, 3 feet in depth and about 4 feet in diameter. From the filtering beds it passes into lateral drains constructed of stones and gravel, and ultimately filters through the earth into the stream. These filters require to be taken out and washed occasionally. The length of time they keep in order varies considerably with the amount of work they have to do. If reasonable care is used it may not be necessary to wash them more than once in two years, but with indifferent use once in six months may not be sufficient."—*Guildford Rural District Report*, pp. 27, 28 & 29.

The systematic Scavenging of the Woking District is thus described :—

"Before the district was constituted an Urban Authority no system of any kind for the disposal of sewage and house refuse existed. At the commencement of the year a system of scavenging for the Woking Station and Maybury Ward was introduced. The work consists of emptying about 450 pail-closets weekly, whilst the house refuse is removed from about 930 houses fortnightly. Plant, consisting of pump, three water-tight cesspool carts, hose, &c., were purchased (cost £140) to enable the Authority to make arrangements for the emptying and cleansing of cesspools in these Wards.

"The Authority, free of charge, provide for (a.) The removal every week of the contents of all earth or pail-closets. (b.) The removal of ordinary house refuse every fortnight. They have also

made arrangements for (c.) The emptying of cesspools in the above-named Ward, and the carting away of the contents thereof, at a charge varying according to the size of the cesspool, the tariff being regulated on a very fair sliding scale.

“ During the year 230 cesspools were emptied and cleansed, whilst nearly 1000 loads of refuse were removed in this Ward.

“ The system of scavenging as adopted in this Ward has been so successful, and so appreciated, that it might be well extended to other populous parts of the Parish.

“ The question of the drainage of the Station Estate engaged the serious attention of the Authority for a considerable portion of the year. In the early part of the year, in the Guildford Court of Summary Jurisdiction, proceedings were taken against the owner of the land for allowing the cesspools to overflow and become a nuisance, and in this important action the Authority proved successful. Owing, however, to the insolvency of the owner, the land changed hands several times, and caused great difficulties, for it was not till the middle of November the name of the responsible owner transpired.”—*Woking Urban District Report*, pp. 20 & 21.

For the rest of the districts in Surrey it must be said that this very important part of Sanitary Work is very much neglected. The Authorities fail to see that it is one of the most important parts of their functions to prevent the origin of nuisances, by arranging for the systematic removal and safe disposal of both liquid and solid domestic excreta and refuse. The pollution of rivers, the overflow of cesspools into ditches, the overflow of cesspools on the roads, the leakage of cesspools into soil (thus rendering houses unhealthy and unfit for occupation), are conditions that can only be dealt with effectively, in many cases, by the Sanitary Authority becoming itself the Scavenging or Cleansing Authority. As it is, the work is frequently let to a contractor, under conditions which make it extremely unlikely that it would ever be carried out in a satisfactory way. The subject is one of great importance to the public health, and as such it is my duty to submit it for the special consideration of the County Council.

XVII.—Quarterly Reports of Dr.
Stevenson, the County
Analyst to the Council.

THE GENERAL REPORT OF THE
COMMISSIONERS OF THE LAND OFFICE
FOR THE YEAR 1871

XVII.—QUARTERLY REPORTS OF DR. STEVENSON, COUNTY ANALYST TO THE COUNCIL.

The following is a table which I have prepared from Dr. Stevenson's reports, showing the kind and number of samples taken under the Food and Drugs Act each quarter. It will be seen that numerous samples were taken of Milk and Butter. Bread, Flour, and Infants' Prepared Food, were not taken in the year under notice, but it is to be particularly noted that Drugs and *Medicines* received attention.

