#### [Report 1907] / Medical Officer of Health, Darwen Borough.

#### **Contributors**

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# BOROUGH OF DARWEN.



# REPORT

OF-

# F. G. HAWORTH,

M.B.C.M., L.R.C.S., D.P.H.,

# MEDICAL OFFICER OF HEALTH,

Medical Officer of the Education Committee,

POLICE SURGEON.

FOR THE

Year ending December 31st, 1907.

#### PRESTON:

MATHER BROS., Printers, Bookbinders, &c., 31, Lune Street,

M D C C C C V I I I .



VALE HOUSE, DARWEN,
FEBRUARY 1908.

# TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

GENTLEMEN,

I have the honour to present to you my Thirteenth Annual Report, being for the Year ending December 31st, 1907.

I am, Gentlemen,

Your obedient Servant,

#### F. G. HAWORTH,

Medical Officer of Health,

Darwen Urban\_Sanitary Authority.

# Members of the Health Committee

1907-1908.

COUNCILLOR GEORGE PICKUP HOLDEN, J.P., MAYOR.

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MEDICAL OFFICER OF INFECTIOUS DISEASES HOSPITAL F. G. HAWORTH.

### METEOROLOGY.

These figures are again included in my Annual Report. It seems a pity the Charts which I inserted on the institution of the Observatory, by the late Councillor Gillibrand, have not been kept up owing to the cost, as they would have formed a continuous and interesting record. The figures are still recorded, and have been of great value to me in my recent evidence before the Royal Commission on "Steaming in Weaving Sheds."

#### JANUARY.

BAROMETER: Mean, 29.465 inches.

Highest, 30.125 inches on the 23rd. Lowest, 28.225 inches on the 2nd.

Air Temperature :— Mean of Maxima, 42.1 deg.

Highest of Maxima, 48.0 deg. on the 2nd.

Mean of Minima, 32.7 deg.

Lowest of Minima, 16.5 deg. on the 25th and 26th.

Mean for the Month, 37.4 deg.

Earth Temperature :- At 1ft. depth mean 37.2 deg.

,, 4ft. ,, ,, 41.3 deg. ,, 10ft. ,, ,, 45.5 deg.

Dew Point Temperature :- Mean, 34.3 deg.

Highest, 45.8 deg. on the 5th. Lowest, 13.8 deg. on the 23rd.

Humidity (percentage): - Mean, 89 deg.

Highest, 99 deg. on the 5th, 10th, 12th, 16th & 21st.

Lowest, 57 deg. on the 23rd.

Sunshine: Recorded on 14 days.

Total duration 34.12 hours. Daily average 1.10 hours.

Highest 6.50 hours on the 30th.

Rain: Recorded on 17 days.

Total fall 2.09 inches. Daily average 0.06 inches.

Greatest fall 0.39 inches on the 1st.

Wind: —The following is a Summary of Observations of direction.

N. N.E. E. S.E. S. S.W. W. N.W. 1 1 3 2 5 23 25 3

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 8.0.

Of the 62 Observations (taken at 9 a.m and 9 p.m) more or less cloud was to be seen at the time of each Observation, and at the time of taking 42 of these Observations the sky was overcast.

#### FEBRUARY,

Barometer: Mean, 29.164 inches.

Highest, 29.730 inches on the 28th. Lowest, 28.037 inches on the 20th.

Air Temperature :- Mean and Maxima, 38.6 deg.

Highest of Maxima, 51.0 deg; on the 15th.

Mean of Minima, 29.7 deg..

Lowest of Minima, 20.0 deg. on the 23rd.

Mean for the month, 34.1.

Earth Temperature :— At 1ft. depth, mean 35.3 deg.

At 4 ft. depth, mean 39.0 deg. At 10 ft. depth, mean 44.0 deg.

Dew Point Temperature :- Mean, 31.4 deg.

Highest, 45.6 deg. on the 15th. Lowest, 14.7 deg. on the 23rd.

Water Temperature :— Mean, 39.9 deg.

Highest, 42.2 deg. on the 18th. Lowest, 36.0 deg. on the 16th.

Humidity (percentage) :- Mean, 85.

Highest, 100 on the 9th. Lowest, 57 on the 23rd.

Sunshine: Recorded on 20 days.

Total duration, 65.44 hours. Daily average, 2.33 hours.

Highest, 7.30 hours on the 27th.

Rain:— Recorded on 13 days

Total fall, 2.56 inches.

Daily average, 0.09 inches.

Greatest fall, 0.62 inches, on the 17th.

Wind: - Mean velocity in miles per hour, 14.

The maximum velocity was 62 miles per hour on the 20th, direction W.

Summary of Observations of Direction: -

N. N.E. E. S.E. S. S.W. W. N.W. 1 1 1 0 19 10 15 8 Cloud:— Mean amount (an over-cast sky being indicated by 10.0) 6.8. Cloudless sky on one occasion at time of Observation, and at the time of taking 26 Observations the sky was overcast.

Mist or Fog: On 1st to 11th, 14th to 19th, and 24th to 28th.

Ground Frost: On 3rd, 5th, 6th, 7th, 12th, 14th, 21st, 22nd and 23rd.

Hoar Frost :- On 10th, 11th, 16th, 20th, 21st and 28th.

Snow on 9th, 12th, 20th. Hail on 24th Gales of Wind on 17th, 19th and 20th.

#### MARCH.

Barometer: Mean, 29.303 inches

Highest, 29.694 inches on th 26th. Lowest, 28.365 inches on the 16th.

Air Temperature :- Mean of Maxima, 46.7 deg.

Highest of Maxima, 62.0 deg. on the 29th.

Mean of Minima, 34.8 deg.

Lowest of Minima, 27.2 deg. on the 12th.

Mean for the month, 40.7 deg.

Earth Temperature:— Mean at 1 ft. depth, 40.2 deg.

Mean at 4 ft. depth, 40.3 deg. Mean at 10 ft. depth, 42.3 deg.

Dew Point Temperature :- Mean, 37.4 deg.

Highest, 48.0 deg. on the 27th. Lowest, 27.9 deg. on the 12th.

Water Temperature :- Mean, 40.1 deg.

Highest, 43.0 deg. on the 29th and 30th.

Lowest, 38.0 deg. on the 5th.

Humidity (percentage) :- Mean, 85.

Highest, 99 on the 16th. Lowest, 60 on the 31st.

Sunshine:— Recorded on 27 days.

Total duration 146.84 hours. Daily Average, 4.73 hours.

Highest, 10.40 hours on the 31st.

Rain: Recorded on 18 days

Total fall 4.90 inches. Daily average 0.15 inches.

Greatest fall 1.00 inches on the 16th.

Wind: Mean velocity in miles per hour, 13.

The maximum velocity was 68 miles per hour on the 17th. Direction W. Summary of Observations of direction:—

N. N.E. E. S.E. S. S.W. W. N.W. 1 0 0 1 14 14 27 5

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 6.5.

There was a cloudy sky at the time of taking every Observation, and the sky was overcast at the time of taking 28 of the 62 Observations taken

during the month.

Fog or Mist on 1st, 2nd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 18th, 20th, 25th, 26th, 27th. Hoar Frost on 4th, 6th, 9th, 11th, 21st, 23rd, 24th. Snow on 7th, 8th, 9th, 14th. Hail on 8th and 14th. Gales of Wind on 8th and 17th.

#### APRIL.

Barometer: Mean, 28.972 inches

Highest, 29.516 inches on the 24th. Lowest, 28.351 inches on the 3rd.

Air Temperature :- Mean and Maxima, 48.4 deg.

Highest of Maxima, 60.2 deg. on the 2nd.

Mean of Minima, 35.7 deg.

Lowest of Minima, 25.5 deg. on the 18th.

Mean for the month, 42.0 deg.

Earth Temperature:— Mean at 1 ft. depth, 44.8 deg.

Mean at 4 ft. depth, 43.4 deg. Mean at 10 ft. depth, 43.4 deg.

Dew Point Temperature :- Mean, 38.5 deg.

Highest, 51.6 deg. on the 23rd. Lowest, 26.5 deg. on the 18th.

Water Temperature :- Mean, 42.5 deg.

Highest, 43.6 deg. on the 25th and 30th.

Lowest, 41.0 deg. on the 1st.

Humidity (percentage) :- Mean, 84.

Highest, 99 on the 8th, 23rd and 27th.

Lowest, 56 on the 2nd.

Sunshine: Recorded on 26 days.

Total duration 106.11 hours. Daily average, 3.53 hours.

Highest, 10.20 hours on the 1st.

Rain :- Recorded on 16 days.

Total fall 2.88 inches.

Daily average, 0.09 inches.

Greatest fall, 0.61 inches on the 6th.

Wind: Mean velocity in miles per hour, 14.

The Maximum velocity was 66 miles per hour on the 13th. Direction, N.E.

Summary of Observations of direction :-

N. N.E. E. S.E. S.W. S. W. N.W. 2 9 3 8 5 9 14 10

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 7.3. At the time of taking 23 of the 60 Observations during the month the sky was overcast, and on one occasion the sky was cloudless.

Mist or Fog on every day except 2nd, 13th, 15th, 18th and 20th. Thunder and Lightening on 2nd and 17th. Gales of Wind on 13th and 20th. Ground Frost on 18th. Hoar Frost on 5th, 19th, and 20th. Hail on 7th and 17th. Snow on 7th and 27th.

#### MAY

Barometer: Mean, 29.076 inches.

Highest, 29.531 inches on the 17th. Lowest, 28.376 inches on the 2nd.

Air Temperatures :- Mean or Maxima, 53.0 deg.

Highest of Maxima, 72.0 deg. on the 12th.

Mean of Minima, 40.5 deg.

Lowest of Minima, 32.0 on the 22nd.

Mean for the month, 46.7 deg.

Earth Temperature :- Mean at 1 ft. depth, 49.3 deg.

Mean at 4 ft. depth, 46.5 deg. Mean at 10 ft. depth, 44.4 deg.

Dew Point Temperature :- Mean, 42.5 deg.

Highest, 55.6 deg. on the 12th. Lowest, 31.0 deg. on the 19th.

Water Temperature :- Mean, 45.7 deg.

Highest, 51.9 deg. on the 13th. Lowest, 40.0 deg. on the 3rd.

Humidity (percentage) :- Mean, 81.

Highest, 99 on the 7th. Lowest, 56 on the 19th. Sunshine:— Recorded on 24 days.

Total duration, 94.27 hours.

Daily average, 3.04 hours.

Highest, 9.15 hours on the 29th.

Rain:— Recorded on 24 days.

Total fall, 5.18 inches.

Daily average, 0.16 inches.

Greatest fall, 0.77 inches on the 31st.

Wind:— Mean velocity in miles per hour, 12.

The Maximum velocity was 56 miles per hour on the 2nd; direction W. Summary of Observations of direction:—

N. N.E. E. S.E. S. S.W. W. N.W. 1 12 3 7 18 5 10 6

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 8.0. At the time of taking 32 of the 62 Observations during the month the sky was overcast, and cloudy at the time of taking every Observation.

Mist or Fog on every day except 5th, 13th, 16th, 21st, and 29th. Gales of Wind on 2nd and 3rd. Thunder and Lightning on 12th and 24th. Hoar Frost on 18th and 22nd. Snow on 2nd. Hail on 2nd.

#### JUNE.

Barometer: Mean, 28.998 inches.

Highest, 29.362 inches on the 17th. Lowest, 28.695 inches on the 1st.

Air Temperatures :- Mean of Maxima, 55.5 deg.

Highest of Maxima, 71.0 deg. on the 9th.

Mean of Minima, 45.0 deg.

Lowest of Minima, 37.2 deg. on the 25th.

Mean for the month, 50.20.

Earth Temperatures: Mean at 1 ft. depth, 53.7 deg.

Mean at 4 ft. depth, 50.4 deg. Mean at 10 ft. depth, 46.9 deg.

Dew Point Temperature :- Mean, 47.9 deg.

Highest, 57.8 deg. on the 19th. Lowest, 37.0 deg on the 2nd.

Water Temperature :- Mean, 51.0 deg.

Highest, 53.7 deg. on the 29th. Lowest, 46.0 deg. on the 3rd. Humidity (percentage) :- Mean, 87.

Highest, 99 on the 3rd 4th, 5th, 6th, 23rd and 24th,..

Lowest, 70 on the 11th and 22nd.

Sunshine: Recorded on 25 days.

Total duration, 94.33 hours. Daily average, 3.14 hours. Highest, 9.40 on the 22nd.

Rain:— Recorded on 27 days.

Total fall 10.03 inches. Daily average, 0.33 inches.

Createst fall 1.54 inches on the 5th.

Wind: — Mean velocity in miles per hour, 11. The Maximum velocity was 49 miles per hour on the 3rd; direction W.

Summary of Observations of direction :-

N. N.E. E. S.E. S. S.W. W. N.W. 1 2 1 1 24 4 26 1

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 8.8. At the time of taking 41 of the 60 Observations during the month, the sky was overcast and cloudy at the time of taking every Observation.

Mist or Fog on 1st, 2nd, 3rd, 4th, 5th, 6th, 8th, 9th, 14th, 15th, 16th, 18th, 20th, 26th, and 27th. Hail on 3rd. Thunder and Lightning on 9th, and 12th.

#### JULY.

Barometer: Mean, 29.224 inches.

Highest, 29.790 inches on the 11th. Lowest, 28.784 inches on the 4th.

Air Temperatures :- Mean of Maxima, 60.5 deg.

Highest, of Maxima 79.1 deg. on the 18th.

Mean of Minima, 48.0 deg.

Lowest of Minima, 38.5 deg. on the 1st.

Mean for the month, 54.2 deg.

Earth Temperature :- Mean at 1 ft. depth, 57.7 deg.

Mean at 4 ft. depth, 53.4 deg. Mean at 10 ft. depth, 49.4 deg.

Dew Point Temperature :- Mean, 50.8 deg.

Highest, 59.8 deg. on the 26th. Lowest, 39.3 deg. on the 7th. Water Temperature :- Mean, 54.7 deg.

Highest, 59.3 deg. on the 21st.

Lowest, 50.0 deg. on the 5th, 8th and 9th.

Humidity (percentage) :- Mean, 84.

Highest, 99 on the 26th and 28th.

Lowest, 64 on the 18th.

Sunshine: Recorded on 28 days.

Total duration, 156.43 hours. Daily average, 5.04 hours.

Highest, 14.25 hours on the 17th.

Rain :- Recorded on 21 days.

Total fall, 4.49 inches.

Daily average, 0.14 inches.

Greatest fall, 1.59 inches on the 22nd.

Wind: — Mean velocity in miles per hour, 7. The maximum velocity was 36 miles per hour on the 7th; direction N.W.

Summary of Observations of direction :-

N. N.E. E. S.E. S. S.W. W. N.W. 2 4 4 5 18 7 17 5

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 7.0. At the time of taking 25 of the 62 Observations during the month the sky was overcast and cloudless at the time of taking 7 of the Observations

Mist or Fog on 1st, 8th, 9th, 13th, 15th, 20th, 21st, 22nd, 24th, 25th, 26th, 27th, 29th and 30th. Hail on 4th. Thunder and Lightning on 4th, 5th, 21st and 22nd. Dew on 18th, 19th, 21st and 23rd.

#### AUGUST.

Barometer: Mean, 29.209 inches.

Highest, 29.592 inches on the 21st. Lowest, 28.844 inches on the 15th.

Air Temperatures :- Mean of Maxima, 59.2 deg.

Highest of Maxima, 67.0 deg; on the 4th and 13th.

Mean of Minima, 47.1 deg.

Lowest of Minima, 41.0 deg. on the 30th.

Mean for the month, 53.1 deg.

Earth Temperatures: Mean at 1 ft. depth, 57.2 deg.

Mean at 4 ft. depth, 55.0 deg. Mean at 10 ft. depth, 51.3 deg. Dew Point Temperature :- Mean, 50.5 deg.

Highest, 59.8 deg. on the 4th. Lowest, 42.8 deg. on the 30th.

Water Temperature :— Mean, 54.9 deg.

Highest, 57.3 deg. on the 14th. Lowest, 50.0 deg. on the 20th.

Humidity (percentage) :- Mean, 86.

Highest, 99 on the 14th and 16th.

Lowest, 65 on the 28th.

Sunshine: Recorded on 29 days.

Total duration, 120.86 hours. Daily average, 3.89 hours.

Highest, 9.25 hours on the 30th.

Rain :- Recorded on 23 days.

Total fall, 6.19 inches.

Daily average, 0.19 inches.

Greatest fall, 1.19 inches on the 8th.

Wind: Mean velocity in miles per hour, 10. The maximum velocity was 39 miles per hour on the 8th; direction W.

Summary of Observations of direction:

N. N.E. E. S.E. S. S.W. W. N.W. 1 0 0 0 8 8 40 5

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 7.6. At the time of taking 28 of the 62 Observations during the month the sky was overcast and cloudy at the time of taking every Observation.

Mist or Fog on 3rd, 8th, 9th, 13th, 14th, 15th, 16th, 17th, 19th, 20th, 21st, 24th, 26th, 29th, 30th and 31st. Dew on 2nd. Thunder and Lightning on 6th.

#### SEPTEMBER.

Barometer: Mean, 29:327 inches.

Highest, 29.711 inches on the 9th. Lowest, 28.672 inches on the 2nd.

Air Temperatures :- Mean of Maxima, 61.3 deg.

Highest of Maxima, 69.5 deg. on the 10th.

Mean of Minima, 46.1 deg.

Lowest of Minima, 36.2 deg. on the 4th.

Mean for the month 53.7

Earth Temperatures: Mean at 1 ft. depth, 55.9 deg.

Mean at 4 ft. depth, 54.6 deg. Mean at 10 ft. depth, 52.1 deg.

Dew Point Temperature :- Mean, 50.0 deg.

Highest, 57.9 deg. on the 26th and 27th

Lowest, 35·1 deg on the 3rd.

Water Temperature :- Mean, 53:1 deg.

Highest, 55.0 deg. on the 18th and 19th.

Lowest, 50.0 deg. on the 4th.

Humidity (percentage) :- Mean, 82.

Highest, 99 on the 18th and 19th,.

Lowest, 56 on the 10th.

Sunshine: Recorded on 29 days.

Total duration, 118.50 hours. Daily average, 3.95 hours.

Highest, 9.50 on the 10th and 11th.

Rain :- Recorded on 8 days.

Total fall 1.64 inches.

Daily average, 0.05 inches.

Greatest fall 0.62 inches on the 5th.

Wind: — Mean velocity in miles per hour, 7. The Maximum velocity was 39 miles per hour on the 2nd; direction W.

Summary of Observations of direction :—

N.E. N.W. N. E. S.E. S. S.W. W. 4 0 10 15 7 16 1 7

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 6.3. At the time of taking 22 of the 60 Observations during the month, the sky was overcast and cloudy at the time of taking every Observation.

Mist or Fog on 3rd, 8th, 12th, 13th, 15th, 16th, 17th, 18th, 19th, 20th, 21st 22nd, 23rd, 24th, 25th, 26th, 27th, 29th and 30th. Hoar Frost on 8th and 11th Thunder and Lightning on 26th.

#### OCTOBER.

Barometer: Mean, 28.828 inches.

Highest, 29 269 inches on the 4th. Lowest, 28 287 inches on the 15th. Air Temperatures :— Mean of Maxima, 51.5 deg.

Highest, of Maxima 61.7 deg. on the 4th.

Mean of Minima, 41.5 deg.

Lowest of Minima, 32.0 deg. on the 8th.

Mean for the month, 46.5 deg.

Earth Temperature :- Mean at 1 ft. depth, 49.4 deg.

Mean at 4 ft. depth, 52.0 deg.

Mean at 10 ft. depth, 51.8 deg.

Dew Point Temperature :-- Mean, 45.0 deg.

Highest, 55.8 deg. on the 6th. Lowest, 34.9 deg. on the 15th.

Water Temperature :— Mean, 47.6 deg.

Highest, 53.0 deg. on the 2nd. Lowest, 42.0 deg. on the 28th.

Humidity (percentage) :- Mean, 92.

Highest, 99 on the 1st, 5th, 6th, 20th, 26th and 30th.

Lowest, 75 on the 9th.

Sunshine: Recorded on 22 days.

Total duration, 68.48 hours. Daily average, 2.20 hours.

Highest, 7.75 hours on the 4th.

Rain :- Recorded on 22 days. .

Total fall, 4.53 inches.

Daily average, 0.14 inches.

Greatest fall, 0.47 inches on the 17th.

Wind:— Mean velocity in miles per hour, 10. The maximum velocity was 46 miles per hour on the 17th; direction S.E.

Summary of Observations of direction :-

N. N.E. E. S.E. S. S.W. W. N.W. 0 6 2 15 23 5 7 4

Cloud:— Mean amount (an overcast sky being indicated by 10·0) 7·2. At the time of taking 34 of the 62 Observations during the month the sky was overcast and cloudy at the time of taking every Observation.

Mist or Fog on every day except 3rd, 9th, 12th, 13th, 16th, 20th and 22nd. Hoar Frost on 3rd, 4th, 8th, 9th, 16th, 24th, 25th, 27th and 28th. Thunder and Lightning on 10th.

#### NOVEMBER.

Barometer: Mean, 29:154 inches.

Highest, 29.666 inches on the 30th. Lowest, 28.349 inches on the 26th.

Air Temperatures :- Mean of Maxima, 45.7 deg.

Highest of Maxima, 55.7 deg. on the 2nd.

Mean of Minima, 36.9 deg.

Lowest of Minima, 26.8 deg. on the 26th.

Mean for the month, 41.3 deg.

Earth Temperatures: Mean at 1 ft. depth, 43.9 deg.

Mean at 4 ft. depth, 47.7 deg.

Mean at 10 ft. depth, 50.4 deg.

Dew Point Temperature :- Mean, 39.7 deg.

Highest, 49.4 deg. on the 3rd. Lowest, 25.7 deg. on the 25th.

Water Temperature :- Mean, 42.6 deg.

Highest, 47.0 deg. on the 3rd. Lowest, 35.0 deg. on the 26th.

Humidity (percentage) :- Mean, 90.

Highest, 99 on the 5th, 8th, 14th and 17th.

Lowest, 55 on the 10th.

Sunshine: - Recorded on 15 days.

Total duration, 43·17 hours. Daily average, 1·44 hours.

Highest, 6.03 hours on the 15th.

Rain :— Recorded on 22 days.

Total fall, 4.06 inches.

Daily average, 0.13 inches.

Greatest fall, 1.06 inches on the 23rd.

Wind: — Mean velocity in miles per hour, 12. The maximum velocity was 48 miles per hour on the 3rd; direction E.S.E.

Summary of Observations of direction:

S. S.W. W. N.W. N.E. E. S.E. N. 24 3 0 5 11 4 5 8

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 8.4. At the time of taking 39 of the 60 Observations during the month the sky was overcast and cloudy at the time of taking every Observation.

Mist or Fog every day during the month. Gales of Wind on 3rd and 22nd. Snow on 23rd, 24th and 26th. Hail on 23rd and 24th. Ground Frost on 18th, 25th, 29th and 30th. Hoar Frost on 22nd. Thunder and Lightning on 23rd.

### SUMMARY OF METEOROLOGICAL OBSERVATIONS.

	В	romet	or		Air T	empe	ratur	е		Earth		Ten	w Po	int		Wate		Н	umid	lity		Suns	hine			Ra	infall						v	Vind				
MONTH.	Mean	Highest	Lowest	Mean of Maxima	Height of Maxima	Mean of Minima	Lowest of Minima	Mean for Month	1 Ft. Mean	4 Ft. Mean	10 Ft. Mean	Mean	Highest	Lowest	Mean	Highest	Lowest	Mean	Highest	Lowest	No. of Days recorded	Duration (1	Daily Average	Highest	No. of Days recorded	lall (ii	Daily Average	sst F	Mean Velocity	Maximum Velocity	N.	N.E.	E.	Dir	zi	S.W.	W.	N.W.
January	29.465	30.125	28.225	42.1	48.0	32.7	16.5	37.4	37.2	41.3	45.5	34.3	45.8	13.8				89	99	57	14	34.12	1.10	6.50	17	2.0	9 0.0	0.39				1	3	2	5	23	25	3
February	29.164	29.730	28.037	38.6	51.0	29.7	20.0	34.1	35.3	39.0	44.0	31.4	45.6	14.7	39.9	42.2	36.0	85	100	57	20	65.44	2.33	7.30	13	2.5	6 0.0	0.62	14	62	2	1	1		19	10	15	8
March	29.303	29.694	28.365	46.7	62.0	34.8	27.2	40.7	40.2	40.3	42.3	37.4	48.0	27.9	40.1	43.0	38.0	85	99	60	27	146.84	4.73	10.40	18	4.9	0.1	1.00	13	68	1			1	14	14	27	5
April	28.972	29.516	28.351	48.4	60.2	35.7	25.5	42.0	44.8	43.4	43.4	38.5	51.6	26.5	42.5	43.6	41.0	84	99	56	26	106.11	3.53	10.20	16	2.8	8 0.09	0.61	14	66	2	9	3	8	5	9	14	10
May	29.076	29.531	28.376	53.0	72.0	40.5	32.0	46.7	49.3	46.5	44.4	42.5	55.6	31.0	45.7	51.9	40.0	81	99	56	24	94.27	3.04	9.15	24	5.1	8 0.16	0.77	12	56	1	12	3	7	18	5	10	6
June	28.998	29.362	28.695	55.4	71.0	45.0	37.2	50.2	53.7	50.4	46.9	47.9	57.8	37.0	51.0	53.7	46.0	87	99	70	25	94.33	3.14	9.40	27	10.0	0.33	1.54	11	49	1	2	1	1	24	4	26	1
July	29.224	29.790	28.784	60.	79.1	48.0	38.5	54.2	57.7	53.4	49.4	50.8	59.8	39.3	54.7	59.3	50.0	84	99	64	28	156.43	5.04	14.25	21	4.4	0.14	1.59	7	36	2	4	4	5	18	7	17	5
August	29.209	29.592	28.844	59.	2 67.0	47.1	41.0	53.1	57.2	55.0	51.3	50.5	59.8	42.8	54.9	57.3	50.0	86	99	65	29	120.86	3.89	9.25	23	6.19	0.19	1.19	10	39	1				8	8	40	5
September	29.327	29.711	28.672	61.3	69.5	46.1	36.2	53.7	55.9	54.6	52.1	50.0	57.9	35.1	53.1	55.0	50.0	82	99	56	29	118.50	3.95	9.50	8	1.6	0.05	0.62	7	39	1	4		10	15	7	16	7
October	28.828	29.269	28.287	51.	61.7	41.5	32.0	46.5	49.4	52.0	51.8	45.0	55.8	34.9	47.6	53.0	42.0	92	99	75	22	68.48	2.20	7.75	22	4.53	0.14	0.47	10	46		6	2	15	23	5	7	4
November	29.154	29.666	28.349	45.	7 55.7	36.9	26.8	41.3	43.9	47.7	50.4	39.7	49.4	25.7	42.6	47.0	35.0	90	99	55	15	43.17	1.44	6.03	22	4.06	0.13	1.06	12	48	3		5	11	24	4	5	8
December	28.905	29.520	27.93	41.	0 50.0	34.1	29.0	37.5	38.8	43.3	48.0	36.7	48.8	28.6	38.0	43.5	34.8	91	100	61	12	17.08	0.55	2.91	20	5.86	0.18	0.98	16	64		5	2	12	23	9	9	2
Totals																					271	1065.63			231	54.41					14	44	24	72	196	105	211	64
Mean	29.135	29.625	28.410	50.	3 62.3	3 39.3	30.2	44.8	46.9	47.2	47.5	42.1	53.0	29.8	46.4	49.9	42.1	86	99	61	22.26	88.80	2.91	8.55	19.2	4.53	0.14	0.90	11	52	1.2	3.7	2.0	6.0	16.3	8.7	17.6	5.3

# SUMMARY OF T

							2		
	4								
				14					

#### DECEMBER.

Barometer: Mean, 28.905 inches.

Highest, 29:520 inches on the 24th. Lowest, 27:906 inches on the 13th.

Air Temperatures :- Mean of Maxima, 41.0 deg.

Highest of Maxima, 50.0 deg; on the 8th.

Mean of Minima, 34·1 deg.

Lowest of Minima, 29.0 deg. on the 15th, 27th, 28th and 29th

Mean for the month, 37.5 deg.

Earth Temperatures: Mean at 1 ft. depth, 38.8 deg.

Mean at 4 ft. depth, 43.3 deg. Mean at 10 ft. depth, 48.0 deg.

Dew Point Temperature :- Mean, 36.7 deg.

Highest, 48.8 deg. on the 20th. Lowest, 28.6 deg. on the 27th.

Water Temperature :- Mean, 38.0 deg.

Highest, 43.5 deg. on the 21st. Lowest, 34.8 deg. on the 16th.

Humidity (percentage) :- Mean, 91.

Highest, 100 on the 28th. Lowest, 61 on the 11th.

Sunshine: Recorded on 12 days.

Total duration, 17:08 hours. Daily average, 0:55 hours. Highest, 2:91 hours on the 7th.

Rain :— Recorded on 20 days.

Total fall, 5.86 inches.

Daily average, 0.18 inches.

Greatest fall, 0.98 inches on the 8th.

Wind:— Mean velocity in miles per hour, 16. The maximum velocity was 64 miles per hour on the 14th; direction N.W.

Summary of Observations of direction:

N. N.E. E. S.E. S. S.W. W. N.W. 2 12 23 9 9 2 0 5

Cloud:— Mean amount (an overcast sky being indicated by 10.0) 8.8. At the time of taking 45 of the 62 Observations during the month the sky was overcast, and on one occasion the sky was cloudless.

