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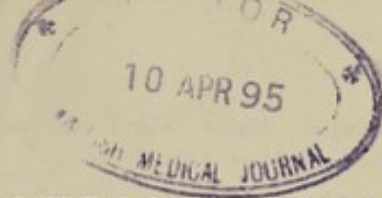
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Wellcome Collection  
183 Euston Road  
London NW1 2BE UK  
T +44 (0)20 7611 8722  
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# WATFORD URBAN DISTRICT COUNCIL.

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POPULATION IN 1891 ... ..	17,769.
ESTIMATED POPULATION IN 1895... ..	21,500,
AREA (IN ACRES) ... ..	784½
ADDED TO DISTRICT IN 1892 ... ..	260¼.

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A. T. BRETT, M.D.,  
MEDICAL OFFICER OF HEALTH.

WATFORD, HERTS,

JANUARY 1st, 1895.

## TO THE WATFORD URBAN DISTRICT COUNCIL.

GENTLEMEN,

I have the honour to submit to you my Annual Report for the year 1894.

It is the twenty-second that I have sent you as the Board of Health, and the first as the Watford Urban Council.

### VITAL STATISTICS.

The population of your district, estimated to the middle of 1894, was 21,500.

The area of the district is 784½ acres, which gives an average density of population of 27·4 persons per acre.

### MARRIAGES.

1st Quarter ... ..	24
2nd „ ... ..	41
3rd „ ... ..	47
4th „ ... ..	43

Total ... .. 155 Marriage rate = 7·2.

### BIRTHS.

The births registered during the year were 610. 57 of these occurred in that portion of your district which lies in the parish of Bushey.

The birth rate for the year was 28·37 per 1000 persons living against 27·95 in 1893.

### DEATHS.

The total deaths registered as occurring in the district during 1894 were 248.

From this number must be deducted 20 deaths which took place in the Workhouse Infirmary, two in the Cottage Hospital, and one in the Isolation Hospital of patients who, previous to admission, resided without the district.

The total deaths thus corrected represented a rate of mortality of 10·46 per 1000 of estimated population.

In 1893 the death rate was 12·82.

The mortality from all causes at different age periods was as follows :—

At all ages ... ..	248
Under 1 year ... ..	60
1 to 5 years ... ..	18
5 to 15 „ ... ..	4
15 to 25 „ ... ..	13
25 to 65 „ ... ..	81
65 upwards ... ..	72

Comparing the deaths under 1 year with births, it will be seen from the above Table that the infant mortality is 96·72 per 1000 births.

Of the 207 deaths recorded as occurring in Watford and New Bushey,

18	were ascribed to	Phthisis,
40	„ „	Bronchitis, Pneumonia, or Pleurisy,
25	„ „	Heart Disease,
1	„ „	Rheumatic Fever.

#### ZYMOTIC DISEASES.

Under Notification Act, 82 reports were made to me as follows :—

Small-pox	...	...	...	...	1
Scarlatina	...	...	...	...	60
Diphtheria	...	...	...	...	7
Membranous Croup	...	...	...	...	1
Typhoid	...	...	...	...	7
Erysipelas	...	...	...	...	6

For details see annexed schedule, kindly prepared for me by Mr. Baker.

The deaths were as follows :—

1894.		LAST YEAR (1893).	
Scarlatina	... .. 1	Scarlatina	... .. 3
Diphtheria	... .. 3	Diphtheria	... .. 2
Membranous Croup	... .. 2	Membranous Croup	... .. 2
Typhoid	... .. 1	Typhoid	... .. 2
Measles	... .. 2	Measles	... .. 6
Whooping Cough	... .. 2	Whooping Cough	... .. 1
		Small-pox	... .. 1
		Erysipelas	... .. 1
		Puerperal Fever	... .. 1

Of the deaths from diphtheria, one was from paralysis following diphtheria.

The zymotic death rate was 0·51 per 1000, as against 0·87 in 1893.

