[Report 1896] / Medical Officer of Health, Nottingham City.

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BOROUGH OF NOTTINGHAM.

ANNUAL HEALTH REPORT

FOR

1896,

— BY —

PHILIP BOOBBYER, M.B.,

MEDICAL OFFICER OF HEALTH;
MEDICAL SUPERINTENDENT OF ISOLATION HOSPITAL.

Nottingham:

THOMAS FORMAN AND SONS, PRINTERS, SHERWOOD STREET.

BOROUGH OF NOTTINGHAM.

1896-97.

HEALTH COMMITTEE.

ALDERMAN FRASER, J.P., MAYOR.

Chairman—
ALDERMAN BLACKBURN, J.P.

Vice-Chairman –
ALDERMAN PULLMAN, J.P.

ALDERMAN BENNETT	COUNCILLOR FLEEMAN
,, JELLEY	,, HUNTER
COUNCILLOR S. O. ABBOTT	,, MUTCH
,, G. ABBOTT	,, ROBERTS
,, ADAMS	,, G. ROBINSON
,, BENTLEY	,, SUTTON
,, COPLEY	,, WHITE

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

GENTLEMEN,—

I have now to hand you my seventh Annual Report as your Medical Officer of Health.

The general health of the town during 1896 would have compared favourably with that of many other previous years, but for an exceptional epidemic of measles and for the serious prevalence of typhoid fever.

The measles epidemic continued throughout the year, and was responsible for the heaviest annual mortality from this disease recorded in the town since 1880. One point of special interest in connection with this epidemic, and bearing directly upon the increased fatality, was the fact that the interval between its commencement and the cessation of the immediately preceding outbreak was of twice the usual duration. The deaths from typhoid fever were nearly 20 per cent. ahead of the annual average of the past ten years. As I have often said before, I hold the antiquated conservancy system still in use to be mainly responsible for this.

The other zymotic diseases did comparatively little mischief. Their fatality in all cases was considerably below the average of other recent years.

The town is now passing an important epoch in its history. New trades are springing up all round, and the population of the town is rapidly increasing. There are, besides, several schemes on foot, which—whatever their primary object—cannot fail to bear good fruit in the near future in promoting the health, prosperity, and well-being of the town and its inhabitants. I

refer especially to (*a*) the new railway, (*b*) the new water undertaking, (*c*) the new cemeteries scheme, (*d*) the street improvement scheme, and (*e*) the new Meadows drainage scheme.

When, in addition to these, the conversion of the pail-closets of the town is seriously taken in hand, when the building of public abattoirs, and of further works for dealing with town refuse is undertaken, and when the newly imported industries have had time for development, Nottingham will be entitled alike by size, wealth, salubrity, and equipment, to take its place in the very front rank of English municipalities.

PHILIP BOOBBYER.

TABLE I.

Nottingham. Population, Inhabited Houses, Marriages, Births and Deaths for 1896, and for the 10 years 1886-95.

	Estimated Population.	Inhabited Houses.	† Marriages.	Births.	Deaths.			Deaths in Public Institutions.
					Total at all ages.	Under One Year	Under Five Years	
1896	229,775	...	1749	6758	3987	1136	1709	594
1895	226,659	...	1658	6717	4195	1269	1640	522
1894	223,584	...	1635	6373	3728	1108	1609	547
1893	220,551	...	1638	6612	4061	1145	1569	610
1892	217,556	...	1672	6315	3961	1058	1613	561
1891	214,606	46,612	1615	6344	4162	1078	1646	540
1890	*	45,580	1549	6205	4031	985	1484	430
1889	*	...	1422	6636	3985	1216	1816	410
1888	*	...	1405	6879	3916	1039	1605	430
1887	*	...	1623	7395	4130	1265	1833	432
1886	*	47,834	1518	7820	4411	1406	2102	417
Average of the *ten* years 1886-95.	*	...	1577	6833	4058	1157	1692	490

* The variations in the number of the population were very great in these years, owing to trade fluctuations. The unoccupied houses ranged from a few hundreds, in some years, up to 6753 at the Census of 1891.

† The returns of Marriages do not include those in Bulwell, Basford or Wilford.

Population at Census 1881—186,575; at Census of 1891—213,877.

Average number of persons in each house, at Census 1881—4·8; at Census 1891—4·6

Area of Borough—10,935 acres.

Average number of persons to an acre—19·7.

TABLE II.

Nottingham. Annual Rates for 1896 and the 10 years 1886-95.

	Rate per 1000 of Population.		Per 1000 Births. Deaths under 1 year.	Per 1000 of Total Deaths.		
	Birth Rate.	Death Rate.		Deaths under 1 year.	Deaths under 5 years.	Deaths in Public Institutions.
1896	28·9	17·5	168	278	418	145
1895	29·7	18·5	189	302	391	139
1894	28·6	16·7	174	336	432	147
1893	30·2	18·4	172	282	386	150
1892	29·4	18·4	167	267	407	141
1891	29·9	19·5	169	259	395	129
1890	29·2	19·0	158	244	368	106
1889	27·9	16·7	182	304	454	117
1888	29·9	17·3	151	264	419	110
1887	31·5	17·6	170	306	444	105
1886	33·6	18·9	181	319	477	95
Average of the *ten* years 1886-95.	30·0	18·1	171	288	417	124

TABLE III.

Nottingham.—Deaths Registered from all causes during the year 1896.

NOTE.—The Deaths of Non-Residents occurring in Public Institutions situated in the District are excluded, and the Deaths of Residents occurring in Public Institutions situated beyond the limits of the District are included.