Mist or Fog on every day except 5th, 6th, 25th, 26th and 28th. Hoar Frost on 1st, 6th, 12th and 24th. Ground Frost on 15th, 24th, 26th, 27th and 28th. Hail on 3rd, 4th, 5th and 6th. Snow on 7th, 8th and 27th. Thunder and Lightning on 5th. Gales of Wind on 8th, 9th, 10th, 14th 27th, and 28th.

# Population

Estimated for the middle of the year at 41,864, is based on the natural increment as indicated from one census period to another. It would appear from the increase in new property that our estimate, when it comes to be confirmed by the next census taking, will probably be below the mark. It is better to come below than above, in order to avoid having to lower our figures.

War	d Population.
CENTRAL	7,660
WEST-CENTRAL	4,061
NORTH-EAST	10,024
NORTH-WEST	5,670
SOUTH-EAST	6.995
SOUTH-WEST	7,454
to the same and the same and the	41,864

## Births.

There were 431 Males and 445 Females born and registered during the year, making a total of 876. This gives a birth-rate of 20.92 per 1,000 of the population, and an increase of 1.22 per 1,000 over the previous year.

The average for the last 26 years is 27.70 per 1,000.

August gave the highest rate with 22.93 per 1,000, and November the lowest, with 17.48 per 1,000.

The highest annual rate was in 1883, when it was 34.39 per 1,000; and the lowest was in 1906, when it was 19.70 per 1,000.

#### ILLEGITIMATE BIRTHS.

There were 29 children born out of wedlock, at the rate of 3.31 per cent. of the total births.

The percentage of Midwifery cases attended by medical men was 44.97, being a decrease on the previous year of 1.39 per cent.

This is accounted for by the increasing number of Certificated Nurses who are practicing in the town.

TABLE I.

	NUMBE	Rate per 1,000 Estimated		
	Males.	Females.	Total.	Population
JANUARY	35	35	70	20.06
FEBRUARY	41	35	76	21.78
MARCH	34	43	77	22.07
APRIL	39	40	79	22.64
MAY	36	35	71	20.35
JUNE	35	37	72	20.63
JULY	35	43	78	22.35
AUGUST	48	32	80	22.93
SEPTEMBER	34	34	68	19.49
OCTOBER	36	35	71	20.35
NOVEMBER	26	35	61	17.48
DECEMBER	32	41	73	20.92
	431	445	876	20.92

TABLE II.

ILLEGITIMATE BIRTHS.

	Number.	Percentage of Births.
JANUARY	3	4.28
FEBRUARY	2	2.63
MARCH	4	5.19
APRIL	3	3.79
MAY	0	0.00
JUNE	3	4.16
JULY	1	1.28
AUGUST	2	2.50
SEPTEMBER	2	2.94
OCTOBER	3	4.22
NOVEMBER	1	1.63
DECEMBER	5	6.84
	29	3.31

TABLE III. gives the Estimated Populations, Number of Births, and the Birth-rates for the Darwen Sanitary District since 1882 inclusive.

TABLE III.

Year.	Estimated Population at the Middle of Each Year.	Total Births	Birth-rate.		
1882	30,295	007	32.57		
1883	30,733	987	34.39		
1884	31,360	1057 978	31.18		
1885	31,720	1015	31.18		
1886	32,185	965	29.98		
1887	32,491	1000	30.77		
1888	33,500	994	29.67		
1889	34,500	972	28.17		
1890	36,500	1075	29.45		
1891	34,192	1115	32.60		
1892	35,000	1057	30.20		
1893	35,500	955	26.90		
1894	36,000	1039	28.86		
1895	36,000	1128	31.33		
1896	36,652	1032	28.15		
1897	37,500	1114	29.70		
1898	37,500	1131	30.16		
1899	37,900	1062	28.02		
1900	38,600	980	25.38		
1901	38,212	858	22.45		
1902	38,712	891	23.01		
1903	39,114	941	24.05		
1904	39,516	820	20.75		
1905	39,918	818	20.49		
1906	41,164	811	19.70		
1907	41,864	876	20.92		

Average for the last 26 years-27.72.

BIRTHS IN WARDS-1907.

	Cent	tral.	Cent	est- tral,	-	th- ist.	Nor We		Sou	th-	Sou		To	TAL.
THE REAL PROPERTY.	М.	F.	М.	F .	M.	F.	М.	F.	М.	F.	М.	F.	М.	F.
January	2	4	7	4	10	9	5	2	3	10	8	6	35	35
February	6	6	3	3	7	9	8	2	9	11	8	4	41	35
March		5	1	8	10	10	6	11	0	5	8	4	34	43
April	0	7	3	4	10	10	9	6	6	7	11	6	39	40
May	9	7	3	2	7	6	7	2	5	7	5	11	36	35
June	5	7	9	5	11	8	4	4	3	3	3	10	35	37
July	9	1	3	7	9	11	3	9	6	6	5	9	35	43
August		5	2	2	16	5	5.	5	11	7	6	8	48	32
September	4	0	5	4	10	10	5	8	3	10	7	2	34	34
October	3	3	2	4	11	9	6	4	8	7	6	8	36	35
November		10	1	6	4	8	4	4	6	3	5	4	26	35
December	4	4	5	3	10	12	5	10	4	4	4	. 8	32	41
	65	59	44	52	115	107	67	67	64	80	76	80	431	445
TOTAL	1	24	9	6-	22	22	13	4	14	4	15	6	8'	76
Population	7,0	660	2.0	061	10,0			570	6,9	995	7,4	154	41,	864
Birth-rate	16	.18	23	.63	22	.14	23	.63	20	.58	20	.92	20	,92

TABLE V.

RETURN OF VACCINATION FOR DARWEN—1907.

MONTHS.	Sucess- ful Vaccina- tion.	Deaths.	Insus- ceptible.	Ex- empted.	Post- poned.	Re- moved out of Town and Traced.	Re- moved and Cannot Trace	Unac- counted for
January	-58	6	1	4	0	0	1	0
February		6	0	3	2	0	2	1
March	63	8	0	4	1	0	0	1
April	66	5	0	6	1	0	0	1
May	48	12	0	9	1	0	. 0	1
June		4	0	11	3	0	1	0
July	52	4	0	11	4	0	4	3
August	66	2	0	3	2	0	1	6
September	51	2	0	7	1	0	0	7
October	37	7	0	14	2	0	0	11
November	30	3	0	3	0	0	0	25
December	11	4	0	2	0	0	0	56
	597	63	1	77	17	0	9	112

Successfully	Vaccinated	for	Quarter,	January, February, March	183
,,	,,	,,	,,	April, May, June	167
,,	,,	,,	,,	July, August, September	169
,,	,,	,,	,,	October, November, December	78
					597

It should be noted that children born at the end of the year, 1907, need not be vaccinated until June, 1908.

(Signed) A. H. E. STEPHENSON,

Vaccination Officer, Blackburn Union.

#### TABLE VI.

The following Table shows the number of Births and the percentage of these attended by Medical Men during the last ten years—

		Attended by Medical Men.						
Years.	No. of Births.	Number.	Percentage					
1898	1131	815	72.06					
1899	1062	653	61.48					
1900	980	540	55.10					
1901	858	420	48.95					
1902	891	401	45.00					
1903	941	461	48.99					
1904	820	421	51.34					
1905	818	411	50.24					
1906	811	376	46.36					
1907	876	394	44.97					

# Marriages.

The number of Marriages solemnized in Darwen during the year ending December 31st, 1907, was as follows—

Church of Engl	land			195
Nonconformist	Places	of	Worship	156
	Г	ota	d	351

This means that 702 people were united in the bonds of wedlock, and is at the rate of 16.76 per 1,000 of the population, as compared with 18.07 per 1,000 in the previous year.

The following Table will give the rates since the year 1882 inclusive-

TABLE VII.

Year.	Birt	hs.	Dea	ths.	Marriages.		
T Car.	Number.	Rate.	Number.	Rate.	Number.	Rate	
1882	987	32.57	650	21.45	490	16.0	
1883	1057	34.39	518	16.85	478	15.5	
1884	978	31.18	595	18.97	444	14.1	
1885	1015	31.99	489	15.41	480	15.1	
1886	965	29.98	641	19.91	540	16.7	
1887	1000	30.77	716	22.03	558	16.6	
1888	994	29.67	600	17.90	616	18.2	
1889	972	28.17	544	15.76	570	16.5	
1890	1075	29.45	673	18.43	586	16.0	
1891	1115	32.60	660	19.30	648	18.7	
1892	1057	30.20	641	18.31	670	19.1	
1893	955	26.90	677	19.07	592	16.7	
1894	1039	28.86	542	15.05	640	17.7	
1895	1128	31.33	640	17.77	676	18.7	
1896	1032	28.15	627	17.10	696	18.9	
1897	1114	29.70	651	17.36	688	18.3	
1898	1131	30.16	632	16.85	700	18.6	
1899	1062	28.02	647	17.07	666	17.5	
1900	980	25.38	789	20.44	532	13.7	
1901	858	22.45	620	16.22	576	15.0	
1902	891	23.01	569	14.69	606	15.6	
1903	941	24.05	501	12.80	612	15.6	
1904	820	20.75	606	15.33	606	15.3	
1905	818	20.49	562	14.07	578	14.4	
1906	811	19.70	540	13.11	744	18.0	
1907	876	20.92	527	12.58	702	16.7	
Average 26 years	987	27.72	609	17.07	603	16.6	

# Notification of Infectious Diseases.

The following were reported to me during the year-

Small Pox	1
Diphtheria	22
Erysipelas	14
Scarlet Fever	26
Typhoid Fever	21
Puerperal Fever	0
	84

#### CASES REPORTED IN-

	1897	8681	1899	1900	1061	1905	1903	1904	1905	1906	1907
Diphtheria	2	2	10	186	197	141	21	34	29	18	22
Croup	3	6	2	4	10	3	-	-	-	1-	-
Erysipelas	56	35	31	27	34	15	17	35	49	17	14
Scarlet Fever	101	93	400	276	231	137	30	689	456	50	26
Typhoid Fever	. 41	43	55	33	21	34	15	20	28	17	21
Continued Fever	1	3	-	1	3	1	-	-	-	-	-
Puerperal Fever	12	10	7	4	1	3	2	5	5	4	0
Small Pox	-	-	-			3	27	2	-	-	1
Chicken Pox		-	1	-	-	-	32	_	-	-	-
	216	192	505	531	497	337	144	785	567	106	84

INFECTIOUS DISEASES NOTIFIED.—The total number of these cases reported has been diminishing since 1904, when the number was 785.

DIPHTHERIA.—Under this name is now included Croup. This complaint shows the slight increase of 4 over the previous year.

We exercise special supervision over Diphtheria in order to check, at the onset, any tendency to spread through the medium of contact in the schools. In my opinion this disease is especially a dangerous one from the above cause, and would be the better for more perfect isolation in hospital. The accommodation in the general

run of artizan dwelling in a manufacturing town, like our own, does not lend itself to the prevention of the spread of such a disease. Too often the sleeping rooms are insufficient in number to deal with the separation of numbers and sexes. The parents and older children have in most cases to go out to work, consequently any deprivation in the number of hours of sleep incapacitates them for work, and lowers the resisting power of their bodies.

ERYSIPELAS.—Fourteen cases were reported as compared with seventeen in the previous year. I am not in favour of this disease being notified. It does not give the return for the necessary expense.

scarlet fever.—The number of cases notified as follows:—13 males and 13 females, total 26, as compared with 50 in the previous year. This probably constitutes the lowest point of the annual curve, since this year came in, and following on the period of latency we have taken extreme precautions to follow up all cases since reported, immediate isolation of the patients in Bull Hill Hospital, and careful supervision of the rest of the family, has resulted in preventing the few cases we have had during this year from spreading. In one instance we were instrumental in finding a source of infection in a peeling child, and in stopping any further imischief.

Now that I am appointed Medical Officer to the Schools I shall have an official status and recognition which will enable me to use such influence in checking the nfectious diseases from spreading through these mediums. Undoubtedly they have been a prolific source of infection in the past. With the aid of Miss Glass I hope to do a good work.

The distribution was as follows :-

	Central.	West- Central.	North- East.	North- West.	South- East.	South- West.
Population	7660	4061	10024	5670	6995	7454
Number	. 6	3	3	8	4	2
Deaths	. 0	0	0	0	0	0
Death-Rate per 1,000	. 0.0	0.0	0.00	0.0	0.0	0.0

Table showing susceptible period:-

Under 1 year.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	Total.
0.	4	15	5	2	26

TYPHOID FEVER.—There were 21 cases notified as against 17 in the preceding year. The increase was due to one family being attacked in the Hollins Grove district, The initial case was traced to a probable source in some mussels eaten a short while before. I wrote the Medical Officer of the district from which the mussels had come, and he replied that all the beds had then been closed. In a newspaper paragraph it was stated that these same mussel beds were causing some uneasiness in the minds of the members of the district Council concerned. The Lord of the Manor gave permission to the Council to destroy these beds.

To confirm our suspicions we have had a few cases of Fever since reported, which have had their infection from a similar source.

Another matter has come to our notice in a probable source of infection in celery, a succulent vegetable very much in demand in this district. Celery is grown in very large quantities in the country surrounding Lancashire towns. It is carefully tended, and often manured with night soil. Should this night soil contain the germs of Typhoid it is easy to see, that unless the sticks of ce'ery are very carefully washed or boiled, there is a danger in its use. So far we have not traced any specific case to its use. It is a matter requiring careful watching.

# Deaths.

Return of the number of Infectious Diseases reported to the Medical Officer of Health during the year 1907, and the deaths from the diseases notified —

	Cases Notified.	Deaths Registered.
Scarlet Fever	. 26	 0
Diphtheria and Membraneous Croup	. 22	 5
Typhoid Fever	21	 4
Puerperal Fever	. 0	 0
Erysipelas	14	 0
Small Pox	1	 1
	84	 10

SCARLET FEVER .- Notified twenty-six; deaths none.

**DIPHTHERIA.**—Notified, twenty-two; deaths, five; giving a death-rate of 22.7 per cent. of those attacked.

TYPHOID FEVER.—Twenty-one notified, with four deaths, giving a death rate of 19.0 per cent. of those attacked.

PUERPERAL FEVER .-- None notified.

ERYSIPELAS.—Fourteen notified, or 3 less than in the previous year; deaths none.

INQUESTS.—The Coroner held thirty-one enquiries, or 10 more than in the previous year.

CONSUMPTION.—Thirty-five deaths occurred, giving a rate of 0.83 per 1,000 of the population.

ZYMOTIC DEATH RATE.—0.69 per 1,000 of population.

TABLE VIII.

Population as per Census enumerated	Estimated Population to middle of year	Births.	Deaths from all causes.	Deaths under 1 year	Deaths 1 to 5	Deaths 5 to 15	Deaths 15 to 25	Deaths 25 to 60	Deaths 60 years and upwards
	1886 32,185	965	641	187	154	28	29	135	108
	1887 32,491	1000	716	188	139	60	35	174	120
1881	1888 33,500	994	600	154	113	32	33	145	118
	1889								1000
29,747	34,500 1890	972	544	149	90	16	31	161	107
	36,500 1891	1075	673	184	68	28	30	196	167
	34,192	1115	660	168	115	32	26	193	126
	1892 35,000	1057	641	177	85	35	64	175	105
	1893 35,500	955	677	184	101	40	44	167	141
	1894			1 5000					
1891	36,000 1895	1039	542	130	67	17	46	174	108
34,192	36,000 1896	1128	640	179	92	16	43	186	124
01,102	36,652	1032	627	187	102	17	26	163	132
	1897 - 37,500	1114	651	182	87	19	33	195	135
	1898 37,500	1131	632	199	79	22	27	174	131
	1899 37,900	1062		200			100		
	1900	20000000	647		90	23	,26	189	119
	38,600 1901	980	789	188	144	45	33	196	183
1901	38,211 1902	858	620	145	100	33	20	166	156
38,212	38,712	891	569	135	58	32	27	174	143
	1903 39,114	941	501	117	51	17	18	151	147
	1904 39,516	820	606	123	110	35	29	160	149
		020	000	120	110	33	20		65 and
	1905 39,918	818	562	118_	61	31	30	25 to 65 216	upwards 106
	1906 41,164	811	540	111	65	19	18	202	125
	1907 41,864	876	527	104	49	21	26	217	110

TABLE IX.

Death-rates per 1,000 of the Population in the various Wards of the Borough.

Wards	Central	West- Central	North- East—	North- West	South- East.	South- West	Death Rate per
Population	7660	4061	10.024	5670	6995	7454	Month
1907.							
January	26.63	23.63	9.57	23.28	20.58	16.09	18.91
February	18.79	2.95	11.97	29.62	15.43	16.09	16.05
March	12.53	11.81	15.56	14.81	10.29	14.48	13.47
April	7.83	17.72	10.77	16.93	18.87	9.65	12.89
May	20.36	20.68	22.74	10.58	6.86	20.92	17.48
June	7.83	17.72	9.57	10.58	10.29	19.31	12.03
July	10.96	0.00	9.57	10.58	8.57	6.43	8.31
August	6.26	5.90	9.57	8.46	8.57	8.04	8.02
September	4.69	14.77	8.37	6.34	8.57	8.04	8.02
October	7.83	2.95	9.57	19.04	3.43	11.26	9.17
November	10.96	11.81	14.36	21.16	10.29	6.43	12.32
December	18.79	20.67	15.55	16.92	8.57	8.03	14.32
Average	12.79	12.55	12.27	15.69	10.86	12.07	12.58

#### DEATHS FROM CONSUMPTION.

Tabes Mesenterica	0
Tubercular Meningitis	3
Tubercular Peritonitis	2
Phthisis Pulmonalis	35
Tubercular Disease of Testes	1
General Tuberculosis	2
	-
	43

#### DEATHS OF PERSONS 65 YEARS AND UPWARDS.

Senile Decay	25
Bronchitis and Pneumonia	18
Heart Disease	12
Apoplexy	16
Injuries	0
Phthisis	0
All other causes	39
	110

TABLE X.—Bronchitis.

Deaths at the different age periods during the last fifteen years.

	Under 1 year.	1 to 5.	5 to 15	15 to 25	25 to 60	60 and upwards.	TOTAL
1893	41	24	3		12	29	109
1894	27	20			7	17	71
1895	24	13			21	26	84
1896	36	28			10	20	94
1897	25	13			22	26	86
1898	22	12			10	21	65
1899	29	12			16	16	73
1900	18	7			20	36	81
1901	16	10			11	30	67
1902	19	8	1		7	22	57
1903	17	8			4	20	49
1904	8	10			11	19	48
						65 and	
		and the same	-	POST-POT IN	25 to 65	The second secon	
1905	15	5			12	19	51
1906	16	5			11	23	55
1907	16	9		1	10	12	48
Total	329	184	4	1	184	336	1038

#### TABLE XI.—Pneumonia.

Deaths at the different age periods during the last fifteen years.

Allegalik	Under 1 year.	1 to 5.	5 to 15.	15 to 25	25 to 60	60 and upwards	Total.
1893	8	8	1	1	24	8	50
1894	5	4	1		19	4	33
1895	9	4	1	1	15	4	34
1896	9	. 9	2		17	3	40
1897	14	12	2	2	31	10	71
1898	11	13	3		18	8	53
1899	12	14	2		21	8	57
1900	20	28	3	1	25	11	88
1901	19	14	1		15	11	60
1902	16	12	2	2	28	4	64
1903	8	8	1		18	6	41
1904	13	19	1		15	5	53
						65 and	
D 1 15 15.0			10000		25 to 65	upwards	
1905	12	12	6		13	4	47
1906	11	19	5	5 2	20	6	66
1907	18	16	3	2	17	6	62
	185	192	34	14	296	98	819

TABLE XII.—Phthisis.

Deaths at the different age periods during the last fifteen years.

	Under 1 year	1 to 5	5 to 15	15 to 25	25 to 60	60 and upwards	Total
1893					35	4	39
1894		1	1	1	42		45
1895					34	4	38
1896	1	1			25	2	29
1897					26	1	27
1898					26	2	28
1899			1	2	26	2	31
1909	1		1	1	25	2	30
1901			1	2	23	3	29
1902		2			27	2	31
1903			1	1	18	2	22
1904	1	3	3		28	3	38
						65 and	
					25 to 65	upwards	
1905		1		8	24	3	36
1906			1	2	16		19
1907		1	1	5	28		35
	3	9	10	22	403	30	477

### TABLE XIII.

		SMALL POX.		SCARLET FEVER.		Diphtheria.		MENBRA- NEOUS CROUP.	
	TOWNS.	Num- ber.	Rate per 1000	Num- ber.	Rate per 1000	Num- ber.	Rate per 1000	Num- ber.	Rate per 1000
1.	Hyde			245	7.47	14	0.42	3	0.09
2.	Stockport	1	0.01	408	4.39	54	0.58	1	0.01
3.	Macclesfield			67	1.93	47	1.35	1	0.02
4.	Crewe			435	10.33	36	0.85	1	0.02
5.	Chester			91	2.37	209	5.45	2	0.05
6.	Birkenhead		0.00	293	2.64	211	1.90	15	0.13
7.	Wallasey			250	4.66	94	1.75		***
8.	Bootle			255	4.23	54	0.89		0.00
9.	Liverpool		0.02	2745	3.89	914	1.29	21	0.02
10.	Waterloo-with-Seaforth		0.04	98	4.24	23	0.99	4	0.04
11.	St. Helens	10000		204	2.41	189 24	0.83	-	
13.	Southport			90	1.87	19	0.39	***	***
14.	Ince-in-Makerfield		***	39	1.83	13	0.61	***	***
15.	Wigan		***	174	2.11	66	0.80		
16.	Warrington		****	308	4.79	69	1.07	4	0.06
17.	Leigh		***	252	6.29	25	0.62	2	0.04
18.	Bolton	200	***	865	5.14	81	0.48	4	0.02
19.	Bury	1000	***	40	0.68	38	0.65	7	0.12
20.	Heywood		***	35	1.37	11	0.43	1	
21.	Radcliffe			70	2.75	111	0.43	2	0.07
22.	Eccles			184	5.35	30	0.87		
23.	Stretford	200		124	4.07	40	1.31	1	0.03
24.	Swinton and Pendlebury			65	2.40	25	0.92	5	0.18
25.	Gorton	0.000		381	14.34	10	0.37	2	0.07
26.	Manchester	The second second	0.00	2931	4.83	514	0.84	53	0.08
27.	Salford	112	0.03	10.44	4.72	370	1.67	16	0.07
28.	Ashton-under-Lyne		0.18	285	6.49	5	0.11	1	
29.	Stalybridge			79	2.85	5	0.18	5	0.18
30.	Chadderton			72	2.89	24	0.96	3	0.12
31.	Middleton			44	1.74	44	1.62	9	0.35
32.	Oldham			517	3.76	66	0.48		
33.	Rochdale		0.01	239	2.87	96	1.15	7	0.08
34.	Accrington			86	1.99	41	0.95	3	0.06
35.	Haslingden			24	1.29	41	2.21	3	0.16
36.	Rawtenstall			86	2.76	9	0.28		***
37.	Burnley			503	5.18	75	0.77	2	0.02
38.	Colne			99	4.30	5	0.21	4	0.17
39.	Nelson			104	3.16	35	1.06	***	
40.	Blackburn		0.01	537	4.15	144	1.11	4	6.03
41.				19	0.71	13	0.48		
42.	Preston	-		246	2.17	60	0.53	2	0.01
43.	Blackpool			178	3.75	84	1.77	***	***
44.	Fleetwood			40	3.31	5	0.41		
45.	Lancaster			55	1.36	15	0.37		0.05
46.	Barrow-in-Furness				3.24	55	0.95	3	0.05
47.	Darwen	. 1	0.02	26	0.68	22	0.57		1

### TABLE XIII.

n.		FEVERS.										CHOLERA.		ERYSIPELAS	
of Town	Typhus. Typ		Тург	PHOID. CONTINUE		NUED.	ED. RELAPSING.		PUERPERAL.						
Number o	Num- ber.	Rate. per 1000	Num- ber.	Rate, per 1000	Num- ber.	Rate, per 1000	Num- ber,	Rate. per 1000	Num- ber.	Rate. per 1000	Num- ber.	Rate. per 1000	Num- ber.	Rate. per 1000	
1 2			20 36	0.61 0.38					1 4	0.03			38 57	1.15	
3 4			11 5	0.31					4	0.11			8	0.23	
5		***	12	0.31	***				1	-0.02		***	23 14	0.54	
6	***		68	0.61	4	0.03			4	0.03		***	72	0.64	
8			32 51	0.59			***		4	0.07	***		45 29	0.83	
9	iii	0.15	462	0.65	35	0.04	1	0.00	56	0.07		***	794	1.12	
10			15	0.64					1	0.04			14	0.60	
11	***	***	61	0.72		***			10	0.11		***	88	1.04 0.59	
13			13	0.27		***							27	0.56	
14			23	1.08	1	0.04							31	1.45	
15 16			107	1.29 0.32		***	***		8	0.09			77	0.93	
17			39	0.97				***	9	0.14	****	***	21 47	0.32	
18			139	0.82				***	18	0.10			89	0.52	
19			18	0.31	1	0.01	***		15	0.25			34	0.58	
20 21		•	7	0.27					7	0.27			20	0.78	
22	1	0.02	11	0.43		***			2	0.07	***		21	0.82	
23			14	0.45					i	0.03			19	0.64	
24	:		17	0.62	1	0.03			5	0.18			35	1.29	
25 26			24	0.90					2	0.07	***		23	0.84	
27	1	0.00	288 94	0.47		0.02		•••	99 23	0.16			353 134	0.58	
28			16	0.36	5	0.02			1	0.02			28	0.63	
29			9	0.32					1	0.36			. 8	0.28	
30			9	0.36					1	0.04			11	0.44	
32	***		7 22	0.27 0.16			***		- 8	0.19 0.05	***	***	8 96	0.31 0.69	
33			15	0.18					10	0.12			50	0.60	
34			22	0.51					4	0.09			28	0.64	
35 36			14	0.57					2	0.10	***		16	0.86	
37	-		15 43	0.48		7000			6	0.19 0.15		***	26 119	0.83	
38			5	0.44 0.21		***	100		15	0.13			22	0.95	
39			5	0.15		***			ī	0.03			25	0.76	
40			60	0.46					24	0.18			100	0.77	
41	3	0.02	100	0.14		0.01			1 5	0.03			11 74	0.40 0.65	
43		0.02	109	0.96	5	0.04			5 2	0.04			12	0.05	
44			4	0.33					ī	0.08			1	0.08	
45	333		24	0.59		***			3	0.07		***	30	0.74	
40			25	0.43		***			6	0.10			65	1.12	
141	1		21	0.54	***	1			1				13	0.34	

TABLE XIV.

NOTIFICATION OF INFECTIOUS DISEASES IN EACH WARD, AND FOR

EACH MONTH OF THE YEAR 1907.