#### SCHEDULE OF BIRTHS AND DEATHS FOR PREVIOUS YEARS.

Year.	Population.	Births.	Deaths.	General Death Rate.	Zymotic Death Rate.
1880	10,400	323	191	18·3	2·4
1881	10,073	344	182	18·06	2·48
*1882	12,653	339	181	15·68	2·08
1883	12,684	433	231	16·23	1·13
1884	12,950	442	261	17·8	1·6
1885	13,220	425	262	17·3	2·7
1886	13,490	463	276	18·08	2·37
1887	13,840	462	216	13·51	1·
1888	16,000	466	294	17·2	2·12
1889	16,300	457	237	13·6	1·6
1890	17,000	328	248	13·23	·76
1891	17,000	396	242	12·94	·35
*1892	19,400	547	306	13·93	1·9
1893	20,500	580	284	12·82	·87
1894	21,500	610	248	10·46	·51

\* District enlarged in this year.

I have, during the year, made special reports to you on the following matters :—

- (1) January 1—*re* Scarlet Fever.
- (2) „ 1—*re* E. Sturman, exposing himself in public thoroughfare whilst suffering from scarlet fever.
- (3) „ 19—*re* Numbering houses.

- (4) Feby. 16—*re* Nuisances at Sewage Outfall.  
 (5) „ 17—*re* Provision of separate cisterns to water closets.  
 (6) „ 20—*re* Sewage Outfall.  
 (7) March 30—*re* Scarlet Fever.  
 (8) April 2—*re* Small-pox.  
 (9) „ 25—*re* Fatal case Diphtheria.  
 (10) May 24—*re* Fatal case Diphtheria, also one of Membranous Croup.  
 (11) „ 25—*re* Numbering the houses.  
 (12) July 11—*re* Weeds in river Colne.  
 (13) „ 29—*re* Measles.  
 (14) August 1—*re* Wooden Cottage, Villiers Road.  
 (15) Nov. 27—*re* Scarlet Fever.

#### MEASLES.

This complaint, which caused two deaths, was widely prevalent during July, and was the subject of a special report to you.

It was deemed advisable to close the Infant School in Red Lion Yard on account of same.

This was done with very good results.

#### SCARLET FEVER.

This disease was prevalent during the first three months of the year, and was the subject of a special report. In 1893 we were visited with a severe epidemic, 364 cases being notified as occurring in your district—of these 268 were removed to the Isolation Hospitals, which were enlarged during the year to make room for the great influx of patients.

The following table gives the number of Notifications in different months :—

1893.				1894.			
In January	...	...	8 cases.	In January	...	...	16 cases.
„ February	...	...	30 „	„ February	...	...	8 „
„ March	...	...	27 „	„ March	...	...	9 „
„ April	...	...	14 „	„ April	...	...	1 „
„ May	...	...	34 „	„ May	...	...	9 „
„ June	...	...	41 „	„ June	...	...	0 „
„ July	...	...	60 „	„ July	...	...	2 „
„ August	...	...	27 „	„ August	...	...	3 „
„ September	...	...	48 „	„ September	...	...	4 „
„ October	...	...	31 „	„ October	...	...	7 „
„ November	...	...	24 „	„ November	...	...	1 „
„ December	...	...	20 „	„ December	...	...	0 „

A careful consideration of the tables I have given will shew that the epidemic, which commenced towards the latter end of 1892, rapidly spread,—reaching its height during the month of July, 1893, and then gradually subsided.

The spread of the complaint may be attributed to the following causes :—

1st—An extremely susceptible population.

It has been shewn that the liability of the unprotected to infection is small in the first year of life, that it increases to its maximum in the 5th year, or soon after.

Now Watford had been free from an epidemic for many years, so that when the focus of infection occurred it had not much difficulty in finding suitable pabulum.

2nd—To slight cases undetected.