	AGES.												Totals.			
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.	55 to 60*	1896	1895	1894	1893
I. Specific Febrile, or Zymotic Diseases ..	251	242	51	27	26	17	7	11	9	3	1	..	645	769	630	781
II. Parasitic Diseases ..	2	..	..	..	..	..	..	..	..	..	..	..	2	14	8	10
III. Dietic Diseases . ..	1	..	..	..	2	6	1	2	..	..	..	..	12	24	14	15
IV. Constitutional Diseases	70	52	46	75	87	96	105	90	55	12	..	..	688	747	655	672
V. Developmental Diseases	169	..	1	..	..	..	..	..	26	112	32	..	340	363	348	377
VI. Local Diseases	402	234	46	57	85	141	194	26	297	159	23	..	1899	1847	1732	1789
VII. Deaths from Violence ..	31	18	13	6	7	17	14	11	7	5	1	..	133	127	115	149
VIII. Deaths from Ill-Defined and Not Specified Causes	210	27	1	1	1	4	5	10	8	1	1	..	269	304	226	268
Totals	1136	573	158	166	208	281	326	384	402	295	58	..	3987	4195	3728	4061
1.—Specific Febrile, or Zymotic Diseases.																
1.—Miasmatic Diseases.																
Small pox { Vaccinated ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Small pox { Unvaccinated ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4
Small pox { No Statement ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
Measles	50	138	15	..	..	..	..	..	..	..	..	..	203	1	134	25
Scarlet Fever	..	15	10	2	..	..	..	..	..	..	..	..	27	50	49	83
Typhus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough	35	56	..	..	..	..	..	..	..	..	..	..	91	33	119	59
Diphtheria	1	4	6	1	..	..	..	..	..	..	..	..	12	11	22	15
Simple Continued and Ill-defined Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Enteric or Typhoid Fever ..	..	7	19	19	16	7	3	4	..	..	..	3	75	55	61	68
Influenza	1	1	..	1	..	3	1	4	6	..	..	..	17	115	20	61
Tetanus	..	..	1	..	..	1	..	..	..	..	..	..	2	3	1	2
Chicken Pox	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
German Measles	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..
2.—Diarrhœal Diseases.																
Simple Cholera	1	1	..	..	..	..	..	..	..	..	..	..	2	..	..	2
Diarrhœa, Dysentery	144	19	..	1	1	1	2	1	3	2	1	1	175	448	152	361
3.—Malarial Diseases.																
Remittent Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Ague	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
4.—Zoogenous Diseases.																
Cowpox and effects of Vaccination	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases (*e.g* Hydrophobia, Glanders, Splenic Fever) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5.—Venereal Diseases.																
Syphilis	12	..	..	..	1	1	1	..	..	..	..	..	15	16	15	30
Gonorrhœa, Stricture of Urethra	..	..	..	..	..	..	..	..	..	..	..	..	..	2	9	1

	AGES.												Totals.			
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.	55 to 60*	1893	1895	1894	1893
6.—Septic Diseases.																
Erysipelas	5	..	..	1	1	..	..	2	..	1	..	1	10	5	8	21
Pyæmia, Septicæmia	1	..	..	1	3	3	..	..	..	..	..	..	8	9	9	10
Puerperal Fever	..	..	..	1	4	1	..	..	..	..	..	..	6	20	27	29
II.—Parasitic Diseases.																
Thrush, & other Diseases	2	..	..	..	..	..	..	..	..	..	..	..	2	14	7	8
Worms, Hydatids, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2
III.—Dietic Diseases.																
Want of Breast Milk, Starvation	1	..	..	..	..	..	..	..	..	..	..	..	1	7	2	3
Scurvy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chronic Alcoholism	..	..	..	..	1	3	1	2	..	..	..	1	7	16	10	10
Delirium Tremens	..	..	..	..	1	3	..	..	..	..	..	..	4	1	2	2
IV.—Constitutional Diseases.																
Rheumatic Fever, &c.	..	..	4	1	1	1	4	1	..	..	..	1	12	5	23	19
Rheumatism	..	1	2	..	..	1	..	1	..	..	..	..	5	7	8	14
Gout	..	..	..	..	..	..	..	1	1	..	..	..	2	1	1	3
Rickets	9	9	1	..	..	..	..	..	..	..	..	..	19	33	24	15
Cancer, Malignant Disease	1	..	1	3	6	20	44	56	43	11	..	20	185	200	167	142
Tabes Mesenterica	20	3	2	..	..	..	..	..	..	..	..	..	25	34	31	44
Tubercular Meningitis, Hydrocephalus	15	21	16	2	1	1	..	..	..	..	..	..	56	55	53	49
Phthisis	21	17	17	64	76	66	52	24	7	..	..	10	344	364	310	305
Other forms of Tuberculosis, Scrofula	1	..	1	3	..	..	2	1	1	1	..	..	10	18	11	51
Purpura, Hæmorrhagic Diathesis	2	..	1	..	..	..	..	..	..	..	..	..	3	5	2	6
Anæmia, Chlorosis, Leucocythæmia	1	1	..	1	2	2	..	2	1	..	..	1	10	9	10	7
Glycosuria, Diabetes Mellitus	..	..	1	1	1	5	3	4	2	..	..	2	17	16	15	15
Other Constitutional Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
V.—Developmental Diseases.																
Premature Birth	155	..	..	..	..	..	..	..	..	..	..	..	155	147	153	156
Atelectasis	2	..	..	..	..	..	..	..	..	..	..	..	2	6	4	1
Congenital Malformations	12	..	1	..	..	..	..	..	..	..	..	..	13	24	39	23
Old Age	..	..	..	..	..	..	..	..	26	112	32	..	170	186	152	197
VI.—Local Diseases.																
I.—Diseases of Nervous System																
Inflammation of Brain or Membranes	21	23	3	2	3	..	5	5	..	..	..	3	62	45	51	48
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	2	..	3	..	5	12	25	44	65	44	6	16	206	220	185	207
Insanity, General Paralysis of the Insane	..	..	..	1	6	9	6	5	1	..	..	1	28	22	15	12
Epilepsy	1	2	1	4	3	2	6	..	3	..	..	..	22	12	18	11
Convulsions	95	13	1	..	..	..	..	..	..	..	..	..	109	102	111	117
Laryngismus Stridulus (Spasm of Glottis)	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..
Disease of Spinal Cord, Paraplegia, Paralysis Agitans	..	..	..	..	2	..	4	3	3	2	..	2	14	10	15	12
Other Diseases of Nervous System	..	..	..	2	..	3	1	..	..	..	..	..	6	..	2	3