Erysipelas. Diphtheria. Puerperal Fever. Total.	4	9		-	:	:		-	:	:	:	16	084
Erysipelas. Diphtheria.	4												And in case of the last of the
Erysipelas.		9	:	00	-	61	:	:	- :	63	:	4	155
The second secon	1 :	-	-	-	-		61	0	-	:	-	4	142
'IDAGA DIOUGAT	1 00	_	10	-	:	:	:	63	:	-	4	4	211
Typhoid Fever.	-	61		9	00	4	-	-	:	:	4	4	262
	1 :	:		-	:	:	:	30	:		:		12
		-	-	-	-	-	+	-	-		-	-	
	61	60	- :	- 1		:	-	:	:	-	:	2:0	120
	:	-	:		-:		-	:	:	-	:	-	101
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Small Pox.			:				:	-	:	:		:	1-
MONTHS.	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTALS
	Small Pox. Scarlet Fever. Bearlet Fever. Typhoid Fever. Erysipelas. Diphtheria. Brysipelas. Erysipelas. Diphtheria. Brysipelas. Brysipelas. Typhoid Fever. Typhoid Fever. Brearlet Fever. Typhoid Fever. Brysipelas. Brysipelas. Brysipelas. Diphtheria. Brysipelas. Brysipelas. Brysipelas. Brysipelas. Brysipelas. Diphtheria. Brysipelas. Brysipelas. Brysipelas. Brysipelas. Diphtheria. Brysipelas.	Small Pox.  Scarlet Fever.  Erysipelas.  Bearlet Fever.  Typhoid Fever.  Erysipelas.  Branch Fever.  Typhoid Fever.  Erysipelas.  Branch Fever.  Typhoid Fever.  Erysipelas.  Branch Fever.  Typhoid Fever.  Typhoid Fever.  Branch Fever.  Typhoid Fever.  Typhoid Fever.  Brancheral Fever.  Typhoid Fever.  Typhoid Fever.  Brancheral Fever.  Typhoid Fever.  Brancheral Fever.  Typhoid Fever.  Brancheral Fever.	Small Pox.  Scarlet Fever.  Typhoid Fever.  Brysipelas.  Brysipelas.	Small Pox.  Scarlet Fever.  Lyphoid Fever.  Brysipelas.  Brysipelas.	Small Pox.  Small Pox.  Scarlet Fever.  Liveipelas.  Diphtheria.  Erysipelas.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Diphtheria.  Erysipelas.  Diphtheria.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Diphtheria.  Erysipelas.  Diphtheria.  Diphtheria.  Diphtheria.  Erysipelas.  Diphtheria.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Erysipelas.	MONTHS  THOM Small Pox.  Scarlet Fever.  Typhoid Fever.  Erysipelas.  Diphtheria.  Bearlet Fever.  Typhoid Fever.  Typhoid Fever.  Bearlet Fever.  Typhoid Fever.  Typhoid Fever.  Bearlet Fever.  Typhoid Fever.  Brasilet Fever.  Typhoid Fever.	T. Small Pox.  Small Pox.  Scarlet Fever.  Typhoid Fever.  Erysipelas.  Diphtheria.  Puerperal Fever.  Typhoid Fever.  Erysipelas.  Diphtheria.  Diphtheria.  Puerperal Fever.  Typhoid Fever.  Typhoid Fever.  Bearlet Fever.  Typhoid Fever.  Typhoid Fever.  Bearlet Fever.  Typhoid Fever.  Typhoid Fever.  Bearlet Fever.  Typhoid Fever.  Diphtheria.  Erysipelas.  Diphtheria.  Diphtheria.  Erysipelas.  Diphtheria.  Typhoid Fever.  Typhoid Fever.  Bearlet Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Bearlet Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Diphtheria.  Diphtheria.  Diphtheria.  Diphtheria.  Diphtheria.  Diphtheria.	MONTHS  THARK  ARRY  Scarlet Fever.  Diphtheria.  Erystpelas.  Diphtheria.  Diphtheria.  Layphoid Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Erystpelas.  Diphtheria.  Erystpelas.  Diphtheria.  Erystpelas.  Diphtheria.  Erystpelas.  Diphtheria.  Erystpelas.  Diphtheria.  Layphoid Fever.  Erystpelas.  Diphtheria.  Diphtheria.  Erystpelas.  Diphtheria.  Erystpelas.  Diphtheria.  Diphtheria.  Erystpelas.  Diphtheria.  Diphtheria.  Diphtheria.  Erystpelas.  Diphtheria.  Diphtheria.	MONTHS  THARK  Small Pox.  Scarlet Fever.  Typhoid Fever.  Typhoid Fever.  Erysipelas.  Diphtheria.  Diphtheria.  Typhoid Fever.  Typhoid Fever.	Small Pox.    Small Pox.	Small Pox.  Small Pox.  Small Pox.  Diphtheria.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Erysipelas.  Diphtheria.  Scarlet Fever.  Typhoid Fever.  Typhoid Fever.  Typhoid Fever.  Erysipelas.  Diphtheria.  Erysipelas.  Diphtheria.  Typhoid Fever.  Typhoid Fever.  Erysipelas.  Diphtheria.  Diphtheria.  Typhoid Fever.  Typhoid Fever.  Diphtheria.  Erysipelas.  Diphtheria.  Typhoid Fever.  Erysipelas.  Diphtheria.  Typhoid Fever.  Typhoid Fever.	Small Pox.  Small Pox.  Scarlet Fever.  Diphtheria.  Puperal Fever.  Typhoid Fever.  Carlet Fever.  Typhoid Fever.  Diphtheria.  Puerperal Fever.  Typhoid Fever.  Typhoid Fever.  Diphtheria.  Puerperal Fever.  Typhoid Fever.  Typhoid Fever.  Diphtheria.  Bearlet Fever.  Typhoid Fever.  Typhoid Fever.  Diphtheria.  Bearlet Fever.  Typhoid Fever.  Typhoid Fever.  Diphtheria.  Bearlet Fever.  Lever.  Diphtheria.  Diphthe	Small Pox.    Small Pox.   Small Pox.

# Infantile Mortality.

For many years now I have made this particular branch of Public Health the key note of my reports. The general Death-rate has been going steadily down owing to the vigorous measures taken in the direction of sanitary improvements. The rate under consideration last year reached the very low figure of 118 per 1000 births. There are two causes which have brought about this result. The first is what we may call a mechanical one, viz., the low birth rate giving us fewer children to succumb, and secondly the various steps which we have taken to deal directly with infants, one being the early Notification of Births Bill which came into force on the 1st January, and was optional, and put into operation on 16th March this year. This of course could not affect our rate for last year, but in anticipation of some such measure I have for some years, through the agency of the District Nursing Association, given particular instructions in the proper feeding of infants, and I honestly believe that these instructions are now bearing fruit.

To re-iterate these instructions:—A baby from birth should be fed on pure unmixed cows milk with 5 per cent. lime water and 5 per cent. sugar. A baby's stomach has a capacity of as many ounces as he is months old, or divide the age of the infant in weeks by two, this represents the number of tablespoons of food to be given at each feeding.

Regularity of feeding is a sine qua non of perfect health. This applies to babies of the average weight at birth, viz.,  $6\frac{1}{2}$  pounds.

To get greater accuracy it is necessary to know the weight of a child at each month. The stomach capacity at birth is 1/100 of its body weight, during the second month 1/66, third month 1/50, fourth month 1/46, fifth month 1/36, and the sixth month 1/32. With these figures at hand it is easy to compute the amount of food to be given during each month, whatever the weight of the child.

During the month of March I attended the second Conference on Infantile Mortality, at the Caxton Hall, London. The meeting was characterised by great enthusiasm and good work. There were many papers read and resolutions carried, with probably some useful recommendations to Parliament by the Executive Council.

Our present Mayor, Councillor George Pickup Holden, with a view to encouraging the mothers to take an interest in the early notification of births, and consequently in the after care of their babies is giving to each child born after a certain date, up to the end of his year of office, a cup on which is inscribed "A gift from the Mayor and Mayoress." His particular object was to give the Inspector a reason for calling at the house, and so making the duty somewhat lighter.

Early this year the Council appointed Miss Glass as "Lady Health Visitor." She entered on her duties on February 1st. When a birth is notified Miss Glass calls at the house, makes the usual inquiries, enters these in her visiting book, and gives instruction, where she thinks necessary, in the washing, dressing and feeding of babies. I may say these visits are mostly favourably received, at others they are somewhat resented.

The medical men in practice in the town opposed the adoption of the new Act for reasons taken pretty nearly all over the country, that such a duty should not be imposed, a possible penalty without a fee, as in the notification of infectious diseases. I agree with the objection, but I advised the Council on its adoption, as in my opinion good would come from it; and I was prepared to waive any objection for the good of the coming generations.

Miss Glass advises the course of feeding as outlined in this report.

Miss Glass also attends at the Health Office every Saturday afternoon to advise all mothers who may attend, and weigh the babies.

She also spends part of her time in visiting the schools, examines all the children, with a view to ascertaining the presence of vermin and the condition of their bodies and heads for skin diseases and nits. She prepares a report of these for me, and I then visit the children and make my examination.

There is no doubt about the results of the above measures being beneficial in reducing the infant death-rate. The result of sending out instructions on the artificial feeding of children, and the introduction of municipal milk shops, is to lesson the number of breast-fed infants, as the mothers look upon the instructions as being meant to replace mothers' milk giving it an official authority. For this reason it is not wise to encourage these milk shops, but to secure a purer and better milk supply from the farmers, by exercising supervision over the farms and dairies.

104 Infants died during the year.

This is at the rate of 118 per 1,000 Births.

2.48 per 1,000 of Population.

19.73 per cent. of total Deaths.

Premature Birth		Females.	 Total. 18
Convulsions	5	 4	 9
Bronchitis and Pneumonia	19	 15	 34
Diarrhœa	- 2	 1	 3
Whooping Cough	2	 2.	 4
Inanition	5	 0	 7
Other Diseases	20	 9	 29
	65	39	104
		-	

	Males.	1	emales.		Total.
Diseases of the Respiratory System	20		15		35
Diseases of the Digestive System	15		4	1	19
Developmental Diseases	13		6		19
Diseases of the Nervous System	9		9		18
Zymotic Diseases	4		3		7
Infective Diseases	1		0		1
Diseases of the Urinary System	1		0		1
Inquests	1		1		2
Uncertified	1		1		2
	65		39		104

What is known as Infantile Mortality all over the country is the relation of deaths per annum of children under twelve months old to one thousand births for the same period.

The rate for Darwen is 118, somewhat lower than is usual, but yet much higher than it should be.

At least we should aim at keeping this Infantile Death-rate below 100 per 1,000 births, and consider every death above that as a preventable one, and, consequently, an unnecessary one.

PREMATURE BIRTH.—Eighteen prematurely born children died during the year, as compared with Eighteen in the previous year.

TUBERCULOR DISEASES (with the exception of the lungs) are due to the milk, and in every case the milk should be scalded before being used. We are trying to get our milk supply as good as possible. With careful attention to the animals I hope for better things.—See remarks on Farms.



### GOVERNMENT TABLE V.

### NAME OF DISTRICT—DARWEN.

### INFANTILE MORTALITY DURING THE YEAR 1907.

Deaths from stated Causes in Weeks and Months under One Year of age-

CAUSE OF DEATH.		1-2 Weeks	2-3 Weeks	3-4 Weeks	Total und'r 1 m'nth	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total Deaths under
All Causes—					700												
Certified	18	2	5	7	32	11	10	7	6	9	4	5	3	9	5	1	102
Common Infectious Diseases—					***								-				-
Small Pox																	
Chicken-pox																	
Measles																	
Scarlet Fever																	
Diphtheria: Including Memb. Croup.																	
Whooping Cough						1	1						1	1			4
Diarrhœal Diseases—	8									100							
Diarrhœa, all forms						1	1		1								3
Enteritis, Muco-enteritis						1	1		1				0.03	1			4
Gastro-enterrus			1	1			1										
Gastritis Gastro-intestinal Catarrah Wasting Diseases—			1		2		1			1	***	***	***			***	4
Premature Birth	11	1	1	2	16	1	1										18
Congenial Defects	1	i	î	1	4			***			***				***		10
Injury at Birth												1					
Want of Breast-milk, Starvation																뼳	
Atrophy, Debility, Marasmus	5				5	1		1									7
Tuberculous Diseases—							1000										
Tuberculous Meningitis										1		1	1				5
Tuberculous Peritonitis Tabes																	
Mesenterica													***				
Other Tuberculous Diseases																	
Other Causes— Ervsipelas						ı									10		
A A.		10000		***					***			***			***		**
Rickets Meningitis (not Tuberculous)																	**
Meningitis (not Tuberculous)		***			***				111	9	***		100	1			-
Convulsions	<b>MARKET</b>	100000	10000	1			100000	200000	DOM:	_	1	1		î	1		9
Bronchitis					1	1 3		4		2	1	1	1	2	1		10
Laryngitis																	
Pneumonia	1			1	2	1	3		1	3	1	2		2	2	1	18
Suffocation, overlying Other Causes																	
	2				2	1	2		3		1			1	1		1
	20	2	5	7	34	11	10	7	6	9	4	5	3	9	5	1	10-
D-14: ( 1: + 1 +:1	21	-	20	1	00	7)	-			1		4	1.0	00	1	1,	
Population (estimated to mid	ale	e	OI	1	901	)						4	1,8	09	ŧ		

Population (estimated to	middle	of 1907) 41,864	
Deaths in the year of—	Bi	rths in the year—	
Legitimate Infants	99	Legitimate	847
Illegitimate Infants	5	Illegitimate	29
Deaths from all Causes at	all ages.	527	

The list of children who have died during the year here appended, is in continuation of such information which has been in the report for two previous years.

On this occasion the information was obtained by Miss Glass owing to her appointment being made before the Notification of Births Bill came into operation. In previous years the Inspectors went round enquiring.

I am sorry to say when the Lady Health Visitor visited the houses some exception was taken by the Medical men, as they looked upon her action as being officious instead of official. I fully believe Miss Glass used her position as delicately as possible, and did everything not to hurt the parents' feelings.

The information is very valuable, as it enables us to see the weak points in the present day method of feeding. I do not say it is the feeding in all cases, as some of the children died from complaints with which feeding can have no direct influence, but one point is brought prominently forward, and that is the number of mothers who have gone back to work. Where breast feeding is indulged in this is an anomaly, as a woman must put the baby to the breast at regular intervals or the quality of the milk will be impaired.

Other infants were fed on mixed foods, partly breast\_and partly artificial. This is an impossible combination, unless the mother puts the child to the breast at the stated times, and makes up the deficiency with the bottle. By this means I believe good would accrue.

The question of adding water to cows milk comes to our notice. This, in my opinion, is altogether wrong. The proportion of fat along with the proteids is reduced, and enough care is not exercised to bring back the fat to its proper proportion. The absence of fat renders it an impossible food, and no doubt is a cause of so many children being weak and puny, and unable to withstand the attack of sickness.



# Deaths of Infants during 1907, with Cause of Death and Method of Feeding.

	THE PARTY OF THE P	a light to an insepan h		Mother goes out to work.	7		Mother goes out to work.		Mother goes out to work.	0
Kind of Food given	Tinned milk Breast-fed 3 months, for 1 month fed on mixture of whey, brandy, bovril and Balon metals	Milk and Water. Milk and water, equal parts. Breast-fed Breast-fed a months, prepared	Milk and prepared barley,	Breast first week, milk and water	Breast-fed. Milk and Barley water every	Milk and water, equal parts Breast 3 months, milk and	Water, Milk and bread.  Milk and water given with teaspoon.	Milk and water, equal parts every 2 hours.	Prepared food.  Breast-fed.  Breast-fed 10 weeks, bread	None.
Kind of Bottle used	Bottle with long tubing None.	Boat-shaped bottle. None. Bottle with long tubing.	Bottle with long tubing	Bottle with long tubing	None. Boat-shaped bottle.	Boat-shaped bottle. Bottle with tubing.	None.	Boat-shaped bottle.	Bottle with long tubing.  None.	None. None;
Cause of Death	Bronchial Pneumonia Nephritis & Convulsions	Convulsions Acute Gastritis. Convulsions. Bronchitis & Convulsions.	Catarrhal Pneumonia.	Epucpsy.  Broncho-Pneumonia &	Convulsions Hepatitis.	Want of breast-milk. Convulsions.	Premature birth	Meningitis Friedmith's Areais	Whooping Cough. Bronchitis Convulsions.	Septic Pneumonia. Premature hirth
Age	7 months 4 months	3 months 24 days. 4 days 25 weeks	5 months	4 months.	1 month.	3 months 6 months	1 month	9 months	8 months. 3½ months 3 months	2 days.
Date of Death	Dec. 31, 1906 Jan. 18, 1907	Jan 31st, 1907 Feb. 4, 1907 Feb. 27 1907 Feb. 15, 1907		Jan. 20, 1907		Feb. 1 1907 Feb. 5, 1907	Feb. 7, 1907	Feb. 8, 1907	12.	Feb. 20, 1907 Feb. 22, 1907
No.	- 61	601+3	1 0	-		121	13	14		19

Deaths of Infants during the year 1907, with Cause of Death and Method of Feeding-continued.

ne	ilk and Mother goes out to work	hottle	-	Mother goes out to work.	milk and	Mother goes out to work.	equal parts. Mother goes out to work	e water,	Mother goes out to work.	l parts.	er with	Mother goes out to work.	part water.			rater. Mother goes out to work.	pu	Mother goes out to work.	Mother goes out to work.  Mother goes out to work.		
Kind of Food given	Breast and bottle, milk and	None. Breast for 6 weeks.	ards 3 months		Breast and Bottle, m	water, equal parts.	None.		prepared food.  Breast-fed 5 months,	water and milk, equal parts.	Breast-fed. Milk and barlev water with	teaspoon. Breast-fed.	-	None.	Barley water and milk	Breast-fed. Milk, cream, and lime water.	Breast and milk, water and	None.	None. Milk and prepared food	Breast-fed.	Descriptional ford
Kind of Bottle used	Bottles with tubing.	None.	Rottle with tubing	Boot chaned hottle	Bottles with tubing.	Boat-shaped bottle.	None. Boat-shaned hottle.	Bottle with tubing.	Bottle with tubing.	Bottle with tubing.	None.	None.	Boat-shaped bottle.	None	Boat-shaped bottle.	None. Boat-shaped bottle.	Bottle with tubing.	None.	None. Rottle with tubing	None;	Details mith lane to bine
Cause of Death	Bronchitis	Inanition Acure Catarrhal Gastritis	(Inquest) Convulsions	Contribution (Section of Section	Gastro Euteritis, Con-	vulsions.  Prematurity.	Prematurity.	Inanition.	Broncho Pneumonia	Teething and Convulsions.	Meningitis. Prematurity.	Teething, Bronchitis, and	Convulsions Acute Intussusception	Prematurity, Imperforate	Branchitis, Convulsions.	Convulsions.	Broncho Pneumonia.	Prematurity.	Prematurity.	Convulsions.	
Age	1 month.	26 hours.	o montins.	o months	14 days.	2 months	2 days	3 davs.	9 months	10 months	5 months	9 months	2 months	2 days	5 months	1 month	4 months	6 hours.	12 hours	22 days	afen an
Date of Death	Feb. 25, 1907	March 2, 1907	March 2, 1907	¥ :	Mar. 9, 1907	Mar. 9, 1907	15,	Mar. 27, 1907	20.	00	Mar. 31, 1907		April 10, 1907	April 14, 1907	16.	April 22, 1907		May 7 1907		May 9, 1907	
No.	21	61 6	07 6	# 10°	26	27	67.0	30	31	9.0	200	35	36	37	38	39	4	42	43	44	0.

Deaths of Infants during the year 1907, with Cause of Death and Method of Feeding-continued.

	Mother goes out to work	Mounte goes out to work.		Mother goes out to work	Thomas goes to more	Mother goes out to work.		Mother goes out to work.		Mother goes out to work.		Mother goes out to work. Mother goes out to work.	Mother goes out to work.	Mother goes out to work.  Mother goes out to work.
Kind of Food given	Milk and barley water.  Breast and rusks soaked in	Brandy and water given with	spoon. Breast fed.	Breast, milk and Barley water,	equal parts. Sterilised milk, lime water and	Sugar. Breast-fed. Breast-fed. Breast-fed 10 weeks, Pure	None. Barley water and milk equal	parts. Milk and water, equal parts. Milk and barley water.	None. Milk and water every 2 hours.	None Breast-fed.	Breast-fed I month, then milk little water and sugar.	Breast-fed. Milk and barley water. Breast-fed. also with husks in	water sweetened Breast 6 weeks, then milk,	lime water and sugar Breast-fed. Breast 4 days, then milk and water, equal parts.
Kind of Bottle used	Bottle with long tubing. None.	None.	None.	Bottle with tubing.	Bottle with tubing.	None. None. Boat-shaped bottle.	None. Boat-shaped bottle.	Bottle with tubing. Bottle with long tubing.	None. Boat-shaped bottle.	None. None.	Bottle with long tubing.	None. Boat-shaped bottle. None.	Boat-shaped bottle.	None. Boat-shaped bottle.
Cause of Death	Broncho Pneumonia. Euteritis.	Inanition	Bronchitis and Convul-	Acute Bronchitis.	Broncho Pneumonia.	Enteritis. Congenital defect in colon Euteritis and Convulsions	Congenital Atelectasis Acute Bronchitis.	Bronchitis. Catarrhal Pneumonia.	Broncho Pneumonia and	Convulsions.  Premature bir*h.  Whooping Cough and Convulsions.	Diarrhœa & Convulsions.	Perbussis Diarrhea & marasmus Larvneismus Stridulus.	Whooping Cough.	Premature Birth. Prematurity & Inanition.
Age	9 months 4 months	4 days	15 days	3 months	5 months	5 weeks. 24 days 3 months	2 days 3 months	8 months 10 months	5 months	1 day 1 month	10 weeks	2 months. 28 days 11 weeks	9 months	11 days 21 days.
Date of Death	May 11, 1907 May 12, 1907	May 17 1907	May 17 1907	May 20, 1907	May 22, 1907	May 24, 1907 May 24, 1907 May 28, 1907	May 29, 1907 June 1, 1907	June 2, 1907 June 6, 1907		June 15, 1907 June 19, 1907	July 15, 1907	July 26, 1907 July 31, 1907 Aug. 18, 1907	26,	Sept. 6 1907 Sept. 18, 1907
No.	48	49	20	51	52	54	56	59	-	63	64	65 66 67	89	69

Deaths of Infants during the year 1907, with Cause of Death and Method of Feeding-continued.

State of Street and	Mother goes out to work.	Mother goes out to Work.	Mother goes out to work.	Mother goes out to work.		Mother goes out to work.		Mother goes out to work.	Mother goes out to work.	Mother goes out to work.	Mother goes out to work.	Mile of the Treat, the	Mother goes out to work.	The state of the s
Kind of Food given	Milk, lime water and sugar. Breast-fed Milk.	None. Milk and water. Milk and water, equal parts, every 3 hours.	Breast-fed. 3 parts milk to 1 part water.	Milk and barley water. Breast-fed.	Breast-fed until last week, then fed on milk, brandy and	Cornflour Milk and water given with teaspoon.	Milk and water given with	Breast-fed I month, then milk and lime water (equal parts)	Milk, lime water and sugar. Milk, lime water and sugar.	Breast 3 weeks, bottle 1 week, milk and barley water.	None. None. Will and water breast 5 months	Milk and water 5 months, pure	None.	None.
Kind of Bottle used	Boat-shaped bottle.  None.  Boat-shaped bottle.	None. Bottle with tubing Bottle with tubing and	None. Boat-shaped bottle.	Bottle with long tubing None.	Bottle with long tubing.	None.	None.	Boat-shaped bottle.	Bottle with long tubing. Bottle with tubing.	Boat-shaped bottle.	None. None.	Boat-shaped bottle.	None.	None.
Cause of Death	Broncho Pneumonia. Influenza, Meningitis. Broncho Pneumonia.	Prematurity. Acute Bronchitis Broncho Pneumonia	Bronchitis.	Tubercular Meningitis. Debility from Prematurity	Diarrhea.	Inanition.	Prematurity.	Broncho Pneumonia.	Broncho Pneumonia. Tubercular Meningitis	Bronchitis, Congenital	Prematurity.	Teething, Convulsions.	Prematurity, Cardiac	Insumerency. Inanition.
Age	10 months 9 months 7 months	1 day. 10 months 2 months	1 month 9 months	8 months	4 months.	4 days	6 days	2 months	28 days. 5 months	1 month	20 hours 20 hours	9 months	16 hours	18 hours
Date of Death	24, 27, 30,	Oct. 9 1907 Oct. 11, 1907 Oct. 15, 1907		4 1 9	Nov. 15, 1907 Nov. 15, 1907	Nov. 15, 1907	Nov. 16, 1907	Nov. 17, 1907	Nov. 27, 1907 Dec. 6, 1907	Dec. 6, 1907	5,	Dec. 12, 1907 Dec. 15, 1907	Dec. 16, 1907	Dec. 21, 1907
No.		74 75 76			8 8 8	84	85	98	88	88	- Charles	93	94	95

			The second second second second		
	Oct. 7 Oct 22 Nov. 17 Nov. 25 Dec. 25 Dec. 15	June 24 June 20, Aug. 2 Aug. 27 Sept. 2 Sept. 4 Sept. 11,	Apl. 17  May 3  Apl. 20  May 8  May 8  May 22  May 24  June 12  June 16	Feb. 18 Feb. 15 Mar. 5, Mar. 19 Apl. 11	Date of Death.
	Sept. 17, 1907  May 7, 1897  Oct. 23, 1907  June 23, 1907  Apl. 20, 1907  Dec. 27, 1907  Dec. 7, 1957		June 11, 1886 Dec. 10, 1887 Feb. 25, 1907 May 7, 1907 May 3, 1907 Apl. 2, 1907 Apl. 2, 1907	Jan. 15, 1907 Feb. 9, 1907 Jan. 24, 1907 Aug. 16, 1906 Mar. 29, 1907	Date of Admittance to Institution.
	Edward Kenyon Catherine Brown Elizabeth Fish Andrew Lomax James Regan Donald Davidson	Watson Jane McLean William Walsh Mary Harwood James Whewell Thomas Holden Eliza Walsh Joseph Parker Thomas Redman	Richard T. Leigh Alfred Kirkham Grace Holden Elizabeth Moran John Kay Hannah Town Squire Gibson Robert Taylor Sarah Alice	Henry Watson  Mary Decaux  Elizabeth Duck- worth James Pilkington John S. Aspden	NAME.
	F7F F 5 5 7 9.		18, 5, 5, 22 18, 5, 5, 22 18, 33	3, Cockrane Street Back Bury Fold 9a, Entwistle Street 25, Union Street 6, Orchard	ADDRESS.
	Stoker  Blacksmith Wife of a Weaver Widow of Coal Miner Plasterer Clay Moulder Stone-mason	Blacksmith Cotton Waste Sorter Iron Dresser Widow of Labourer Labourer Coal Miner Widow of Horse-keeper Stoker Labourer	Son of Serv Weave Widow Si Cotton Cotton Widow Fitte Cotton Cotton Wife of	Labourer Widow of Labourer Widow of Stone mason Son of a carter Son of a	Occupation.
	Chronic Bronchitis Cerebral Paralysis Senile Decay, Bronchitis Chronic Bronchitis Cerebral Hæmorrage Cerebral Paralysis Bronchitis	Cerebral Hæmorrhage Phthisis	General Tuberculosis Phthisis Senile Decay Morbus Cordis Morbus Cordis Chronic Bronchitis Phthisis Senile Decay	Chronic Bronchitis Cerebral Hæmorhage Senile Decay. Idiocy Phthisis Enteric Fever	DISEASE.
1:					Under 1
					to to 5
-   :					M F 150
0 :	5	111 111 11 1			15 to 25
					N 25 25
-					35 45 45
10					M F 65
12	4			-	65 and up- w'ds
-					
9 1	5 :::1 _ : 1	11211212	. !! _ ! !!		Total.

TABLE XV.