Sample.	Quarter 1.	Quarter 2.	Quarter 3.	Quarter 4.	TOTAL.
Milk	51	110	88	111	360
Butter	80	52	37	62	231
Margarine ..	2	...	1	...	3
Lard	17	10	6	4	37
Brandy	10	4	2	3	19
Gin	6	...	3	5	14
Whiskey	15	13	10	4	42
Mustard	1	...	...	2	3
Jam	1	...	2	...	3
Coffee	2	...	8	4	14
Yeast	2	...	...	...	2
Vinegar ... ..	...	2	1	...	3
Sugar ... ..	...	2	15	...	17
Oil ... ..	...	1	...	1	2

QUARTERLY REPORTS OF DR. STEVENSON--continued.

Sample.	Quarter 1.	Quarter 2.	Quarter 3.	Quarter 4.	TOTAL.
Pepper	2	2
Iodide Potass'm	5	5
Quinine	6	6
Steel Wine	1	1
Magnesia	1	1
Seidlitz Pwdrs.	1	1
Medicines	5	5
TOTALS ...	187	194	173	217	771

XVIII.—Quarterly Reports of
Professor Axe.

THE
ANNUAL REPORT OF THE
COMMISSIONER OF THE
LAND OFFICE
FOR THE YEAR 1887

XVIII.—QUARTERLY REPORTS OF PROFESSOR AXE.

The following notes are abstracted from the interesting Reports of Professor Axe (Chief Inspector under the Contagious Diseases Animals Act) to the Council.

In the June Quarter fourteen outbreaks of Swine Fever were reported. The Reports were confirmed in five cases. The nine other suspected outbreaks were of diseases of a common character. The five infected herds contained fifty-two animals, of which number, twenty-seven were attacked and fourteen died.

One case of Glanders occurred. The animal was the property of a labourer residing in the South-west District of London.

Two outbreaks of Anthrax, one in the Godalming and another in the Farnham Districts. In each case one death only occurred, there was no recurrence.

In the September Quarter seven outbreaks of Swine Fever were reported and confirmed. The infected herds contained 149 animals, of which, twenty-five were attacked, and seven died. Fifty were destroyed.

Five outbreaks of Anthrax were reported and confirmed. Three were in the Godstone, one in the Farnham, and one in the Chertsey District.

On one farm the disease had occurred periodically for years. In the other instance, no previous visitation of the disease was known to have occurred, and no recurrence of the malady has since been reported in any of the farms.

Professor Axe says :—" It was only in one instance that we were able to assign a satisfactory reason for the origin of the Disease, and here it would appear to have arisen as the result of dressing certain pastures with animal refuse obtained from neighbouring kennels."—(*Reports presented to the County Council, November 13th, 1894. p. 146*).

In the December Quarter four confirmed outbreaks of Swine Fever were recorded. The infected herds contained 234 animals, of which number 64 were attacked, 14 died, and 206 were destroyed.

Two confirmed outbreaks of Glanders were recorded. In the course of inquiry a third outbreak was traced to a stud of horses, out of which a diseased animal had been recently purchased.

Sheep Scab appeared on two farms, one in the Godstone and one in the Chertsey District.

One case of reported Pleuro-Pneumonia in the Chertsey Division proved to be Anthrax. One other case of Anthrax occurred on a farm where two outbreaks were notified in the previous Quarter.

As regards the possible relation of "Animal health," to the periodical recurrence of Influenza among Humans, Professor Axe informs me that his attention has been specially directed to the subject, but that he has "never had reason to regard the former as being in any way influenced by the latter."—(*Letter dated May 23rd, 1895.*)

XIX.—Concluding Remarks.

XIX—Continuing Remarks

XIX.—CONCLUDING REMARKS.

The Index attached will be found useful for cross references.

In the preparation and arrangement of the above comprehensive report, regard has been had to the desirability of making it serve a threefold purpose, viz.: that of a record, a review, and a guide.

1. As “a record” it should be useful, not only for the purposes of the County Council, but also for those of the District Councils. It records the position of affairs as regards County Sanitary conditions over which the Councils have control, and which have been partially or wholly dealt with in 1894.

2. As “a review” it should be useful as enabling the County and District Authorities to see what has been the effect of their influence in the general improvement of Sanitary Conditions, and in what directions that influence seems most required immediately and in the future.