	AGES.												Totals.			
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards.	55 to 60*	1896	1895	1894	1893
2.—Organs of Special Sense.																
(*e.g.*, of Ear, Eye, Nose)	2	2	..	..	..	..	..	..	..	..	..	..	4	7	7	5
3.—Circulatory System.																
Pericarditis	..	..	1	..	..	2	..	..	1	..	..	..	4	5	1	1
Acute Endocarditis	..	..	1	..	1	..	1	..	..	..	..	..	3	1	..	1
Valvular Diseases of Heart ..	..	..	5	1	3	5	19	11	8	3	..	7	55	180	126	106
Other Diseases of Heart	4	..	4	9	9	25	39	66	68	37	3	29	264	134	144	128
Aneurism	..	..	..	..	1	1	..	1	..	..	..	1	3	14	4	7
Embolism, Thrombosis	1	..	1	..	1	..	1	2	3	..	..	1	9	23	7	9
Other Diseases of Blood Vessels	..	..	..	..	..	..	..	1	2	4	1	..	8	2	7	13
4.—Respiratory System.																
Laryngitis	1	6	..	..	..	..	..	..	..	..	1	..	8	10	11	16
Croup	2	8	2	..	..	..	..	..	..	..	..	..	12	10	12	12
Emphysema, Asthma	..	..	..	..	..	2	4	1	4	..	..	1	11	18	12	10
Bronchitis	121	63	5	1	1	8	12	58	81	44	8	19	402	467	431	425
Pneumonia	83	92	11	8	13	19	21	19	13	8	1	4	288	238	215	253
Pleurisy	..	3	..	3	1	1	1	2	4	..	..	2	15	13	3	13
Other Diseases of Respiratory System	1	2	1	..	..	1	1	..	..	..	..	..	6	2	..	..
5.—Digestive System.																
Dentition	16	7	..	..	..	..	..	..	..	..	..	..	23	15	21	15
Sore Throat, Quinsy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	7
Diseases of Stomach	16	2	1	3	1	2	3	2	2	2	..	1	34	39	33	43
Enteritis	16	1	..	1	..	1	..	..	1	..	..	..	20	15	18	9
Obstructive Diseases of Intestine	3	..	1	2	3	5	3	1	2	3	..	..	23	24	30	31
Peritonitis	2	..	3	6	2	1	2	1	1	1	..	..	19	12	22	24
Ascites	..	..	..	..	..	..	..	..	1	..	..	..	1	1	1	1
Cirrhosis of Liver	..	..	..	..	4	10	11	11	5	..	..	5	41	30	33	36
Jaundice and other Diseases of Liver	8	..	..	..	3	1	3	3	3	..	1	2	22	12	24	21
Other Diseases of Digestive System	1	1	..	..	2	1	..	..	..	..	..	..	5	..	..	3
6.—Lymphatic System.																
(*e.g.*, of Lymphatics and of Spleen)	..	..	..	..	..	..	..	..	..	..	..	..	..	6	3	3
7.—Gland-like Organs of Uncertain Use.																
(*e.g.*, Bronchocele, Addison's Disease)	..	..	..	1	..	1	1	2	..	..	..	1	5	4	3	5
8.—Urinary System.																
Nephritis	1	3	1	1	6	3	4	4	2	2	1	2	28	35	37	34
Bright's Disease, Albuminuria ..	..	..	..	1	3	7	14	13	7	3	..	6	48	47	57	45
Disease of Bladder or of Prostrate	..	..	..	..	..	1	..	2	9	3	1	..	16	20	9	22
Other Diseases of the Urinary System	..	..	..	..	..	1	..	..	..	..	..	..	1	..	3	2
Stone in Kidney	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..

