

Twenty-fifth annual report of the health and sanitary condition of the Borough of Richmond (Surrey) : being for the year 1897 / by John T. Rowland.

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TWENTY-FIFTH

Annual Report

OF THE

Health & Sanitary Condition

OF THE

BOROUGH OF RICHMOND

(SURREY),

BEING FOR THE YEAR 1897,

BY

JOHN T. ROWLAND, M.D., M.R.C.S., ENG., L.S.A., &c.

Medical Officer of Health to the Urban Sanitary Authority.

RICHMOND, SURREY.

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BOROUGH OF RICHMOND
SURREY.

Twenty-fifth
ANNUAL REPORT
OF THE

MEDICAL OFFICER OF HEALTH,

Being for the Year, 1897.

To the Chairman and Members of the Health Committee of the
Borough.

GENTLEMEN,

The Report I have the honour to lay before you, in accordance with the recognised custom, contains the statistical facts, relating to the health and general sanitary condition of the Borough, a summary of deaths and diseases, and of the action taken to limit the spread of diseases of a zymotic character.

Whilst inviting attention to these statistics, I note three important facts as worthy of observation :—(1) The great enlargement which has taken

place of late years in the work of the health department; (2) The much improved sanitary condition of the Borough; and (3) The continued reduction in the death-rate.

Demography and Statistics.

A gradual increase of population has taken place in all parts of the Borough, except in the parish of Petersham. It is estimated that this increase has amounted to about 4,000 in the course of the six years since the last census enumeration, raising the population considerably above 30,000, but the exact amount so many years after a "census," must be, to a certain extent, uncertain. I have taken an estimate of the increase up to the middle of the year on the customary basis of calculation, and arrived at that which may be found to be a reasonable and probable figure for the practical purposes of the computation of the vital statistics of the Borough, namely 30,600.

TABLE I,

Showing Area and Population.

Area in Statute Acres.	Population (Census) 1891.	Estimated Population.	Rateable Value.
2534	26,859.	30,600.	255,087

Marriages.

In the course of the year 226 Marriages took place in the Town as follows :—

By the Established Church	153
At other places of Public Worship	20
At the Offices of the Registrar.. .. .	53

From this is deduced a marriage-rate of 7·4 per 1,000, in other words 14·8 persons to every 1,000 inhabitants entered the bonds of Matrimony in the Borough in the course of the year.

Births—Birth-Rate.

The registered Births amounted to 704, of which number 348 were males and 356 females, and the birth-rate deduced therefrom is in the proportion of 23·0 to every 1,000, of the estimated population. This is a low birth-rate. Although rather better than last year's rate, it is much below the average of the previous ten years. It has declined for some years from a maximum of 30·7 in 1882. The birth-rate in England and Wales was 29·7 that of London being 30·0, and these figures are below the mean rate of the ten preceding years

Deaths—Death-Rate.

TABLE II.

Shows the relation of the Local Death-Rate to the Metropolitan Death-Rate during the last Decennium.

		1897	1896	1895	1894	1893	1892	1891	1890	1889	1888
RICHMOND	..	12·2	12·5	14·2	12·3	14·6	16·0	17·1	14·6	13·0	15·7
LONDON	..	18·2	18·6	19·8	17·9	21·0	20·7	21·1	20·3	17·5	18·5

In all England and Wales, according to the Registrar-General, the death-rate of the year was 17·4 in London it was 18·2. In the Borough of Richmond it was 6·0 per 1,000 below the rate for "Registration

London" and 1.0 per 1,000 below that for the suburban area called the "outer ring" of the Metropolis. The total number of deaths registered in the Borough during the year was 432 to which, however, has been added for statistical purposes, the deaths of six persons, previously resident in and belonging to Richmond, who had been removed to Brookwood Asylum and died there, thus adding to and increasing the total deaths to 438. Allowance on the other hand has been made by way of deduction, for 63 deaths which took place in public institutions, and elsewhere within the district, of persons *not* belonging to the resident population of the Borough, reducing by so much the number for the computation of the death-rate; subject to these corrections the annual rate of mortality was in the proportion of 12.2 per 1,000 of the estimated population.