The epidemic on the whole was of a very mild character, some of those attacked having it in so mild a form that beyond a little passing malaise, they were never ill. Certain of such cases were found, desquamating freely, at work, ignorant that they were suffering from the disease.

Of the cases thus detected

One was a schoolmistress.

One a newsboy.

One a hairdresser's apprentice.

Three were domestic servants.

3rd—To inefficient disinfection of the dwellings, clothing, and bedding of those attacked by the disease.

*e.g.*, a case was traced to the following cause :—

When the child was removed to hospital, the mother folded up the clothes it had been wearing and put them away safely in a drawer until the little wearer's return. This failure to disinfect led to two fresh cases in the house, after the wearer of the clothes returned from hospital.

One example will suffice :—

The only means of disinfection at our disposal are

1. Fumigation of rooms and contents with sulphur.
2. Lime washing and re-papering of walls and ceilings.
3. Washing and boiling of infected linen.
4. Fresh air and sunlight.

In many cases this is sufficient, but it is impossible always to carry out these measures satisfactorily. What is urgently required is a steam disinfecting apparatus.

4th—Return hospital cases.

No doubt in certain cases, infection was carried by the out-going patient from hospital—seeing the great difficulties under which your hospital staff worked, one cannot be surprised. During 1893, return cases were of not infrequent occurrence. During 1894, only two such cases occurred, and since you built the discharging ward at Holywell there has not been one return case.

As exemplifying the value of the Notification Act and prompt measures being taken on the outbreak of this disease, I may mention that after March 28th, 1894, no cases occurred until May 10th, on which date six cases were reported from a cottage in Merton Road. On visiting the spot two baskets of washed and dressed linen were noticed in the front room, all ready to be sent home to their owners, who resided in a more wealthy part of the town. On a sofa in the same room, one of the fever-stricken children was lying.

All these cases were at once removed into hospital, the house disinfected, and the linen in question boiled and re-washed before being sent home.

The following table gives the total number of cases treated in the Joint Isolation Hospitals for the last four years :—

1891—Urban, 1	}	=5
Rural, 4		
1892—Urban, 25	}	=130
Rural, 105		
1893—Urban, 268	}	=403
Rural, 135		
1894—Urban, 52	}	=93
Rural, 41		

Of all the cases treated in hospital during the year 1893, four died, giving a case mortality of 14·92 per 1000 cases.

Of all the cases in your district treated at home in 1893, three died, giving a case mortality of 31·25 per 1000 cases.

In 1894, of all cases treated in hospital, two died, giving a case mortality of 21·5 per 1000 cases. Of these two deaths, one was that of a postman, who was removed from Rickmansworth suffering from scarletina, complicated with double pneumonia, and who died within 48 hours of admission.

The other occurred in a child, which developed diphtheria, after its removal into hospital.

#### SMALL-POX.

Only one case occurred during the year, as against 13 last year.

The disease was evidently imported, for the patient, who removed from London to Watford on March 12th, was taken ill on March 26th, in the interim, had never left the precincts of her house.

The notification was received on Sunday, April 1st, at 3.30 p.m. Thanks to the energetic assistance of Mr. Baker, the patient was removed into hospital, and the infected quarters in process of disinfection by 1 a.m. (mid-night). These measures, together with vigorous vaccination, every one who had had any personal communication with the lady being followed up and operated upon, were effectual in stamping out the disease.

## VACCINATION.

The Vaccination Officer reports a large and increasing number of defaulters under this Act, there being over 250 for 1893 alone.

I cannot too strongly impress upon you the importance of this matter, situated, as we are, close to London, where small-pox is always present; these defaulters are not only a standing danger to themselves, but also to their neighbours.

## TYPHOID FEVER.

Seven cases of this disease were notified during the year, one being fatal. In 1893 there were two cases.

No. 1.—Notified on January 13th, from 40, Upper Paddock Road, was that of a female domestic servant, aged 21, who came home ill from Bedford. No sanitary defects.