# Showing the Diseases and Age Periods at which Persons have Died.

DISEASES	Ur de	r	to 5	0	to 1	0	13 to 24	)	25 to 35	5	3: te	0	4 to 6	0	1000000	and	То	val.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Alcoholic Gastritis Appendicitis Circhosis of Liver													··i	1			ï	1
Cirrhosis of Liver Enteritis Gall Stones Gastric Ulcer Gastritis								1					1	1 3 2		2	3 1 3	3 4 2
Gastro Enteritis				-					100	000				0.00		2	2 1  6 2	1 2
Obstruction of Bowels							1							1	i		ī	
	14	4	2				1	1					3	10	1	4	21	19
NERVOUS DISEASES.	100			-											100			The same of the sa
Alcoholic Neuritis Apoplexy Cerebral Congestion Convulsions											2	1	2	6	8	8	12 1 7	1-
Convulsions Epilepsy Fredreich's Ataxia Hemiplegia Infantile Paralysis.	0	1		1								1	100				1 3	
Laryngismus Stridulus Locomotor Ataxia Meningitis	1	2	2		····												1 4	
Muscular Atrophy													1		1		1 1 1	
Paratysis															 1	1	ï	
	8		4	1	1			2			2			9	13	9	33	3

# TABLE XV .- (Continued).

DISEASES	Ui de	er	t	0 5	t	5 0 5	t 2	5 0 5	3	5 0 5	t	5 0 5	t	5 0 5	1000000	and ards	То	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
NEW GROWTHS.					-													
Cancer of Breast				13	13	100	1	- 33	36	100		9		2	The Park	2		
Cancer of Liver										ï			2	3 2	ï		3	-
Cancer of Stomach											1		1	1	1	1	3	1
Cancer of Oesophagus													1	1	1	***	2	1
Cancer of Uterus										••••				2		1		3
Cancer of Rectum					•••					•••			3				3 2	
Cancer of Stomach and Liver													1				1	
Cancer of Jaw													î				î	
Cancer of Parotid Gland															1		î	
Cancer of Lung												1						1
Cancer of Tongue													1				1	
Cancer of Ovary														1				1
Cancer of Bowel													1				1	
							-			1	1	2	10	10	5	4	18	18
	***	1	••••	***	•••	•••		•••		1	1	3	12	10	0	4	10	10
Atelectasis Bronchitis Congestion of Lungs Emphysema Phthisis Pneumonia	6	10	4										1 2		 7 	5   6	1 25 1 3 20 31	23
	20	15	13	15	2	2	2	6	10	5	2	7	27	8	7	11	83	69
GENERAL DISEASES.  Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay			 1				 1 			1	1		2	1	1   10	 1  15	1  1 3 1 10	3 16
Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay			 1				 1 			1	1		2	i	 10	 i	1 3 1	1
Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay PRINCIPAL ZYMOTIC DIS- EASES.			1				 1 			 1  1	1		2	1	 10	 1  15	1 3 1 10 16	16
Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay  PRINCIPAL ZYMOTIC DIS- EASES. Diarrhœa.	2		1				 1  1			 1  1	1		2	1	 10	 1  15	1 3 1 10 16	16 20
Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay  PRINCIPAL ZYMOTIC DIS- EASES.  Diarrhœa. Diphtheria			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		  	 	 1 1	  		 1 - 1	1		2 2	 1 3	 iö 11	 1  15 16	1 3 1 10 16	20
Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay  PRINCIPAL ZYMOTIC DIS- EASES.  Diarrhœa. Diphtheria Enteric Fever.	2		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		  		 1 1	  		 1  1	1		2	 1 3	 iö 11	1 15 16	1 3 1 10 16	16 20
Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay  PRINCIPAL ZYMOTIC DIS- EASES.  Diarrhœa Diphtheria Enteric Fever Measles	2		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		  	 	 1 1	  		 1 - 1	1		2 2	 1 3	11	1 15 16	1 3 1 10 16	20
Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay  PRINCIPAL ZYMOTIC DIS- EASES.  Diarrhœa. Diphtheria Enteric Fever. Measles Small Pox	2		1 1	   2  1			 1 1	1 1		 1 1	1		2 2	 1 3	 10 11 	 1  15 16	1 3 1 10 16	200
Alcoholism Diabetes Hæmophilia Pernicious Anæmia Pupura Senile Decay  PRINCIPAL ZYMOTIC DIS- EASES.  Diarrhœa Diphtheria Enteric Fever Measles	2		1 1	   2  1			 1 1	1 1		 1 1	1		2 2	 1 3	11	1 15 16	1 3 1 10 16	16

DISEASES	Ui de	er	t	1 0 5	t	5 0 5	t	5 0 5	t	5	t	5	1	0 55		and ards	То	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Diseases OF THE URINARY SYSTEM.											To the second				TO STATE			10
Bright's Disease	1						1	2	2	2	1	3	5	3	2	2	12 1	12
Cystitis								· ;			· · i				1		1	
Renal Calculus														1				
Uraemia													1		1		2	
	1						1	3	2	2	2	3	6	4	5	2	17	14
CIRCULATORY DISEASES.															40	741		
Arterial Sclerosis		1	100	1		-							1	1	2	1	3	2
Congenital Heart Disease				1														1
Heart Disease						3				1					6	6	25	28
				1	2	3		2	1			5	16	12	8	7	28	31
DEVELOPMENT DISEASES.					-													
Congenital Defects in Intestine Premature Birth	119															:::	1 12	
Spina Bifida																	1	
	14	6															14	(
INFECTIVE DISEASES.																		
Tubercular Disease of Testes													1				1	
Tubercular Meningitis General Tuberculosis	1	2			···												1 2	2
Influenza	1								1				î	3		ï	3	4
Rheumatic Fever Tubercular Peritonitis							1										2 2	
	2	2	-		3		1	1	1		1		3	3		1	11	7
DISEASES CONNECTED WITH PARTURITION.																		
Child Birth Parturition										1								1
rareurition				***			***				-				•••		•••	- 2
	***					***		***		1		1						2

# TABLE XV .-- (Continued).

DISEASES	Ui de	r	to f	0	t	5	t	5 0 5	t	5 0 5	3 t- 4		4 6	0		and ards	To	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	м	F	M	F
DISEASES OF THE GENERA- TIVE SYSTEM. Ovarian Tumour										1								
DISEASES OF ORGANS OF LOCOMOTION.  Gangrene of Foot						-		-		-						1 1		
																2		-
DISEASES OF THE EAR. Suppuration of Middle Ear										1								
Drowned					100000			1								 i	4 2 1	
							1			1	1		5			1	7	
INQUESTS.	1	1				1						2	6	2	2		9	
UNCERTIFIED.	1	1							1	1				1			2	
						-	-		_	-						_		

# Deaths in Regard to Occupation.

Accidents.		Arterial Scierosis.	
Cotton Weaver	1	Cotton Mill Manager	1
Knocker-up	1	Cotton Weaver	1
Labourer	1	Housewives	2
	_	Inn-Keeper	1
	3	The Street Canada and the Street Control of	-
			5
Aleskalla Castalla			
Alcoholic Gastritis.			
Cotton Winder	1		
	-	Asthma.	
Alcoholic Neuritis.		Cotton Weaver	1
Housewife	L		
Housewife	with .		
Alcoholism.		Biliary Calculus.	
Clog-Block Maker	1	Housewives	2
Appendicitis.			
Butcher	1	Bright's Disease.	
Apoplexy.		Caretaker	1
прориску.		Collier	1
Block Cutter	1	Cotton Spinner	1
Caretaker	1	Cotton Tape Sizer	1
Club Steward	1	Cotton Warper	1
Collier	1	Cotton Weavers	3
Cotton Twister	1	Cotton Winder	1
Cotton Weavers	2	Dressmaker	1
Furniture Dealer	1	Farm Labourer	1
Grocers	2	Green Grocer	1
Housewives	13	Housewives	6
Inn-Keeper	1	Labourers	2
Twing-Doglor		The second secon	1
Tripe-Dealer	1	Paper Reeler	
Impe-Dealer	25	Paper Reeler	21

### Bronchitis.

### Cancer of Liver.

anileaugan a	to be	Cotton Mill Overlooker	1
Brick-layer	1		1
Coal Dealer	1	Hotel Manageress	0
Collier	1	Housewives	2
Cotton Mill Overlooker	1	Labourer	1
Cotton Spinner	1	Printer	1
Cotton Weavers	2		6
Housewives	7		-
Iron Broker	1		
Iron Moulder	1		
Iron-stone Miner	1	Cancer of Lung.	
Joiner	1	Cotton Card-room Hand	1
Oil and Tallow Merchant	1	Cotton Card-room Hand	100
Railway Goods Inspector	1		
Shoe Maker	1	Cancer of Oesophagus.	
	21	Calico Printers Finisher	-1
	_	Hotel Keeper	1
		Housewife	1
			-
Cancer.			3
Cotton Weaver	1		
Labourer	1		
Police Constable	1	Cancer of Parotid Gland.	
Tolico constanza	_	attrakting to	24
	3	Clogger	1
		Cancer of Rectum.	
Cancer of Breast.		Cotton Weaver	1
Book-Binder's Assistant	1	Labourer	1
Housewives	6		-
110usewives	_		2
	7		
	-		
		Cancer of Stomach.	
Cancer of Bowel.		Farmer	1
Labourer	1	Flagger and Slater	1
Labourer	0.7	Housewives	2
		Yeast Dealer	1
Cancer of Jaw.		21100 201101	-
			5
Cotton Grinder	1		

Cancer of Stomach and Liver	Diarrhœa.
Butcher 1	Cotton Weaver 1
Cancer of Tongue.	Diphtheria.
Labourer 1	Cotton Weaver
	Cotton Weaver
Cancer of Uterus.	Emphysema.
House Keeper 1	Cotton Mill Overlooker 1
Housewives2	Quarryman1
3	2
,	alleganine many
Cerebral Congestion.	Enteric Fever.
Cotton Spinner 1	Caretaker 1
	Cotton Weaver 1
Childbirth.	Housewife 1
	Labourer 1
Cotton Weaver 1	4
	The second secon
Cirrhosis of Liver.	Enteritis.
Housewife 1	
	Carter 1
Congestion of Lungs.	The same of the sa
	Gall Stone.
Tailor 1	Housewife 1
Cystitis	Gangrene of Foot.
Grocer 1	Housewife 1
	Membrania
Diabetes.	Gastric Ulcer.
Furniture Dealer 1	Cotton Weavers 2
Talanda Deales Initialization	Labourer 1
	Housewives 2
Diabetes Insipidus.	5
Cotton Tape Sizer 1	-

### Gastritis.

### Hepatitis.

Housewives	2	Housewives	2
Hæmophilla.		Influenza.77	
	,	Chair Maker	1
Cotton Weaker		Housewives	4
		Paper Mill Checker	1
Heart Disease.		artable to re-made "-	6
Heart Disease.			_
Carter	1		
Coachmen	2	Injuries.	
Collier	1	Anjurios.	
Catton Creeler	1	Carter	1
Cotton Spinner	1	Cotton Weaver	1
Cotton Tape Sizer	1	Rope Manufacturer	1
Cotton Weavers	9		3
Farmer	1		
Gardener	1		
Housewives	18	Travert	
Inn-Keeper	1	Inquest.	
Insurance Agent	1	Collier	1
Iron Founder	1	Cotton Weavers	2
Kiln-Setter	1	Engine Tenters	2
Labourers	2	Housewives	4
Lodging House Keeper	1	Labourers	2
Machine Printer	1	Quarrýman	1
Railway Porter	1	Shoe Maker	1
Shopman	1		13
Stone-Masons	2		-
	48		
	-	Muscular Atrophy.	
		Musculai Milophy.	
		Accountant	1
Hemiplegia.			
Accountant	1	Myelitis.	
Cashier	1		20
Housewives	2	Clerk	1
Labourer	1		
2000000	-	Neurasthenia.	
	5		1
	-	Labourer	-

### Obstruction of Bowel.

### Pneumonia.

Knocker-up	1	Blast Furnace-man	1
•		Carters	9
		Char Woman	
Paralysis.		Clerk	
The state of the s		Collier	
Housewife	1	Cotton Mill Overlooker	
Posturition		Cotton Warper	
Parturition.		Cotton Weavers	
Cotton Card-room Hand	1	Draper	
			1
		Labourer	1
Pernicious Anæmia.		2	26
Cotton Spinner	1	Smill Pers	-
Cotton Weaver	1		
Furniture Broker	1		
Housewives	2		
Pattern Maker (iron)	1	Puerperal Eclampsia.	
	_	Cotton Card-room Hand	,
CONTROL OF THE PARTY OF THE PAR	6	Cotton Card-room Hand	1
Phthisis.			
Phthisis.		Renal Calculi.	
Phthisis.  Block Printer	1		
	1 2	Renal Calculi.  Cotton Cloth Looker	1
Block Printer	1 2 1		1
Block Printer	1 2 1		1
Block Printer	1 2 1 1		1
Block Printer	2 1 1		-
Block Printer	2 1 1 1	Cotton Cloth Looker	1
Block Printer  Coachmen  Cotton Drawer-in  Cotton Mill Overlooker  Cotton Reacher-in  Cotton Twister	2 1 1 1	Cotton Cloth Looker	1
Block Printer  Coachmen  Cotton Drawer-in  Cotton Mill Overlooker  Cotton Reacher-in  Cotton Twister  Cotton Weavers	2 1 1 1 1 8	Rheumatic Fever.  Cotton Creeler  Dressmaker	1 1 1 1
Block Printer  Coachmen  Cotton Drawer-in  Cotton Mill Overlooker  Cotton Reacher-in  Cotton Twister  Cotton Weavers  Housewives	2 1 1 1 1 8 7	Cotton Cloth Looker	1 1 1 1 1
Block Printer  Coachmen  Cotton Drawer-in  Cotton Mill Overlooker  Cotton Reacher-in  Cotton Twister  Cotton Weavers  Housewives  Labourer	2 1 1 1 1 8 7	Rheumatic Fever.  Cotton Creeler  Dressmaker  Labourer	1 1 1 1 - 3
Block Printer  Coachmen  Cotton Drawer-in  Cotton Mill Overlooker  Cotton Reacher-in  Cotton Twister  Cotton Weavers  Housewives  Labourer  Laundress	2 1 1 1 1 8 7	Rheumatic Fever.  Cotton Creeler  Dressmaker  Labourer	1 1 1 1 3
Block Printer  Coachmen  Cotton Drawer-in  Cotton Mill Overlooker  Cotton Reacher-in  Cotton Twister  Cotton Weavers  Housewives  Labourer  Laundress  Milk Seller	2 1 1 1 1 8 7 1 1	Rheumatic Fever.  Cotton Creeler  Dressmaker  Labourer	1 1 1 1 3
Block Printer  Coachmen  Cotton Drawer-in  Cotton Mill Overlooker  Cotton Reacher-in  Cotton Twister  Cotton Weavers  Housewives  Labourer  Laundress  Milk Seller  Printer  Slater	2 1 1 1 1 8 7 1 1 1	Rheumatic Fever.  Cotton Creeler  Dressmaker  Labourer	1 1 1 1 3
Block Printer Coachmen Cotton Drawer-in Cotton Mill Overlooker Cotton Reacher-in Cotton Twister Cotton Weavers Housewives Labourer Laundress Milk Seller Printer Slater Stone Masons	2 1 1 1 1 8 7 1 1 1 1	Rheumatic Fever.  Cotton Creeler  Dressmaker  Labourer	1 1 1 1 3
Block Printer  Coachmen  Cotton Drawer-in  Cotton Mill Overlooker  Cotton Reacher-in  Cotton Twister  Cotton Weavers  Housewives  Labourer  Laundress  Milk Seller  Printer  Slater	2 1 1 1 1 8 7 1 1 1 1 1 2	Rheumatic Fever.  Cotton Creeler  Dressmaker  Labourer	1 1 1 1 3
Block Printer Coachmen Cotton Drawer-in Cotton Mill Overlooker Cotton Reacher-in Cotton Twister Cotton Weavers Housewives Labourer Laundress Milk Seller Printer Slater Stone Masons	2 1 1 1 1 8 7 1 1 1 1 1 2	Rheumatic Fever.  Cotton Creeler  Dressmaker  Labourer	1 1 1 1 3

### Senile Decay.

### Suppuration of Middle Ear.

CI W	1	Cotton Warper 1
Char-Woman	1	
Coal Dealer	1	
Cotton Spinner	1	Tubercular Disease of Testes.
Cotton Weavers	4	A strangerth
Farmer	1	Labourer 1
Housewives	13	
Iron Broker	1	
Paper Maker	1	Tubercular Peritonitis.
The state of the s	-	Cotton Weaver
The state of the s	24	Tailor 1
	_	-
		2
Small Pox.		the special contraction of the second
Carter	1	
		Tuberculosis.
Spastic Paraplegia.		Cotton Weaver 1
Cotton Weaver	1	Cotton Weave:
		W_1 W .
Spinal Caries.		Umbilical Hernia.
Spinal Carles.		
Spinal Caries.  Housewife	1	Housewife 1
Spinal Carles.	1	
Spinal Carles.	1	Housewife 1
Housewife		Housewife
Housewife	1	Housewife 1
Housewife		Housewife
Housewife		Housewife
Strangulated Inguinal Hernia.  Stoker	1	Housewife
Strangulated Inguinal Hernia.  Stoker  Suicide.  Collier	1	Housewife
Strangulated Inguinal Hernia.  Stoker	1 1 1	Housewife
Strangulated Inguinal Hernia.  Stoker  Suicide.  Collier  Cotton Card-room Hand	1 1 1 1	Housewife
Strangulated Inguinal Hernia.  Stoker	1 1 1 1 1 1	Uncertified.  Collier
Strangulated Inguinal Hernia.  Stoker  Suicide.  Collier  Cotton Card-room Hand  Cotton Mill Overlooker  Cotton Weaver  Housewives	1 1 1 1 2	Uncertified.  Collier. 1 Cotton Winder 1  Uraemia.  Cotton Weaver 1
Strangulated Inguinal Hernia.  Stoker  Suicide.  Collier  Cotton Card-room Hand  Cotton Weaver  Housewives  Labourer	1 1 1 1 2 1	Uncertified.  Collier
Strangulated Inguinal Hernia.  Stoker  Suicide.  Collier  Cotton Card-room Hand  Cotton Mill Overlooker  Cotton Weaver  Housewives	1 1 1 1 2	Uncertified.  Collier. 1 Cotton Winder 1  Uraemia.  Cotton Weaver 1
Strangulated Inguinal Hernia.  Stoker  Suicide.  Collier  Cotton Card-room Hand  Cotton Weaver  Housewives  Labourer	1 1 1 1 2 1	Uncertified.  Collier
Strangulated Inguinal Hernia.  Stoker	1 1 1 1 2	Uncertified.  Collier. 1 Cotton Winder 1  Uraemia.  Cotton Weaver 1
Strangulated Inguinal Hernia.  Stoker  Suicide.  Collier  Cotton Card-room Hand  Cotton Weaver  Housewives  Labourer	1 1 1 1 2 1 1	Uncertified.  Collier

### TABLE XVI.

DISEASES.		to 5	2	5	3	5	4	5	6	5		and	To	tal.
A RELATIONS	M	F	M	F	M	F	M	F	M	F	М	F	M	F
Accountants.  Hemiplegia Muscular Atrophy											1 1		1 1	
											2		2	
Blast Furnace-man									3	1	nes s	in i	N W	Man S
Pneumonia					1								1	
Block Cutter.  Apoplexy											1		1	
Block Printer.  Phthisis									1				1	
Bookbinders Assistant.  Cancer of Breast								1						1
Brick-layer.  Bronchitis									1				1	
Brick-maker.  Senile Decay											1		1	

DISEASES.	1	5	2	25	3	35	4	15	1			and ards	То	tal.
Butchers.						-							M	1
				1 3					1			1000		10
Cancer of Stomach and Liver Appendicitis									1				1	
									2				2	
									-					
Calico Printers Finisher.								1						
Cancer of Œsophagus											1		1	
Caretakers.														
Apoplexy									1				1	
Apoplexy									1				1	
Enteric Fever		••••		••••						1				
									2	1			2	
Carters.														
Enteritis				200					1				1	
Heart Disease	-	_											î	
Injury Pneumonia		March of the last	-	•••	···	•••	••••	•••	1				1 2	
Small Pox											ï		1	
					1				4		1		6	
Cashier.		1	-											
Hemiplegia						•••					1		1	
Chair Maker.														
Influenza	100				1 3	-						133	1	

DISEASES.	1	5	2	5		5	4	5	(	35	65 upw M	and ards	То	tal.
Char-Women.			1.11		201	-	111		100		211	1010		-10
Pneumonia												 1		1
										1		1		2
Clerks.														
Myelitis Pneumonia											1		1 1	
			1								1		2	
Clog Block Maker.														
Alcoholism											1		1	
Clogger.							-	-						
Cancer of Parotid Gland											1		1	
Club Steward.														
Apoplexy				-							1		1	
Coachmen.  Heart Disease									9				2	
Phthisis	100000				2					 -			2	
					2		•••		2	•••		•••	4	

DISEASES.		to 5		to 5		to 5		to 5		to 5	65 upw		Tot	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	·
Coal Dealers.														
ovai Dealois.												5 10		
Bronchitis											1		1	
Senile Decay											1		1	
											2		2	
														_
Colliers.												100		
Joiners.												1000		
Apoplexy											1		1	
Apoplexy									1				1	
Bronchius											1		1	
Heart Disease											1		1	
Inquest													1	
Suicide			1						1	1			i	
Uncertified					1					111			i	
		-	-	-		_	-		_	-				
			1		1				3		3		8	
Cotton Card-room Hands.													*****	
Canaan of Lung		1					7	1						100
Cancer of Lung								1						1 3
Parturition				1										100
Suicide							1						1	
	-				-		-	-						
				1			1	2			•••		1	1
Cotton Cloth-looker.												1		
Renal Calculi							1						1	
								_						
									-				1	1
Cotton Creelers.			-											
Heart Disease				1					17.			1.75		
Rheumatic Fever	1												1	
	-													-
				1									1	

	DISEASES.	1	5	2	25	-	5	4	5	6	55	65 upw M	То	tal.
0	otton Drawer-in.					111				, and	-	ALL	M	60
	Phthisis					1							 1	
C	otton Grinder.  Cancer of Jaw									1	:		 1	
C	otton Mill Manager.  Arterial Sclerosis									1			 1	
0	otton Mill Overlookers.  Bronchitis							···		1 1 1		1   	1 1 1 1 1 1 6	
C	otton Reacher-in. Phthisis			1									 1	
C	otton Spinners.  Bright's Disease Bronchitis Cerebral Congestion Heart Disease Pernicious Anaemia Senile Decay											   1	 1 1 1 1 1 1 1 6	

DISEASES.	1	5	2	25	3	5	4	15	6	55		and and	То	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Cotton Tape Sizers.	18											1		
Bright's Disease											1		1	
Diabetes Insipidus											1		1	
											3		3	
Cotton Twisters.				1										700
Apoplexy Phthisis							1						1	
							1		-				2	
					***	•••	•	***	-		•••		-	700
Cotion Warpers.											Town	110		
Bright's Disease														]
Pneumonia						1		1						
				1		1		1						:
Cotton Weavers.														
Accident														1
Apoplexy											1		2	
Asthma			1			1				 1			1	
Bronchitis									2				2	
Cancer of Rectum									1				1	
Diarrhœa Diphtheria				1										1
Enteric Fever Gastric Ulcer	1								000				1	
Haemophilia				-			1						ï	

DISEASES.	5 1		15 2	20000	25 3	100000	35 4			to 5	65 upwa		To	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Cotton Weavers (continued).							-							
Heart Disease		1		1		1	1	1	2	2			3	6
Injuries			1										1	
Inquests		• • •		•••		1			2				2	1
Phthisis				2	2	3			ï				3	5
Pneumonia	1			1					3				4	1
Senile Decay											4		4	
Spastic Paraplegia		• • •	• • • •	• • •	• • •				1	• • • •	1	***	1	
Tubercular Peritonitis	1			***				• • •	1				1	**
Tuberculosis													1	
Uraemia											1		1	
	3	1	2	8	2	7	3	1	15	4	8		33	2
Alcoholic Gastritis Bright's Disease Uncertified						 1				1				
Oraper.														
Pneumonia									1				1	
Dressmakers.														12
Dressmakers.  Bright's Disease  Rheumatic Fever				1		1								

DISEASES.	5	to 5	15	to 25	25 3	to	35 4	to 5	45	to 5	65 upw	and ards	То	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Engine Tenters.  Inquest									2				2	
Farmers.  Cancer of Stomach Heart Disease Senile Decay									1				1 1 1	
									=		2		3	
Farm Labourer.  Bright's Disease					1								1	
Flagger and Slater.  Cancer of Stomach							1						1	
Furniture Broker.  Pernicious Anæmia									1				1	
Furniture Dealers.  Apoplexy Diabetes									1	i			1	··i
									1	1			1	1
Gardener.  Heart Disease									1				1	

DISEASES.	1000	to 5		to 5		to 5				to 5	65 upw		То	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Green Grocer.  Bright's Disease											1		1	
Grocers.  Apoplexy Cystitis											2 1		2 1	
											3		3	
Hotel Keeper.  Cancer of Oesophagus									1				1	
Hotel Manageress.  Cancer of Liver						1								1
House-keeper.  Cancer of Uterus										1				1
Housewives.  Alcoholic Neuritis Apoplexy Arterial Sclerosis Biliary Calculus Bright's Disease Bronchitis Cancer of Breast Cancer of Liver Cancer of Oesophagus Cancer of Stomach								2 1 1		5 1  2 1 3 2 1 1		 8 1 2 2 5 2 		1 13 2 2 6 7 6 2 1 2

		5	2	25	3	5		5		to 5		and ards	10	tal.
	M	F	M	F	M	F	M	F	M	F	М	F	M	F
Housewives (continued).												199		
Cancer of Uterus			-0							1		1		2
Cirrhosis of Liver										î				ĩ
Enteric Fever										1	***			î
Gall Stone										1		****		î
												1		î
Gangrene of Foot										2				2
Gastritis										2				2
Heart Disease						1000000		4		8		6		18
Hemiplegia										2				2
Hepatitis												2		2
Influenza										3		1		4
Inquests									•••			1		4
Paralysis										-		1		1
Pernicious Anæmia					1000000					ï		1		2
Phthisis								- 4		_				7
Pneumonia										4		6	***	11
Sclerosis of Kindey										1	•••			11
										1		12	***	13
Senile Decay										-		12		
Spinal Caries Suicide						1					***	1		1
Umbilical Hernia										1		1		2
Umbinea) Herma										1		***		1
													100	-
						2		16		49		54		121
Inn Keepers.														
Apoplexy											1		1	
Arterial Sclerosis											1		1	
Heart Disease									1		2		3	
	-	-	1000	-	-	-	-	-	-	-	1000		1	
									1		2		3	
Insurance Agent.  Heart Disease				-					1				1	

DISEASES.	1	5	2	5	3	5	4	5	6	5	65 upw		То	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Iron Brokers.			-										7127	
Bronchitis									1		 1		1	
									1		1		2	
Iron Founder.s														
Heart Disease									1				1	
Iron Moulder.									200					
Bronchitis											1		1	····
Iron-stone Miner.  Bronchitis					:						1		1	
Joiner.  Bronchitis									1				1	
Kiln Setter.														
Heart Disease									1				1	
Knocker-up.														
Accident									1		 1		1 1	
									1		1		2	

DISEASES.	100	to 5	-	to 5		to 35		to 15	1000	to 35	65 upw	and ards	То	tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	1
Labourers.				-	-			1				1000	10	
Accident							l		1				1	
Bright's Disease					1				1				2	
Cancer									1				1	
Cancer of Bowel									1				Ī	1
Cancer of Liver											1		1	
Cancer of Rectum											1		1	
Cancer of Tongue									1				1	
Enteric Fever													1	
Gastric Ulcer									1				1	
Gastric Ulcer Heart Disease									2				2	
Hemiplegia									1		2000		ī	
Inquests									1		1		2	
Neurasthenia								1	i	-		100	ī	
Phthisis					1	-			1				î	1000
Pneumonia											***	1 12-12-50	i	100
Rheumatic Fever									***				1	
Suicide							1		1			***	1	
Tubercular Disease of Testes									1				1	
Tubercular Disease of Testes									1					
					3		1		14		3		21	
Laundress. Phthisis				1										
Lodging House Keeper.			100							4.	190		unit	
Heart Disease									1				1	
Machine Printer.			The same of										1129	
Heart Disease									1				1	
Milk Seller.														
Phthisis					1								1	

DISEASES.		to .5	2	5	3	5	4	5	6	5	65 upw		Tot	al.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Oil and Tallow Merchant.														
Bronchitis									1				1	
Painters.			V											
Phthisis									1				1	
									2				2	
Paper Maker.														
Senile Decay											1		1	
Paper Mill Checker.													1	
Influenza					1							•••	1	
Paper Reeler.														
Bright's Disease									1				1	
Pattern Maker (Iron).														
Pernicious Anæmia			1										1	
Police Constable.												30		Provide Name
Cancer									1				1	
Printers.														
Cancer of Liver	10000	1000							1				1 1	
mild as a labor or or of the									2				2	

DISEASES.	3	5	2	5	3	35	4	5	•	55	1000	ards		tal.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Quarrymen.										3		pall of		
Emphysema									1 2				1	
									2				2	
Railway Goods Inspector.														
Bronchitis											1		1	
Railway Porter.  Heart Disease											1		1	
Rope Manufacturer.														
Injuries							1						1	
Secretary.														
Uraemia									1				1	
Shoe Maker.													1000	
Bronchitis									1		 1		1	
									1		1		2	
Shop man.													17.11	
Heart Disease					1								1	

DISEASES.	1	5		5	3	5	4	5	6	55	65 upw	THE PERSON NAMED IN	Tot	tal.
Slater.  Phthisis													1	
Stoker. Strangulated Inguinal Hernia	-		1	-	-								1	
Stone Masons.  Heart Disease Phthisis									2		2		2 2	
									2		2		4	
Tailors.  Congestion of Lungs  Tubercular Peritonitis							-		-		-		1 1 2	
Tea Dealer. Phthisis							1						1	
Tripe Dealer.  Apoplexy											1		1	
Yeast Dealer.  Cancer of Stomach											1		1	

TABLE XVII.

Estimated Population, Number of Deaths, and Death-rates from all Causes, from Zymotic Diseases, of Children under 1 year, and Persons 60 years and upwards, during the last 17 years.

1907	1906	1905		1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891		YEAR.
41.864	41,364	39,918		39,516	39,114	38,712	38,212	38,600	37,900	37,500	37,500	36,652	36,000	36,000	35,500	35,000	34,192		Estimated Population at Middle of Year.
527	540	562		606	501	569	620	789	647	632	651	627	640	542	677	641	660		Total Deaths from all causes
12.58	13.11	14.07		15.33	12.80	14.69	16.22	20.44	17.07	16.85	17.36	17.10	17.77	15.05	19.07	18.31	19.30		Death Rate per 1,000 of Population.
29	47	40		107	30	40	82	112	89	78	63	81	77	40	79	67	60		Total Deaths from Seven Principal Zymotic Diseases
0.69	1.14	1.00		2.70	0.76	1.03	2.14	2.90	2.34	2.08	1.68	2.20	2.13	1.11	2.22	1.91	1.75		Death Rate from Zymotic Diseases per 1,000 of Population
104	111	118		123	117	134	145	188	200	199	182	187	179	130	184	177	168		Total Deaths under 1 Year of Age.
19.7	20.5	20.9		20.2	23.3	23.7	23.3	23.8	30.9	31.4	27.9	29.8	27.9	23.9	27.1	27.6	25.4		Percentage of Deaths under 1 Year to Total Deaths.
110	125	106	65 and up ds	149	147	143	156	183	119	131	135	132	124	107	141	105	126	-	Total Deaths of Persons 60 Years and Upwards.
20.8	23.1	18.8		24.5	29.3	25.1	25.1	23.1	18.3	20.7	20.7	21.0	19.3	19.7	20.8	16.3	19.0		Percentage of Deaths of Aged. Persons to Total Deaths.

TABLE XVIII.

Deaths during the Seventeen Years, 1891 to 1907 inclusive, of Children under 5 years and Persons 5 years and upwards.

	1903 1904 1905 1906 1907	
	190	::::::::::::::::::::::::::::::::::::::
	1905	: £41 : : : : : : :
	1904	127 100 100 100 100 100 100 100 100 100 10
AGE.	1903	12 148 1 1 1 1 1 1 1 1 1 4 1 2 2
OF	1902	35 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1	1898 1899 1900 1901 1902	: 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
YEARS	1900	163 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
5	6681	182442 ::::2:::1 :::: 24444
ER	8681	152-1 : 8 : : : : : : : : : : 82 - 4 - 25 : : : : : : : : : : : : : : : : : :
UNDER	1897	182 g 1 g 1 : : : : : : : : : : : : : : : :
	1891 1892 1893 1894 1895 1896 1897	14.2.2.3.2. 1.1.1.2.1.1.2.2.3.3.3.3.3.3.3.3.3.3.3.3.
	1895	13. 12. 15. 11. 15. 15. 15. 15. 15. 15. 15. 15
	1894	::0017- :::0::::: 0::3
	1893	:27 + 28 : : : : : : : : : : : : : : : : : :
	1892	1333 63 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	1681	:22-27 :220 :::::: 80-480
A		Smallpox Measles Scarlet Fever Diphtheria Whooping Cough Croup Continued Fevers:— Typhus Typhoid Others Diarrhoea and Dysentry Cholera Erysipelas Pyæmia Puerperal Fever Erysipelas Pythisis Bronchitis, Pneumonia, and Pleurisy Heart Disease Injuries Injuries Injuries Interpretation of the continuity Interpretation of the continuit

TABLE XVIII. - (Continued).