Proportional Mortality.

The gross mortality of the first month was equal to a rate of 16.0 per 1,000. It fell in February to 11.7, rose again in March to 14.7 against 26.9 in the corresponding month of 1895, and 14.4 in 1896, shewing a remarkable difference. The April rate was 14.3. In May there was a rise to 15.2, and in June and July the mortality assumed normal proportions. In August under very ungenial meteorological conditions the mortality ran up to a rate exceeding 20.0 per 1,000, it fell again in September and during the rest of the year there was a general average of about 15.6 per 1,000. The deaths, after making due allowance for those of non-residents, amounted to 375. There was one death to every 81 persons in the estimated population. The mortality among persons of 65 years of age and upwards was

equal to 28 per cent. of total deaths, and that of infants under 1 year old was equal to 26 per cent. of total deaths. Of the 704 children born, 98 died before attaining the age of 1 year, 606 surviving. Thus the relation of infantile deaths to children born was in the proportion of 139 deaths to 1,000 births, being rather below the average, so that the year has not been particularly unfavourable to the young or the aged.

TABLE II.A.

WARDS, Sub-Districts.	Population Census, 1891.	DEATHS.			From Seven Zymotic Diseases.
		Infants under 1 year.	Children under five.	Total all Ages.	
EAST WARD ..	7690	53	62	120	10
WEST WARD ..	4922	6	9	41	2
NORTH WARD ..	6331	20	27	77	6
SOUTH WARD ..	5840	7	7	53	2
KEW WARD ..	2076	7	7	26	0
PUBLIC INSTITUTIONS		5	10	52	5

The mortality among persons in the Richmond Hospital, in the Union Workhouse, and in Brookwood Asylum are tabulated below as

Deaths in Public Institutions.

	Parishioners.	Non-Parishioners.	Total.
In the Richmond Hospital	19	33	52
In the Union Workhouse	33	18	51
In Brookwood Asylum	6	—	6

One person found drowned, whose remains were deposited in the Mortuary at Barnes, was reported to have been an inhabitant of Richmond, and several persons newly arrived *as visitors* to Richmond died in the Town during the year, and have been accounted as residents.

Zymotic Diseases.

TABLE III.

Shews the Deaths and Death-rate from the Seven Principal Zymotic Diseases for the last ten years.

DISEASES.	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Small Pox	0	0	0	0	0	0	0	0	0	0
Measles	5	4	5	18	9	2	5	1	11	3
Scarlet Fever ..	0	6	1	1	0	2	0	3	4	2
Diphtheria	0	0	0	2	2	5	4	0	4	3
Whooping Cough..	14	6	13	22	8	9	11	0	10	9
Fever(Typhoid,&c.)	3	2	2	3	5	1	0	4	5	2
Diarrhœa	4	2	5	2	8	11	4	4	10	6
Totals	26	20	26	48	32	30	24	12	44	25
Rate	1.1	0.9	1.1	2.1	1.3	1.0	0.8	0.4	1.4	0.8

The mortality from the ZYMOTIC DISEASES has been below the average. Very few deaths having occurred from any of these with the exception of Whooping Cough and Diarrhœa.

The following deaths occurred among other diseases of the ZYMOTIC or MALARIAL Class, *namely*:—Membraneous Croup (1), Influenza (1), Septicœmia (1), Puerperal Fever (1), Congenital Syphilis (3).

Dietic Diseases.

In this class of Diseases 5 deaths took place from Chronic Alcôholism.

Constitutional Diseases.

As usual the catalogue of Diseases under this head comprehends deaths from several serious maladies, as follows :—DIABETES (2), CANCER (20), TABES MESENTERICA (2), TUBERCULAR MENINGITIS (6), PHTHISIS (33), TUBERCULOSIS (2), and ANÆMIA (3).

From these figures it appears that Rheumatic Fever was less prevalent than usual, no case having ended fatally, whilst the mortality from Cancer and Phthisis remain about the same.

Developmental Diseases.

Thirteen deaths occurred from PREMATUREITY, DEFECTIVE VITALITY caused 6 deaths; TEETHING, 4; and SENILE DECAY, 26. Several of the latter had attained extreme ages up to and some exceeding 94 years.