	AGES.												Totals.			
	0 to 1	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards	55 to 65*	1893	1893	1894	1893
9.—Reproductive System.																
A. *Organs of Generation.*																
Male Organs	..	..	..	..	..	..	1	1	2	..	..	1	4	..	..	..
Female Organs	..	..	..	2	3	5	3	2	1	1	..	2	17	8	13	18
B. *Of Parturition.*																
Abortion, Miscarriage	..	..	..	1	1	2	..	..	..	..	..	..	4	3	3	7
Puerperal Convulsions	..	..	..	2	..	..	..	..	..	..	..	..	2	2	1	1
Placenta prævia, Flooding	..	..	..	1	1	3	..	..	..	..	..	..	5	6	7	3
Other Accidents of Child Birth	..	..	..	3	6	5	..	..	..	..	..	..	14	2	8	5
10.—Bones and Joints.																
Caries, Necrosis	..	4	..	1	..	1	1	..	2	..	..	..	9	20	15	13
Arthritis, Ostitis, Periostitis	..	..	1	1	1	..	..	..	3	..	..	..	6	2	4	4
Other Diseases of Bones & Joints	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Acromelagy	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..
11.—Integumentary System.																
Carbuncle, Phlegmon	..	1	..	..	..	..	..	..	..	1	..	..	2	4	1	13
Other Diseases of Integumentary System	5	1	..	..	..	..	2	..	..	1	..	..	9	2	6	9
VII.—Deaths from Violence.																
1.—Accident or Negligence.																
Fractures and Contusions	..	3	5	4	1	3	4	5	4	4	1	2	34	43	33	55
Gunshot Wounds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Cut, Stab	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..
Burn, Scald	1	11	5	..	1	1	..	..	..	1	..	..	20	20	13	15
Poison	..	1	..	..	..	1	2	1	..	1	..	..	6	5	7	1
Drowning	1	1	3	..	1	..	..	..	..	..	..	..	6	8	7	12
Suffocation	26	..	..	..	..	..	1	..	1	1	..	..	29	19	22	30
Otherwise	2	2	..	..	..	..	..	..	..	1	..	..	5	3	5	4
Injuries in process of child birth	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
2.—Homicide.																
Manslaughter	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..
Murder	..	..	..	..	1	1	..	..	..	..	..	..	2	1	5	2
3.—Suicide.																
Gunshot Wounds	..	..	..	..	..	..	2	..	..	..	..	..	2	1	1	1
Cut, Stab	..	..	..	..	..	..	1	1	1	..	..	..	3	6	4	4
Poison	..	..	..	2	..	8	..	1	..	..	..	..	11	10	4	5
Drowning	..	..	..	..	1	..	..	..	..	..	..	..	1	1	2	3
Hanging	..	..	..	..	1	2	2	3	2	..	..	1	10	4	7	15
Otherwise	..	..	..	..	..	..	1	..	..	..	..	..	1	1	2	..
4.—Execution.																
Hanging	..	..	..	..	1	..	1	..	..	..	..	..	2	..	1	..
VIII.—Ill-Defined Causes.																
Dropsy	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	2
Debility, Atrophy, Inanition	185	20	..	..	..	..	2	1	1	..	..	1	209	250	176	194
Mortification	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..
Tumour	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Abscess	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Hæmorrhage	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2
Sudden Death (cause not ascertained)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Causes not specified (Ill-defined)	..	..	..	..	..	..	..	1	..	..	..	..	..	..	3	6
Uncertified	23	7	1	1	1	4	3	8	6	1	1	3	56	50	45	61

SUMMARY OF TABLE III.

	No. of Deaths.			
	1896	1895	1894	1893
I.—Specific Febrile, or Zymotic Diseases.				
1. Miasmatic Diseases	429	268	410	326
2. Diarrhœal „	177	448	152	363
3 Malarial.. „	..	1	..	1
4. Zoogenous „	..	..	..	..
5. Venereal „	15	18	24	31
6. Septic „	24	34	44	60
II.—Parasitic Diseases	2	14	8	10
III.—Dietic Diseasess	12	24	14	15
IV.—Constitutional Diseases..	688	747	655	672
V.—Developmental Diseases	340	363	348	377
VI.—Local Diseases—				
1. Diseases of Nervous System	447	412	398	410
2. Diseases of Organs of Special Sense.. ..	4	7	7	5
3. Diseases of Circulatory System	346	359	289	265
4. Diseases of Respiratory System	742	758	684	729
5. Diseases of Digestive System	188	148	183	193
6. Diseases of Lymphatic System	..	6	3	3
7. Diseases of Gland-like Organs of uncertain use	5	4	4	5
8. Diseases of Urinary System	93	103	106	103
9. Diseases of Reproductive System—				
(*a*). Diseases of Organs of Generation ..	21	8	13	18
(*b*). Diseases of Parturition..	25	14	19	16
10. Diseases of Bones and Joints	16	22	19	20
11. Diseases of Integumentary System	11	6	7	22
VII.—Violence—				
1. Accident or Negligence	101	101	88	119
2. Homicide	2	3	6	2
3. Suicide	28	23	20	28
4. Execution	2	..	1	..
VIII.—Ill-Defined and Not Specified Causes. ..	269	304	226	268
TOTAL	3987	4195	3728	4061

TABLE IV.

Nottingham, 1896. Deaths and Death Rates from certain groups of Diseases.

A. All Ages.	Deaths.	Deaths per 1000 of the *population.*	Deaths per 1000 *total Deaths.*
1. Principal Zymotic Diseases	585	2·54	146
2. Pulmonary Diseases	742	3·22	186
3. Tubercular Diseases	435	1·89	109
B. Infants under 1 year of Age.	**Deaths.**	**Deaths per 1000 *Births.***	**Deaths per 1000 *Deaths under 1 year***
4. Wasting Diseases ..	341	50·4	300
5. Convulsive Diseases	133	19·7	117

NOTES.

1. Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Typhus, Enteric, and Simple Continued Fevers, and Diarrhœa.
2. Includes all Respiratory Diseases except Phthisis (Consumption).
3. Includes Phthisis, Scrofula, Tuberculosis, and Tabes Mesenterica.
4. Includes Marasmus, Atrophy, Wasting, Debility, Inanition, Premature Birth and Improper Feeding.
5. Includes Hydrocephalus, Infantile Meningitis, Convulsions, and Dentition.

TABLE V.

Nottingham. Deaths from the Principal Zymotic Diseases in the ten years 1886-95, and in the Year 1896.