Smallpox Measles Scarlet Fever Diphtheria Whooping Cough Croup Croup Croup Croup Continued Fevers:— Typhoid Others Diarrhea and Dysentery Cholera Rheumatic Fever Erysipelas Pyæmia Puerperal	1891	1891   1892   1893   1894   1895   1896   1900   1901   1902   1903   1904   1905   1906   1907	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	68 : 2 : 2 : 6 : : : 1 : 6	2	YE 88961	YEARS  YEARS  YEARS  1	AND   898	D 88991	UPWRADS  1900 1901 19  14 10  14 10  13 2  4 3  2 3  2 1  2  1  1  1	RAI 9011 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	S. 1902 1247 1 1811 1	21 31 11 11 11 18 11	1221   1904	1905	0061	1907
s nd	22 119 27 15 171	93 35 110	82 57 113 168		.88 22 38: 168 24 2	28 28 37 15 18 14	27. 93 9 9 1	28. 60 47 489	31: 65 55 172 5	89 53 54 250	29 72 55 7 157	70 :: 281	192 4 51 53	34:	35 56 56 50 200		34 51 53 6 6 8 16

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Vital Statistics of whole District during 1907 and previous years.

(Population Corrected for Intercensal Periods.)

NAME OF DISTRICT—DARWEN.

Population Straight of Mumber. Rate.*   Under 1 Year of Age.   At all Ages.   Public in Pul Institution of Middle of Number.   Rate.*   1,000	TOTAL. Non- Residents DEATHS residents	AGES BELONGING TO THE DISTRICT.
Number. Rate.* 1,000  3 4 5  1114 29.70 182 1131 30.16 199 1062 28.02 980 25.38 858 22.45 891 24.05 891 24.05 818 20.49 811 19.70 111  942 24.37  * Rates in Columns 4, 8,	registered in Public	
Number. Rate.* 1,000  3 4 5  11114 29.70 182 1131 30.16 199 1062 28.02 200 980 22.45 188 858 22.45 145 891 24.05 117 820 20.75 123 818 20.49 118 811 19.70 111  876 20.92 101  * Rates in Columns 4, 8,	Institut- tions tions in beyond	Number. Rate.*
3 4 5 11114 29.70 182 1131 30.16 199 1062 28.02 200 980 25.38 188 858 22.45 145 891 24.05 117 820 20.75 123 818 20.49 118 811 19.70 111 876 20.92 101	THE the the District.	
1114 29.70 182 1131 30.16 199 1062 28.02 200 980 25.38 188 858 22.45 145 891 24.05 117 820 20.75 123 818 20.49 118 811 19.70 111 876 20.92 101	9 10 11	12 13
1131 30.16 199 1062 28.02 200 980 25.38 188 858 22.45 145 891 23.01 135 941 24.05 117 820 20.75 1123 818 20.49 1118 19.70 111 876 20.92 101	Nil. Nil	
858 22.45 188 858 22.45 188 891 23.01 135 941 24.05 117 820 20.75 123 818 20.49 118 811 19.70 111 876 20.92 101	N. N.	632 16.85
858 22.45 145 145 891 23.01 135 891 23.01 135 891 820.75 117 818 20.49 1118 811 19.70 1111 876 876 20.92 101 876 876 876 876 876 876 876 876 876 876		
820 20.75 113 820 20.75 123 818 20.49 118 811 19.70 111 942 24.37 151 876 20.92 101		620 16.22
820 20.75 123 818 20.49 118 811 19.70 111 942 24.37 151 876 20.92 101	TiN	
811 19.70 111 812 24.37 151 876 20.92 101 * Rates in Columns 4, 8,	ij	
942 24.37 151 876 20.92 101 * Rates in Columns 4, 8,	Nil. Nil. 27	540 13.11
876 20.92 101 * Rates in Columns 4, 8,	Nil. Nil. 13	611 15.73
oó	Nil. Nil. 21	527 12.58
	mated population.	
Area of District in acres (exclusive of area covered by water 5,919) $\frac{3}{6}$ Nett Deaths at Total Population at all ages	Nett Deaths at all ages belonging to the District 506, showing Death-rate of 12.08 per 1.000 of the Population.  Institutions outside the District receiving Sick and infirm	to the District 506, showing of the Population.

* Kates in Columns 4, 5, and 15 calculated per 1,000 of estimated population.	a covered by water 5,919   = Nett Deaths at all ages belonging to the District 5 Death-rate of 12.08 per 1.000 of the Populat B,432   ≥ = Institutions outside the District receiving Sick persons from this district.	Blackburn Infirmary and Workhouse. Lancaster Asylum Children's Hospital, Manchester.
s carcura	5,919 88,212 8,432	4.5
* Kates in Columns 4, 5, and 1	Area of District in acres (exclusive of area covered by water Total Population at all ages	Average number of Persons per house

### GOVERNMENT TABLE II.

Vital Statistics of Separate Localities in 1907 and previous years.

## NAME OF DISTRICT-DARWEN.

North-West South-East South-West Borough.	Deaths at all Ages.  Population estinated to middle of each Year.  Births  Begistered.  Begistered.  Ages.  Deaths at all Ages.  Population estinated to middle of each Year.  Births  Registered.  Births  Births  Ages.  Deats at all  Ages.  Deaths under  Births  Ages.  Deaths under  I Year.  Deaths under  Births  Ages.  Of each Year.  Births  Ages.  Deaths under  Ages.  Deaths at all  Ages.  Deaths under  Ages.  Ages.	8         6057          113         32         6656         213         120         35         37500         1114         651         182           15         6057         188         134         40         6656         213         120         35         37500         1131         632         199           24         6239         138         126         6703         199         120         32         37500         1062         647         200           24         6239         128         125         25         6827         184         140         30         38600         9757789         188           21         6501         153         120         23         6870         148         95         24         38212         858         620         145           13         6591         138         93         24         6977         172         121         30         38712         891         569         145           14         6664         159         79         15         7063         165         93         15         39114         941         501         606         123	15 6464 151 104 24 6944 167 111 26 38813 942 611 151	6995 144 76 5 7454 156 90 19 41864 876527 104
South-East South-West Ward.	Deaths at all Ages.  Population estinated to middle of each Year.  Births  Begistered.  Begistered.  Ages.  Deaths at all Ages.  Population estinated to middle of each Year.  Population estinated to middle of each Year.  Population estinated to middle of each Year.  Births  Ages.  Deaths ander  Registered.  I Year.  Population estinated to middle of each Year.  Ages.  Births  Ages.  Of each Year.  Births  Ages.	6057          113         32         6656         21.         124         39         37500         1114           6057         188         134         23         6656         213         120         35         37500         1131           6126         188         133         40         6703         199         120         32         37900         1062           6239         158         125         25         6827         184         140         30         38600         975           6501         153         120         23         6870         148         95         24         38212         858           6531         138         93         24         6977         172         121         30         38712         891           6664         159         79         15         7063         165         93         15         39114         941           6737         134         97         26         7150         132         103         20         39516         820           6810         123         105         17         7237         144         93         20         39918	6464 151 104 24 6944 167 111 26 38813	144 76 5 7454 156 90 19 41864 876 527
South-East South-West Ward.	Deaths at all Ages.  Population estinated to middle of each Year.  Births  Births Ages.  Deaths at all Ages.  Deaths at all Ages.  Population estinated to middle of each Year.  Population estinated to middle of each Year.  Population estinated to middle of each Year.  Births  Ages.  Deaths ander  I Year.  Population estinated to middle of each Year.  Ages.	6057          113         32         6656         21.         124         39         37500         1114           6057         188         134         23         6656         213         120         35         37500         1131           6126         188         133         40         6703         199         120         32         37900         1062           6239         158         125         25         6827         184         140         30         38600         975           6501         153         120         23         6870         148         95         24         38212         858           6531         138         93         24         6977         172         121         30         38712         891           6664         159         79         15         7063         165         93         15         39114         941           6737         134         97         26         7150         132         103         20         39516         820           6810         123         105         17         7237         144         93         20         39918	6464 151 104 24 6944 167 111 26 38813	144 76 5 7454 156 90 19 41864
South-East South-West Ward.	Deaths at all Ages.  Population estinated to middle of each Year.  Births Births Ages. Deaths at all Ages. Deaths under I Year. Population estinated to middle of each Year. Rirths Registered. Births Ages. Ages. I Year. Rirths Ages. Ages. I Year. Births Ages. I Year. Births Ages. I Year. Ages. I Year. Ages. I Year. Ages.	6057          113         32         6656          124         39         37500           6126         188         133         40         6703         199         120         35         37500           6239         158         125         25         6827         184         140         30         38600           6500         153         120         23         6870         148         95         24         38612           6591         138         93         24         6977         172         121         30         38712           6664         159         79         15         7063         165         93         15         39114           6737         134         97         26         7150         132         103         20         39516           6810         123         105         17         7237         144         93         20         39918           6868         120         86         19         7304         150         107         21         41164	6464 151 104 24 6944 167 111 26	144 76 5 7454 156 90 19
South-East Ward.	Deaths at all Ages.  Population estinated to middle of each Year.  Births  Registered.  Births  Ages.  Deaths at all Ages.  Population estinated to middle of each Year.  Deaths at all Ages.  Population estinated to middle of each Year.  Deaths under Births  Ages.  Deaths at all Ages.  Deaths at all Ages.  Deaths at all Ages.	6057 113 32 6656 124 39 6657 188 133 40 6703 199 120 35 650 153 120 35 650 153 120 35 650 153 120 35 650 153 120 32 6664 159 79 15 7063 165 93 15 6654 159 79 15 7063 165 93 15 6737 134 97 26 7150 132 103 20 6868 120 \$6 19 7304 150 107 21	6464 151 104 24 6944 167 111 26	144 76 5 7454 156 90 19
South-East Ward.	Deaths at all Ages.  Deaths under I Year.  Population estimated to middle of each Year.  Births  Registered.  Deaths at all Ages.  I Year.  Deaths under I Year.  Of each Year.  Deaths under of each Year.  Births  Registered.  Births  Registered.  Births  Ages.  Births  Ages.  Births  Ages.	6057 113 32 6656 124 6057 188 94 23 6656 213 120 6126 188 133 40 6703 199 120 6239 158 125 25 6827 184 140 6500 153 120 23 6870 148 95 6664 159 79 15 7063 165 93 6737 134 97 26 7150 132 103 6810 123 105 17 7237 144 93 6868 120 86 19 7304 150 107	6464 151 104 24 6944 167 111	144 76 5 7454 156 90
South-East Ward.	Deaths at all Ages.  Deaths under I Year.  Population estinated to middle of each Year.  Births  Registered.  Ages.  Deaths at all Ages.  I Year.  Population estinated to middle of each Year.  Registered.  Births  Registered.  Births  Registered.	6057 113 32 6656 6057 188 94 23 6656 213 6529 158 125 25 6827 184 6500 153 120 23 6870 148 6664 159 79 15 7063 195 6810 123 105 17 7237 144 6868 120 86 19 7304 150	6464 151 104 24 6944 167	144 76 5 7454 156
South-East Ward.	Deaths at all Ages.  Deaths under I Year.  Population estion of each Year.  Births  Births  Begistered.  Begistered.  Deaths at all Ages.  Deaths under I Year.  Population estinated to middle	6057 113 32 6656 6057 188 94 23 6656 6126 188 133 40 6703 6239 158 125 25 6827 6500 153 120 23 6870 6591 138 93 24 6977 6664 159 79 15 7063 6737 134 97 26 7150 6810 123 105 17 7237 6868 120 86 19 7304	6464 151 104 24 6944	144 76 5 7454
South-East Ward.	Deaths at all Ages.  Deaths under I Year.  Population estimated to middle of each Year.  Births  Registered.  Registered.  Ages.  Deaths at all Ages.  I Year.  Population estimated in Year.	6057 113 32 6057 188 94 23 6126 188 133 40 6239 158 125 25 6500 153 120 23 6591 138 93 24 6664 159 79 15 6737 134 97 26 6810 123 105 17 6868 120 86 19	6464 151 104 24	144 76 5
	Deaths at all Ages.  Deaths under I Year. Population estimated to middle of each Year. Births Registered.  Registered.  Registered.  Registered.	6057 113 6057 188 94 6126 188 133 6239 158 125 6500 153 120 6591 138 93 6664 159 79 6737 134 97 6810 123 105	6464 151 104	144 76
	Deaths at all Ages.  Deaths under I Year.  Population estimated to middle of each Year.  Births  Registered.	6057 6057 188 6126 188 6239 158 6500 153 6591 138 6664 159 6737 134 6810 123 6868 120	6464 151	144
	Deaths at all Ages. Deaths under I Year. Population estimated to middle of each Year. Births	6057 6057 6126 6239 6500 6591 6664 6737 6810	6464 151	
	Deaths at all Ages. Deaths under I Year. Population esti- mated to middle		6464	
North-West Ward.	Deaths at all Ages. Deaths under	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15	the same of the sa
North-West Ward.	Deaths at all Ages.	The second secon		=
North-W Ward	THE R. P. LEWIS CO., LANSING, MICH. LANSING, SANSAN, PRINCESSON, Name of Street, or other party of the land of the	84 65 65 65 65 65 65 65 65 65 65 65 65 65	8	68
Nor	Births Registered.	120 120 123 101 101 103 103	115	134
	Population esti- mated to middle of each Year.	5202 5202 5202 5357 4984 4999 5023 5023 5649	5172	5670
	Deaths under I Year.	335.77 335.77 335.77 335.77	41	35
Sast I.	Deaths at all Ages.	156 129 129 129 139 143	142	123
3. Ward.	Births Registered.	292 292 223 225 225 226 229 206	240	222
N	Population esti- mated to middle of each Year.	8753 8753 8854 9017 9079 9428 9583 9738	9223	10024
1	Deaths under I Year.	41 12 13 13 13 13 14 15 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17	13	15
ntral	Deaths at all Ages.	62 62 63 64 65 65 65 65 65 65 65 65 65 65 65 65 65	61	51
West Central Ward.	Births Registered.	109 109 177 177 173 173 178 178	81	96
We	Population esti- mated to middle of each Year.	3875 3919 3919 3860 3866 3872 3872 3878 4050	3907	4061
-	Deaths under ! Year.	12222888391621717	29	19
Nard	Deaths at all Ages.	1112 112 112 102 103 86 86	110	86
l. Central Ward.	Births Registered.	210 1154 1174 1174 1179 1179	164	124
Cen	Population esti- mated to middle of each Year.	6957 6957 7038 7168 6919 7006 7145 7214 7214	7101	7660
Names of Localities.	Year.	1897 1898 1899 1900 1902 1904 1906	Averages of Years 1897 to 1906.	1907

GOVERNMENT TABLE III.

Cases of Infectious Disease notified during the year 1907.

## NAME OF DISTRICT—DARWEN.

		Cases Notified in Whole District.	Noti	Totified i	n W	nole		Tota	1 Cases	Notifie	Total Cases Notified in each Locality.	h Local	ity.	No.	No. of Cases Removed to Hospical from each Locality.	ss Rem	Cases Removed to E from each Locality.	Hospi	lea	
	1		-												,	Ī				
Notifable Disease	sə		At	At Ages—Years.	-Ye	ars.			6	cr	4	10	9	-	c	er	4	10	8	Total
7	ge lle M	Un- der	to 1	5 15 15	15 to 25	25 50 65	65 and Centil up's Ward		45	No'th- No'th- East West	No'th- West	4 4	44	Cent'l West Ward. Cent'l.		No'th- East	No'th- West	Sou'h- East	ch-	Cases removed to Hospital.
Small Pox	1	:	:	:	:	:	1	-		:	:	:	::	1	:	:	:	:	:	1
Cholera	:	:	:	:	:	:	:				::	7		:	:	:		:		
Membranous Croup)	22	:	7	6	1	5	:	2	61	67	61	6	5	:	. :	:		:	:	
Erysipelas	14 26	: :	: 4	15	1 2	0 01	e1 :	0199	01 00	9 %	- ∞	1 4	C1 C1	:00	: :	::	: 20		:-	10
Typhus Fever Enteric Fever	21	: :	:-	: 10	: 4	:=	::	:00	:-	:00	9	4	: 4	::	::	::	::	::	: :	::
Relapsing Fever	:	::		::	:		:						:	:						
Continued Fever	:			:	:	:	:	::	:	:	:	:	:			:	:	::	:	
Plague	: :	: :	: :	::	::	::	::	: :	::	: :	: :	::	::	: :	: :	::	::	::	: :	::
	-	1			-		1							-						-
Totals	84	:	12	30	11	28	00	14	œ	14	17	18	13	4	:	:	5	-	-	11

## ISOLATION HOSPITAL—BULL HILL, DARWEN.

### GOVERNMENT TABLE IV.

### Causes of, and Ages at, Death during year 1907.

### NAME OF DISTRICT—DARWEN.

	" F	Reside	ents"	subj whet ond th	her	occur	ring	den	ts" b	t all selong ether	ging t	to Lo	cal-
CAUSES OF DEATH	All Ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Central Ward	West-Central Ward	North-East Ward	North-West Ward	South-East Ward	South-West Ward
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Small-pox Measles Scarlet-Fever Whooping-cough Diphtheria (including Membranous Croup	1 1  13 5	 4	 1  7		1		1	1 4	 i 1	 3	 :: : 1	ïi ïi	3
Fever Typhus Enteric Other continued Epidemic Influenza Cholera Plague	 4  7	i		i		3  5 	··· ··· ··· ···	 1  2 	2		2	  i	``i
Diarrhea Enteritis Puerperal Fever Erysipelas. Other Septic Diseases Phthisis (Pulm. Tuberculosis). Other Tubercular Diseases	3	11	1   1		1  5 1	3  28 2		3 1 1	2 2	5 1   6 2	   10 2	   6 2	3 1   10
Cancer Malignant Disease	36 48 62  7	16 18 	9 16 	3	1 2 	27 10 17  5	9 12 6 	5 13 10 	3 6	12 12 17  3	5 9 7 	5 5 5 3	7 6 17 
Alcoholism—Cirrhosis of Liver Venereal Diseases Premature Birth Diseases and Accidents of	4 18	18				3	1 	 i	1	1 7	2 4	 i	 5
Parturition Heart Diseases. Accidents Suicides. All Other Causes	54 7 9	32	 1 1  9	5  5	 2 2 1 10	2 34 4 7 67	12  1 67	12 4 3 36	7  1 22	1 8 3  42	7  1 36	15  30	1 5  4 24
All Causes	527	104	49	21	26	217	110	98	51	123	89	76	90

### Schools

I have paid visits during the year to all the Schools with respect to their Sanitary Conditions.

I arranged with the Inspectors to collect for me samples of Air from them all. This was done and Mr. John Cook, the Clerk in the Health Department, estimated the amount of Carbonic Acid in each case, with the following results:—

Amount of Carbonic Acid Gas per 1,000 Cubic Feet of air taken from Infant Schools.

Trinity, 1.18; Blackburn Road, 1.21; Earcroft, 0.85; Lower Chapel, 0.81; St. James's, 1.12; Duckworth Street, 0.66; St. George's, 1.23; Central Council, 1.24; St. Edward's, 1.10; Hollins Grove, 1.26; St. Cuthbert's, 1.01; Culvert, 1.27; Vernon Street, 1.07; Belgrave, 0.84; St. Joseph's, 1.76; Bolton Road, 1.64; St. John's, 1.23.

Amount of Carbonic Acid Gas in pure Atmospheric Air, 0.4 per 1,000.

As compared with the amount of Carbonic Acid in the Atmospheric Air. The amount in the Schools is excessive.

The CO<sub>2</sub>, I may state, is only used as a harmless index of the amount of Organic Impurity, and on this account it is of vast importance.

The bodies of the children are not all as clean as they should be. Certain exhalations take place, rendering the air impure: then on wet days the clothes steam and exhale impurities, so that it is very desirable to make provision for caps, overcoats, shawls, etc., somewhere not in connection with the schools, and with good cross ventilation, to prevent the odours from reaching the children. Many children present themselves at school suffering from vermin, or some skin affection. Now in the case, say, of Eczema, where matter accumulates on the head or body, this matter collects under the crusts or scabs, and constitutes a fresh scource of infection. When it escapes it runs the risk of infecting others, then organic and pathogenic impurities are given off from the persons into the school rooms, rendering the air impure and dangerous. For this reason good ventilation is necessary, without draught, at the same time if these children were sent home to be cleansed, the source of air impurity and of infection could be removed.

This is also the case with regard to Infectious Diseases in the earlier stages, as soon as a child is noticed to be in the least unwell, that child should be at once sent home for 3 or 4 days. If it is only a cold the child can return to school, if more serious then the case is removed from a danger zone, and the disease is prevented from spreading.

### HEALTH OFFICE, DARWEN,

August 6th, 1907.

### TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

GENTLEMEN,

I have the honour to present to you my

### Report on the Stammering Class,

conducted by Mr. W. A. Yearsley during the six weeks ending July 5th, 1907.

I am, Gentlemen,,

Your obedient servant,

### F. G. HAWORTH,

Medical Officer of Health, and Medical Officer to the Education Committee, Darwen.

Stammering is the generic term for all forms of speech defect, and is commonly used synonymous with stuttering. In the course of my examination and enquiry of a large number of children forming a special class under the tuition of Mr. W. A. Yearsley, I have come to agree with him that it is important and necessary to classify the sufferers into two forms, the (1) Stammerers and the (2) Stutterers, as each one represents a distinct form of defective utterance. Certainly they defferentiate in their phenomena, and it may reasonably be expected the causes will be different.

I am indebted to Mr. Yearsley for such valuable assistance in putting before you the proper significance of these particular defects, and also for much information in regard to the children in following up the progress during the course of the session.

### STAMMERING.

The direct causes such as accompany the impediment when fully devoloped, are improper respiration and vocalisation manifested in the inability to produce articulate sound accompanied by an abnormal mental and emotional condition which arises from a lack of co-ordination of mental and vocal processes.

The Stammerer rarely exhibits any pronounced spasmodic or convulsive action of the vocal apparatus. He may distend his lips, roll his eyes, or distort his feature<sup>8</sup> almost beyond recognition in his vain attempts to give utterance to his thoughts; but these contortions are slowly drawn and are mild in comparison with the spasmodic and hurricane manner which attend the physical efforts of the Stutterer.

This type of speech hesitancy is a mental one—not a lack of intelligence, but a lack of co-ordinating power between the two centres.

### STUTTERING.

On the other hand is a vicious attempt at utterance accompanied by spasmodic action of, not only the organs of speech, but frequently of the whole body, this being violently convulsed and contorted. He rarely hesitates through inability to produce articulate sound. He generally begins his sentence with a painful and rapid repetition of the initial syllable, the facial muscles become agitated, cutaneous congestion of the face, the respiration, spasmodic and abnormal, and the effort to connect his syllables into words is indicated by violent and excited physical movements. In his agitation he slaps, kicks, pinches himself, stamps his feet, bites his lips or tongue and exhibits signs of his difficulty being caused or accentuated by lack of nervous control. That Stuttering is a nervous complaint is indicated by the fact that the sufferers are of a sensitive and nervous temperament.

### SUMMARY.

Improper respiration and vocalisation combined with an abnormal, mental, and emotional condition are the direct accompanying causes of one of these defects, and lack of nervous and physical tranquility are responsible for the more pronounced agitation attending the efforts of the Stutterer.

In the examination of 800 cases Mr. Yearsley diagnosed 40 per cent. as hereditary, 29 per cent. from association and mimicry, 15 per cent. from sickness, and 16 per cent. from shock and fright.

In the class under consideration which numbered 38 males and 7 females, making a total of 45. In 22 of the cases 2 per cent. was the cause of heredity, from association and mimicry 53.3 per cent, from nervousness 13.3 per cent. from illness 4.4 per cent, fright and shock 4, 4 per cent., and in which the cause was unknown 4.4 per cent; the causes in regard to heredity and association are reversed. This may be due to the smaller number of cases under calculation, but is probably a more correct estimate of the etiology than that given in Mr. Yearsley's figures. A child whose

parent stammers is likely to be more affected by association than by heredity, in that from his earliest moments he is exposed to the sounds of defective speech uterance, instead of rhythmic flow of correct language. This means much in the after treatment of stammering in showing us the value of segregation as far as possible, and where not feasible to correct the sufferer and keep up reading exercises.

Mr. Yearsley also found in his 800 cases, 397 began to stammer between the ages of 4 and 7 years, 227 from 7 to 9 years, 134 between 9 and 12 years, and 42 from the ages of 12 and 20 years. In the class now considered there were out of 45, 9 aged from 4 to 7 inclusive, 10 from 7 to 9 inclusive, 17 from 9 to 12 inclusive, and there were 2 aged 13 years. Again it seems to me that if heredity were to be taken into account the sufferer would be more likely to acquire the defect during his earlier years.

The same causes which have produced stammering in one person induce another to stutter. In this connection we may assume that whatever the outward manifestations of stammering and stuttering are, they are solely indicative of the temperament and general disposition of the sufferer.

We find there are as many forms of stammering as there are types of men, and that what produces in one the defect of stammering, will in another cause stuttering. Can it be then that the nervous temperament of the stutterer is responsible for the facial and physical contortions which are peculiar only to this class of unfortunates, and that the characteristics which distinguish the stammerer are solely another effect of the same disorder upon a differently constituted individual? If this be so then individuality is responsible for this distinctive element in the classification of speech impediments, and the symtoms are a reflex of natural idiosyncracies.

### TREATMENT.

Improper respiration and vocalisation combined with an abnormal mental and emotional condition are the direct accompanying causes of one of these defects, and lack of nervous and physical tranquility is responsible for the more pronounced agitation attending the efforts of the other, so that in training a pupil to cultivate a habit of calm self-possession over his nervous and physical functions, and to correct his improper mode of respiration and vocalisation, it is necessary to keep him systematically drilled to the strict performance of the methods employed, that is a systematic continuity of a daily regime extending over a period of several weeks.

Mr. Yearsley brings about his results, and so far as I have seen, most perfect results, by devoting four hours a day, and six days a week for six weeks.

Thirty minutes morning and afternoon are taken up with

### BREATHING EXERCISES.

This is to ensure a correct r ethod of management of the breath in speaking. These respiratory exercises are divided into chest, diaphramatic, and abdominal breathing, thus helping to bring out and strengthen the various muscles concerned in the operation, as well as to obtain a better control over them.

The pupils are next drilled for two hours and a half a day in a course of vocal gymnastics, first by articulating the vowels on a natural tone, then by exercising the vocal organs on an explosive utterance. They are afterwards drilled in the rising and falling inflection of each vowel sound, by commencing the sound with an effusive utterance, rising to the full pitch of the voice, then by beginning with explosive force and gradually sinking to a low tone again.

Each vowel is then separately articulated on a prolonged natural tone, the idea being to cultivate the economical expenditure of breath during articulation. Some of the pupils can, after a course of training keep up a firm volume of sound on any of the vowels for a period of 30 to 40 seconds on inhalation.

For another thirty minutes morning and evening the class is instructed in a combination of

### VOCAL, BREATHING, AND PHYSICAL EXERCISES.

To enable the pupil to observe strict uniformity in respiration and to follow the elocutionary exercises with rythmical precision.

The dumbells, which are manipulated during articulation at 80 movements to the minute, are destined to improve the physique, and to build up the necessary motive power or physical energy necessary to effect a cure.

The mental activity is awakened to the necessity of co-ordinate action between the respiratory, vocal, and physical efforts, so that perfect harmony reigns instead of the discordant and ungainly mannerisms which previously prevailed.

The improvement which obtains as the course advances is a very marked one. The rythmical movements begun with the dumbells showing a marked co-ordination with the vocal and breathing exercises, and as showing the force of habit, these are, in a modified form such as the bending of a finger, continued afterwards. The effect of deep breathing in developing the muscles of respiration is seen in the strong explosive effects during the vocal exercises. It sounds like the rush of a mighty wind when the order is given by Mr. Yearsley to expire.

The last half hour morning and afternoon is devoted to reciting and reading in company. The reading is done syllabically and in a measured utterance, syllable by syllable, by metronome measure at the rate of 80 strokes per minute, so that the first two weeks are taken up in the re-establishment of the normal use of the organs of speech. During the next two weeks the aim is to encourage the application of the principles relating to these exercises, and to test the pupils in their ability to give individual demonstrations in respiration, voice production, and physical and mental tranquility.

A continuity of the exercises is kept up by having a fixed time for each form of instruction, and a greater range now allowed by devoting more time to individual instruction. The last two weeks are taken up in the gradual perfection of the principles underlying these exercises. The pupils are trained to deliver written speeches, and to recite in a slow measured and deliberate manner.

To sum up the treatment, it is in

### RESPIRATION, VOCALISATION, AND TRANQUILITY.

The average age of both boys and girls was 9 years, the average height and weight of the girls was somewhat greater than those of the boys. Boys 9½ years old should stand 4ft. 2¾in., and weigh 4st. 8lbs. The actual height of the boys in the class was 4ft. 2in., and the weight was 4st. 3¼lbs., so they can be taken as a fair standard of the average healthy child. Girls at the same age measure 4ft. 2¾in. and weigh 4st. 4lbs., whereas the average height of the girls in the class was 4ft. 3¼in. or rather higher than the average, and weighed 4st. 5lbs., being exactly one pound more than the mean for the same age.