Some deaths of infants and very young children from the following diseases appear to come appropriately under this class, namely, DEBILITY from MAL-NUTRITION, INANITION, MARASMUS, and CONGENITAL MAL-FORMATION, collectively 15 deaths.

TABLE IV.

Shewing the Deaths, Rate of Mortality and Relative Proportions to Births and Deaths from certain Groups of Diseases.

DISEASES. Division I.	Deaths.	Ratio per 1000 Popu- lation.	Per 1,000 Deaths at all Ages.
1.—Principal Zymotic Diseases	25	0·8	66
2.—Pulmonary Diseases	54	1·7	144
3.—Principal Tubercular Diseases ..	42	1·3	112
Division II. (Infants under One Year.		Deaths per 1,000 Births.	Per 1,000 total Deaths under 1 Year.
4.— Wasting Diseases	20	29	204
5 —Convulsive Diseases	14	20	142

NOTE—3 includes Phthisis, Scrofula, Tuberculosis, Tabes, and Hydrocephalus; 4 includes Marasmus, Atrophy, and Debility, want of Breast Milk and Premature Birth; 5 includes Infantile Hydrocephalus, Meningitis, Convulsions, and Teething.

Local Diseases.

The returns of deaths certified as caused by the various diseases of this class are summarised as follows :—

Nervous System.

DEATHS.

Includes Apoplexy, Paralysis, Epilepsy, Dementia, and Cerebral and Spinal Disease...	40
--	----

Circulatory System.

Heart Disease and Pericarditis	34
Aneurism and Embolism	4

Respiratory System.

Comprises Diseases—chiefly acute—as Bronchitis, Pneumonia, and Pleurisy ...	54
Laryngitis, Bronchial Asthma, Catarrh, &c. ...	4

Under the head of Diseases of the Digestive System may be mentioned deaths from the following, namely :—
Cirrhosis of the Liver, Obstruction of the Bowels, Enteritis, Peritonitis, Jaundice, Gastric Catarrh, &c.

Collectively	55
---------------------	----

Urinary System.

Diseases of the Kidneys and Bladder, and Bright's Disease!... ..	12
--	----

Reproductive System.

Uterine Hæmorrhage (2), Pueperal Fever (1)	3
Under "CAUSES NOT CLASSIFIED" are found deaths from Gangrene, and Ascites ...	2

Under the designation of

Violent Deaths

Thirty-six deaths occurred, and an inquiry into the cause of death was held by the Coroner in each of the cases

which are specified below, and in 17 cases of death from illness otherwise uncertified. The verdicts returned are classified as follows :—

	VIOLENT DEATHS.	INQUESTS.
1.—Accidental ...	Fractures.....	6
„	Injury from a fall	1
„	Suffocation in bed	3
„	Do. from a fire...	1
„	Burns and Scalds	5
„	Drowning	8
„	Infant found dead, no evidence	1
Suicidal	Cut-throat	1
„	Hanging	1
„	Poison	2
„	Bullet Wound	1
„	Drowning	6
	TOTAL.....	36
Natural Causes ...	Deaths from Illness.....	17

N.B.—Among the cases specified above are the deaths of 23 persons not belonging to the resident population of the Borough.

**In Relation to Sickness Generally, and the state of the Public
Health at the close of the Year.**

The records of sickness in the practice of the public Medical Service in the Borough do not reveal anything exceptional. The great majority of the cases in the out-patients' department of the Richmond Hospital were of a minor or less important character. About 3,000 persons were treated there for their various ailments, consisting of wounds, contusions, abscesses, and other minor surgical cases, besides Bronchial Affections, Heart Diseases, Gout, Anæmia, Eczema, Tonsillitis, Tubercular Diseases, Whooping Cough and Infantile Diarrhœa.

The records of the internal department as regards patients belonging exclusively to the Borough show the following cases, viz. :—ENTERIC FEVER 2, RHEUMATIC FEVER 1, Diseases of the RESPIRATORY ORGANS 8, Accidents and Injuries including Burns and Scalds 60, Phthisis 6, Attempted Suicide by Poison 3, besides numerous cases due to various other causes amounting in all to about 500.

