

[Report of the Medical Officer of Health for London, City of].

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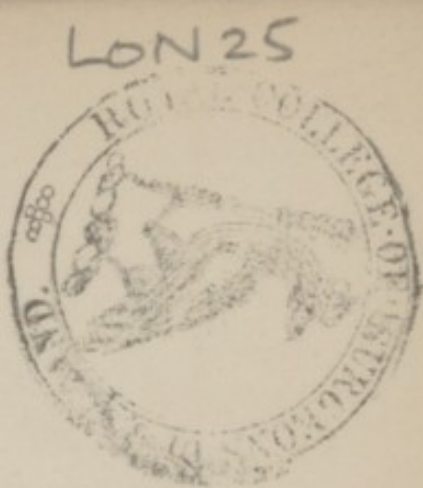
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REPORT
ON
THE SANITARY CONDITION
OF THE
CITY OF LONDON,
FOR THE YEAR
1857-58.

BY
H. LETHEBY, M.B., M.A., PH.D., &c.,
FELLOW OF THE LINNEAN AND OTHER SOCIETIES,
MEDICAL OFFICER OF HEALTH FOR THE CITY OF LONDON,
AND PROFESSOR OF CHEMISTRY AND MEDICAL JURISPRUDENCE IN THE
COLLEGE OF THE LONDON HOSPITAL.

LONDON:
M. LOWNDS, PRINTER, 148½, FENCHURCH STREET, CITY.

1859.



At a Meeting of the Commissioners of
Sewers of the City of London, held

at the Guildhall of the said City, on

Thursday the 25th of January 1879.

THE SANITARY COMMISSION

OF THE

THE CITY OF LONDON

Count the Annual Report, which was ordered to
be printed, and a copy to be sent to every Member
of this Court, and of the Council of London Council.

H. LETHBRIDGE, M.B., M.A., F.R.S., &c.
FELLOW OF THE SOCIETY OF MEDICAL OFFICERS OF HEALTH FOR THE CITY OF LONDON
AND MEMBER OF THE LONDON SANITARY COMMISSION

LONDON:
W. LOWE, PRINTER, 101, FLEET STREET, CITY.

*At a Meeting of the Commissioners of
Sewers of the City of London, held
at the Guildhall, of the said City, on
Tuesday, the 25th of January, 1859 :—*

The Medical Officer of Health laid before the Court his Annual Report, which was ordered to be Printed, and a Copy to be sent to every Member of this Court, and of the Court of Common Council.

JOSEPH DAW,

Principal Clerk.

At a Meeting of the Commissioners of
the City of London, held
at the Guildhall of the said City, on
Tuesday, the 25th of January, 1859:—

CITY OF LONDON.

The Medical Officer of Health, John Hall, before the
Court his Annual Report, which was ordered to
be printed, and a Copy to be sent to every Member
of this Court, and of the Court of Common Council.

I have delayed my Annual Report until
now in the hope that I should be able to
submit to you a general summary of the progress of
sanitary affairs in the City during the last ten years
—that is, from the time that the Board of Health
was established, and with authority over such matters,
within this City; but, although I have given much
attention to the subject, and have accumulated
much information respecting it, yet I have still to
examine the details of it and afterwards to elaborate

THE
SANITARY CONDITION
OF THE
CITY OF LONDON.

THE TENTH ANNUAL REPORT OF THE MEDICAL
OFFICER OF HEALTH.

TO THE HON. THE COMMISSIONERS OF SEWERS
OF THE CITY OF LONDON.

GENTLEMEN,

I have delayed my Annual Report until now, in the hope that I should have been able to submit to you a general summary of the progress of sanitary affairs in the City during the last ten years—that is, from the time that the Sewers' Act of 1848 invested you with authority over such matters, within this City; but, although I have given great attention to the subject, and have accumulated much information respecting it, yet I have still to examine the details of it, and afterwards to elabo-

rate the work, so that it may have the value of a statistical inquiry. All this will require time for its completion, and therefore, I have considered it best to postpone the general disquisition, and to submit to you now merely a brief account of the sanitary business of the last twelve months.