Disease.	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	Ten years, 1886-95.		1896.	
											Annual Average.	Proportion of Deaths to 1000 Deaths.	Deaths.	Proportion of Deaths to 1000 Deaths.
Small-pox	2	..	12	..	..	..	..	4	4	..	2·2	0·54	..	..
Measles	175	58	115	86	52	110	118	25	134	1	87·4	21·55	203	50·90
Scarlet Fever	13	22	25	32	33	28	43	83	49	50	37·8	9·32	27	6·77
Diphtheria	10	10	34	11	16	21	30	15	22	11	18·0	4·43	12	3·01
Whooping Cough	90	153	81	153	47	121	117	59	119	33	97·3	23·98	91	22·83
Fevers. Typhus	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fevers. Enteric	61	74	89	66	58	70	36	68	61	55	63·8	15·72	75	18·81
Fevers. Simple Continued ..	2	2	1	2	4	..	..	1	..	..	1·2	0·29	..	..
Diarrhœa	328	315	157	263	185	180	158	361	152	444	254·3	62·67	177	44·4
Total	681	634	514	613	395	530	503	616	541	594	562·1	138·50	585	146·70
Total, London	11,121	12,684	10,803	9,709	12,279	9,675	11,983	13,223	11,549	11,544	11·457	132·7	14,100	168·8
Total, England and Wales	62,859	64,676	50,684	61,027	59,698	53,221	56,032	73,499	52,771	64,901	59·936	110·1	66,936	126·8

Birth-Rate, Death-Rate, Infantile Death-Rate, and Death-Rate from Zymotic Diseases and Phthisis.

I. NOTTINGHAM.

In five yearly periods, 1856—1885, and in single subsequent years.

	Birth-Rate.	Death-Rate.	Infantile Death-Rate.	DEATH-RATE FROM								
				7 Prin. Zymotic Diseases.	Small-Pox.	Measles.	Scarlet Fever.	Diph-theria.	Whooping-Cough.	"Fever."	Diarr-hœa.	Phthisis, and other tubercular Diseases.
1856—1860	36·8	27·2	209	5·98	0·21	0·80	1·08	0·13	0·76	1·02	2·00	3·22
1861—1865	34·8	24·9	192	3·83	0·09	0·43	0·98	0·12	0·51	0·78	1·09	3·19
1866—1870	31·3	23·8	200	4·34	0·07	0·44	0·73	0·09	0·51	0·92	1·57	2·78
1871—1875	34·1	24·9	192	4·30	0·79	0·31	0·53	0·02	0·26	0·84	1·53	2·42
1876—1880	34·6	21·7	175	3·00	0·00	0·35	0·62	0·03	0·43	0·34	1·06	1·85
1881—1885	36·6	20·9	174	3·22	0·06	0·41	0·77	0·12	0·46	0·31	1·09	1·99
1886	33·6	18·9	180	2·92	0·01	0·75	0·06	0·04	0·39	0·27	1·41	1·61
1887	31·4	17·6	170	2·55	0·00	0·24	0·10	0·03	0·66	0·32	1·30	1·43
1888	29·9	17·3	151	2·08	0·05	0·50	0·11	0·14	0·34	0·40	0·54	1·42
1889	27·9	16·7	182	2·57	0·00	0·36	0·13	0·04	0·64	0·28	1·10	1·28
1890	29·2	19·0	158	1·86	0·00	0·24	0·15	0·07	0·22	0·29	0·87	1·88
1891	29·8	19·5	169	2·49	0·00	0·51	0·13	0·09	0·56	0·32	0·84	1·69
1892	29·4	18·4	167	2·33	0·00	0·55	0·19	0·13	0·54	0·16	0·73	1·42
1893	30·2	18·4	172	2·62	0·02	0·11	0·37	0·07	0·27	0·31	1·47	1·81
1894	28·6	16·7	174	2·42	0·01	0·60	0·23	0·08	0·53	0·28	0·60	1·80
1895	29·7	18·5	189	2·64	..	0·00	0·23	0·04	0·14	0·24	1·97	2·10
1896	28·9	17·5	168	2·47	..	0·88	0·11	0·06	0·39	0·34	0·69	1·89

II. ENGLAND & WALES.

In five yearly periods, 1858 to 1890, and in single subsequent years.

1858—1860	34·3	22·2	153	4·03	0·22	0·48	0·89	0·37	0·49	0·79	0·78	2·57
1861—1865	35·1	22·6	151	4·22	0·22	0·46	0·98	0·25	0·52	0·92	0·87	2·53
1866—1870	35·3	22·4	159	4·08	0·10	0·43	0·96	0·13	0·55	0·85	1·06	2·45
1871—1875	35·5	22·0	153	3·76	0·41	0·37	0·76	0·12	0·50	0·60	1·09	2·22
1876—1880	35·4	20·8	144	2·94	0·01	0·39	0·68	0·12	0·53	0·38	0·83	2·04
1881—1885	33·4	19·3	139	2·32	0·01	0·41	0·43	0·16	0·46	0·27	0·65	1·82
1886—1890	31·4	18·9	145	2·25	0·01	0·46	0·24	0·17	0·44	0·20	0·66	1·63
1891	31·4	20·2	149	2·70	0·00	0·43	0·17	0·17	0·46	0·16	0·46	1·59
1892	30·5	18·9	148	2·78	0·01	0·46	0·19	0·22	0·45	0·14	0·50	1·46
1893	30·8	19·2	159	3·16	0·05	0·37	0·23	0·31	0·34	0·23	0·95	1·88
1894	29·6	16·6	137	2·25	0·02	0·39	0·16	0·29	0·41	0·16	0·36	1·38
1895	30·3	18·7	161	2·14	0·00	0·38	0·15	0·26	0·32	0·18	0·87	1·39
1896	29·7	17·1	148	2·18	0·02	0·56	0·18	0·29	0·41	0·17	0·55	

Principal Vital Statistics of the 33 Greater English Towns for 1896 (taken from the Registrar-General's Quarterly Reports and Annual Summary).

Populations at Census of 1891.