In regard to the sickness which was attended to in the Poor Law Medical Department there were 14 cases of WHOOPING COUGH, 4 of INFLUENZA, 37 of BRONCHITIS, PNEUMONIA, and PLEURISY collectively, 7 of PHTHISIS, 1 of CANCER, 12 of GOUT and RHEUMATISM, 12 of INJURY, and 150 of various other ailments of more or less importance, besides certain notifiable diseases included in the subjoined table.

In the Town generally—exclusive of other cases of disease in private general medical practice—the following *non-fatal* cases have been notified under the provisions of the Infectious Diseases (Notification) Act :—

Scarlatina.	Diphtheria.	Enteric Fever.	Continued Fever.	Erysipelas
110	15	15	6	18

Scarlet Fever

Has been the most prevalent of the Infectious Diseases. All due precautions have been taken or advised in the way of *prevention*. In the course of this it has been thought necessary (whenever the treatment of a case had unavoidably to be carried out in the small and often crowded houses of the poorer classes) to have the accommodation of a separate room in addition to all other means that could be devised for *isolation*. All this has been constantly urged upon persons responsible for the care of the patient. The working part of the family—those having outside employment—have been induced to quit their homes temporarily and get other accommodation for the time. Considerable success has attended these measures, but in spite of all precautions, good isolation has not been found always practicable. Hence the difficulty of carrying out, completely and efficiently, the measures recommended. Immediately after notification of a case of Infectious Disease a domiciliary visit is paid by one of the Inspectors and by the Medical Officer of Health, as required. At the termination of the illness all infected rooms are fumigated and cleansed, and the purification of all articles therein likely to retain infection is performed by heat in a steam disinfecter. Disinfectants are supplied gratuitously to poor persons. The Elementary School Superintendents, and the Librarian of the Free Library have notice of all cases of infectious illness.

SCARLET FEVER IN 1897.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
TOTAL CASES	3	6	4	3	6	9	11	10	8	20	24	8	112
Removed to Hos- pital at Mortlake					3		2	1	1	2	3	1	13
Removed elsewhere						1			1				2

With regard to other diseases of the ZYMOTIC GROUP—INFLUENZA was not prevalent to any great extent, and the illness was of a less severe character. MEASLES was prevalent from time to time and so was WHOOPING COUGH. The best guide to the amount of the illness, in the absence of notification, being the mortality.

The future methods of Isolation in cases of infectious disease, and of dis-infection, will shortly as regards *isolation in particular*, undergo a salutary change. The new Isolation Hospital erected at Mogden for this district conjointly with the Heston & Isleworth District Council, is now approaching completion, and it is expected will be available for the reception of patients in a very short time, and the best modern means of dis-infection will be employed.

Statistics Relating to Vaccination.

The following Table shows the numbers in the Borough.

Date.	Success- fully Vac- cinated.	Died Un- Vaccin- ated.	Postponed by Medical Certificate.	Un-Vac- cinated.	Total Births.
1897	515	58	19	112	704

From the figures in the above table it will be seen how far the proceedings of the Vaccination Officer have been successful. As the numbers under the head of *Unvaccinated* refer to infants below the statutory age for compulsory Vaccination, the duties of his office appear to have been efficiently carried out.

The position of the Public Health at the close of the Year was that there was no Epidemic Disease, but a prevalence of Influenza, Measles, Rotheln, and a diminished prevalence of Scarlet Fever, but no other notifiable illness of any moment, no arrears of Sanitary Work, and an exceedingly moderate death-rate.

Remarks on Meteorological Observations.

The weather for the first half of January was mild, wet, and dull. Temperature was lowest on the 18th, and there were cold days towards the end of the month, followed by snow in the beginning of February, then came a rise in temperature and there was a continuance of dull weather, with heavy rains and floods.