In the course of the year which has just expired, there were 3,184 births in the City, 2,883 deaths, and 1,689 marriages. Each of these numbers is below the average for the corresponding periods of the last ten years ; for during that time, the annual proportion of births was 3,504, of deaths 3,102, and of marriages 1,740 ; and, although the falling off in the several proportions has been very general throughout all the districts of the City, yet it has been most marked in the central, where, from the emigration of the wealthier classes, and the encroachments for trade and public improvements on the domiciles of the poorer, the resident population has been greatly thinned. In other districts where these influences have not been so largely at work, the births and marriages have been more evenly maintained, although there also the death-rate has been greatly reduced ; and this is no doubt due to the exercise of your sanitary powers.

Looking at the general aspect of the year, as it is seen in the mortality returns, it will be noticed

that the number of deaths in 1858 was much less than that of any other year since 1848, excepting the remarkable year of 1850, when, after the ravages of a cholera epidemic, the mortality fell to the low proportion of 2,752, which is at the rate of 21 per 1,000 of the inhabitants; in the course of the last year it was 22 per 1000. This, therefore, has a satisfactory appearance, for it shows that the condition of the public health has been steadily improving, from the very beginning of your sanitary functions. Altogether, in fact, the reduction in the annual mortality of the citizens, has been about nine per cent. below the average for the first three years of the decade, eight per cent. below that of the second, and about six per cent. of the third—making a general average of seven per cent. below the death-rate for the whole period.

Of the 3,184 births in the City during the year, 1,351 were in the Eastern Union, 766 in the Western, and 1,067 in the Central. These numbers are in the proportion of 33 per 1,000 of the population in the first-named district, 27 in the second, and scarcely 19 in the third; the average for the whole City being about 25 per 1,000 of the inhabitants. Now this is a long way below the average of births in the rest of England, for the usual birth-rate in this country is as nearly as possible 34 per 1,000 of the inhabitants. The circumstances of a City life

appear, therefore, to be unfavorable for any great increase of the population. I shall, however, discuss this matter somewhat fully hereafter, when I come to speak of the prominent facts of the last ten years; then also I shall take the opportunity of directing your attention to the influence of the seasons, and other circumstances, on the birth-rate. At present it will be sufficient for me to remark, that, while in England the season which is most prolific of birth is the spring, in the City of London it is the winter; here the smallest number of births occurs in the summer time, but in the rest of England it happens in autumn. This would appear remarkable if we were not acquainted with the habits of a large section of the labouring classes, who quit their City homes during the summer and autumn for employment in the neighbouring counties.

Again, it is my intention to bring prominently before you the facts which have been observed respecting the illegitimate births in the City; but I may here observe, that, whereas in all England the proportion of illegitimate births amounts to about 65 per 1,000 of all the births; in the City it reaches to only about 30 per 1,000. And this again might be made the basis of many ingenious but false speculations concerning the morality of this great City. But a knowledge of the manners of the people, and of the facility with which such marks of shame

are here hidden, will easily explain that which has so doubtful a signification. In one case, perhaps, the number of illegitimate births may be the true exponent of immorality, and that is, when, all other circumstances being alike, the proportions vary. There is, for example, no reason for supposing that there is greater opportunity or desire for masking the immorality in the Eastern Union than in the Western, and yet in one the proportion of illegitimate births is 44 per 1,000, and in the other 35. This accords with our knowledge of the habits of the people in the two districts, for in the Western Union, where there is the largest proportion of illegitimacy, there is also the largest amount of open immorality. It is there that we encounter the greatest difficulty in checking that indiscriminate association of the sexes, which is so common with the lower classes of the Irish poor. I hope to examine this fully, and to be able to show you that it is a matter which requires a strong power to deal with it.

Lastly, in respect of the births, I have to say that of the 3,184 children born in the course of the year 1,643 were males, and 1,541 females—numbers which are in the proportion of 1,066 males to 1,000 females. In the rest of England the proportions are as 1,045 males to 1,000 females; but the dis-

crepancy is merely apparent, for it does not exist in the averages of several years.