	Census Population, 1891.	Birth Rate.	Recorded Death Rate.	Corrected Death Rate.	Death Rates at Age Periods.			Death Rate from seven chief zymotic diseases.	Percentage of uncertified Deaths.
					Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
England & Wales	29,001,018	29·7	17·10	17·10	148	9·0	62·5	2·18	2·2
33 Large Towns..	10,188,449	30·7	18 91	20·45	167	10·6	67·7	2·86	1·5
London	4,231,431	30·2	18·58	19·80	161	10·6	63 8	3 14	0·6
Liverpool ..	517,951	34·9	22·74	24·97	173	13·5	80 8	3 01	3·4
Manchester ..	505,343	33·0	22·64	25 65	176	9·6	121·2	3·42	1·3
Birmingham ..	429,171	32 6	20·81	23 00	197	11·4	69·3	3·57	5·0
Leeds	367,506	30·7	18·75	20·78	169	10·4	74 4	2·28	0 6
Sheffield	324,243	34·0	19·26	21·42	173	10·6	69 4	3·32	3·5
Bristol	221,665	27·6	16·90	17·66	142	9 0	67·6	1·90	1·2
West Ham ..	217,113	32·6	16·07	17·34	165	8·6	60·8	3·00	3·7
Bradford	216,361	25·5	16·51	18·90	143	9 4	73·7	1·58	0·8
Nottingham ..	213,877	28·9	17·50	18·82	168	9·1	64·8	2·47	1·4
Hull	199,991	31·9	18·91	19 86	173	10 3	66·1	3·32	2·8
Salford	198,136	34·9	22·64	25·46	199	12·9	79·7	4·10	2·1
Newcastle ..	186,345	31·1	18·46	20·11	165	10 7	66·5	2·08	0·5
Portsmouth ..	159,255	27·6	16·57	16·94	154	8 5	63 2	2·11	0·7
Leicester.. ..	142,051	30·8	16 72	18·15	187	8·2	60·0	2·97	2·7
Oldham	131,463	27·2	20·73	23 22	184	12·5	71·6	2·91	0 3
Sunderland ..	130,921	34·2	19·82	20·80	158	11·8	64·0	3·00	0·9
Cardiff	128,849	33·8	16·84	18·79	165	9·1	62·5	2·27	1·3
Blackburn ..	120,064	27·7	17·87	20·07	171	9·7	81·5	1·82	2·7
Brighton	115,402	24·7	14·22	16·31	135	8·4	61·6	1·63	1 7
Bolton	115,002	31·3	20·73	23·49	168	12·0	87 8	2·80	0·3
Preston	107,573	32·6	20·76	22·82	203	10·3	81·3	1·86	4·3
Croydon	103,152	25·1	14·22	14 82	150	7·2	55·1	1·94	—
Norwich	100,964	30·8	17·38	16·65	164	8·2	56·6	2 33	1·6
Birkenhead ..	99,184	31·7	19·19	21·10	177	10·7	68·1	2·97	1·0
Huddersfield ..	95,422	20·5	16·47	19·15	166	9·3	74 4	1·50	2·5
Derby	94,146	28·0	15·65	17·26	151	8·0	71·8	1·91	0 4
Swansea	92,344	30·5	16·85	18 41	161	9·1	67·6	1·18	1·1
Burnley	90,589	31 0	17·51	20·11	170	9·7	72·6	2·19	1·4
Gateshead ..	88,588	35·8	19·09	20·50	172	10·5	64·7	3 1C	0·9
Plymouth ..	84,179	28·8	19·57	19·02	178	9·9	62 1	2·30	0·5
Halifax	82,864	24·3	17·33	19·29	149	9·2	79·3	1·10	1·7
Wolverhampton..	82,620	34·4	19·95	20·88	184	10·0	67·9	3·11	1·3

GENERAL VITAL STATISTICS.

Population.—The population of the town at the middle of 1896 is estimated at 229,775, on the assumption that the rate of increase which obtained during the ten years 1881-1890 has been evenly maintained since the 1891 census. In my last annual report I stated that the actual number of the population was probably above this estimate, and it certainly is so at the present time. Building operations are now proceeding on a more extensive scale and at a more rapid rate than for many years past, and the number of new houses built since the commencement of the M., S. & L. Railway works has already largely exceeded the number of those destroyed through the railway and other agencies during the same period.

As, however, it is impossible without the aid of a recent census to ascertain the exact number of the population, and as it is necessary to render my statistics for the borough comparable with those of the Registrar General, I have adhered to the method adopted by the latter for estimating the intercensal population. Provided the numerical ratio of the sexes remains the same as at the 1891 census, this population of 229,775 will be made up of 106,069 males and 123,706 females.

Nottingham by the above estimate still retains the ninth place from the highest among the 33 great towns of the country with regard to bulk of population. Bristol stands next above it on the list with 230,623, and Bradford next below with 228,809.

Marriages.—I am still without returns of the number of marriages taking place in those parts of the Registration Sub-Districts of Basford, Bulwell, and Wilford, which are situated within the borough. Those in the Nottingham Sub-Districts, however, are complete. They were 1749 in number: 1104 were celebrated in churches, and 645 in chapels and elsewhere.

The quarterly numbers were as follows: 1st quarter, 312; 2nd, 443; 3rd, 461; 4th, 533. The total number is no less than 91 greater than that of 1895, and 172 above the average annual number during the past ten years.

Births.—These amounted to 6758 during 1896. The actual total is higher than in any year since 1888. In 1895 it was 6717, and the average annual number for the ten years ending with 1895 was 6833. Still, although the births during 1896 were more numerous than in some other recent years, they were far below those of many other past years when the population was much less than at present. For example, there were 8329 births in 1884, and the annual average for the ten years ending with 1888 (the first complete decennium after the borough extension) was 7291. When we turn to the rates, the decline becomes at once apparent.