No. 2.—Notified June 15th from 3, Oxford Place, was that of a female, aged 4 years.

On investigation it was found that the rain water pipe originally directly connected with the sewer, had been altered so as to discharge over a rain water butt; a portion of the pipe standing two feet out of the ground being left.

Smells had been noticed to arise from this pipe, which proved to be a source of attraction to children, including the patient, who amused themselves by dropping stones into the pipe.

This defect was remedied, together with one or two minor matters.

No. 3.—Notified August 1st from 44, Escourt Road, was that of a female, aged 21. No sanitary defects.

No. 4.—Notified September 1st, from Farthing Lane, was that of a male, aged 27, and ended fatally. The patient had made several visits into the country the previous month. No sanitary defects.

Nos. 5, 6, and 7 all occurred in same family, living in Percy Road.

No. 5.—Notified November 8th, housewife, aged 24.

No. 6.—Notified December 4th, daughter, aged 4.

No. 7.—Notified December 25th, son, aged 6.

No satisfactory source of infection could be traced.

Beyond the closet cistern being out of repair, there were no sanitary defects.

The last two cases demonstrate great difficulty of isolation of the sick or efficient disinfectant measures being carried out in a small house.

Hospital accommodation was offered and strongly urged in these cases, but without avail.

It is interesting to note that in all the cottages invaded, the closets were all out of doors.

## FEVER HOSPITAL.

Great improvements have been effected during the year, not only in accommodation but also in nursing arrangements, and the present hospital, bearing in mind its temporary structure, will bear comparison with any other fever hospital in the country.

Especially would I mention the building of a proper discharging Ward at Holywell. This step alone, has had much to do with the diminution of scarlet fever in the neighbourhood.

However, as yet you have not provided any effectual disinfectant apparatus, this I would urge upon you, and also the provision of a more suitable ambulance.

I subjoin tabulated statements of

(1) Hospital accommodation.

(2) Cases admitted into hospital from your district during the year.

## 1. Hospitals.

## (a) Holywell.

1 Large Ward, cubic area, 9500 feet—18 Beds.
1 Small do. „ 1400 „ 1 „
1 do. do. „ 2000 „ 2 „

## (b) Dentons.

1 Ward, cubic area, 3000 feet—7 Beds.
1 do. „ 3000 „ 7 „

During the year 1894, 54 cases were admitted from the district into the Fever Hospitals.

1 Small-pox, 52 Scarletina, 1 Diphtheria.

NO.	AGE.	DATE.	RESIDENCE.	DISEASE.	OBSERVATIONS.
1	3	January 1	57, Lower Paddock Road	Scarletina	
2	7	" 1	" " "	"	
3	5	" 7	8, Estcourt Road	"	
4	12	" 7	74, Merton Road	"	
5	17	" 7	10, Banbury Street	"	
6	19	" 11	High Street	"	
7	11	" 13	54, Sutton Road	"	
8	7	" 16	6, Heath Road	"	
9	3	" 16	" " "	"	... { Developed Diphtheria ; fatal
10	18	" 16	6, Smith Street	"	
11	2	" 19	6, Heath Road...	"	
12	4	" 19	48, Souldern Street	"	
13	1½	" 25	16, Cassio Hamlet	"	
14	12	" 31	The Rookery	"	
15	5	February 1	28, Upper Paddock Road	"	
16	10	" 6	1, Grover Road	"	
17	13	" 11	Lower Derby Road...	"	
18	12	" 11	34, Fearnly Street	"	
19	11	" 21	11, Percy Road	"	
20	13	March 4	34, Fearnly Street	"	
21	9	" 23	15, Albert Street	"	
22	7	" 16	Weymouth Street	"	
23	14	" 16	" " "	"	
24	14	" 17	11, Nascot Street	"	
25	14	" 28	37, Clifford Street	"	
26	12	" 28	" " "	"	
27	11	" 28	" " "	"	
28	7	" 28	" " "	"	
29	4	" 28	" " "	"	
30	40	" 28	" " "	"	
31	22	April 1	59, Queens Road	Small-pox	
32	4	" 30	Heath Road	Scarletina	
33	4	May 10	38, Merton Road	"	
34	35	" 10	" " "	"	
35	2	" 10	" " "	"	
36	9m	" 10	" " "	"	
37	5	" 10	" " "	"	
38	35	" 12	Heath Road	"	
39	6	" 14	70, Villiers Road	"	
40	6	" 18	44, Merton Road	"	
41	12	" 21	Sotheron Road...	"	
42	7	July 4	Ebury Road	"	
43	11	" 16	13, Fearnly Street	"	
44	8	Sept. 8	46, Gladstone Road...	"	
45	6	" 16	High Street	"	
46	10	" 30	74, Merton Road	"	
47	5	October 3	13, Fearnly Street	"	
48	2	" 5	Clifford Street	"	
49	10	" 9	Oxford Place	"	
50	4	" 11	Clifford Street	"	
51	11	" 11	7, Avenue Terrace	"	
52	7	" 11	" " "	"	... { Subsequently died in Union Infirmary from past Diphtheritic Para- lysis.
53	2	" 11	" " "	"	
54	35	Nov. 13	Boot Yard	Diphtheria...	