Although March was changeable it was very wet, and the aggregate rainfall was heavier than any March for years, and the fall of the quarter was in excess of the average. Last year the rain was welcomed, following as it did a period of drought. This year, on the other hand, the rains prolonged the exceedingly wet weather of the winter, which had continued since the middle of the previous summer ; and in April of this year, which was variable at first, the same feature which characterised the last autumn and winter continued and served to keep the atmosphere in a humid condition. In May there were short periods of brighter weather, but generally it was dull with very little sunshine, and below the normal temperature. It was, however, reserved for June to produce the welcome change to fine, bright, and warm

summer weather which ran on into the middle of August, being at times extremely hot. The highest temperature occurred on the 25th of June and the 5th of August, when the thermometer registered 89 degrees in the shade. After this the weather became dull and cool with much rain. Thunderstorms occurred in September, with heavy floods in some parts round London. The two succeeding months were, for the most part, dry and dull, and the temperature above the average for that period of the year. South-westerly gales were experienced in November and December, and fog on several days. With the exception of a few crisp days before Christmas there was an absence of the customary wintry weather. Rain fell on 150 days during the year to an aggregate rainfall of 22 inches.

TABLE VI.

Shows the Particulars of each Quarter of the year as regards Atmospheric Pressure, Mean Temperature, Rainfall, Humidity of the Air, and Hours of Bright Sunshine.

1896.	Barometer.	Main Temperature.	Dew Point.	Degree of Humidity.	Rainfall (Inches.)	Hours of Bright Sunshine.
First Quarter	29·7	41·1	36	·85	7·3	177
Second „	29·7	53·1	40	·73	4·8	574
Third „	29·7	60·9	51	·72	6·3	587
Fourth „	29·9	47·0	41	85	3·7	203
For the Year	29·7	50·5	43	·79	22·1	1541

From this it may be observed that the mean temperature was above the computed average in the first quarter of the year, and about equal to the average in the second ; it was above the average in the other two quarters. The total rainfall amounted to 22.1 inches ; the largest monthly rainfall occurred in March, and it was much below the average in July and October. The degree of humidity ranged from .65 to .86 (saturation of the air being represented by 1.00). The total amount of bright sunshine recorded throughout the year was 1541 hours, which is about equal to 32 per cent. of possible duration. The most sunny times occurred in May, July, August, October, and December.

In Relation to Hygienic Circumstances in the District.

Works of progress and amendment have been done to the sewers, roads, and sanitary arrangements of the Borough generally. Sewers in Church Court, Victoria Place, and Greville Road, found to be defective or inadequate, have been put in order. Surface-water sewers in extension of the existing system, have been laid in Church Court and Lower Mortlake Road, and defective ones cleansed and reconstructed in River Lane, Petersham, and in Forest Road, Kew. Works have been carried out for making up some roads which were in an imperfect state in Kew, and in a part of the ADDED AREA, near the Gas Works. THE UNDER-GROUND SANITARY CONVENIENCE in George Street is now well-advanced towards completion, and it will doubtless be found to be a useful and important structure.

The cleansing and scavenging of streets and premises has proceeded as heretofore in a satisfactory manner, and the dust and house refuse has been collected and disposed

of by contract as usual. The ventilation of the sewers is effected by the use of Holman's improved "Keelings" sewer gas extractor and destructor with explosion proof furnace, which is a great sanitary improvement, about 20 miles of sewer being cleared of foul air by seven of these heated columns. The Public Urinals, under the supervision of the Inspector of Nuisances as part of his routine duty, have been duly attended to and kept in order.

Some alterations and improvements have been made in the Mortuary, and it has been kept in a satisfactory state for use for the purpose to which it is adapted. Inquests were held upon the bodies of 53 persons received therein during the year.

Under the Workshops Act, which came into effect in 1892, inspections have been made from time to time by the Assistant-Inspector, specially appointed to that duty, and as regards those duties which come within the scope of the Local Authority, all necessary steps have been taken in accordance with the Act, and the requirements of the Government Inspector.

Boats or Barges on the river coming under the denomination of "Canal Boats" and the Act relating thereto, have been dealt with, and Inspections made of 28 of them during the year; the condition of 27 was found to be in conformity with the regulations, and in one the arrangements were found in some respect out of order, and the defects were remedied.