3. As “a guide” it should be useful by affording visitors or residents in the County a ready opportunity of obtaining knowledge of what is being done for the improvement of Local and County Sanitary Conditions.

I cannot conclude this Report without expressing my sense of the loss of Mr. Henry Yool, who took such a deep interest in the welfare of the County. By his death I feel that I have lost an honoured Chairman, a Counsellor and Friend.

EDWARD SEATON,

County Medical Officer.

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*The Editor The British Medical
Journal
with Dr. Seaton's comments.*

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JULY 31st, 1894.

SURREY COUNTY COUNCIL.

REPORT

OF THE

SANITARY COMMITTEE.

REPORT OF THE SANITARY COMMITTEE.

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31st July, 1894.

THE REPORT OF THE SANITARY COMMITTEE to the County Council of the Administrative County of Surrey, at their Meeting to be held on TUESDAY, the 31st day of July, 1894, such Committee consisting of—

HENRY YOOL, Esq., *Chairman.*

G. P. BIDDER, Esq., Q.C.
LIEUT.-COL. R. J. CALLWELL.
G. CAVE, Esq.
G. CHATTERTON, Esq.
J. COOPER, Esq.
ADMIRAL THE HON. F.
EGERTON.
SIR DOUGLAS FOX.

E. J. HALSEY, Esq.
SIR TREVOR LAWRENCE, Bart.
LIEUT.-GEN. F. MARSHALL,
C.M.G.
E. H. LEYCESTER PENRHYN,
Esq.
S. M. RICHARDS, Esq.
W. WELCH, Esq.

VAGRANCY AND INFECTIOUS DISEASES.

The Committee have received from the London County Council an invitation to appoint two Delegates, with the County Medical Officer, to attend a Conference to be held at the County Hall, Spring Gardens, on the 19th instant, with the view to consider whether means can be adopted to

prevent the spread of Infectious Diseases by Vagrants. The subject being one of great importance, the Committee have appointed the Chairman of the Council, together with Colonel Callwell and the County Medical Officer, to attend the Conference.

RIVERS POLLUTION.

ALDERSHOT SEWAGE WORKS.

The Aldershot Local Board appealed against the Orders made by His Honour Judge Lushington, directing them to pay three Penalties of £20 each, upon proceedings taken against them by the Hartley Wintney Rural Sanitary Authority, for polluting the River Blackwater by the effluent from the Aldershot Sewage Works, and the Judges of the Queen's Bench Division, who heard the Appeal, quashed the Order made by the County Court Judge.

The Committee have ascertained that the Rural Sanitary Authority will not at present proceed further against the Local Board.

JOINT COMMITTEE FOR THE RIVER BLACKWATER.

The Committee have received the following Resolution of the Hampshire County Council :—

“ That this Council make an Application under Section 14, Clause 3, of the Local Government Act, 1888, to the Local Government Board, to constitute by Provisional Order, a Joint

Committee or other Body representing the Counties of Hants, Surrey and Berks, through or by which Counties the River Blackwater passes, with such powers as are mentioned in the said Section of the Act, or that may be deemed necessary or desirable."

The River Blackwater is polluted not only by the Sewage Works of the Aldershot Local Board, but as is reported by Dr. Seaton in Appendix I. to this Report, by the sewage from North Camp, Aldershot, and otherwise.

The Committee **recommend** the Council to join in an application to the Local Government Board to constitute a Joint Committee, representing the Councils of the Counties of Hants, Surrey and Berks, for the purpose of dealing with the Pollution of the River Blackwater.

The Committee further **recommend** the Council to order that the part of Dr. Seaton's Report relating to the Pollution of the Blackwater by Sewage from North Camp, Aldershot, be forwarded to the War Department, with a request that it may be referred to the Army Sanitary Committee for inquiry, and expressing a hope that such inquiry will result in steps being promptly taken to remedy a state of things dangerous alike to the health of the troops and the inhabitants of the adjacent districts.