The 2,883 deaths in the City were distributed as follows:—1,115 occurred in the Western Union, 703 in the Eastern, and 1,065 in the Central. These numbers are in the proportion of 25 per 1,000 of the inhabitants of the first-named district, 24 per 1,000 of the second, and nearly 19 of the third ;—the general total being about 22 per 1,000 of the entire population. This, as I have already said is a great reduction of the average death-rate ; for in the course of the last nine years the annual mortality has been at the rate 24 per 1,000, instead of 22,—a reduction which has been general throughout all the City districts. This saving of human life, and with it the mitigation of the many miseries which a high mortality indicates, is the result of your sanitary labours ; it is, to use the words of my predecessor, the fruitage of that stately tree which was planted in the City ten years ago ; and, although in the course of the last quarter the fruit seemed to be barren of seed, yet the successive harvests of a longer period, have been sufficiently abundant to give us hope for the future, and to indicate the necessity for a still larger exercise of those sanitary labours which have been so prolific in the past.

The number of deaths in each of the four seasons of the year is represented in Table I. of the Appendix. The proportions are as follows:— 21 per cent. of all the deaths occurred in the summer quarter, 24 per cent. in the spring, 25 in the autumn, and 29 in the winter. The high mortality of the last-named season is due, not merely to the trying influences of the weather, but also to the circumstance that it is the season when the poor congregate in the City, and when the evils of overcrowding are at their worst; besides which, the state of the weather does not permit of those sanitary operations which are so largely employed in the summer and autumn.

Table I. also informs you that, of the 2,883 deaths in the year, 1,503 were of males, and 1,380 females. The numbers being in the proportion of 1,089 males to 1,000 females. In all England the proportion is about 1,030 males to 1,000 females.

Again, of the 2,883 deaths, 1,088 (or rather more than 37 per cent. of the whole number) were of children under five years of age, and of these 533 were less than a year old; a sixth part, therefore, of all the children born perished in the course of the first year of their age; 203, or nearly 7 per cent. of the deaths were of young persons of from 5 to 20 years of age; 376, or about 13 per cent., were

between the ages of 20 and 40 ; 545, or nearly 18 per cent., were in the fulness of manhood, between the ages of 40 and 60 ; and 671, or almost a fourth part of the whole number, were at 60 and upwards. These proportions differ a good deal from the averages of England; for while, on the one hand, there is an apparently less mortality in the City at all ages below 30 than in the rest of the country, on the other, there is a terrible increase in the death-rate of persons who have passed the meridian of life. This last fact is shown by every mode of estimating the mortality of the citizens ; and even in the case of infants, where a City life appears to be so genial, if the death-rate is calculated for the number of children living, instead of for the total number of the dead, it will be seen that the exception in favor of the City is only apparent. In all England, for example, only about one-seventh of the children die before they are a year old, whereas in the City a sixth of them perish. Again, of every 1,000 children living under 5 years of age, only 66 die in the country generally, but there are 86 in the City. Of adults, between the ages of 50 and 60, the English mortality is 21 per 1,000, and the City mortality 32. It is, in fact, the very young, and those in the maturity of manhood, and the decline of life, who are swept away so fast. These, therefore, swell the proportions of the death-rate, and make the duration of a City life so short.

In the Table which exhibits the principal causes of death you will perceive that the number dying of violence has risen from a general average of 130 per annum to 157 ; those of phthisis, from 519 to 523 ; and those of measles, whooping-cough, and croup, from 192 to 277. These last, in fact, are the diseases which have been unusually prevalent during the year ; and, although they are not all preventible to a like extent, yet there can be no doubt that in every case their force might be lessened by the aid of sanitary science. The chief increase in the mortality from zymotic diseases has occurred in the East London Union, but the largest proportion of deaths from phthisis, has been in the Western districts. The mortality from other diseases has, in almost every instance, fallen below the average, for the deaths from fever were but 88, instead of 150 ; those from diarrhoea and dysentery, among adults, have fallen from 153 to 38 ; scarlet fever from 103 to 50 ; small-pox, from 24 to 6 ; and erysipelas from 26 to 19. Altogether, indeed, the deaths from zymotic affections, excepting croup, measles, whooping-cough, and diphtheria,—which have been unusually prevalent, have fallen from an average of 456 to 201, or to less than half. This is strong proof of the value of sanitary measures ; for nothing speaks so forcibly of the general condition of a place as the death-rate from such maladies. It is true that some of these diseases have gained

upon us during the last quarter, but the circumstances of the season have been peculiarly trying, and there is hope that the normal condition of things will soon be restored.