It is presumed therefore that the other measurements:—e.g. the chest girth—would follow out the average. One very good feature I am pleased to record is the absolutely clean condition of all their bodies. On my visits to the schools in the Borough I have never been satisfied with the condition of the children as regards general appearance; the hair is towsled, faces and hands unclean, showing a want of material care which should not be. There can be no excuse for sending children to bed in an unwashed state, and if the child has the face, neck, and ears washed well the night before, little remains to be done next morning to be prepared for school; yet I must say I am always disappointed on my visits. Then again the children's faces should be washed at noon and hair brushed. The hands will be dirtied because the children will join in the games peculiar to the season.

The general tone of the children was good. There were two boys of a decidedly lower mental calibre, yet it was astonishing with what interest and precision these two followed the exercises; and strict disciplinarian as Mr. Yearsley is, the whole

class kept up their interest to the end. In fact the attendance all through was almost 100 per cent., and the children, instead of lagging were always too early, and ever ready to begin. It cannot be called easy either for teacher or pupil, but nothing deterred them; and to keep up the continuity of the lessons, a very important thing, they had to attend six days a week.

The respiratory range of the boys before having the lessons was 2.12 inches, and after the course this had increased to 2.87 inches, showing an increase of 0.75 inch, the same increase in the girls was  $1\frac{1}{2}$  inch, or double that of the boys, which is accounted for by the fact that in females it is essentially chest breathing, and the tendency undoubtedly is to an increase in that part; whereas in boys it would be to enlarge the abdomen. This shows the value of the gymnastic part of the course as a great improvement in the physique took place. In every instance the pupils acquired an ease and regularity of speech, and they all lost the habit of stammering. Little peculiarities remained, such as the bending of a fore finger. This in time is given up, but there is no doubt the habit of stammering will be resumed unless some control is exercised by the parents and school teachers. Mr. Yearsley was always glad to welcome the teachers in the elementary schools to witness his methods, and he gave the pupils reading lessons to do at home under the special supervision of their parents, so there will be no excuse if any relapse into speech defect.



### TABLE I.

No.	Name.	Age.	School.	Standard.	Height. Before. After.
1	Thomas Haslam	5 6/12	Bolton Road	2	3-5.50 3-6.25
2	Albert Longworth	5 9/12	St. Cuthbert		3-5.25 3-6.75
3	Rowe Atherton	daing a	Central		3-8.37 3-9.62
		5 10/12			
4	William Slater	6	Vernon Street		3-5.12 3-6.37
5	James Mytton	6 10/12	Vernon Street		3-9.00 3-9.25
6	James Tattersall	7	Vernon Street		3-11.25 3-11.75
7	Libert Mc.Cale	7	Highfield	1	3-8.00 3.8-00
8	Norman Cooper	7 6/12	St. James	1	3-10.50 3-11.00
9	Rudolph Kenyon	7 6/12	Trinity	1	3-11.50 3-11.87
10	Benjamin Taylor	8 4/12	Vernon Street	2	3-11.00 3-11.75
11	William West	8 7/12	Duckworth Street	2	3-11.12 4-0.00
12	John A. Holden	8 9/12	St. James	3	3-10.00 3-10.62
13	James Mc.Cann	8 11/12	St. Joseph	2	3-9.25 3-9.37
14	William Shaw	9	Hollins Grove	3	4-2.25 4-2.75
15	Harry Miller	9	St. John	1	4-0.25 4-0.50
16	Fred Hamer	9	Duckworth Street	3	4-0.00 4-0.62
17	John Crompton	9 3/12	Highfield	3	4-5.62 4-6.25
18	William Worden	9 9/12	Earcroft	. 3	4-3.50 4-3.87
19	William Woodcock	9 10/12	Culvert	3	4-1.12 4-1.50
20	Joseph Nuttall	10	Sandhill	. 1	4-1.62 4-1.75
21	William Roberts		Trinity	. 3	4-0.12 4-1.00
22	Oliver Jones		Hollins Grove		4-3.75 4-3.87
23	John B. West		Duckworth Street		4-4.75 4-5.00
					4-6.00 4-6.50
24	John Walsh		St. George		
25	Albert Farnworth	10 10/12	Trinity	. 4	4-4.37 4-4.75

### TABLE I .- (Continued).

26       Richard Parsons       11       St. Edward       2         27       Thomas Isherwood       11       Bolton Road       3         28       John Duxbury       11       Trinity       5         29       Allan Foley       11       5/12       Trinity       5         30       James Yates       11       5/12       St. Edward       6         31       Albert Holden       11       9/12       St. James       4         32       Norman Wolfenden       12       Trinity       5         33       Wilfrid Harding       12       6/12       Trinity       5         34       Harry Hutchinson       12       6/12       St. Cuthbert       6         35       Frank Walkden       12       8/12       Duckworth Street       5         36       Thomas Gledhill       12       9/12       Belgrave       6         37       Samuel Oldham       13       Higher grade       7	4 4-5.12 4-5.62
27 Thomas Isherwood       11       Bolton Road       5         28 John Duxbury       11       Trinity       5         29 Allan Foley       11 5/12       Trinity       5         30 James Yates       11 5/12       St. Edward       6         31 Albert Holden       11 9/12       St. James       6         32 Norman Wolfenden       12       Trinity       5         33 Wilfrid Harding       12 6/12       Trinity       5         34 Harry Hutchinson       12 6/12       St. Cuthbert       6         35 Frank Walkden       12 8/12       Duckworth Street       6         36 Thomas Gledhill       12 9/12       Belgrave       6         37 Samuel Oldham       13       Higher grade       7	4 4-5.12 4-5.62
27 Thomas Isherwood       11       Bolton Road       5         28 John Duxbury       11       Trinity       5         29 Allan Foley       11 5/12       Trinity       5         30 James Yates       11 5/12       St. Edward       6         31 Albert Holden       11 9/12       St. James       6         32 Norman Wolfenden       12       Trinity       5         33 Wilfrid Harding       12 6/12       Trinity       5         34 Harry Hutchinson       12 6/12       St. Cuthbert       6         35 Frank Walkden       12 8/12       Duckworth Street       6         36 Thomas Gledhill       12 9/12       Belgrave       6         37 Samuel Oldham       13       Higher grade       7	4 4-5.12 4-5.62
28       John Duxbury       11       Trinity       5         29       Allan Foley       11       5/12       Trinity       5         30       James Yates       11       5/12       St. Edward       6         31       Albert Holden       11       9/12       St. James       6         32       Norman Wolfenden       12       Trinity       5         33       Wilfrid Harding       12       6/12       Trinity       6         34       Harry Hutchinson       12       6/12       St. Cuthbert       6         35       Frank Walkden       12       8/12       Duckworth Street       6         36       Thomas Gledhill       12       9/12       Belgrave       6         37       Samuel Oldham       13       Higher grade       7	
29 Allan Foley       11 5/12       Trinity       8         30 James Yates       11 5/12       St. Edward       4         31 Albert Holden       11 9/12       St. James       4         32 Norman Wolfenden       12       Trinity       8         33 Wilfrid Harding       12 6/12       Trinity       8         34 Harry Hutchinson       12 6/12       St. Cuthbert       6         35 Frank Walkden       12 8/12       Duckworth Street       8         36 Thomas Gledhill       12 9/12       Belgrave       6         37 Samuel Oldham       13       Higher grade       7	5 4-4.37 4-5.12
30 James Yates       11 5/12       St. Edward       4         31 Albert Holden       11 9/12       St. James       4         32 Norman Wolfenden       12       Trinity       5         33 Wilfrid Harding       12 6/12       Trinity       5         34 Harry Hutchinson       12 6/12       St. Cuthbert       6         35 Frank Walkden       12 8/12       Duckworth Street       6         36 Thomas Gledhill       12 9/12       Belgrave       6         37 Samuel Oldham       13       Higher grade       7	5 4-2.12 4-3.25
31 Albert Holden	5 4-4.25 4-5.00
32       Norman Wolfenden       12       Trinity       3         33       Wilfrid Harding       12 6/12       Trinity       3         34       Harry Hutchinson       12 6/12       St. Cuthbert       6         35       Frank Walkden       12 8/12       Duckworth Street       3         36       Thomas Gledhill       12 9/12       Belgrave       6         37       Samuel Oldham       13       Higher grade       7	4 4-7.50 4-7.50
33       Wilfrid Harding 12 6/12       Trinity	4 4-6.37 4-7.37
34 Harry Hutchinson       12 6/12       St. Cuthbert       6         35 Frank Walkden       12 8/12       Duckworth Street       5         36 Thomas Gledhill       12 9/12       Belgrave       6         37 Samuel Oldham       13       Higher grade       7	5 4-5.37 4-6.75
35       Frank Walkden 12 8/12       Duckworth Street       5         36       Thomas Gledhill 12 9/12       Belgrave       6         37       Samuel Oldham 13       Higher grade       7	5 4-6.37 4-7.37
36 Thomas Gledhill 12 9/12 Belgrave         37 Samuel Oldham 13 Higher grade	6 4-9.62 4-9.87
37 Samuel Oldham 13 Higher grade	5 4-7.25 4-8.12
	6 4-4.25 4-4.25
00 m	7 4-9.63 4-9.75
38 Thomas Smethurst 13 6/12 Trinity	7 5-0.75 5-1.00
1800 - 18	
Average 9 5/12	4-2.05 4-2.31
THE PARTY OF THE P	E WATE O
1 Doris Metcalf 5 3/12 Vernon Street	1 3-7.75 3-8.50
2 Bella Williams 7 St. Cuthbert	1 3-7.50 3-7.62
3 Ethel Edwards 9 6/12 Sandhills	2 4-1.00 4-1.25
4 Martha Walsh 9 11/12 Culvert	4 4-2.50 4-2.62
COLUMN TO THE RESERVE	4 4-7.37 4-7.50
122 2370 10310 1071	5 4-7.00 4-7.37
DOM: 1 19134 20130 30130 30170	6 5-2.00 5-2.62
THE PERSON NAMED OF THE PE	5-2.00 5-2.62
Average 9 8/12	4-3.30 4-3.64

TABLE II.

Before the Course. Chest Measurement.

	Weigh	ht.	After	Measuremen	After.	Respiratory.
No.	Before.	After.	Expiration.	Normal.	Inspiration.	Range.
-	-	-		-	-	
	st. lbs.	st. lbs.	ins.	ins.	ins.	ins.
1	2-13.00	2-12.75	20.25	21.00	21.50	1.25
2	3-0.25	3-0.50	21.00	21.75	23.00	2.00
3	3-5.00	3-4.75	21.25	23.00	23.25	2.00
4	2-11.00	2-12.50	20.25	20.62	21.50	1.25
5	3-4.00	3-4.75	20.75	21.00	22.75	2.00
6	3-11.50	3-10.25	21.25	22.12	23.75	2.50
7	3-3.00	3-4.00	21.50	21.50	22.00	0.50
8	3-8.00	3-9.12	21.00	21.50	23.25	2.25
9	3.13-50	3-11.50	23.50	24.00	25.75	2.25
10	3-6.00	3-5.00	20.75	21.25	22.62	1.87
11	3-5.00	3-3.00	22.25	22.50	24.00	1.75
12	3-4.50	3-5.25	22.25	23.00	23.87	1.62
13	3-3.50	3-3.75	20.75	21.00	23.25	2.50
14	3-11.50	3-9.75	23.00	23.25	25.00	2.00
15	3-9.00	3-8.50	22.25	22.25	24.00	1.75
16	3-8.00	3-8.75	21.00	22.00	22.75	1.75
17	4-8.25	4-8.37	22.75	23.50	25.25	2.50
18	4-4.00	4-3.75	22.50	23.00	25.00	2.50
19	3.11-00	3-11.50	22.75	23.12	24.62	1.87
20	4-7.00	4-7.75	23.25	24.00	25.62	2.37
21	4-2.00	4-2.75	22.25	24.25	24.50	2.25
22	3-4.00	3-5.25	21.50	21.75	23.50	2.00
23	4-1.00	3-13.50	22.50	23.00	25.75	3.25

### TABLE II.—(Continued).

Before the Course. Chest Measurement.

				nest Measurem		-
No.	Weig Before.	After.	After Expiration.	Normal.	After. Inspiration.	Respiratory. Range.
94	st. lbs.	st. lbs.	ins.	ins. 24.75	ins. 27.50	ins. 3.25
24	5-3.00	5-2.00	24.25	24.75	27.50	5.20
25	4-9.00	4-9.75	23.62	25.00	25.75	2.12
26	5-1.00	5-0.75	25.75	26.00	26.75	1.00
27	4-6.50	4-8.50	22.50	24.25	25.50	3.00
28	4-5.50	4-5.00	23.87	24.50	25.75	1.87
29	4-9.00	4-8.75	24.00	24.50	25.25	1.25
30	5-3.00	5-3.00	23.50	24.00	26.00	2.50
31	5-8.00	5-12.00	24.75	26.75	27.25	2.50
32	5-8.50	5-8.50	25.50	26.00	27.37	1.87
33	5-4.50	5-3.75	24.75	25.00	27.75	3.00
34	5-0.00	5-2.75	25.00	25.25	27.00	2.00
35	5-12.50	5-11.75	26.75	27.00	29.25	2.50
36	5-0.00	4-13.50	23.50	24.75	26.75	3.25
37	5-10.00	5-12.50	26.25	27.50_	28.50	2.25
38	6-5.00	6-6.50	26.25	26.50	29.37	3.12
	4-3.25	4-3.50	22.37	23.50	25.00	2.12
1	2-12.50	2-13.25	19.50	20.25	21.00	1.50
2	2-9.75	2-9.75	18.50	19.50	20.00	1.50
3	3-8.50	3-8.00	21.25	21.75	23.75	2.50
4	3-13.75	3.13-75	21.50	22.00	23.25	1.75
5	5-1.50	. 5-1.50	23.25	24.00	24.75	1.50
6	5-1.25	5-2.25	22.00	23.00	24.75	2.75
7	7-1.50	7-1.75	26.50	27.75	29.25	2.75
	4-5.00	4-5.12	21.75	23.37	23.62	2.00

### TABLE III.

After the Course Chest Measurement.

		Chest Measuremen		The second	129 60	
No.	After Expiration	Normal.	After Inspiration.	Respiratory Range.	Present Health.	Diagnosis
	in processing	21011101	zin-priteroin	and a	Trouble.	Diagnosis.
1	20.25	21.00	22.00	1.75	Good	Stammering.
2	21.00	21.75	23.50	2.50	do.	do.
3	22.00	23.00	23.75	1.75	do.	do.
4	20.00	20.75	22.50	2.50	do.	do.
5	20.75	21.00	22.75	2.00	do.	do.
6	21.62	22.25	24.00	2.37	do.	Stuttering.
7	21.50	22.75	23.25	1.75	do.	Stammering
8	21.00	21.50	23.50	2.50	do.	do.
9	23.50	24.00	25:75	2.25	do.	Stuttering
10	21.00	21.50	23.25	2.25	do.	do.
11	21.12	22.75	24.62	3.50	do.	Stammering
12	21.50	23.00	24.50	3.00	do.	do.
13	21.25	22.00	23.75	2.50	do.	Stuttering
14	22.00	23.25	25 00	3.00	do.	do.
15	21.50	22.25	23.75	2.25	do.	Stammering
16	20.50	22.50	23.25	2.75	do.	Stuttering
17	22.25	24.00	26.50	4.25	do.	Stammering
18	22.75	23.50	25.25	2.50	do.	do.
19	23.25	23.50	24.50	1.25	do.	Stuttering
20	23.00	24.00	25.00	2.00	do.	Stammering
21	21.25	24.25	25.00	3.75	do.	Stuttering
22	20.87	21.62	23,50	2.62	do.	do.
23	22.25	23.25	25.75	3.50	do.	Stammering
24	24.00	23.62	28.25	4.25	do.	Stuttering

### TABLE III.—(Continued).

After the Course Chest Measurement.

No.	After Expiration	Normal.	After Inspiration.	Respiratory Range.	Present Health.	Diagnosis.
25	24.25	25.00	26.75	2.50	do.	Both
26	23.50	26.25	26.75	3.25	good	Stuttering
27	22.25	24.37	26.50	4.25	do.	do.
28	23.00	24.50	25.75	2.75	do.	Stammering
29	23.25	24.75	25.75	2.50	do.	do.
30	23.00	24.00	26.75	3.75	do.	Stuttering
31	24.50	26.75	27.50	3.00	do.	do.
32	25.25	26.00	27.50	2.25	do.	do.
33	23.62	24.62	28.50	4.87	do.	do.
34	24.00	25.50	27.50	3.50	do.	Stammering
35	26.37	27.00	29.62	3.25	do.	Both
36	23.12	25.00	26.75	3.62	do.	Stammering
37	26.50	27.50	29.50	3.00	do.	Stuttering
38	26.00	27.00	30.00	4.00	do.	do.
	22.75	23.75	25.62	2.87	Mark	
1	19.25	21.50	21.75	2.50	Good	Stammering
2	18.50	19.62	20.37	1.87	do.	do.
3	20.75	21.75	23.75	3.00	do.	do.
4	21.75	21.75	23.75	2.00	do.	do.
5	22.50	23.75	24.75	2.25	do.	Stuttering
6	22.75	24.50	26.00	3.25	do.	do.
7	27.00	29.00	29.75	2.75	do.	Stammering
-	21.62	23.12	24.25	3.50		

### TABLE IV.

No.	Commenced	Can he Sing without Stammering	Does he Articulate distinctly when not Stammering	Does he Lisp	Which Sounds give greatest difficulty
1	Infancy	Yes	Yes	No	All Consonants.
2	Infancy	Yes	Yes	No	P.H.B.D.T.
3	Infancy	Yes	Yes	No	Dentals
4	Four years old	Yes	Yes	No	Consonants
5	Infancy	Yes	Yes	No	Dentals
6	Infancy	Yes	Yes	No	Explosives and dentals
7	Infancy	Yes	Yes	No	Consonants
8	Infancy	Yes	Yes	No	Consonants
9	Infancy	Yes	Yes	No	Explosives
10	Infancy	Yes	No	No	All sounds
11	Six years old	Yes	No	Yes	Sounds S.P continuous
12	Infancy	Yes	Yes	No	Consonants
13	Five years old	Yes	Yes	No	Explosives
14	Infancy	Yes	No	Yes	All sounds
15	Six years old	Yes	Yes	No	Consonants
16	Infancy	Yes	Yes	No	Explosives
17	Five years old	Yes	Yes	No	Explosives
18	Infancy	Yes	Yes	No	Linguals
19	Infancy	Yes	Yes	No	Gutterels and Explosives
20	Six years old	Yes	Yes	No	Consonants
21	Infancy	No	No	No	Linguals
22	Seven years old	Yes	Yes	No	Dentals
23	Infancy	Yes	Yes	No	Open sounds, a.e.i.o.u.
24	Infancy	Yes	Yes	No	Consonants

### TABLE IV .- (Continued).

Does he Articulate Does Can he Sing distinctly he Which Sounds give without when not No. Commenced Stammering Stammering Lisp greatest difficulty 25 Infancy Yes Not very No All sounds Five years old Yes Yes No Gutterels 26 Infancy Yes Yes No Explosives and Dentals 27 Infancy . 28 Yes Yes No Gutterels Infancy Yes 29 Yes No Explosives and Gutterels 30 Infancy Yes Yes No Explosives and Linguals 31 Infancy Yes Yes No Explosives and Dentals 32 Infancy Yes All Sounds Not distinct No 33 Infancy Yes Yes No Gutterals Yes 34 Infancy Yes No Gutterals and Dentals 35 Infancy Yes Yes No Consonants 36 Infancy Yes Yes No S.St.Sp.D.T. Yes Yes 37 Infancy No B.M. and Explosives Yes Yes 38 Infancy No All Sounds Infancy Yes Yes No Consonants Infancy Yes Yes No Explosives Five years old Yes Yes No Linguals Infancy Yes Yes No Gutterels Yes Five years old Yes No All Consonants Seven years old Yes Yes No Dentals and Gutterals Yes Infancy Yes No Explosives and Gutterals

### TABLE V.

No	Temper- ament	Any organic defect.	Caus	se. n	is he nentally lefective	Does he make any Contortion	
3	Quiet	No	Heredity		No	Face	
2	2 Quiet	No	Heredity		No	Face	
:	Quiet	No	Association Mim	icry	No	Face	
4	Quiet	No	Imitation		No	Arms and Feet	
ŧ	Quiet	No	Unknown		No	Face •	
	Nervous	No	Nervousness		No	Face and Body	
7	Quiet	No.	Heredity		No	Face	
8	Quiet	No	Mimicry		No	Face	
9	Nervous	Irregular Teeth	Unknown		No -	Face and Body	
10	Nervous	Roof of Mouth	Heredity		Yes	Face and Body	
11	Quiet	No	Heredity		Weak	Lips Protrude	
15	2 Quiet	No	Mimicry	100	No	Face	
1:	Nervous	No	Mimicry		No	Face and Body	
1	1 Nervous	No	Nervousness		No	Face, etc.	
18	5 Quiet	No	Mimiery		No	Face	
10	i Nervous	No	Nervousness		No	Body	77.0
1	7 Quiet	No	Scarletina		No	Face	
1	8 Quiet	No	Heredity		No	Face	
1	9 Nervous	No	Shock		No	Face and Body	
2	Quiet	No	Heredity		No	Face	
2	l Nervous	Cleft Palate	Mimiery		No	Mouth	
2	2 Nervous	No	Association		No	Face and Body	
2	3 Quiet	No	Association and	d Heredity	No.	Face	
2	4 Nervous	No	Association Mim	nicry	No	Face and Body	
2	5 Nervous	No No	Association		Yes	Face and Body	

### TABLE V.—(Continued).

No.	Temper- ament	Any organic defect.		is he nentally lefective	Does he make any Contortions
26	Nervous	No	Heredity	No	Face and Body
27	Nervous	No.	Not known	No	Face and Body pro- nounced
28	Quiet	No	Association Mimiery	No	Face
29	Quiet	No	Association Mimicry	No	Face pronounced
30	Nervous	No	Mimicry	No	Protrudes Tongue
31	Nervous	No	Nervousness	No	Face and Body
32	Nervous	No	Sickness	No	Face and Body
33	Nervous	No	Association Mimicry	No	Face and Body
34	Quiet	No	Imitating another boy	No	Face very bad
35	Nervous	No	Association Mimiery	Yes	Face and Body
36	Quiet	No	Association Mimicry	No	Protrudes lips
37	Nervous	No	Heredity	No	Face and Body
38	Nervous	No	Nervousness	No	Face and Body
1	Quiet	No	Association	No	Facial
2	Quiet	No	Association Mimicry	No	Facial
3	Quiet	No	Association Mimicry	No	Face and Swaying of Body
4	Quiet	No	Association Mimicry	No	Face
5	Nervous	No	Fright	No	Face
6	Nervous	No	Association and Nervousness	No	Face and Body
7	Quiet	No	Mimicry	No	Face

### TABLE VI.

-	Does he stand	Is the defect aggravated by	After t	he Course. Is
No.	transfixed or rapidly repeat initial sounds	improper respiration.	Are Contortions noticeable.	Stammering noticeable.
1	Stands transfixed	Yes	No	No
2	Stands transfixed	Yes	No	No
3	Stands transfixed	Yes	Face and arms	No
4	Stands transfixed	Yes	Arms	Slight hesitation
5	Unable to articulate	Yes	Fingers	Nô
6	Repeats initial sounds	Yes	Arm	No
7	Stands transfixed	Yes	Finger	No
8	Unable to begin	Yes	Finger	No
9	Repeats initial sound	Yes	Finger and Arms	No
10	Repeats initial sound	Yes	No	No
11	Stands transfixed	Yes	Fingers	No
12	Stands transfixed	Yes	Speaks slowly	No
13	Repeats initial sound	Yes	Arm	No
14	Repeats initial sound	Yes	Fingers	Lisps
15	Stands transfixed	Yes	Speaks slowly	No
16	Repeats initial sound	Yes	No	No
17	Stands transfixed	Yes	Arms and Fingers	No
18	Unable to begin	Yes	Speaks slowly	No
19	Repeats initial sound	Yes	Fingers	No
20	Cannot articulate	Yes	No	No
21	Stands transfixed and repeats initial sound	Yes	Arm	No
22	Repeats initial sound	Yes	No	No
23	Cannot articulate	Yes	Nervous	No
24	Repeats initial sound	Yes	Fingers	No

### TABLE VI. - (Continued).

	Does he stand	Is the defect aggravated by	After the	Course. Is
No.	transfixed or rapidly repeat initial sounds	improper respiration.	Are Contortions noticeable.	Stammering noticeable.
25	Stands transfixed and repeats first sound	Yes	No	No
26	Rapidly repeats initial sounds	Yes	Fingers work,inhalation forced	No
27	Rapidly repeats initial sound	Yes	No	No
28	Stands transfixed, unable to speak	Yes	No	No
29	Stands transixed	Yes	Fingers, shouts	No
30	Repeats initial sound of each word	Yes	No	No
31	Repeats initial sound of each	Yes	Fingers	No
32	Repeats initial sound and stands transfixed	Very much	Fingers	Slight
33	Repeats initial sound	Yes	Indrawing of breath	No
34	Stands transfixed	Yes	No	No
35	Stands transfixed and repeats initial sounds	Yes	No	No
36	Stands transfixed	Yes	No	No
37	Rapidly repeats a syllable or word	Yes	No	Slight
38	Rapidly repeats a syllable or word	Yes	Shouts	No
1	Stands transfixed	Yes	No	No
2	Unable to commence speech	Yes	No	No
3	Stands transfixed	Yes	No	No
4	Unable to begin	Yes	No	No ·
5	Repeats initial syllable of each word	Yes	No	No
6	Repeats initial syllable	Yes	Fingers	No
7	Unable to begin	Yes	No	No

### TABLE VII.

### AFTER THE COURSE.

No.	Has Breath control improved	Has Physique improved.	Has he more confidence	Progress.
1	Imperfect	Yes	Yes	Good
2	Yes	Yes	Yes	Good
3	Yes-	Yes	Yes	Good
4	Yes	Yes	Yes	Good
5	Yes	Has a large head	Yes	Good
6	Yes	Yes	Yes	Good
7	Yes	Yes	Yes	Good
8	Yes	Yes	Yes	Good
9	Yes	Yes	Yes	Good
10	Yes	Yes	Yes	Good
11	Yes	Yes	Yes	Bood
12	Yes	Yes	Yes	Good
13	Yes	Yes	Yes	Good
14	Yes	Yes	Yes	Good
15	Slowly inhale	Yes	Yes	Good
16	Yes	Yes	Yes	Good
17	Yes	Yes	Yes	Good
18	Yes	Yes	Yes	Good
19	Yes	Yes	Yes	Good
20	Yes	Yes	Yes	Good
21	Yes	Yes	Yes	Good
22	Yes	Yes	Yes	Good
23	Yes	Yes	Yes	Good
24	Yes	Yes	Yes	Good

### TABLE VII. - (Continued).

### AFTER THE COURSE.

No.	Has Breath control improved	Has Physique improved.	Has he more confidence	Progress.
25	Yes	Yes	Yes	Good
26	Yes	Yes	Yes	Good
27	Yes	Yes	Yes	Good
28	Yes	Yes	Yes	Good
29	Yes	Yes	Yes	Good
30	Yes	Yes	Yes	Good
31	Yes	Yes	Yes	Good
32	Yes	Yes	Yes	Good
33	Yes	Yes	Yes	Good
34	Yes	Yes	Yes	Good
35	Yes	Yes	Yes	Good
36	Yes	Yes	Yes	Good
37	Yes	Yes	Yes	Good
38	Yes	Yes	Yes	Good
1	Yes	Dull	Yes	Good
2	Yes	Yes	Yes	Good
3	Yes	Yes	Yes	Good
4	Yes	Yes	Yes	Good
5	Yes	Yes	Yes	Good
6	Yes	Yes	Yes	Good
7.	Yes	Yes	Yes	Good

### Farms and Dairies.

The Inspectors, acting under my instructions have visited all the above buildings in the Borough. A large number of improvements have been made in improving the sanitary conditions, such as lighting, ventilation and drainage.

Careful supervision is also exercised over the water supplies. In some instances fresh supplies have been obtained, due to pressure being made by the inspectors.

Some samples of milk were taken, and in most cases found to be pure and undiluted. Mr. Walsh had two cases in Court, where cream had been extracted, and penalties inflicted.

One sample contained borate preservatives, and the farmer was cautioned not to offend again, as such drugs are not necessary, and may be injurious in the case of infants.

A sample of milk was sent to Professor Delëpine, who examined it and found pus cells, pointing to the presence of manmmary abcess, and indicating danger to persons using the milk. The farmer who lived outside the Borough limits was also cautioned

We may possibly have increased powers of inspecting the farms outside the Borough, yet much good can be done by constantly inspecting our own farms, and endeavouring to keep the farmers up to a high standard of cleanliness, both personal and of the cattle and farm buildings.

### Factories and Workshops.

These have all been visited by the Inspectors, and have been found clean and healthy.

Below is a list of Half-Timers in Lancashire and Yorkshire towns, the population of the towns at the last census, the total numbers, and the rate per 1,000 of the population are given.

We occupy the unenviable position at the top of the list, and I may say that these figures are from the Factory Report for 1904.

It is evident the parents of Darwen make great use of their children as wage earners. It would be better for the health of these children if they could go to school longer, and have more time in bed for rest and recuperation.

It is a common sight to see children of tender years about the streets at a late hour, and when they have to rise early to go to work, it must be deleterious to their growth and stamina.

Details of the work done in the workshops can be seen in the Government tables.

Many wholesale bakeries have been very much improved and enlarged. I had occasion last year to complain of the men during the meal hours, smoking and spitting in the rooms used for mixing. I drew the attention of the men, and cautioned them, so it has not been noticed since then.