The proceedings against the Aldershot Local Board being at present in abeyance, and it being possible that some difficulty and delay may occur in constituting a Joint Committee of the three Counties, the Committee further

recommend the Council to order that a sum of £250 be placed at the disposal of this Committee for the purposes of joint action with the Councils of Hants and Berks, or either of them, or with any Sanitary Authority or Authorities injuriously affected by the Pollution of the River Blackwater.

THE BEVERLEY BROOK (TRIBUTARY THE PYL BROOK), THE
WANDLE (TRIBUTARY THE GRAVENEY BROOK).

These Rivers and their tributaries are receiving the special attention of Dr. Seaton, who is in communication with the Authorities concerned in preventing pollution.

RIVER MOLE.—COBHAM TILT.

The Epsom Rural Sanitary Authority have considered the Representation made to them by the Committee, and have directed the Sanitary Inspector to serve Notices under the Rivers Pollution Acts, upon the Owners of the several houses, the drainage from which was reported to be causing pollution to the River Mole.

DRAINAGE OF GODSTONE.

In consequence of Reports of the defective condition of the drainage of Godstone, the Committee caused a Representation upon the subject to be made to the Godstone Rural Sanitary Authority, and a reply has been received that the Authority have decided to obtain the advice of an Engineer in the matter.

LOCAL GOVERNMENT BOARD INQUIRIES.

In compliance with the Resolution of the Council, passed at their Meeting, on the 8th May last, upon the recommendation of this Committee, a communication was sent to the Local Government Board, requesting them to give Official Notice to the Council of inquiries about to be held by the Board in the County, and the following is the Board's reply, under date 5th June, 1894 :

“ SIR,

“ I am directed by the Local Government Board to
“ advert to your letter of the 11th ultimo, requesting that a
“ copy of the Notice of any Local Inquiry held by the Board
“ in the County of Surrey, may be sent to the County Council,
“ and I am to state that the Board will be happy to give the
“ Council due Notice of the Inquiry, in any particular case, in
“ which such Notice is desired by them.

“ The Board do not, however, consider it necessary that
“ they should inform the County Council of the several
“ Inquiries which the Board may direct in the County ; but
“ only of those in regard to which it appears to them such a
“ course is desirable.

To this Letter the Committee have directed an answer to be sent to the effect that the Notices required by the Council, are those relating to Schemes which affect Public Health (such as Water, Drainage, Isolation Hospitals) inasmuch as without such Notices the Council have necessarily no official knowledge of such proposals.

SANITARY CONDITION OF SHALFORD.

The Committee print in *extenso* in the annexed Appendixes II. & III., the Report of the County Medical Officer on the above subject, together with his remarks on the Sewage Disposal Works and experiments connected therewith, which are being carried on at Cranleigh.

Dated this 10th day of July, 1894.

HENRY YOOL,

Chairman.

APPENDIX I.

OBSERVATIONS ON THE BLACKWATER RIVER AND CONDITIONS AT NORTH CAMP.

It will be remembered that my Report to you last year, on the subject of the Sewage Works of the Aldershot Local Board referred to the large accumulation of sludge on those premises, and to the evidence thus afforded of the neglectful way in which the process of sewage disposal was being carried out. I regret that I have now to Report to you an equally bad case of the same kind at North Camp, about two miles lower down the River Blackwater. On Friday, June 29th, in company with Dr. Lorimer, Medical Officer of Health, Mr. Jones, Surveyor, and Mr. Patrick, Inspector to the Farnham Rural Sanitary Authority, I visited the spot where the sewage of the Camp is supposed to be disposed of, presumably either by processes of Irrigation or Land Filtration. It is, however, a misnomer to call it "a Sewage Farm," it is in truth "a Sewage Marsh," where pools of stagnant putrid sewage give rise to poisonous exhalations, which, if the Cholera infection were introduced, would soon prove to be of a most deadly character. It is a matter for astonishment that the War Office Authorities can permit such a noxious state of things to exist close to their Camp.