The birth-rate per 1000 living was 28·9 for 1896. The rates for 1889 (27·9) and 1894 (28·6) were lower, but, with these exceptions, that for 1896 is the lowest on record.

If we compare the rates in the last two census years (in which the correct population figure is known) we shall be able to estimate the decline in the births during the past few years in a perfectly reliable manner. The birth-rate during 1881 was 36·5 per 1000, that during 1891 was 29·9—a decline of no less than 6·6 in ten years.

Of the 6758 births during 1896, 3459 were male, and 3299 female; 203 of the male and 206 of the female were illegitimate.

The illegitimate births were equal to 6·1 % of the whole.

The birth-rate of England and Wales per 1000 living during 1896 was 29·7, that of the 33 great towns taken together 30·7, and that of London 30·2.

The decline in the birth-rate is as well marked elsewhere as in Nottingham. The London rate for the past year is the lowest on record, and of the five other leading cities, Liverpool, Man-

chester, Birmingham, Leeds and Sheffield, Birmingham alone fails to shew a decline in its birth-rate for the past year as compared with previous years.

The following were the five towns (among the 33 greater towns) having the lowest birth-rates:—Bradford 25·5; Croydon 25·1; Brighton 24·7; Halifax 24·3; Huddersfield 20·5.

The illegitimate births in England and Wales amounted to 4·2 % of all registered births during 1896.

Deaths.—The deaths registered in Nottingham during 1896 numbered 4087, but these are reduced to 3987 if the deaths of all non-residents, in Public Institutions situated within the borough, are deducted. The two totals correspond to rates of 17·8 and 17·4 per 1000 of population respectively.

In the Registrar-General's Annual Summary the rates in the 33 greater towns are corrected by the use of a factor for each, the application of which to the recorded rate shews the rate which would have occurred in each had the age and sex constitution of their populations been identical with that of England and Wales.

The death-rate of Nottingham for 1896, so corrected, becomes 18·8. If we assume that the relative numbers of the sexes in the Nottingham population remained as at the census of 1891 until the middle of 1896, the death-rate of males works out at 19·82, and that of females at 15·98 per 1000 living. The discrepancy is an extraordinary one, but I give the figures for what they are worth. To put them differently,—these rates represent 124 male and 100 female deaths out of equal numbers of each sex living in the same period.

The recorded death-rate of Nottingham for 1896 is the thirteenth from the lowest on the list of the 33 towns. The corrected death-rate is eleventh on the same list. The lowest recorded death-rate in the great towns is again that of Croydon, at 14·22 per 1,000, but Derby, West Ham, Brighton, Huddersfield, Bradford, Portsmouth, Leicester, Cardiff, Swansea, and Bristol all have recorded death-rates below 17·0 per 1000.

Liverpool once more heads the list with a recorded death-rate of 22·74, Manchester and Salford being bracketed next with 22·64. When, however, the factor for correction is applied, Manchester takes the lead with a rate of 25·65.

By the comparative mortality figures of the Registrar-General's Annual Summary, we are enabled to contrast at a glance the rates of mortality in the greater towns with that of England and Wales taken as a standard 1000. The rate for Nottingham as compared with this is 1101, that of London 1158, and that of the 33 great towns taken together 1196.

The deaths under one year per 1000 births, in Nottingham during 1896, amounted to 168. This number is 21 below that of 1895, and three below the annual average of the ten years 1886–95. This rate was 161 in London, and 167 in the 33 great towns as a whole. During 1896, fifteen of these towns had lower rates than Nottingham. The highest was that of Preston, 203, and the lowest that of Brighton, 135.

There was a death-rate of 9·1 per 1000 living among persons in Nottingham aged from 1 to 60 years, during 1896. The London rate was 10·6, as also was that of the 33 great towns. Twenty-two of the towns had higher, and eight had lower rates than Nottingham; two, Cardiff and Swansea, had the same rate as Nottingham.

The local death-rate among persons aged 60 years and upwards, per 1000 living, was 64·8. This rate in London was 63·8, and in the great towns 67·7.

The number of deaths in Nottingham during the year which were not certified by either medical man or coroner was 57, the same as in 1895. These constituted 1·4% of all deaths. Of these uncertified deaths, however, I shall have more to say under the appropriate heading later on in the report.

Registration Sub-Districts.—The borough is still divided, for registration purposes, into the four Nottingham sub-districts proper, and those portions of Bulwell, Basford, and Wilford which are situated within its boundaries.

In other annual reports since 1891, owing to the difficulty of estimating with even approximate accuracy the increase of population in the various sub-districts, I have used the population figures furnished by the census in that year as a basis for calculating the vital statistics of the several districts. But now, having reached the fifth year since the census, I feel that there must be less general error involved in assuming a uniform increase in all, than in reckoning their populations as unchanged. I have, therefore, ascertained approximately the actual increase in one sub-district, and assumed that all the others have grown in like measure. I had anticipated that the aggregate of the estimates of population thus found would exceed the estimate for the town as a whole, already referred to in the section headed "Population." I find, however, that it amounts to 228,079 only, as compared with the 229,775 of the latter estimate. Practically, for statistical purposes, these figures may be taken as identical; it follows, therefore, that the rates for the several divisions of the borough will now be almost strictly comparable with those given for the town as a whole, being calculated upon very nearly the same basis.

Births in Registration Sub-Districts. 1896.