As to the sanitary work which has been accomplished in the year, I have to report that there were 5,340 inspections of houses, and 2,446 visits to the Common Lodging-houses of the City. The number of orders issued for sanitary improvement, amounted to 1,721; and of the several inspections there were 1,140, because of the existence of fever, 833 from the occurrence of dysentery and diarrhœa, and 14 because of cholera. All these were notified in the returns of the Medical Officers to the Unions of the City; and, as soon as they became known to me, they were made the subjects of especial inquiry. I regard this as one of the most effectual means of checking the progress of any disease that manifests a disposition to become epidemic.

In the course of the year, I have laid before you certificates of the over-crowding of 66 houses, in which there were 116 rooms occupied by 181 men, 219 women, and 138 children. The inmates were distributed somewhat in the following manner,—one man with two, three, or four women; two men with two or three women; and sometimes three men to two or more women. This is an evil which

I am most anxious to check, for it is, without doubt, the very worst of all the unwholesome influences with which you have to deal; and until it is corrected, you will never be secure from those outbursts of disease which appear to set your sanitary measures at defiance. This has happened in the course of the last quarter, and it will occur again and again, until the evil is eradicated.

Lastly, as regards the Meteorology of the year, the principal facts are shown in the last Table of the Appendix; and, as usual, they are deduced from the observations made at Guildhall under the superintendence of Mr. Haywood. The range of the barometer has been about two inches, viz., from 28·84 to 30·8. The lowest point was reached on the 8th of October, 1857, and the highest on the 12th of the month following,—the average for the year having been about 30·0. The thermometer has had a daily range of from 9° to 21·8°. The highest point, 89·9, was attained on the 16th of June, and the lowest, 19·5°, on the 3rd of February, 1857; but in the months of May, June, July, August, and September, it reached to between 77° and 89·9°; and in November, December, January, and February, it fell to between 19·5° and 31·5°. The quantity of moisture in the atmosphere has been generally large, for the degree of humidity has ranged from 69 per cent. in

June, to 94 in March; the average for the year being 81. This is large, considering that the amount of rain-fall has been below the usual quantity: indeed, the total fall for the whole year was but 19·37 inches, although the average of the last 19 years is 23·43; and of this quantity 4·6 inches fell in October, 1857, and only 0·6 in December and June. The electricity of the atmosphere was generally positive throughout the year.

I have the honor to remain,

GENTLEMEN,

Your obedient Servant,

HY. LETHEBY.

GUILDHALL,

January, 1859.

No. I.—*Tenth Annual Enumeration of Deaths, relating to the fifty-two weeks, dating from September 26th, 1857, to September 25th, 1858.*

DEATHS IN THE FOUR QUARTERS.	TOTAL.	EAST LONDON UNION.						WEST LONDON UNION.			CITY OF LONDON UNION.					
		Saint Botolph.		Cripple- gate.		Work- houses.		North.	South.	Work- house.	S. W.	N. W.	South.	S. E.	N. E.	Work- house.
Quarter ending Dec. 26 .	M. F. 381 353	M. F. 45 48	M. F. 76 64	M. F. 17 15	M. F. 28 31	M. F. 42 56	M. F. 21 11	M. F. 24 15	M. F. 17 17	M. F. 28 32	M. F. 27 16	M. F. 31 35	M. F. 25 13			
	734	93	140	32	59	98	32	39	34	60	43	66	38			
Quarter ending March 27	439 404	63 66	72 64	25 22	36 38	46 38	31 30	24 19	24 23	33 18	28 19	29 42	28 25			
	843	129	136	47	74	84	61	43	47	51	47	71	53			
Quarter ending June 26 .	385 320	70 56	85 62	15 11	26 22	40 38	12 15	18 16	28 17	24 17	29 21	30 28	8 17			
	705	126	147	26	48	78	27	34	45	41	50	58	25			
Quarter ending Sept. 25.	298 303	59 58	47 55	10 10	21 31	25 37	18 10	13 15	19 16	32 18	23 12	14 22	17 19			
	601	117	102	20	52	62	28	28	35	50	35	36	36			
Sum of the Four Quarters	1503 1380	237 228	280 245	67 58	111 122	153 169	82 66	79 65	88 73	117 85	107 68	104 127	78 7			
	2883	465	525	125	233	322	148	144	161	202	175	231	152			
		1115			703			1065								
Annual Average of the Nine preceding years {	1617 1509	265 243	267 247	75 96	156 134	190 187	72 61	97 94	93 86	117 98	106 84	122 114	56 66			
	3126	508	514	171	290	377	133	191	179	215	190	236	122			
		1193			800			1133								