EDWARD SEATON, M.D.

APPENDIX II.

THE SANITARY CONDITION OF SHALFORD.

In the month of March a request was made by the Shalford Parochial Committee that I should visit and report on the Village. This request was before you in April, and was readily acceded to. Accordingly I have been engaged since then in making enquiries and inspections as opportunity has offered respecting the Sanitary condition of the Parish of Shalford. I have now to report to you thereon, premising my statements by saying, that inasmuch as "Sanitary Conditions" in the case of this Village are obviously in large measure dependent on "Sanitary Administration," I must perforce refer to the subject in this report.

The Parish of Shalford near Guildford is in the District of the Hambledon Rural Sanitary Authority. The Medical Officer of Health for the Authority is Dr. George Hall, of Milford, near Godalming; the Inspector of Nuisances for the Authority is Mr. A. E. Simmonds, of Wonersh. The population of the whole district is 19,042, and the area in acres 60,200. Hambledon Rural Sanitary District is with one exception (Dorking Rural Sanitary District) the most thinly populated of the Sanitary Districts in the County. The area which has to be covered by the Officers is also larger than that of any other single District. The Annual Rates of Mortality estimated for each year for a comparatively small population like that of Hambledon Rural Sanitary District would hardly form sufficient basis for drawing conclusions of value respecting its Sanitary condition. If, however, reference be made to the County Report for 1892—where Tables of Average Death-rates are given—it will be seen that in respect of some of the Zymotics, especially Fever

(Typhoid or Enteric), the Hambledon District, notwithstanding the sparsity of its population, is one of those which has a high rate of Mortality. This fact alone shows that the District is one of those in the County that requires close Sanitary Supervision and Administration.

The Reports for 1893 of the Medical Officer of Health, dated January 31st, that of the Inspector, dated February 14th, that of the Surveyor, dated February 28th, are printed together. They were among those which were not received by the Council in sufficient time to be reported on in April. The statistical part of the Medical Officers' Report was furnished in advance, and finds its place in the County Report for 1893.

The following passages of the Medical Officer's Report refer to the General Sanitary condition of his District.

“Several old cottages have been pulled down, and others have been made habitable by being made weather tight and cleansed by whitewashing, but there are several others which require improving. The privy system still exists at most cottages ; this cannot be too strongly condemned, as in a number of instances I have found the privy dangerously near dwellings and water supplies.

“The drainage of the District has been considerably improved, but is still far from perfect. I would like to call your special attention to the open holes at the back of most Rural cottages, which are used as receptacles of all manner of refuse and filth ; those which are situated a safe distance from the cottage itself are a source of danger to the children, who too eagerly play around.

“A great many sink drains have been altered during the year and made to open into the open air, over a properly trapped

gully, the sink inside the dwelling should be trapped by means of a syphon trap and not as is too often the case by an old-fashioned bell-trap. In regard to the earth closet system, I find that there is not enough care used in selecting a good dry mould, this should be gathered during the summer and stored in a dry shed, a sufficient quantity should be placed in a box close to the closet, and a metal scoop provided, and each person should place a scoopful of dry earth on each dejecta, it is only by paying strict attention to this, that the value of the above system will be appreciated; I often find that it is only the house ashes which are used, these are of no use at all for the purpose. It is the use of ashes instead of earth and the application of the contents of the pails to the gardens, that gives rise to danger of polluting the water supplies, where surface wells are the only source. There has been less trouble with the heaps of decaying vegetable matter, which I mentioned in my last report; these ought to be burnt and not left lying about.

“Nuisances from keeping pigs have not been so frequent, one or two pigsties are rather close to dwellings and might cause pollution of the water supply.