### HALF-TIMERS IN MILLS.

List showing the number of Half-timers and the rate per thousand of population:

Town.	Population. (Census, 1901)	No. of Half-Timers.	Rate per 1,000 of Population.
Darwen	38,212	623	16.30
Keighley	41,564	647	15.56
Haslingden	18,543	284	15.31
Bradford	279,767	4210	15.04
Nelson	32,816	442	13.46
Heywood	25,458	325	12.76
Blackburn	129,216	1530	11.84
Clitheroe	11,414	131	11.47
Bacup	22,505	250	11.10
Burnley	97,043	1042	10.73
Colne	23,000	246	10.69
Todmorden	25,418	264	10.38
Halifax	104,944	1018	9.70
Mossley	13,452	127	9.44
Preston	112,989	950	8.40
Accrington	43,122	348	8.07
Brighouse	21,735	168	7.72
Leigh	40,001	276	6.89
Chorley	26,852	180	6.70
Rochdale	83,114	543	6.53
Rawtenstall	31,053	200	6.44
Bolton	168,215	1068	6.34
Ashton-under-Lyne	43,890	270	6.15
Bury	58,029	323	5.56
Oldham	137,246	534	3.89

### Black Smoke.

The large number of 335 Observations were taken by the Inspectors, and 7 prosecutions followed, and a large number of Statutory Notices sent out.

The average duration of emission of Black Smoke for the year was 2.95 minutes per hour, showing a great improvement over the previous, and over every year, confirming my remarks in the Annual Report for the previous year, when the limit of Black Smoke emission was reduced.

The action taken by the Council, and the supervision of the Inspectors caused many firms to provide and fix mechanical stokers to the boilers, making the atmosphere much clearer, and no doubt reducing the coal bills of the firms which have made the change.

Full particulars will be found in the separate reports of the Inspectors.



### ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1907, FOR THE BOROUGH OF DARWEN.

On the Administration of the Factory and Workshop Act, 1901, in connection with

### FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

### I.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of Inspections.	Number of Written Notices.	
Factories (Including Factory Laundries) and W shops (including Workshop Laundries)		22	
Workplaces	3		
Homeworkers. Premises			
		_	
	1105	22	
A TAKE BETTER OF BEAUTY	The same of the sa	-	

### II.—DEFECTS FOUND.

Nuisances under the Public Health Acts-

	Nui	Number of Defects.			
Particulars. F		Remedied.			
Want of Cleanliness	15		15		
Want of Ventilation	6		6		
Overcrowding					
Want of Drainage of Floors	3		3		
Other Nuisances	9		9		

	Num		
Particulars	Found	Remedied	
Sanitary accommodation—			
Insufficient	8	5	
Uusuitable or defective	3	3	
Not separate for sexes			
Offences under the Factory and Workshop Act-			
Breach of Special Sanitary requirements for Bakehouses	1	1	
	-	_	
Total	45	42	
	100000	and the last	
IV.—REGISTERED WORKSE	IOPS.		
Workshops on the Register at the end of the year		251	
V.—OTHER MATTERS.			
Class		Number	
Matters notified to H.M. Inspector of Factories:—		visigins!	
Failure to affix Abstract of the Factory and Act (s 133)	Workshop		
Action taken in matters referred by H.M. Instrumental remediable under the Public Health Acts, but the Factory and Workshop Act (s 5)—			
Notified by H.M. Inspectors		. 15	
Reports (of action taken) sent to H.M. I	nspector	. 17	
Underground Bakehouses:—			
In use at the end of the year		. 5	

F. G. HOWARTH,

Medical Officer of Health.

# INFECTIOUS DISEASES HOSPITAL.

PATIENTS IN HOSPITAL DURING 1907.

Days.	8 2 2 2 4 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8
Discharged.	Feb. 4 4 19 Mar. 19 19 19 19 May 18 July 25 Dec. 31 31 31
Admitted.	Dec. 18 ". 24 Jan. 26 Feb. 1 April 2 Mov. '18 ". 27 ". 27 ". 26 ". 27 ". 27
Disease.	years Scarlet Fever ,, ,, Small Pox ,, Scarlet Fever ,,
Age.	3½ years 6¼ ,, 17 , 16 ,, 67 ,, 34 ,, 11¾ ,, 11¾ ,, 11¾ , 13¾ ,, 13¾ ,, 13¾ ,,
Address.	William Fenton 10, Henry Street Benjamin Fenton 10, Henry Street Rachael A. Baron 38, Olive Lane Robert King 52, Olive Lane Bessie Turbott 47, Hindle Street James Briggs 130, Lomax Street Stannard 6, Ratcliffe Street Fliza J. Holden 58, Harwood Street John Whittle 13, Joseph Street West Sarah J. Whittle 13, Joseph Street West May Brocklebank 14, Maria Street
Name.	William Fenton 10, Henry Street Benjamin Fenton 10, Henry Street 10, Henry Street 10, Henry A. King 25, Olive Lane 25, Olive 2

### COUNTY OF LANCASTER.

### Medical Officer's Report for 1907,

### URBAN SANITARY DISTRICT OF DARWEN.

Area in Statut	e Acres	5,919
Population (Census	1901	38,212
Population (Estima	ted) 1907	41,864

Name of Medical Officer of Health—FRED GEORGE HAWORTH, M.B.C.M., D.P.H. Salary, £200.

	Males.	Females.	Total.
Births Registered	431	 445	 876
Deaths Registered (Nett Deaths			
belonging to the District)	280	 247	 527

- Number of Illegitimate Births Registered, 29. Deaths of Illegitimates under one year of age, 5.
- Birth Rate, 20.92. Death Rate, 12.58. Rate of Infant Deaths, under one year, to 1,000 Births, 118.
- Death Rate from the seven principal Epidemic Diseases per 1,000 of population, 0.69.
- Diseases prevalent?—Scarlet Fever, Diphtheria and Enteric Fever slightly. Period?—Whole year.
- What Action taken ?—Isolated in Hospital where possible. Any Schools Closed ?
  —No
- What is the character of the Hospital Accommodation?—Isolation.

  Is it Joint or otherwise?—No.

Number of Beds available for your District ?-20 and 4 cots.

Number of cases treated ?—Small Pox, 1; Scarlet Fever, 10: Total, 11.

Deaths in Hospital ?—One. From what cause ?—Small Pox.

How is Disinfection carried out ?—Houses, Sulphur chiefly: Clothing, Bedding, etc., Superheated Steam. Apparatus used?—Washington Lyon's. Where situated?—Bull Hill Hospital.

Number of Cases of Infectious Diseases Notified ?-- 84.

Are any Diseases not specially mentioned in the Act notifiable (for instance, Measles, Whooping Cough, Diarrhœa, Chicken Pox.)? If so, what are they?—No.

Has any arrangement been made for the "voluntary" notification of Phthisis ?—No.

Is Diphtheritic Anti-toxin supplied to Medical Practitioners free of charge ?—No. Supplied at Cost Price.

Action taken under "The Housing of the Working Classes Acts"-

No. of Houses condemned ?-4.

Closed ?-None.

Demolished ?-None.

Made habitable ?—4.

From where is the Water Supply obtained, and what is its condition ?—Upland Surface Water. Is it subject to your inspection ?—Yes.

Is Scavenging carried out satisfactorily?—Yes. By Sanitary Authority or Contract?—Sanitary Authority.

How is the refuse disposed of ?—Burnt in Destructor (Meldrum's). Has a Destructor been provided ?—Yes.

What is the character of Drainage and the form of Sewage Disposal,?—Combined System, Bacteriological Treatment.

Canal Boats (Number Inspected, etc.) ?—None.

What is the condition of the Bakehouses?—Good. An Improvement has taken place.

Slaughter-houses: Has a Public Abbatoir been provided?—One Private, one Public.

Lodging Houses ?—One Municipal.

Dairies, Cowsheds, and Milkshops: Are they periodically inspected ?-Yes.

What is their condition ?-Good. Improving each year.

Have Regulations been made under the Order of the Local Government Board ?—Yes.

Are they enforced ?-Yes.

What amount of air space in cubic feet is required for each cow !- 600 cubic feet.

Food unfit for Human Consumption: Amount seized?—20 lbs. Herring, 40 Mackeral, 2 sides Skate, 1 bag Mussels, 8 lbs. Tomatoes, 10 lbs. Grapes, 4 Beasts, 25 Sheep, 1 Calf, 1 Pig, also 2 tons 17½ cwts of Offal.

### DEPARTMENT OF INSPECTORS OF NUISANCES.

Number of Notices served ?-844.

Nuisances remedied ?—1,688.

Number of Legal Proceedings taken and result ?—One. Order to abate.

### CLOSET ACCOMMODATION OF THE DISTRICT.

Number of Privy Middens ?-None.

Pail Closets ?--6,150.

Fresh Water Closets ?-1,441.

Waste Water Closets ?-2,132.

Number of Privy Middens converted during 1907?

To W.C.'s-None.

To Pails, etc. ?—One.

### SMOKE.

Number of Observations ?—335.

Number of Legal Proceedings taken and result;—7—7 orders for abatement.

What is the time limit allowed for the emission of black smoke per hour ?—One, two, or three boilers—five minutes per hour; four or more boilers—seven minutes per hour.

Has the Authority adopted-

- (a) "The Infectious Diseases (Prevention) Act, 1890"?—Yes, except Sections 5 to 11 inclusive and 15.
- (b) "The Public Health Acts Amendment Act, 1890";—Yes, except that relating to music and dancing.
- (c) "The Notification of Births Act, 1907?—Yes. The Act came into force on March 16th, 1908.



STATISTICS FROM LANCASHIRE LARGE TOWNS.

Cancer Death Rate	1.05 0.39 0.88 0.67 0.73 0.60 0.58 0.58
Infantile Death Rate per 1000 red	107 1111 120.6 144 148 156 163 163 118
Death Rate from other Tubercular Tabesses	0.48 0.81 0.66 0.49 0.48 0.52 0.66 0.82 0.61 0.61
Phthisis Death Rate	0.83 0.92 0.92 0.93 0.93 0.83
Respiratory Death Rate	2.58 3.26 3.26 4.08 3.44.2 3.63 3.63 3.63
Zymotic Death Rate	0.83 1.29 1.27 1.38 1.99 1.04 2.87 2.87 2.887 0.69
Death Rate (Corrected)	14.57 12.19 17.0 18.8  19.5 19.3 16.96 17.8 16.36 16.37 16.37
Death Rate (Crude)	13.91 17.4 17.4 17.55 17.55 17.55 18.3 19.29 12.08
Birth Rate (per 1000)	22.59 24.9 24.9 31.3 31.3 32.1 20.92 20.92
Hetimated Population 1907	45,500 69,733 134,438 182,917 69,200 103,947 58,901 46,031 746,144 141,730 88,000 92,476 90,765 41,864
TOWN	Accrington Barrow-in-Furness Blackburn Bolton Bootle Bury Liverpool Oldham Rochdale Salford St. Helens Wigan DARWEN



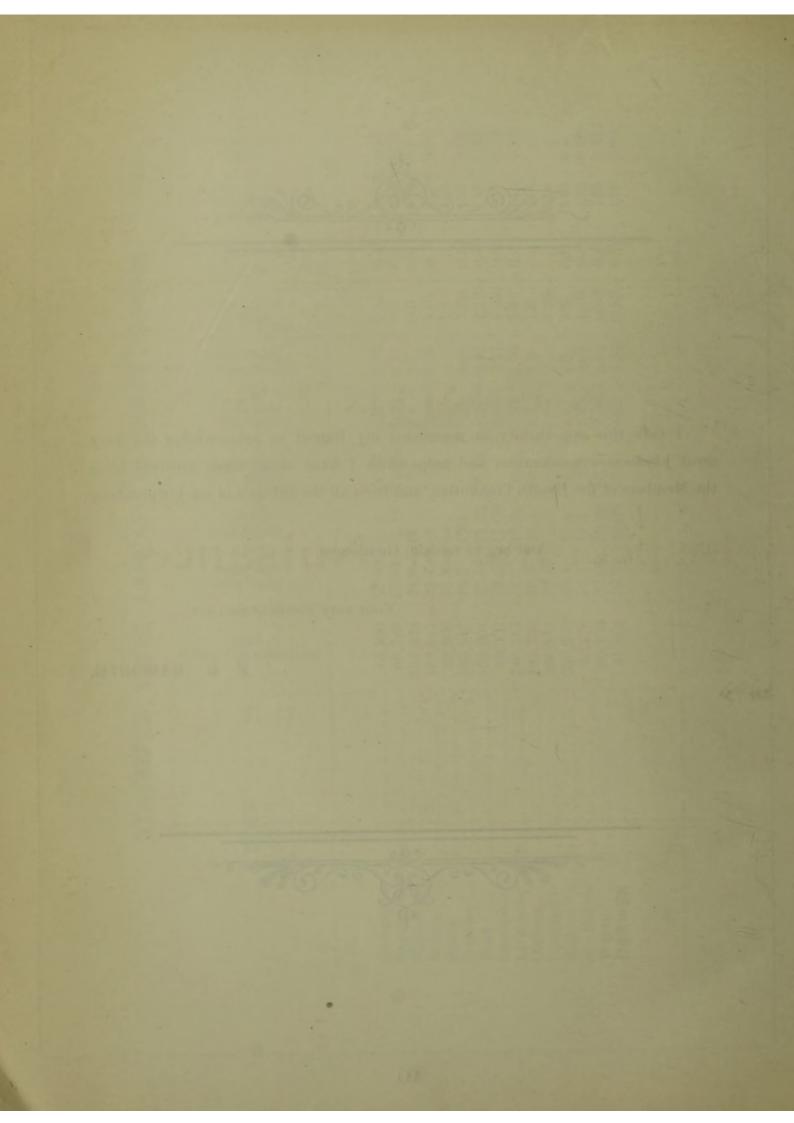
I take this opportunity in presenting my Report to acknowledge the very great kindness, consideration and help which I have at all times received from the Members of the Health Committee, and from all the Officials of the Corporation.

And beg to remain, Gentlemen,

Your very obedient servant,

F. G. HAWORTH.







# REPORTS

OF THE

# Inspectors of Nuisances,

FOR THE

YEAR ENDING DECEMBER 31ST, 1907.



### SANITARY DEPARTMENT

Municipal Offices, Darwen,

March, 1908.

# TO THE CHAIRMAN AND MEMBERS OF THE COMMITTEE.

### GENTLEMEN,

I have pleasure in presenting my Seventeenth Annual Report, giving particulars of the work carried out under my supervision during the year 1907 in administering the various Public Health Acts and Bye Laws in force within the Borough.

### NUISANCES.

The following list gives the nature of Nuisances, etc., dealt with	:-
No. of Nuisances dealt with	929
Preliminary Notices served	553
Legal Notices served	412
Nuisances abated	841
Re Inspections	1935
Complaints received	130
Complaints attended to	126
Houses inspected	8766
The following list gives the different kinds of nuisances dealt with	by notices :-
Defective Drains	93
Uneven Gullies	84
Defective Soil Pipes and Waste Pipes	13
Defective Easing Troughs and Down Spouts	109
Insanitary Yards	64
Dirty Houses and Premises	131
Dirty and Delapidated Closets	21

Accumulations of Refuse	48
Nuisance from Keeping Animals	9
Jnsanitary Ashpits	31
Ash Tubs without Covers	42
Broken Slop Pipes	87
Choked W. W. C.'s	46
Broken Ash Tubs	13
Insufficient Ventilation	32
Dangerous Buildings	3
Convert Pails to W.C	20
Insufficient Closet Accommodation	16
Overcrowding	5
Abolish Cesspools	12
Miscellaneous	13

Back to back property, large open yards and all poor class property within the Borough has been kept under close inspection, and such nuisances as were discovered were immediately dealt with.

In many cases where defective drainage was found the smoke test was applied, and some were found to be defective. Notices were served and defects carried out.

### INFECTIOUS DISEASES.

During the year I had reported to me for investigation 45 cases of Disease, this being a decrease of 4 as compared with 1906.

The premises at which the cases occurred were carefully inspected. Printed and verbal instructions were given as to the proper means of isolation of infected persons, etc. At the termination of each case the rooms were fumigated, and the infected bedding removed to Hospital for disinfection.

5 cases of Scarlet Fever were removed to Hospital, and one case of Small Pox.

### SMALL POX.

On April 17th I received information from the Medical Officer that a case of

Small Pox had broken out in Lomax Street. I immediately visited the premises, made very careful enquiries as to the case and the movement of the patient for the previous 14 days, but was not successful in discovering the cause of the outbreak.

I removed the patient, a man named James Briggs, aged 67, Coal Heaver, Darwen Station, to the Bull Hill Hospital, the same evening.

The other inmates of the house were vaccinated, and kept under supervision for some days, and I am pleased to say there was no further outbreak.

A full report of the case was submitted to the Health Committee at the time.

The following Tables give the nature and number of the Diseases for 1906-7 and the Notification in each Ward for 1906, 1907—

	Fe	arlet ver 1907		hoid ver 1907	Puer Fev 1906	ver	1	Erysi 1906		Diph 1906		Po	all x 1907
January	5	1	 3	2	 0	0		0	0	 3	3	 0	0
February	3	2	 0	0	 1	0		1	0	 2	6	 0	0
March	1	0	 0	1	 1	0		2	1	 2	0	 0	0
April	2	3	 0	0	 0	0		1	0	 1	2	 0	1
May	3	1	 0	0	 0	0		0	0	 2	0	 0	0
June	0	3	 . 0	0	 0	0		0	0	 0	1	 0	0
July:	1	0	 0	0	 0	0		0	2	 1	0	 0	0
August	. 2	0	 . 0	1	 0	0		1	0			 0	0
September	2	0	 . 0	0	 . 0	0		1	0	 0	0	 0	0
October	1	0	 . 1	1	 0	0		0	0	 1	2	 0	0
November	. 0	0	 . 1	3	 . 0	0		1	0	 1	0	 .0	0
December	. 0	2	 . 1	3	 . 0	0		0	2	 1	2	 0	0
	20	12	 . 6	11	 . 2	0		7	5	 14	16	 0	1

	Cen	tral		ath-	Sor	ath-
	1906	1907	1906	1907	1906	1907
Scarlet Fever	9	6	 . 10	4	 1	2
Typhoid	2	3	 . 2	4	 2	4
Puerperal						
Eryseplas						
Diphtheria						
Small Pox						
	18	14	19	18	12	13

The following is a list of Bedding removed to Hospital for disinfection :-

	Beds	Mattresses	Bolsters	Pillows	Quilts	Blankets	Sheets	Suits of Clothes	Carpets	Rugs	Curtains	Cushions	Shawls	Sundries
January	3	4	3	8	4	6	4		2	1				23
February	3	2	2	2	3	7								5
March	8	5	8	5	7	6	1		2					3
April	3	4	3	2	2	2								18
May														
June	3		2	2	2	4	2							3
July	3	2	2	2	1	2								4
August	1	2	1	2	1						1			3
September	1	2	1	2										
October	1	1	2											
November														
December	7	1	7	10	7	10	11					1	3	21
	33	23	31	35	27	37	18		4	1	1	1	3	80

### FACTORIES, WORKSHOPS, BAKEHOUSES, LAUNDRIES, ETC.

During 1907 I made 545 inspections under the Factory Acts, and found them in a very fair sanitary condition.

Bakehouses and places where wearing apparel was made received frequent visits and were found in a clean condition.

Workshops were reported to H.M. Inspector of Factories, and visits were made in company with the Inspectors.

The following is a summary of visits and notices:-

Premises.	No. of Inspections.		Notices sent.
Factories and Workshops		545	
Homeworkers Premises .		1	

13

### DEFECTS FOUND.

### NUISANCES UNDER THE PUBLIC HEALTH ACTS.

Particulars.	Number	r of Defects.
	Found.	Remedied.
Want of Cleanliness	7	7
Want of Ventilation	3	3
Overcrowding		
Want of Drainage of Floors	2	2
Other Nuisances	1	1
Sanitary Accommodation Insufficient	2	1
Without Sanitary Accommodation	2	2
Breach of Sanitary Requirements for Bake-		
houses	1	1 100
Notices from H. M. Inspector of Factories	9	
Workshops on Register	119	

### FARMS AND DAIRIES.

The whole of the Dairies and Cowsheds which are Registered under the Regulations made by the Local Authority have been periodically visited, and many improvements have been carried out, full reports of which have been submitted to the Health Committee, at its monthly meetings.

The following is a list of Nuisances found and remedied:

	D	efects.
	Found.	Remedied.
Insufficient Ventilation	8	7
Defective Roof of Shippon	2	2
Defective Easing Troughs and Dawnspouts	4	3
Defective Water Supply	1	1
Defective Drainage	9	8
Gullies in Shippon requiring removal	14	14

	D	efects.
	Found.	Remedied.
Gullies in Dairy requiring removal	3	3
Limewash and Cleanse	9	9
Defective Slop-pipe	2	2
Insanitary Manure Pit	2	1
Shippon Flagging and Pavement Defective	3	3

### BLACK SMOKE.

During the year 1907, I have taken 159 Observations against 164 in 1906.

There has been a great improvement made as regards the emission of black smoke, as the figures given below will show as compared with previous years.

I give the number of Observations for previous years and the average black smoke .

	Observations.		Average No. of Minutes Black
1900		41	 101
1901		129	 8
1902		14	 6
1903		15	 $6\frac{1}{2}$
1904		4	 91
1905		30	 61
1906		164	 61
1907		159	 33

The following is a list of Observations at each Mill, with the averages of Black Moderate, and Not Smoking.

Each Observation was of 1 hours duration.



# SMOKE OBSERVATIONS, AVERAGES &c., 1907.

MILL.	Observa		Average.		Boilers.	Apparatus.
	tions.	Black	Mod.	None		
	7	4	14	413	2	Hand.
	20	43	18	37	3	Hand.
Brittannia	00	43	164	39	1	Bennis.
	2	200	14	423	1	Hand.
	2	11	15	433	1	Bennis.
Downer Sninning Rolle Street	9	31	151	41	2	Courts turner
mg, Danc Soloce	4	***	131	44	-	Hand, patent bars
	3	4	131	49	-	Procters
Greenneid new		11	14.0	00		Drootone
reenfield old	71	44	14	777		Frocters.
Hampden Mill	5	77	14	432	-	Procters.
	9	4	15	41	-	Hand.
	33	13	11	47	1	Bennis.
Holme Mil	oc	21	143	423	1	Procters.
	20	375	14	493	2	Hand
	2 14	414	14	411	1 10	Hond
	c	# C	17	412		Hand.
Industry Mill	· .	34.	101	40\$ 5001	- 0	nand.
Darwen Paper	4	4070	195	334	9,	Hand.
Marsh House		77	‡01	42	- (	Hand
No. 1 Spinning	6	35	148	414	7 (	Whittakers.
	4	9	15	384	7	Hand.
	4	31	143	424	1	Whittakers.
	5	21	134	444	1	Procter.
	4	67	13	45	1	Whittakers.
	4	33	144	423	1	Procters.
	4	33	133	43	1	Hand
Spring Vale Tall Chimney	2	œ œ	17	343	4	Hand.
ow Chimney	2	100	143	373	3	Hand.
Sudell Side Mill	4	3	141	42	1	Procters.
Starkie Street	9	43	151	403	-1-	Hand.
	5	41,	151	401	2	Hand.
Padefield	20	333		403	1	Hand.
		*****	111	423	1	Procters.
	1	4.00	154	363	-	Hand
	4	. 65	143	421	-	Bennis.
			-			-

It was necessary to serve 18 Legal Notices to abate Smoke Nuisances, and in 2 cases orders were made by the Magistrates to abate Nuisances.

### CARAVANS AS DWELLINGS.

The Caravans which have settled on the Market Ground have necessitated inspections, and they have been found in a very clean condition.

It has not been found necessary to complain, or issue any notice for any breach of the Health Acts.

### INSPECTION OF FOOD, ETC.

I have paid very close attention to the Fish, Fruit, and Meat, which is exposed for sale in various parts of the Borough, and also on the Market Ground.

I have condemned the following as being unfit for food :-

20 lbs. Herring.

40 Mackerel.

2 Sides of Skate.

8 lbs. Tomatoes.

1 Bag Mussels.

10 lbs. Grapes.

I took three samples of Milk under the Foods and Drugs Acts, and they were, after Analysis found to be genuine.

### HACKNEY CARRIAGES.

As Hackney Carriage Inspector for the Borough I hake issued the following Licenses:—

Licenses for Tramcars	8
Licenses for Hackney Carriages	
License for Motor Car	
Licenses for Tram Drivers	
Licenses for Tram Conductors	
Licenses for Hackney Conductors	
Licenses for Hackney Drivers	
Licenses for Motor Car Drivers	
Licenses for Motor Car Conductors	

During the year I submitted supplementary reports to the Committee on Insanitary Property, Farms and Dairies, Workshops and Infectious Diseases.

I have periodically visited the whole of the Day Schools, and fully reported as to their condition to the Education Office.

It has only been necessary to take out proceedings in one case as regards nuisances, viz.:—Insanitary Property in Riley Street, and by order of the Magistrates No. 5 Riley Street was closed in July 1907, and is still closed till the work is carried out.

I am, Gentlemen,

Your obedient servant,

WILLIAM E. MARSDEN.

Cert. Royal San. Inst.

## Northern District.

# TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

### GENTLEMEN,

I beg to submit a Report to you of the work carried out in the District during the year ending December 31st, 1907.

The District is comprised of North-East, North-West, and West Central Wards.

The following Table gives the number of houses in each Ward at the last Census, and also shows the increase up to January, 1908.

Ward	Houses in occupation Census, 1901.	Uninhabited Census 1901.	Building Census 1901.	Total No. Census.	Total No. Jan. 1908 not including lock-up shops, etc.	Increase from Census Jan. 1908.
W.C.	803	97	6	906	947	41
N.E.	1953	56	21	2030	2203	173
N.W.	1153	21	7	1181	1600	419
Total.	3909	174	34	4117	4750	633

It will be seen from the above Table that the greatest increase has taken place in North-West Ward, consequent upon the opening up of two large estates for building purposes.

### INFECTIOUS DISEASES.

There were 39 Cases reported as against 57 during 1906, as follows:-

Ward.		carlet lever.		phoid ever.		Dipt- eria.		Erysi- elas.		uerpe 'ever.		Cotal.
West-Central		1907		1907 1	-1906 1	1907	1906		1906 0	1907	$\frac{1906}{10}$	1907
Horth-East	11	3	8	3	3	2	5	6	1	0	28	14
North-West	13	8	1	6	0	2	4	1	1	0	19	17
Total	30	14	11	10	4	6	10	9	2	0	57	39

I removed 5 Persons suffering from Scarlet Fever to the Hospital, or 35 per cent. of those reported in the District.

Immediately upon the receipt of Notification of cases of Infectious Diseases I visit the houses and made a thorough examination of the premises, any defects discovered in the drainage or sanitary arreangments I cause to be remedied as quickly as possible.

Further, I obtain a list of the family, ascertaining where the respective members are employed, the schools attended by the children, and the source of the milk supply, etc., noting particularly where the patient has been prior to the commencement of the illness, with a view to ascertaining, if possible, the source of infection. In making these investigations I discovered that four of the Typhoid Fever patients had eaten mussels, some 12 to 14 days prior to the commencement of the illness. I reported the matter to the Medical Officer of Health, who ascertained that the foreshore of a district from whence large consignments of Mussels were sent to this district was contaminated with sewage, and the beds were then being destroyed.

Four other Cases of Typhoid occurred in houses where a patient had previously been reported as suffering from the disease

### SCARLET FEVER.

Three Cases occurred in a house where a child was taken in to nurse during the day. This child had been ill, and when examined was found to be peeling. A Doctor was called in, and he certified the case as Scarlet Fever.

At the termination of each case of infectious disease (including Phthisis) the rooms were thoroughly cleansed and disinfected, and the bedding, etc., conveyed to Bull Hill Hospital, and disinfected in the Super-Heated Steam Disinfector.

During the year 36 loads of Bedding, etc., were disinfected. The following List gives the number and kind of articles treated:—

ğ 45	10	й 46	54	٥ 48			ng l						92	
spa	attresses	Bolsters	llows	uilts	ankets	eets	its of	rpets	sā	rtains	shions	awls	ndries	TAL

In accordance with your instructions and the general order of the Local Government Board I have endeavoured, by systematic inspection, to keep myself informed in respect of any Nuisances existing in the District, as the following summary will show:—

SUMMART OF RUISANCES DEALT WITH IN THE DISTI	MICI.
New Drains Constructed	15
Defective Drains Repaired or Relaid	137
Waste Pipes Trapped and Disconnected from Drains	2
Defective Soilpipes Repaired	3
Defective Water Closets Repaired	8
Defective Roofage, Downspouts and Easing Troughs Repaired	83
Insanitary Yards-Flagged	55
Dirty Houses and Premises Limewashed, etc	84
Houses Insufficiently Ventilated and Overcrowded	19
Filthy Closets Limewashed and Cleansed	31
Insufficient Closet Accommodation	30
Accumulations of Refuse Removed	61
Nuisances Arising from the Keeping of Animals	6
Choked Waste Water Closets Cleansed and Repaired	43
Insanitary Ashpits Abolished and Tubs or Bins Provided	31
Ashtubs Provided with Covers	40
Broken Slop Pipes Repaired	42
Dangerous Buildings Repaired or Rebuilt	18
Broken Ashestubs Repaired etc	27
Broken Closet Receptacle Doors Repaired	51
No Water Supply	5
Factory Chimneys emitting Black Smoke beyond Time Limit	19
Nuisances of a Miscellaneous Character	10
Total Number of Nuisances Discovered in District	803
Letters Written Respecting Nuisances, cte	117
Preliminary Notices Served Respecting Nuisances	516
Legal Notices Served Respecting Nuisances	432

Number of Re-inspections	3411
Number of Nuisances Abated (including outstanding Nuisances discovered in 1906)	847
Number of Houses and Premises Inspected	7673
Number of Inspections of Refuse Tips	65
Number of Inspections of Schools and Public Buildings	85
Complaints Received and Investigated	117

### COMPLAINTS.

- You will observe that 117 Complaints were received and investigated during the year. In a few instances I found the cause of the smell complained of was a leakage in the Gas Mains in the roadway. These I immediately reported to the Gas Manager, and they were repaired at once.