THE SLAUGHTER HOUSES have been frequently inspected and attention given to their condition in accordance with the bye-laws, particularly as to cleanliness and the prompt removal of all refuse matters.

THE DAIRIES and MILK SHOPS, which are also under special regulations made in 1887, have been inspected from time to time with a view to the regular enforcement of the rules, and any infringement thereof has been corrected.

THE BAKEHOUSES, in conformity with the duties imposed under the Factory Acts, have been visited periodically, and directions given for white-washing and general cleanliness, structural alterations where found necessary, and such further action as may be required for securing a satisfactory condition generally. A careful supervision has also been exercised over other food supplies to guard against the sale and distribution of anything unwholesome, and the nuisance arising from the process of frying fish by certain fishmongers has been diminished as much as possible by the best practicable means being adopted.

In reference to the question of FOOD INSPECTION, a careful supervision under the powers given to the Local Authority has been exercised.

The County Inspector under the "Sale of Food and Drugs Act," reports that attention has been given to the following articles :—Milk, Butter, Lard, Spirits, Coffee, Mustard, and Pepper. The analyses showing a continued improvement upon the results of previous years. Out of a total of 64 samples purchased in the Borough and submitted to the Public Analyst 57 were certified as genuine. Three contained *foreign* ingredients, or were deteriorated, of which the *per-centage* was too small to justify legal proceedings, but in each case a warning letter was sent from the Clerk to the County Council. Four samples were found to be so adulterated that legal proceedings

were taken in each case, and the vendors of the articles were convicted and penalties inflicted to the total amount of £15 10s. 6d.

THE WATER SUPPLY of the Borough has been submitted to frequent examination and chemical analysis in the laboratory attached to my office as Medical Officer of Health, and always found to be an excellent and pure water for domestic purposes. Since the public excitement occasioned by the Maidstone case, the supply has been critically investigated, and the water of the Petersham Well analysed by eminent analytical experts. *Chemically* by Professor Wanklyn, who says in his report, "This is unpolluted water" : He had also analysed it in January 1897, and again in February and in October, and reported it as "excellent," and "very pure water," "one of the best for the supply of a town." Professor Klein examined it *bacterioscopically* from a sample taken in December last, and he reports that "the Well is not liable to pollution from the Thames, and the water is of a high degree of bacterial purity and free from harmful bacteria."

In the summer of 1892 the water supply was analysed by Dr. Stevenson, of Guy's Hospital, Public Analyst for the County of Surrey, and his report states that "It is good water of a very satisfactory organic purity."

THE NEW DEEP WELL at the Terrace Gardens during the year has made great progress, the adits have been extended by about 1885 feet. The quantity of water pumped during the year—January to December inclusive—was upwards of 85 million gallons, which is equal to a daily supply of 235,000. The water of deep

wells is practically free from organic impurity, and is more equal in temperature at all times than that from superficial sources.

Work of the Inspector of Nuisances.

In drawing attention to the Inspector's Report for year, I may observe that the progress of the work of the department, under my direction and supervision as Medical Officer of Health, has always been regular and persistent, and much valuable work has been done to keep the district free from nuisances and in a good sanitary state generally, to the safety and advantage of the public health. In addition to the ordinary inspections upon complaint and otherwise in the regular routine, "*Systematic Inspections*" have been made, comprising a complete sanitary survey of all the houses and premises in 30 different streets or places, where the houses are of the class liable at short intervals to get out of order and repair. One house has been "represented" under the provisions of the "Housing of the Working Classes Act" as unfit for habitation. The defects which these investigations brought to light, and the works necessary for their repair, have been summarised in the tabular statement annexed. The very important work of superintending all reconstructions of house drains falls within the duties of the Nuisances Inspector. 111 cases of this kind have been dealt with, and 67 of these were of a character to require careful supervision, and much time and attention to ensure compliance with all details.

It is a tribute to the good sense of the community that the PRELIMINARY and other notices are commonly

respected. No instance has arisen in which it has been necessary to enforce obedience by prosecution in a Court of Justice during the year.

In Conclusion.