“There has not been much improvement in the water supply of the district during the year; several wells have been analysed and found unfit for dietetic purposes. In some of the larger Parishes a good water supply is much needed, and along with it a good system of drainage, and a proper process of disposal of the sewage such as is adopted at Cranleigh. In some parts of the district too many houses of the working class style are being built, the wells of which are often shallow, and liable to surface pollution from being dug too near other dwellings. In some cases newly dug wells are apt to drain the wells of other houses and so lessen their supply.”

The following passage refers especially to the Village of Shalford :—

“Shalford, with a population of 2000, has 53 births and 12 deaths, and consequently a death-rate of 6 per 1000. Fifteen cases of infectious disease were reported during the year, 12 being scarlatina, and 3 diphtheria ; 7 of the scarlatina cases came from Guildford, the other five I could trace to no special cause. Two of the diphtheria cases were said to be wrongly reported on a second opinion being sought. Here is another Parish which would be greatly benefitted by an efficient system of drainage.”

As to the above reports I am bound to observe, that although the remarks of the Medical Officer refer to important matters, they are for the most part too general in character to be of much assistance, either from the point of view of forwarding sanitary administration or indicating what is really being done in the district to reduce liability to easily preventable diseases.

Mr. Simmonds also reports that 29 Nuisances were abated at Shalford in 1893, but no particulars of the kind of Nuisances, or the way in which they were abated, are given.

The report which is, perhaps, of the most practical importance from the Sanitary point of view, is that of the Surveyor. The following paragraph relates to Shalford :—

“SHALFORD.—Most of the new buildings in this Parish abut on the Chilworth Road, and the water mains of the Guildford Corporation have, during the year, been extended there, so that a good supply of water is now available in this locality. Some few of the new houses have taken advantage of this service of water, and it would be a great improvement if other owners of houses in this road would also do so, as the supply from some of the shallow wells there is, in my judgment, of doubtful purity.”

Colonel Godwin Austen has kindly furnished accurate geological information on points of Sanitary importance, viz., the structure of the area, subsoil water, and dangers of surface well pollution, respecting the locality of Shalford. The subjoined is from the valuable notes he has placed at my disposal :—

“ The greater part of the inhabited portions of Shalford Parish lie on a more or less thin stratum of gravel, which can be divided into two beds. On the sides of the Valley of the Tillingbourne these beds rest, and fine out on the surface of the Lower Greensand Formation, generally on the lowest clay beds, the Neocomian or Atterfield clay. In the main Valley of the River Wey, and in a part near Shalford Street, they rest on the upper beds of the Wealden.

“ Naturally a good water supply should always be found beneath the gravel and sands where they rest on the Neocomian, but the gravels being of a very permeable nature, and often very thin, the water is very near the surface, and there is great danger of pollution from cesspools and surface drainage, and in numerous cases the former have been constructed within a very few feet from the wells. The supply is very considerable, particularly near Shalford Station and Station Road. On the South of the Common from Ashley House, Eastward, the gravels have died out, and the springs flow out from below the sandy beds of the Lower Greensand resting on the Neocomian Clay.

“ Although the flow of the water beneath the surface coincides naturally with the fall of the Valley towards the River Wey, yet the exact direction is not determinable, being dependent on the inequalities of the old denuded land surface of the clays below.

“Near Broadford, the gravels and sands come close down to the rivers, and the water is near the surface as in the wells of several of the cottages.

“Near the Vicarage the water supply beneath the gravels receives a certain amount from the chalk, down the Valley North of the Chantry Downs Ridge. The water in the gravel beds, North of the Tillingbourne, is a surface supply derived from the slopes of the lower Greensand, South of the same ridge, and is a very pure water. This was laid on to Shalford House when the well there was condemned. To obtain a larger supply, the great mistake was made of deepening the well into the clay stratum, in which all impurities of course accumulated without any possibility of getting rid of them.