In three instances I found old disused rubble drains passing under the houses. These were connected to the river, and acted as rat runs and air passages, as a result very foul odours found their way into the houses. I caused the goits to be cut off. Many of the Complaints referred to Choked Waste Water Closets and drains. The Nuisances were dealt with as speedily as possible.

During the year I have had to report various owners of property to the Committee for non-observance of Legal Notices which had been served upon them. Warning letters were sent in each case by the Town Clerk. I am pleased to say the letters were effectual in securing the abatement of the Nuisances, without having to resort to magisterial proceedings.

### OVERCROWDED HOUSES.

I have periodically inspected the whole of the houses in the poorer parts of my district, and ascertained the size of each house, and the number of occupants.

Many cases of overcrowding were found to exist. I submitted detailed reports to the Committee, with the result that many Statutory Notices were served upon the occupiers, calling for the abatement of the nuisance. Three persons were ultimately summoned before the Magistrates, and Fines amounting to £4 ls. 0d. were imposed, together with orders to abate.

I have also reported Cases of Neglect of Children to the Inspector of the N.S.P.C.C. and gave evidence in one case of prosecution undertaken by the Society.

### DAIRIES, COWSHEDS, AND MILKSHOPS.

The whole of the Farms, etc., in the Northern District were kept under constant supervision during the year. The Dairies, Cowsheds and Milkshops Regulations have been strictly enforced, resulting in the following improvements having been effected:—

Lighting and Ventilation of Shippons Improved	4
Shippon Pavement Re-laid and Repaired	2
Drains Re-constructed	1
Defective Drains Repaired	2
Drains Removed from Dairies and Shippons	2
New Middensteads Constructed	1
Dirty Shippons Limewashed	8
Repairs to Roofage of Shippons	2
Shippon Overcrowded	1

There is, however, still considerable room for further improvement, both in the Cowsheds and in the methods of milking, in order that the milk supplied to the people may be pure. To this end it is necessary that the following conditions should obtain:—The Cows should be healthy, clean, and well fed; the Shippons light, airy, well paved, and drained; the Water Supply pure; the Milking clean.

A wholesome and efficient Water Supply is of paramount importance. I have, therefore, continued the examination of the various sources of supply commenced a few years ago, and in my monthly reports the results of my Observations have been stated in detail. In one instance the water was contaminated with impurities of an organic nature. I drew the owners attention to the matter and I am pleased to report that a supply of water has been obtained from another source, which appears to be satisfactory.

At another Farm I found the Slop Water being discharged into a stream which partially supplies a Farm below. I caused the Slop Water to be turned into the liquid manure tank. Possible scources of danger to public health have therefore been removed.

Three Farmers have applied to be registered in the District as purveyors of Milk under the Dairies, Cowsheds and Milkshops Orders. Previous to registration the Farms, etc., were thoroughly inspected, and in some cases certain structural improvements were recommended.

When making my inspections I have delivered at each Farm copies of the Regulations under the Dairies, Cowsheds and Milkshops Orders, also Leaf ets respecting the Diseases of Cattle, etc., published by the Board of Agriculture.

### BLACK SMOKE NUISANCE.

The Nuisance arising from the Emission of Black Smoke from Factory Chimneys has received my special attention. During the year I have submitted reports of 176 Observations, each of one hour's duration. The following is the time limit:—

One, Two, or Three Boilers, 5 Minutes per hour. Four, or more Boilers, 7 Minutes per hour.

From the following particulars you will observe that Black Smoke was emitted in excess of the time limit from the Chimneys of 19 factories. Statutory Notices were served, calling for the abatement of the nuisance, and in five instances legal proceedings were instituted under the direction of the Council for non-compliance with the notices. The Justices convicted in each case, and "Orders to Abate" were issued, the defendants paying costs amounting to £2 10s. 6d.

The Analysis of the Observations show an average Emission of Black Smoke of 2.15 minutes per hour. The Average for the last three months of 1906 was 3.4 minutes per hour, during which period the same time limit was in force.

We may, therefore, conclude that the gradual improvement of 1906 has been more than maintained, and the great amount of time spent has not been in vain.

At the following Mills Mechanical Stoking Apparatus has been fixed to the boilers during the year, viz, :—Radford, Hollins Grove, Provident.

On October 31st the owners of two large traction engines were prosecuted by order of the Council for allowing the engine to emit Black Smoke, whilst travelling through the town. The magistrates imposed a penalty of 5/- and costs.

### Particulars of Observations taken during the Year.

Mill	Black Smoke Moderate Smoke	Slight Smoks	Smoking Co.	Date orted to mmittee	Lega Notic serve	l ses	No. of Boilers	Stoking	Apparatus
Anaglypta	 $4\frac{1}{2}10$	5	.40½Jai	ny. 24	-		1	Hand fire	d
,,	 4 71	121	.36Ma	rch 21	-			. ,,	
,,	 3 8	111	.37½Ap	ril 25	-			- 11	
,,	 01 8	8	.43½Au	g. 22	-			,,	
,,	 11 8	12	38½Oc	t. 17	-			**	
Anchor	 1 4	31	.24Ma	rch 21	-		1	Bennis's	
,,	 0 0	18	.42Ju	ne 20	-				

```
Date
                                                          Legal
       Mill
                                           reported to Notices
                                                                             Stoking Apparatus
                                            Committee served
                    0 ... 1 ...28 ...31 ...Aug. 22...
                    3½... 6½...15 ...35 ...Jany. 24...
                                                                ...

    Hand fired

Barley Bank
                    01...111...10 ...38 ...Feby. 21...
                     2 ... 10...12 ...36 ...March 21...
                     1 ... 7 ...11 ...41 ...May
                                                   23...
                    31... 9 ... 6 ...411...July
                                                     8...
                    71...17 ... 7 ...281...Sept.
                                                   26...Oct. 8...
                                                                            Prosecuted Dec. 19th.
                     7 ... 7 ... 41...411...Nov.
                                                    21...
                                                                              "Order to Abate
                     1 ...15 ...37 ... 7 ...April
                                                   25... -
                                                                        ... Proctors
Bank Top
                     01...111...291...181...June
                                                    20...
             .....
                     21... 9 ...27 ...211...Sept.
                                                    26... —
                     4 ...19\(\frac{1}{2}\)...16\(\frac{1}{2}\)...20 ...Dec.
                                                    19...
                                                                ...
                     6 ... 7 ...19 ...28 ...Jany. 24...Feb. 5...
                                                                     3 ...
                                                                            Bennis's Stoker with mov-
Belgrave
                                                                              able bars, fixed to one
                                                                              boiler only
                     0 ... 0 ...17 ...43 ...May
                                                    23...
                     0\frac{1}{2}... 2\frac{1}{2}... 31... 26 ... June
                                                    20...
           ......
                     01... 31...191...361...Sept.
                                                    26...
                     3 ... 8½...18 ...30½...March 21...
                                                                            Proctor's Stokers, Sprink-
Belgrave (South)
                                                                      3 ...
                                                                 ...
                                                                              lers only
                     11... 6 ...441... 8 ...April 25...
                     6 ... 7½...14 ...32½...June
                                                    20...July 2...
                     31... 9 ...12 ...351...Sept.
                                                    26...
                     4 ...11 ...12½...32½...Dec.
                                                    19... -
                     7 ...18 ...11½...23½...Jany. 24:..Feby.5...
                                                                      2...
                                                                            Hand fixed
Bettom Croft
                                                                            The Court-Turner Smoke
                                                    20 ...
                     2½...13 ...10½...34 ...June
                                                                              Preventing apparatus has
                                                                              been fixed to each boiler
                     5 ...15\\dagger ...16\\dagger ...23 ...July
                     26...
                     2 ...14\frac{1}{2}...17 ...26\frac{1}{2}...Oct.
                                                     17...
                     2 ...14 ...11\(\frac{1}{2}\)...32\(\frac{1}{2}\)...Dec.
                                                     19...
        39
                     31...19 ... 91...28 ...March 21...
                                                                      1 ... Hand fired
Brookside
              .....
                     41...17 ...111...27... April 25...
                      14... 74...204...304...May
                                                    23...
                      2 ...15 ...19\(\frac{1}{2}\)...23\(\frac{1}{2}\)...July
                                                      8...
                     41...231...12 ...20 ...Sept.
                                                    26...
                     51...22 ... 7 ...251...Oct.
                                                     17...Oct. 29...
                     4 ...19 ...11½...25½...Dec.
                                                     19...
                                                                      2 ... Bennis's
                     0 ... 0 ...191...401...Jan.
                                                     24...
Carrs
         ..........
                     01... 5 ...261...28 ...March 21...
                     0 ... 6 ...33 ...21 ...May
                                                     23...
                     0 ... 0 ...39 ...21 ...June
                                                    20 ...
    22
                                                    26...
                     0 ...12\frac{1}{2}...38\frac{1}{2}... 9 ...Sept.
    "
                                                                      1 ... Proctor's Stoker with mov
                     11... 61...28 ...24 ... Feby. 21...
                                                                 ...
Cobden .....
                                                                               able bars
       ....... 0 ... 5 ...25 ...30 ...March 21... —
```

```
Date
       Mill
                                          reported to Notices
                                                                          Stoking Apparatus
                                          Committee served
                    1 ... 8 ... 5 ...46 ...June 20...
                    0 ... 0 ...18 ...42 ...Aug.
                                                  22...
                    0 ... 0 ...19 ...41 ...Oct.
                                                  17...
Cotton Hall
                    0 ... 4 ...361...191...March 21...
        Spinning
                                                                  2 ... Bennis's Stoker movable
                                                                           bars
                    0 ... 1 ...31 ...28 ...May
                                                  23...
Cotton Hall
                    2 ... 8½...17 ...32½...Feby. 21... — ...
         Weaving
                                                                  1 ... Proctor's Stoker, movable
                    1 ... 4 ...26\frac{1}{2}...28\frac{1}{2}...April 25...
                    3 ... 4 ...28 ...25 ...May
                                                  23...
                    14...11 ...204...27 ...July
                                                   8...
                                                  17...
                    1 ... 9 ...23 ...27 ...Oct.
                    0 ... 5 ...26 ...29 ...Nov. 21...
                    31...15 ... 7 ...34 ...Jany. 24... — ...
Dove .....
                                                                   1 ... Hand fired
                    61...24 ... 91...20 ... Feby. 21... Mar. 6...
                    0½... 3½...10½...45½...May
                                                  23...
                    21... 6 ...11 ...401...Aug.
                                                  22...
                    1½...12 ...16 ...30½...Dec.
                                                  19...
Electricity Works 0 ... 0 ...15 ...45 ...April 25...
                    01...111...211...261...Oct.
                                                  17...
                                                            ...
                    4 ...13 ...12 ...31... Feby. 21... — ...
Eccleshill .....
                                                                   2 ... Hand fired
                    7 ...13 ... 4 ...36 ...April 25...May 7...
    .. .......
                    2 ...13\dagger ...11\dagger ...33 ...July
                                                   8...
           ....... 5 ...15\frac{1}{2}... 9\frac{1}{2}...30 ...Oct.
                                                  17...
Gas Works ..... 0 ... 5 ... 6 ...49 ...Nov. 21... - ...
                                                                   2 ...
                    1 ... 6 ... 261... March 21... - ...
                                                                   2 ... Proctor's to 1 boiler, Whitt-
George Street ...
                                                                           aker's to one, Draught
                                                                           induced by fan
                    01... 7 ... 191... 33 ... April, 25...
                    2 ... 8 ...32 ...18 ...May
                                                  23...
                    0 ... 61...371...16 ...July
                                                   8...
                    01...30 ...21 ... 81...Sept. 26...
                    1 ...14½...33 ...11½...Nov.
                                                  21...
                    2 ...14 ...29 ...15 ...Dec.
                                                  19...
               ...
Hey Fold .....
                    3 ...10 ...16\frac{1}{2}...30\frac{1}{2}...Jany. 24...
                                                                   2 ... Hand Fired
                                                            ...
                    3\frac{1}{2}... 8 ...10\frac{1}{2}...38 ...Feby. 21...
           ......
                    6 ... 10 ... 14 ... 30 ... April 25... May 8...
                    2½...11½...16 ...30 ...July
           ......
                                                   8...
                    2½...11½... 9½...36½...Sept:
                                                  26...
                    2½... 7 ...13 ...37½...Nov.
                                                  21....
                    4 ...19\dagger ...15 ...21\dagger ...De .
                                                  19...
                    1 ... 3½...29½...26 ...Feby. 21...
Hill Side .....
                                                                  1 ... Whittaker's stoker, sprin-
                                                              ...
                                                                           kler only
                    01... 7 ...25 ...271...June 20...
                    1 ...11½...19 ...28½...Aug. 22...
          ......
                    2 ...10½...29 ...18½...Sept. 26...
```

```
Date
                                                        Legal
       Mill
                                          reported to Notices
                                                                          Stoking Apparatus
                                          Committee served
                    0 ...10 ...40 ...10 ...Dec. 19...
Hindle Street ...
                    0\frac{1}{2}... 2\frac{1}{2}...30 ...27 ...Jany. 24... —
                                                                   1 ... Whittaker's stoker, sprin-
                                                              ...
                                                                           kler only
                    61...17 ...151...21 ...March 21...April 8...
                    1 ... 5 ...31 ...23 ...July
                                                   8...
                    1 ... 5 ...20 ...34 ...Nov.
                                                  21...
                    01... 31...36 ...20 ...Dec.
                                                  19...
Hollins
  Tall Chimney
                    7½...17 ...16½...19 ...Feby. 21... — ...
                                                                  5 ... Hand fired
                    7 ...18½...19 ...15½...June 20...Dec 2...
                    8½...23 ...15½...13 ...Nov.
                                                  21...
Hollins
  low chimney
                    3\frac{1}{2}...11\frac{1}{2}...18\frac{1}{2}...26\frac{1}{2}... Feby. 21...
                                                            ...3 and
                                                                        Hand fired
                                                                 I fur-
                                                                 nace.
                    2 ...13½...21½...23 ...June 20...
                    21...12 ...221...23 ...Aug.
                                                  22... -
                                                             ...
Hollins Grove ...
                    2½... 4 ...43½...10 ...Jany. 24...
                                                                  2 ... Bennis's stokers with mov-
                                                             ...
                                                                           able bars
                    61... 61...28 ...19 ...Feby. 21...Mar. 6...
                    1\frac{1}{2}...10\frac{1}{2}...27 ...21 ...April 25...
                    3 ...21 ...18 ...18 ...April 25...
                    1... 11...47 ...11 ...June 20... —
                    0 ... 0 ...38 ...22 ...Oct.
                                                  17...
                    0 ... 4 ...34 ...22 ...Nov. 21...
Lloyd and
  Millwoods
                    1½... 3½... 6 ...49 ...Jany. 24... — ...
                                                                  1 ... Hand fired
                   1\frac{1}{2}... 6\frac{1}{2}... 10 ... 42 ... Jany. 24... — ...
                                                                  1 ... Hand fired
Lorne Street.....
                    9 ...11 ... 4 ...36 ...Feby. 21...Mar. 6...
                    3 ...12½... 9½...35 ...April 25... —
                    4 ... 91...10 ...361...May
                                                 23...
                    2 ...11 ...13 ...34... July
                                                  8...
                    6 ...18 ...15 ...21 ...Nov.
                                                 21...Dec. 2...
                    2 ...171...301...10 ...Aug.
                                                 22...
                                                                  1 ... Bennis's self-feeding stoker
                                                             ...
Olive
                                                                          with movable bars
                    11...151...31 ...12 ...Oct.
                                                 17...
        ......
                   1 ... 21...13 ...431...Feby. 21...
Lower Wood ...
                                                             ...
                                                                  1 ... Proctor's movable bars
                   2 ... 3 ...18 ...37 ...March 21...
                   0 ... 0 ...18 ...42 ...Aug. 22...
                   11...171...25 ...16 ...Oct.
                                                 17...
                   1 ... 10...181...301...Nov. 21...
                   1½... 6½...27 ...25 ...Feby. 21...Dec 24/06 3 ... Proctor's stoker with mov-
Orchard
                                                                          able bars fixed to 1 boiler
                                                                          only
                   71...13 ...191...20 ...April 25...
                                                                        Prosecuted May 16, orders
                   0 ...10 ...41½... 8½...Sept.
                                                 26...
                                                                          to abate and Costs
          ....... 3 ... 6 ...26½...24½...Oct. 17...
```

```
Slight
                                                       Legal
                                             Date
                                         reported to Notice
                                                                         Stoking Apparatus
      Mill
                                         Committee served
                    34...19 ...23 ...144...Nov.
                                                 21...
          ......
                    41...101...231...211...Dec.
                                                 19...

    Bennis's movable bars

                    0 ...12 ...28 ...20 ...April
Provident
                                                 25....
                    0 ...14 ...35 ...11 ...May
                                                 23...
                                                            ...
             .....
                    0 ...10 ...33 ...17 ...July
                                                  8...
                    1...181...25 ...16 ...Oct.
                                                 17...
                                                                 1 ... Leach's sprinkler only
                    11... 5 ... 12 ... 411... March 21... Jan. 9...
Peel
                    1\frac{1}{2}... 8 ... 11\frac{1}{2}... 39 ... April
                                                25...
                    2 ... 6 ... 9½...42½...June
                                                20...
                    11 ... 5 ... 11 ... 42 ... Aug.
                                                 22... - ...
                    11...12 ... 91...37 ...Oct.
                                                 17...
                    7 ...17½...11½...24 ...Nov. 21...Dec. 2...
                                                 22... - ...
                                                                 1 ... Hand fired
                    1\frac{1}{2}... 9 ... 9\frac{1}{2}... 40 ... Aug.
                    01... 01...15 ...44 ...Oct.
                                                 17... -
                                                           ...
    2.5
                                                                 1 ... Leach's sprinkler only
                    3½...13 ...28 ...15½...Feby. 21... — ...
Queen Street ...
                   5 ...32½... 9½...13 ...March 21...April 8...
                                                                       Prosecuted Aug. 29, 1907
   Order to Abate

    Bennis's movable bars

                    4 ...11 ...111...331...March 21...Jan. 9...
Radford .....
                    4½...11½...10 ...34 ...May
                                                 23...June 4...
                    0 ... 6 ...35 ...19 ...Sept. 26... — ...
                    0½... 1½...18 ...40 ...May
Robert Street ...
                                                 23... - ...
                                                                  1 ... Hand fired
                    2 ... 8 ... 51...441...July
                                                  8... —
               ...
                    1 ... 4½...13½...41 ...Sept. 26...
                    1 ...10 ...15\frac{1}{2}...33\frac{1}{2}...Dec.
                                                 19...
                                                                  I ... Proctor's movable bars
Springfield .....
                    01... 1 ...141...44 ...Jan.
                                                 24...
                                                            ...
                    1½... 9 ...15 ...34½...March 21...
             .....
                    1 ... 4½...29½...25 ...May
                                                 23...
             ......
                    11...13 ...33 ...121...June
                                                20...
                    14... 6 ...404...12 ...Sept.
                                                 26...
            .....
                                                            ...
                    0 ... 8½...14½...37 ...April
Triperies
                                                 25...
                                                                 1 ... Hand fired
                                                            ...
                    0 ... 0 ...10 ...50 ...June
                                                 20...
                    2 ... 8½...12½...37 ...Sept. 26...
                    0 ...14 ... 9 ...37 ...Dec.
                                                19...
Model Lodging
                    0 ... 0 ...21 ...39 ...June 20 ... — ...
         House
Union Street
                    1½...10 ... 9 ...39½...Nov. 21... — ... 1 ... Hand fired
    Saw Mill
                    0 ... 2½...28½...29 ...March 21... —
                                                            ...
                                                                 1 ... Bennis's movable bars and
Vale Street ......
                                                                           Automatic damper
                    0 ... 3 ...22 ...35 ...July
                                                  8...
                    0 ... 4½...33 ...22½...Sept. 26...
                    0½... 9½...27 ...23 ...Dec.
                                                 19...
                   0\frac{1}{2}... 3\frac{1}{2}... 10 ... 46 ... Jany. 24... —
                                                                 1 ... Proctor's movable bars
Woodfold .....
                                                            ...
          ........ 1 ...20 ...19 ...20 ...Feby. 21... —
                   0 ... 5 ...19 ...36 ...May 23...
          ......
```

Mill	in mi	Smoke Smoking Smoking Smoking Smoking Smoking Smoking Smoke	Stoking Apparatus
.,		$1\frac{1}{2}$ $4\frac{1}{2}$ $28$ $26$ Sept. $26$ —	
"		$3 \dots 22 \dots 9\frac{1}{2} \dots 25\frac{1}{2} \dots \text{Oct.}  17 \dots  -  \dots$	
,,		1102524Nov. 21 —	
,,		$0\frac{1}{2}$ $3\frac{1}{2}$ $22$ $34$ Dec. $19$ —	
Woodside	,	0 74112Feby. 21 — 2	Bennis's, movable bars
,,		$0\frac{1}{2}$ 7 $19\frac{1}{2}$ 33 Aug. 22 —	
"		$1\frac{1}{2}12\frac{1}{2}30$ 16Dec. 19 —	

### SCHOOLS.

There are 13 Public Elementary Schools in the Northern Distict. These have been regularly visited, particularly during each vacation, to ascertain if the clean-sing was being carried out in accordance with your requirements. I submitted detailed Reports to the Committee. It was necessary in a few instances to write the Secretaries respecting certain work which had not been carried out. On the whole there is a decided improvement in the condition of the Schools. They are cleaner, better lighted and ventilated, and therefore more healthy, and as a result we have fewer cases of infectious diseases reported amongst school children. During the latter part of the year I took samples of air in each of the schools in my district. These were submitted to the Medical Officer for purposes of analysis

### TRIPERIES.

I have visited these works regularly during the year. The work is still carried out in a satisfactory manner.

### FACTORIES, WORKSHOPS AND BAKEHOUSES.

Systematic inspection of these places of employment has been carried out and the usual Register kept. 401 visits have been paid to them. As previously stated in the Medical Officer's Report, this constant supervision has resulted in a general improvement.

Twenty-six Defects were discovered and dealt with as shown in the Government Table included in the Medical Officer's Report.

Want of Cleanliness	8
Want of Ventilation	3
Defective Drainage	1
Defective or Insufficient Sanitary Accommodation	6
Other Nuisances	8

The Bakehouses have received attention, 158 visits having been paid to them. All reasonable precautions are taken in order that wholesome articles of food may be produced. There are three certified Underground Bakehouses in the Northern District.

The Limewashing and Cleansing were carried out in accordance with the provisions of the Factory and Workshop Act.

The following is a list of the Workshops on the Register:-

Dressmakers and Milliners	34	Boot and Shoe Makers	26
Stocking Knitter	1	Confectioners and Bakers	36
Cycle Repairers	3	Gutscraper	1
Tin Plate Workers	4	Plumbers	7
Saddlers	3	Loom Slay Makers	1
Tailors	4	Tailoress	1
Furniture Polish Manufacturers	1	Cabinet Makers	2
Upholsters	1	Joiners	3
Wheelwrights	2	Tripe Dressers	3

### FOOD AND DRUGS ACTS.

During the year I have taken 6 samples of Milk under the above Acts, for purposes of Analysis. These were submitted to the County Analyst, the following Table gives the result:—

No. of Sample	Fat	Percentage of other Solids.	Total Solids.	Analyst's Rəmarks.
1	2.57	9.11	11.68	Deficient in Fat as compared with the limit as fixed by the Board of Agriculture. The Milk was free from Preservatives.
2	2.72	9.19	11.91	ditto. Ditto.
3				Rich Milk
4				This Milk contained a minute trace of Borate Preservative not exceed
5				ing ¼ of a grain per pint.  Genuine milk, free from Preservatives.
6				Ditto. Ditto.

Magisterial proceedings were taken against the Owners of the samples marked 1 and 2, with the result that the Owner of sample No. 1 was fined 10/- and costs, and his servant was also ordered to pay costs, total amount £1 11s. 10d.

The Owner of sample No. 2 was fined 5/- and costs, total amount £1 2s. 10d.

According to Resolution of Committee the Town Clerk sent a cautionary letter to the Owner of sample No. 4, respecting the Borate Preservative found in the milk

### FOOD INSPECTION.

I have kept a sharp out look during the year over the various articles of food offered for sale for human consumption in the district, and have had no cause for complaint.

### MODEL LODGING HOUSE.

I have kept this house under constant supervision, and have always found it in a satisfactory condition. The whole of the house has been thoroughly disinfected under my supervision during the year. I have also paid occasional visits about midnight and checked the books.

The following Table shows the average number of occupants for each month during the last three years:—

1905		1906		1907
62.8		75.1		80.5
65.2		77.2		81.2
70.1		73.8		93.2
80.2		81.1		95.1
79.2		84.2		86.1
75.1		96.2		82.2
64.4		80.3		84.3
70.2		60.2		86.1
69.1		72.1		97.2
69.1		81.1		90.2
87.1		81.4		92.2
74.0		75.3		78.3
72.2		78.1		87.2
	62.8 65.2 70.1 80.2 79.2 75.1 64.4 70.2 69.1 69.1 87.1 74.0	62.8          65.2          70.1          80.2          79.2          75.1          64.4          70.2          69.1          87.1          74.0	62.8        75.1         65.2        77.2         70.1        73.8         80.2        81.1         79.2        84.2         75.1        96.2         64.4        80.3         70.2        60.2         69.1        72.1         69.1        81.1         87.1        81.4         74.0        75.3	62.8        75.1          65.2        77.2          70.1        73.8          80.2        81.1          79.2        84.2          75.1        96.2          64.4        80.3          70.2        60.2          69.1        72.1          69.1        81.1          87.1        81.4          74.0        75.3

### CARAVANS.

I have inspected several Caravans which were located in various parts of the district. I found two vans located on the ground near to the Model Lodging House. The vans were none too clean, and the people were of very dirty habits. Prompt measures were at once taken, and the people left the town.

At each Monthly Meeting of the Health Committee I have submitted a Report of the work carried out in my District.

115 Agreement Forms have been signed by Owners of Property in the Northern District for the Corporation workmen to carry out repairs, etc., to Back Yards, Drains, Waste Water Closets, etc. This work has been done under my supervision.

I am, Gentlemen,

Yours obediently,

C. R. WALSH, Assoc. R. San. Inst.,

Inspector of Nuisances.

### SUPERINTENDENT'S OFFICE,

### CLEANSING DEPARTMENT.

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

### GENTLEMEN,

I beg to submit to you my Annual Report for the year ending December 31st 1907.

The following is a Summary of the Work done from January 1st to December 31st, 1907.

Tons	. Cwts.	Qrs.
House Refuse to Destructor 9892	4	2
Market Garbage to Destructor	12	0
Slaughter Garbage to Destructor	16	0
10,200	12	2
Mattresses, Beds, etc., to Destructor	1,133	
Dogs, Cats, Fowls, etc., to Destructor	41	
Clinkers removed from Destructor		Loads
Excreta to Sewage Works	6,633	,,
Sweepings to various Tips		,,
Gully Wreck to various Tips		
Water Deposited on Streets	725	,,
Length of Streets Swept by Machine	3641	Miles
Length of Streets Swept by Hand	1,856	,,
Street Gullies Emptied	33,742	
Back Yard Gullies Emptied		
Excreta Pails Emptied	364,815	
Ashtubs Emptied		
Ashpits Emptied		
Ashtubs Added during the Year	281	
Defective Gullies, etc., Reported to Sanitary Inspectors	64	
Pails brought in from Closet Alterations	109	
Snow Removed from Streets	1,514	
37 1 1 41		

Yours obediently,

### JOSEPH NICCOLL,

Cleansing Superintendent.

### SLAUGHTER HOUSES REPORT FOR THE YEAR, 1907.

To the Chairman and Members of the Slaughter Houses Committee.

### GENTLEMEN,

Herewith I submit my Report for the year, 1907.

The number of Cattle Slaughtered at the Public Abattoirs was as follows :-

1907	Beasts	1445	Against	1906	Beasts1291
,,	Sheep	7208	,,	,,	Sheep7249
,,	Calves	147	,,	,,	Calves 154
,,	Swine	719	-,,	,,'	Swine 689
		9519			9383
		1			

This gives an increase for the year of 136 head.

### PRIVATE PREMISES.

					Beasts         877           Sheep         3873
**	Calves	227	,,	2.5	Calves
		5642			4971
		-			

Giving a total increase for the year of 671 head.

### SHOPS AND BUTCHERS VANS.

These are under my supervision, and are kept in a satisfactory condition. The meat is of a very good quality.

### LICENSES ISSUED.

I have during the year issued Licenses for the Slaughtering of 3 Beasts and 54 Swine. The Beasts were all condemned and destroyed, the Swine being in good condition.

### MEAT UNFIT FOR FOOD.

4 Beasts, 25 Sheep, 1 Calf, 1 Swine, and 2 tons 17 cwts. 2 qrs. of Offal were destroyed. 58 Cattle were examined for various complaints.

Gentlemen,

I remain yours,

### Wm. BICKERSTAFFE.

Meat Inspector.

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