## AMBULANCE.

An ambulance is very much needed for the conveyance of patients suffering from infectious disease. The present brougham which is used for that purpose is totally unfit for its work.

A sick person is often removed when he is in such a state that it is of the utmost consequence that he should be able to recline; and what is urgently needed, is a covered vehicle, supplied with one or two moveable stretchers, on which the patient may be made comfortable in his own bedroom and thus carried out to the ambulance without fatigue and delay and without unnecessary exposure, both to the weather and to the onlookers, who, to their own great danger, are usually to be found surrounding an ambulance when a patient has to be removed.

## UN SOUND FOOD.

Several seizures were made during the year of food unfit for human consumption, in most cases due either to mistakes in curing or to being kept too long. In one case, however, that of two fowls, there was distinct evidence of disease. The fowls had been killed whilst suffering from pyæmia.

## SEWAGE FARM.

Great improvements have been effected in the conduct of this during the year. There are now no complaints of smells from the sewage tanks.

## RECREATION GROUNDS.

I am glad that the new Recreation Ground is receiving your attention.

At the Watford Field Ground I notice the wooden floor has been removed from the Band Stand, owing to children playing there.

It would have been better to have surrounded the stand with a border of flowers and an unclimbable fence, as is customary in most places, and to have arranged for a Town Band to play two or three times a week.

## WATER.

The question of our water supply is of especial interest just now, in view of recent utterances. I think it well, therefore, to give you a short *resumé* of the more important facts with regard to it.

The water is obtained from three borings in the chalk, at the Waterworks, which are situated in the lower part of the town at end of Local Board Road.

These borings, which pass through the gravel into the chalk below, are of the following depths and diameters:—

No. 1—(Which is placed at bottom of pumping well) 115 feet deep, 12 inches diameter.

No. 2—Bore 150 feet, 9 inches diameter.

No. 3—Bore 140 feet, 18 inches diameter.

No. 2 and 3 syphon into the pumping well, which is 15 feet in diameter and 25 feet deep.

From the well an engine of 75 h.p. (erected in 1886) pumps the water through a rising main, 12 inches in diameter, to the reservoir, which is situated at the top of the Upper Paddock Road, distant 1400 yards, the overflow being 310 feet above sea level (Ordnance datum).

This reservoir, which is capable of holding one million gallons, is entirely roofed in.

From this reservoir the water is supplied by gravitation, through iron mains, to all parts of the district, except

(1) New Bushey, which, with the exception of one or two houses in Chalk Hill and two in the Villiers Road, is supplied by the Colne Valley Company.