No. II.—*Classification of the 2,883 Deaths, which occurred in the fifty-two weeks, dating from September 26th, 1857, to September 25th, 1858.*

CITY UNIONS OR DISTRICT.	Total Number of Deaths.	AT WHAT AGES ?										FROM WHAT CAUSES ?											
		0 to 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 and over.	Violence, Privation, Poison, and Premature Birth.	Fever.	Acute Diarrhoea (not of In- fants), Dysentery, and Cholera.	Scarlet-Fever and Cynanche Maligna.	Small-Pox.	Phthisis, and other Tubercular Diseases.	Erysipelas, Puerperal Fever, and Phlebitis.	Diarrhoea, Bronchitis, and Pneumonia of Infants under three years of age.	Measles, Whooping-cough, and Croup.	Hydrocephalus, Teething, and Convulsions of Infancy.	Other Diseases, chiefly Chronic.	
East London Union ..	1115	514	45	10	14	55	77	82	97	98	123	54	36	18	29	3	184	8	123	139	125	396	
West London Union ..	703	233	24	11	23	58	58	64	79	70	83	41	29	11	6	1	149	5	60	43	56	302	
City of London Union.	1065	341	34	16	26	53	75	117	106	135	162	62	23	9	15	2	190	6	76	95	94	493	
ENTIRE CITY	2883	1088	103	37	63	166	210	263	282	303	368	157	88	38	50	6	523	19	259	277	275	1191	
Average of the last Nine Years }	3126	1186	126	55	70	194	249	280	291	314	361	130 *	150	153	103	24	519 †	26	296	192	271	1262	

* This is the average for the last four years, as the deaths from this cause were not recorded before that time.

† This is the average for the last two years, as the deaths from phthisis, &c., were not isolated in the preceding years.

No. III.—*Summary of the Sanitary Work done in each of the City Districts during the Years 1857 and 1858.*

QUARTERS ENDING.	CITY DISTRICTS, NUMBER OF HOUSES IN EACH DISTRICT, NAMES OF INSPECTORS, &c.																
	NORTH-WEST. Houses, 1,472. W. Ternouth.		SOUTH-WEST. Houses, 1,037. John Painter.		NORTH-MDL. Houses, 1,389. J. Hopkinson.		SOUTH-MDL. Houses, 262. G. Mortimer.		NORTH-EAST. Houses, 1,758. J. Williams.		SOUTH-EAST. Houses, 736. Wm. Santler.		LODGING Ho. Houses, H. J. Teague.				
	Houses Inspected.	Orders Issued.	Houses Inspected.	Orders Issued.	Houses Inspected.	Orders Issued.	Houses Inspected.	Orders Issued.	Houses Inspected.	Orders Issued.	Houses Inspected.	Orders Issued.	Inspections.	Orders Issued.			
Quarter ending Dec.... {	1856	184	34	204	37	209	99	39	10	270	45	163	60	..	..
	1857	232	51	304	92	269	95	59	21	324	54	151	75	265	15		
Quarter ending March, {	1857	219	60	146	58	190	112	93	54	252	67	123	70	..	..
	1858	268	36	266	48	256	80	93	21	222	38	280	106	669	38		
Quarter ending June, {	1857	235	62	211	120	395	259	45	33	492	296	220	173	..	..
	1858	261	61	293	98	296	161	70	34	318	67	220	129	670	70		
Quarter ending Sept., {	1857	358	82	310	101	295	112	55	13	429	86	157	88	..	..
	1858	208	31	229	85	200	70	58	17	362	40	101	81	840	7		
Year ending September, {	1857	996	238	871	316	1089	482	232	110	1443	494	663	391	..	..
	1858	969	179	1092	323	1021	406	280	93	1226	199	752	391	3446	130		
TOTAL INSPECTIONS		{ 1857..... 5294				{ 1858..... 7786				TOTAL ORDERS ISSUED		{ 1857..... 2031				{ 1858..... 1721	