“On the Chilworth Road, further up the Valley beyond Bradstone Brook, the water supply is under the same series of gravels. Here the dangers of contamination are still greater, for the old denuded land surface of the Neocomian clay, presents, in section, a series of ridges and troughs running longitudinally with the Valley, so that the water flows along the bottom of these depressions. It follows that a cesspool situated on such a line Eastward of a well on the same line of trough, would receive the contamination in a direct and rapid way. (*From Notes by Lt.-Col. H.H. Godwin Austen, F.R.S., F.G.S.*)”

It soon became evident that for the purpose of obtaining reliable information as to the Sanitary condition of the Parish, the best course was to institute a “House to House Inquiry.”

I may here point out that the Local Government Board has specified the duties of Medical Officers of Health for Local Authorities, whose appointments or reappointments have been made since 1891 :

They are as follows :—

- (1.) He shall inform himself, as far as practicable, respecting all influences affecting or threatening to affect injuriously, the public health within the District.
- (2.) He shall inquire into and ascertain, by such means as are at his disposal, the causes, origin, and distribution of diseases within the District, and ascertain to what extent the same have depended on conditions capable of removal or mitigation.
- (3.) He shall by inspection of the District, both systematically at certain periods, and at intervals as occasion may require, keep himself informed of the conditions injurious to health existing therein.

Clauses 4-11 (inclusive) related chiefly to the duties of advising the Local Sanitary Authority on matters affecting the Public Health. Clauses 12-15 (inclusive) to the duties of reporting.

Clause 16 relates also to the duties of reporting, and is as follows :

At the same time that he gives information to us, The Local Government Board, of an outbreak of infectious disease, or transmits to us, The Local Government Board, a copy of his Annual Report, or of any special Report, he shall give the like information or transmit a copy of such Report to the County Council or County Councils of the County or Counties within which his District may be situated.

It is clearly within the province of a Medical Officer for a Local Authority to institute or carry out a house to house Inquiry, by which alone he can become informed of the Sanitary state of his District. I may add that the powers of the Public Health Act are, as I know from practical experience in country districts as well as large towns, amply sufficient to enable this to be carried out.

It is equally clear that he is required to keep the County Council as well as the Local Government Board informed about the Sanitary state of his District.

In carrying out this house to house Inquiry, I was generally accompanied by Mr. Simmonds, who was deputed by the Medical Officer of Health to represent him. Occasionally Dr. Hall himself was present during our Inspections.

I deeply regret to be obliged to say that the state of things revealed by this Inquiry was such as, under existing conditions (both as regards our knowledge of the causes of preventable illness, and the means of dealing with them by statutory powers), to discredit Local Sanitary Administration.

Our Inquiries related to 435 houses. A very large proportion of these require systematic attention on account of Sanitary defects of varying importance. A certain proportion require immediate attention on account of defects, which must be characterized as dangerous to the Public Health. I refer especially to the cases in which water supplies, which are obviously liable to contamination by the soakings from privies, are permitted to be used, notwithstanding that a good and wholesome water supply is ready to hand. When we see a large loosely bricked vault containing accumulated excremental and liquid filth close alongside of a shallow well, also loosely bricked, the privy and the well being separated by only a few feet of porous earth, we cannot ignore the fact that the potential causes of Typhoid fever are before us. In such cases it would be an unnecessary waste of time and money to resort to elaborate Chemical Analysis, the fact of pollution can be shown in a way that would assuredly disgust anyone; while the danger of pollution, which at any time may carry the seeds of Typhoid or Cholera, is well known, and was unfortunately demonstrated afresh last year in the case of the terrible outbreak of Typhoid fever at Worthing. Nuisances or dangers to health of this class can fortunately be removed without serious difficulty at Shalford. It becomes therefore of paramount importance that their existence should be ascertained and reported to the Sanitary Authority. So much impressed was I with the necessity for immediate action in the case of Nuisances of this kind that I had several interviews and sent a list of some of the worst cases to Mr. Crouch, the Clerk of the Parochial Committee, whose influence

has already been of great help in effecting the removal of conditions, which were liable to seriously affect the Public Health of the District.