It now only remains for me to discharge the grateful duty of thanking the officials in all departments of the Borough, and others who have contributed in any degree by their assistance to whatever success may have attended the work of my department during the year ; and my thanks are due to the Health Committee and the Council for a continuance of the confidence and support which has enabled me to superintend and carry out the duties of an office of vastly increasing interest and importance, I trust with advantage to the public and satisfaction of the Sanitary Authority.

I remain, Gentlemen,

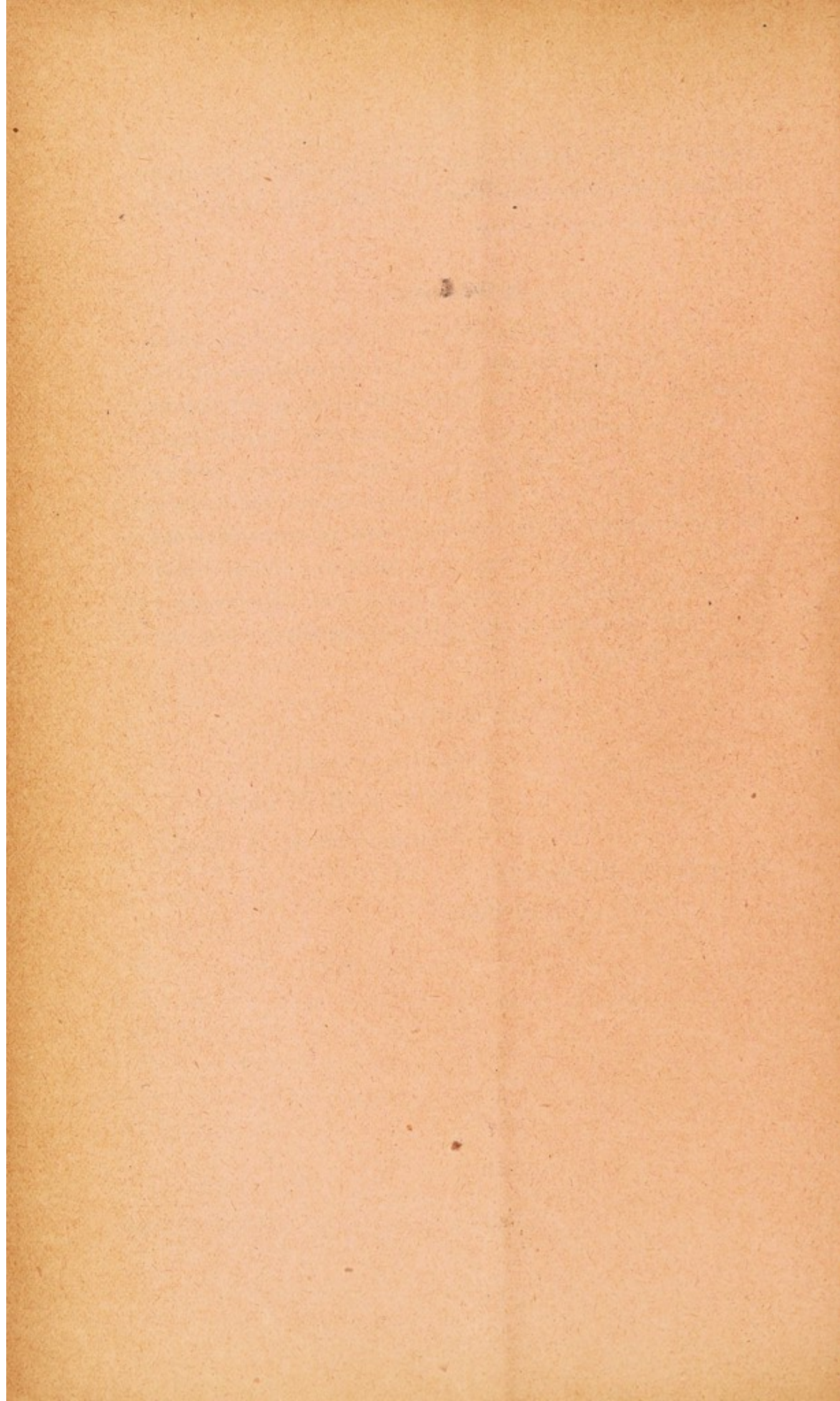
Your obedient Servant,

JOHN T. ROWLAND,

Medical Officer of Health.