(2) The Nascot Wood Estate. This estate is on a higher level than the reservoir. In order to supply it a special stand pipe, 40 feet high and \_\_\_\_\_ diameter, has been erected over the reservoir. Through this the water is pumped for two or three hours daily, thus filling the cisterns with which houses on this estate are supplied.

The mains, which are coated with Angus Smith's solution to prevent rust, are laid three feet below the surface. In many parts they run under the footpaths, in all cases being placed from six to eight feet distant from the sewers.

The pressure in the lower parts of the town is 68 lbs. to square inch.

The water is supplied on the intermittant system, being turned on at 6-0 a.m. and off at 9-0 p.m., except on Saturdays, when it is turned off at midnight (Saturday being the favourite day for baths).

The total water pumped in 1894 was 290 million gallons. This gives a daily supply of about 36 gallons per head.



Subjoined is analysis of the Watford water, copied from 6th Report of the River Pollution Commissioners.

IN PARTS PER 100,000.	
Total Solid Impurity ... ..	32.36
Organic Carbon ... ..	.026
Organic Nitrogen ... ..	.012
Ammonia ... ..	.002
Nitrogen as Nitrates and Nitrites ... ..	.422
Total Combined Nitrogen... ..	.436
Chlorine ... ..	1.26
HARDNESS.	
Temporary ... ..	21.0
Permanent ... ..	3.7
Total ... ..	24.7

#### REMARKS.

Clear and palatable.

The interpretation of the above table is an exceedingly pure but somewhat hard water. The hardness is chiefly due to Calcium Salts, is removable by boiling, and is in no wise detrimental to health.

In my Annual Report for the year 1880, in speaking of the water supply, I strongly advised the adoption of the constant supply system. I would like again to urge this matter. We are fortunate in owning one of the purest water supplies in the Kingdom, and it only remains to us to see that it is adequately supplied in its pristine condition to every inhabitant. Leakages in the mains are always a source of danger from polluting matter gaining access to the pipes by lateral insuccion.

This danger is greatly increased in the intermittant system. Apart from this the intermittant system leads to the storage in cottages of water, with great danger to the same being contaminated.

In conclusion I would draw your attention to the important matter of providing separate cisterns to every water closet. In many parts of the town (especially the older portions) this has not been done. In many cases the water being laid on directly to the pans or supplied to same by a stop-cock.

In these cases the danger of filth gaining access to the pipes is a very serious one.

#### THE BATHING PLACE IN THE RIVER.

The number of bathers in the year was 18,844. Ten years ago it was 22,294, so that there is a decrease of 3,450 as compared with that year. As the population has so much increased, I regret this. I am of opinion that the Bathing Place can be improved and made more attractive.

#### THE PUBLIC BATHS AND WASH HOUSES' ACT.

I would strongly advise you to take advantage of this Act, which is an adoptive one. A good Swimming Bath and other Baths are much required.

Plans for these were prepared at the instigation of the late Mr. Charles Humbert, when he was Chairman of the Board, and for many years they used to hang in the old Board Room. The need is now the more pressing as, owing to the Clarendon Hall becoming more popular and being so much used for entertainments, there is a prospect of the Watford Bath Company being crowded out. Last year 4,128 persons used the Baths of this Company, and since the inauguration 12 years ago, 43,174.

#### WATFORD DISTRICT COTTAGE HOSPITAL.

This still is very popular, and is doing good useful work.

#### THE NEW BRIDGE.

The County Bridge over the Colne is finished at last, and it is a great improvement over the old one. It renders the flow of water and of weed much easier than formerly. The thanks of the ratepayers of Watford are due to the County Council.

Mr. Waterhouse, the Engineer, and Mr. Baker, the Sanitary Inspector, have already submitted their reports, so I will not now refer to them.

I remain, Gentlemen,

Your obedient Servant,

**ALFD. THOS. BRETT, M.D.**