No. IV.—*Meteorology of the City of London for each Month in the Year, from Observations made at the Engineer's Office, Guildhall, under the direction of Mr. Haywood.*

MONTHS.	Barometer.			Dry Thermometer.				Wet Thermometer or Hygrometer.						Rain Gauges.					
	Mean Pres- sure.	Highest Pres- sure.	Lowest Pres- sure.	Mean Temperature.	Highest Temperature.	Lowest Temperature.	Mean Daily Range.	Mean Temperature.		Dew Point.	Degree of Humidity.	Weight of va- pour in cubic foot of air.	Vapour re- quired to satu- rate ditto.	Total Fall.		Greatest Fall.		Lowest Fall.	
								Wet Bulb.	Dry Bulb.					On Roof.	On Grnd.	On Roof.	On Grnd.	On Roof.	On Grnd.
1857-8.	Inches.	Inches.	Inches.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Grns.	Grns.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
October ..	29·872	30·290	28·842	53·9	65·5	38·0	10·8	52·8	54·8	50·9	0·87	4·2	0·7	4·16	4·08	1·87	1·78	0·01	0·01
November	30·045	30·802	29·272	47·4	61·0	31·5	9·1	46·6	48·0	44·1	0·90	3·4	0·4	1·04	1·12	0·46	0·49	0·01	0·02
December	30·277	30·760	29·810	47·6	57·5	31·0	9·0	46·4	48·4	44·2	0·86	3·3	0·5	0·61	0·61	0·33	0·33	0·01	0·01
January ..	30·259	30·626	29·898	39·7	51·5	23·5	12·6	38·7	40·8	36·1	0·84	2·5	0·5	0·36	0·39	0·13	0·14	0·10	0·12
February	29·968	30·378	29·546	36·3	51·5	19·5	10·3	35·5	36·9	33·6	0·88	2·3	0·3	2·28	2·28	1·10	1·10	0·01	0·01
March....	29·654	30·576	29·052	42·0	60·9	26·0	11·4	41·6	42·4	40·6	0·94	2·9	0·2	0·75	0·75	0·17	0·17	0·01	0·01
April	29·896	30·392	29·088	47·4	69·9	32·0	13·8	44·2	47·4	40·7	0·79	2·9	0·8	2·60	2·69	0·67	0·67	0·02	0·03
May	29·912	30·503	29·031	52·3	78·9	39·5	14·8	47·0	52·6	41·4	0·72	3·0	1·5	1·89	2·02	0·58	0·61	0·02	0·02
June	30·030	30·324	29·728	65·1	89·9	51·5	21·8	60·1	66·3	55·1	0·69	4·8	2·1	0·66	0·68	0·49	0·51	0·03	0·03
July	29·608	30·251	29·681	61·4	84·9	50·3	14·3	56·2	61·7	51·5	0·70	4·4	1·5	2·71	2·77	0·65	0·69	0·01	0·01
August ..	29·925	30·474	29·724	62·9	80·6	49·6	14·8	58·8	63·1	53·5	0·71	4·5	1·9	1·59	1·63	0·48	0·48	0·01	0·01
September	29·960	30·543	29·576	60·8	77·0	49·3	12·3	58·5	60·9	56·4	0·86	5·1	0·9	0·72	0·78	0·26	0·29	0·01	0·01

Barometer.—The highest readings were on October 13, November 12, December 12, January 23, February 25, March 22, April 22, May 26, June 23, July 3, August 7, September 25. The lowest readings were on October 8, November 24, December 3, January 20, February 4, March 6, April 30, May 1, June 17, July 6, August 30, September 30.

Temperature.—The highest were October 2, November 3, December 10, January 30, February 5, March 24, April 22, May 31, June 16, July 15, August 12, September 13. The lowest were October 9, November 26, 28, December 31, January 7, February 3, March 5, April 12, May 7, June 14, July 30, August 30, September 25.

Rain.—The greatest fall on October 23, November 24, December 4, January 11, February 15, March 13, April 29, May 25, June 5, July 28, August 11, September 6. The least fall on October 24, 27, November 2, December 1, 2, January 8, February 4, March 17, 18, 19, 31, April 3, May 5, 20, June 7, July 6, 21, 26, August 25, September 22.

Electricity.—Positive generally throughout the year.

WILLIAM HAYWOOD.