TOWN HALL, RICHMOND,

February 10th, 1898.



Summary of the Sanitary Inspector's Report for the Year 1897.

Number of Visits made	...	...	...	6276
„ Complaints received and attended to	...	...	...	255
„ Statutory Notices served	...	...	...	163
„ Preliminary Notices served	...	...	...	457

	Number done.	Not done	Total.
To Divert House Drainage from Cesspool into Com- mon Sewer	1	1	2
To Clear or Amend Drains	108	4	112
To Relay Drains	111	7	118
To Remove Defective Traps and to properly Trap Drains	25	2	27
To cause Waste Pipes to discharge on the Surface	9	—	9
To Repair or Disconnect Rain-water Pipes from Drains	107	10	117
To Repair or Ventilate Soil Pipes	20	4	24
To Clear, Cleanse, or Repair Closets, or Repair Flushing Apparatus to same	109	8	117
To Re-construct Closet and to provide New Closets	191	3	194
To provide a proper Water Supply and Water Sup- plying Apparatus to Closets...	15	3	18
To provide External Ventilation to Closets	1	—	1
To Cleanse, Provide, or Cover Drinking Water Cisterns	158	21	179
To Pave, or properly Repair the Paving of Yards, &c.	129	17	146
To Repair Roof of House	64	7	71
To Repair Dilapidated Dustbins or to provide Sanitary Dustbins...	43	13	56
To Remove Animals kept in such a state as to be a Nuisance	12	2	14
To Remove all Foul Accumulations	41	2	43
Miscellaneous Nuisances	120	9	129
To Disinfect, Cleanse, and Whitewash Rooms	372	22	394
To Provide Houses with a proper Supply of Water...	12	—	12
To abate Overcrowding	5	2	7
To properly Pave and Drain Stables	—	1	1
Totals	1653	138	1791

Table of DEATHS during the Year 1897, in the

(A)

DISEASES

NAMES OF LOCALITIES adopted for the pur- pose of these Statis- tics; public insitu- tions being shown as separate localities.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.								Smallpox.	Scarlatina.
	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.			
EAST WARD	120	53	9	3	5	29	21	Under 5 5 upwards.		1
WEST WARD....	41	6	3	3	1	16	12	Under 5 5 upwards.		
NORTH WARD ..	77	20	7	3	2	25	20	Under 5 5 upwards.		1
SOUTH WARD ..	53	7	0	1	4	17	24	Under 5 5 upwards.		
KEW WARD	26	7	0	1	0	12	6	Under 5 5 upwards.		
HOSPITAL	19	1	3	1	4	7	3	Under 5 5 upwards.		
WORKHOUSE....	33	4	2	2	0	6	19	Under 5 5 upwards.		
TOTALS....	369	98	24	14	16	112	105	Under 5 5 upwards.		1
The subjoined numbers have also to be taken										
Deaths occurring out- side the district among persons be- longing thereto	6					5	1	Under 5 5 upwards.		
Deaths occurring within the district among persons not belonging thereto ..	63	6	5	3	5	33	11	Under 5 5 upwards.		

(Surrey) Urban Sanitary District, classified according to
LOCALITIES.

FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS, OF CHILDREN
UNDER FIVE YEARS OF AGE.

FEVERS.															
Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Influenza.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	TOTAL.
						1	6	1			14		2	37	62
				1						10	8	5	1	32	58
						2							1	6	9
										5	2	8	1	16	32
							3	1			6			17	27
	1									5	7	7	3	26	50
											1	1		5	7
			1							4	5	3	2	30	46
														7	7
										2	2	1	2	12	19
								1					1	1	4
1										2	3		2	7	15
								2						4	6
										1	4		1	21	27
						3	9	5			21	1	4	77	122
1	1		1	1						29	31	24	12	144	244

ant in judging of the above records of mortality.

										1		1		4	6
								1			1	1	4	4	11
										3	4	4	16	22	52