In other important respects the Sanitary condition of the Village appears to have been much neglected. My notes show that in many cases privies, badly placed and constructed, are a source of great offence, not only to the occupiers of houses to which they are attached, but also to passers by on main thoroughfares. The "slush open holes," to which Dr. Hall refers in his Report, require attention from the Sanitary Authority's Officer, as also do the Scavenging arrangements generally. The slaughter-houses, in point of sanitary arrangement, were, it must be said, the worst I have ever yet seen during my long experience of Sanitary Administration, both in Town and Country Districts. In one place that we visited, it appeared that the water supply of a house was only to be obtained by going to a pump, situated in the Urinal of a Railway Station.

In connection with these matters, it is due to the officials immediately concerned, that I should mention specially that there is only one Inspector for the whole district, and that it is the widest of any in the county.

In my opinion the first step towards the improvement of the Sanitary condition of Shalford, and the other villages in the Hambledon Rural Sanitary District, would be the division of the District into two parts, for the purposes of systematic house inspection, under the District Medical Officer of Health. Such inspection to be effective will need closer supervision by the District Medical Officer of Health, than it appears to have received hitherto. In cases of difficulty I should, of course, be ready to confer with him and give him what help I can by advice or otherwise.

In considering the further question of whether a Drainage Scheme is at present desirable for the village of Shalford, it must be remembered that, in the first place, a very great deal will depend upon the view taken by the Authority on the most essential question of "detailed house Inspection."

I have given the whole matter my very careful consideration. From the public health point of view I think in the case of Shalford the balance is in favour of "greatly improved Sanitary supervision, combined with greatly increased Scavenging arrangements," as an alternative to "Sewerage." But, whilst stating this as a provisional conclusion at which I have arrived after an inspection which has lasted over several weeks, I repeat that the kind of inspection and scavenging arrangements which I have in view, would be far more thorough and effectual than any that has hitherto been carried out in any of the Rural Districts in the County. The local circumstances at Shalford seem to me to be particularly well adapted for the trial of such a scheme in preference to Sewerage. Having regard to the necessity of preventing River Pollution, as well as improving the Sanitary condition of the village and neighbourhood, I would strongly urge the Hambledon Rural Sanitary Authority to set about providing a workable and effective Scavenging Scheme. Such a scheme must of course necessitate considerable expenditure, but it will probably prove far less than that which a sewerage system would involve. On Sanitary grounds I believe it would, in this case, be preferable.

Mr. Crouch, Clerk to the Parochial Committee, by whose essential assistance this inquiry has been carried out without serious difficulties, has been at considerable pains to acquire and collate information which bears on the future Sanitary condition of his parish. I reserve information which relates to the practicability of a Sewerage Scheme for the village. For the present (as bearing on the question of otherwise disposing of Sewage, which I hope will be promptly and earnestly taken into consideration by the Sanitary Authority), it is sufficient to give a "Summary of the approximate extent of Garden Areas attached to houses in Shalford" :—

Houses with Garden Area under $\frac{1}{8}$ of an Acre	...	...	...	259
" " " $\frac{1}{4}$ "	...	...	...	118
" " " $\frac{1}{2}$ "	...	...	...	22
" over $\frac{1}{2}$ and " 1 "	...	...	...	11
" " 1 Acre	...	...	...	25

EDWARD SEATON, M.D.

APPENDIX III.

THE DISPOSAL OF VILLAGE SEWAGE.

THE WORKS AT CRANLEIGH.

The Village of Cranleigh (Population 2200) is about equal to that of Shalford (Population 2000), but the circumstances are very different. Shalford is extended ; Cranleigh, in comparison, compact. So that it does not necessarily follow that a system which will, I think, ultimately prove to be well adapted to the requirements of Cranleigh is necessarily well suited to Shalford. The new works have now been in operation at Cranleigh for about a year. It will be interesting to watch the results of this method of dealing with the sewage of a village.

EDWARD SEATON, M.D.