District.	Legitimate.		Illegitimate.		Total of each Sex.		Total of both Sexes.
	M.	F.	M.	F.	M.	F.	
Bulwell	233	256	9	8	242	264	506
Basford ..	350	307	18	25	368	332	700
N.W.	794	722	37	29	831	751	1582
N.E.	753	702	73	79	826	781	1607
S.W.	410	387	20	20	430	407	837
S.E.	665	657	42	43	707	700	1407
Wilford	51	61	4	2	55	63	118
TOTALS ..	3256	3902	203	206	3459	3298	6757

The births registered during 1896 have exceeded those of 1895 in N.W., N.E., S.W., and Wilford, but fallen short of them in Bulwell, Basford, and S.E. The birth-rates calculated upon the estimated population were as follows:—Bulwell, 41·4; Basford, 28·5; N.W., 26·9; N.E., 28·4; S.W., 27·4; S.E., 32·6; Wilford, 53·4. The largest proportional increase is that in Wilford, the most considerable decrease that in Bulwell.

In the coal-mining section of the local community the birth-rate is still high—though fluctuating under trade influences from time to time, it has shewn no continuous alteration for many years past—, but among almost all other classes the decline is both general and continuous. For example, the birth-rate in Bulwell was approximately 41·0 per 1000 during 1886, and in 1896 it is still at the same figure; whereas the rate of what is now known as the S.W. sub-district was only 27·4 during 1896, as compared with certainly not less than 36·0 during 1886. The decline here is about 24%.

The following were the general death-rates in the sub-districts:—Bulwell, 20·4; Basford, 15·5; N.W., 14·5; N.E., 19·6; S.W., 23·0; S.E., 17·4; Wilford, 19·0.

The only very high rate is that in S.W., and here the excess is not to be accounted for under any particular heading; it is due to an average high mortality under all, and to the fact that the population of this district contains an unusually large number of adults advanced in years, whose death-rate is necessarily higher than that of younger persons.

Measles is the one death cause which has given rise to an unusual mortality at all parts of the borough during the year. The influence of this is, of course, more apparent upon the zymotic than upon the general rates. In the Bulwell sub-district it was equal to a rate of no less than 2·2 per 1000, or more than half the total zymotic rate; in S.E. the rate was 1·2, or about one-third of the whole zymotic rate; in Basford it was 1·1; in Wilford, also, it was more than one per 1000, but here the actual

numbers are so small as to be of practically no significance. In the other three sub-districts the measles rate, though high, did not reach 1·0 per 1000. The rate for the whole town was ·88 per 1000, *i.e.*, more than a third of the total zymotic rate.

Whooping-cough was unusually fatal in N.E. and S.E. Two-thirds of all the deaths from this cause occurred in these sub-districts, which contain considerably less than half the population of the borough.

Deaths from fever were relatively most numerous in Bulwell, S.W. and S.E., but, as I shall show later on, typhoid fever is and was far more prevalent and fatal than it should be at all parts of the borough.

Summer diarrhœa caused the largest proportional number of deaths in S.E. and Wilford. The death-rate per 1000 was more than 1·0 in the first, and more than 2·0 in the second. It did not reach 1·0 per 1000 in any of the other sub-districts.

NOTTINGHAM SUB-DISTRICTS.

Summary of Statistics for 1896.

Made up from weekly reports, and therefore subject to correction.

	Population.			Births.	Birth-Rate.	Deaths.			Death-Rate.			DEATHS FROM										Notified Cases of			
	Census.		Estim't'd			Total.	Under 1 year.	From 7 prin. Zymotic Diseases.	Total per 1000 of Population.	Under 1 Year per 1000 Births.	From 7 prin. Zymotic dis. pr. 1000 pop.	Small Pox.	Measles.	Scarlet Fever	Diphtheria.	Whooping-Cough.	"Fever."	Diarrhœa.	Influenza.	Cancer.	Phthisis.	Small-Pox.	Scarlet Fever	Diphtheria.	Enteric Fever.
	1881.	1891.	1896.																						
Bulwell ..	8,575	11,400	12,215	506	41·4	249	93	50	20·4	184	4·1	..	27	2	1	8	5	7	..	6	20	..	42	1	20
Basford ..	18,137	22,900	24,535	700	28·5	381	108	47	15·5	154	1·9	..	26	1	1	4	6	9	1	11	28	..	82	8	45
N.W. ..	39,574	54,885	58,805	1582	26·9	854	269	115	14·5	170	1·9	..	34	8	3	13	16	41	6	46	80	..	155	15	115
N.E. ..	53,911	52,749	56,517	1607	28·4	1106	246	134	19·6	153	2·4	..	36	7	2	33	18	38	7	59	89	..	174	9	119
S.W. ..	25,483	28,558	30,590	837	27·4	705	158	75	23·0	189	2·5	..	23	4	1	5	13	29	2	24	52	..	94	13	56
S.E. ..	40,295	40,886	43,206	1407	32·6	750	249	154	17·4	177	3·6	..	54	5	3	27	17	48	1	38	75	..	182	14	115
Wilford ..	597	2,064	2,211	118	53·4	42	16	10	19·0	136	4·5	..	3	..	1	1	..	5	..	1	..	..	2	..	8
The whole Borough.	186,572	213,442	228,079	6757	28·9	4087	1139	585	17·8	168	2·5	..	203	27	12	91	75	177	17	185	344	..	731	60	478

Fatal cases in Bagthorpe Hospital and other Public Institutions have been distributed to the Districts from which they were admitted.

GENERAL REPORT.

Zymotic Diseases.—The deaths registered in Nottingham during 1896 as primarily due to the seven principal members of this group of diseases amounted to 585.

The Registrar-General makes the total 575, or ten less than mine. The larger number corresponds to a rate of 2·54 per 1000 of population. The zymotic deaths during 1895 numbered 598, and equalled a rate of 2·64 per 1000. The average annual number for the ten years, 1886—95, was 562, and the rate 2·46.

I may here once more explain that when quoting numbers and rates in other towns, extracted from the Registrar-General's returns, I have commonly, in order to avoid confusion, adopted also his rate for Nottingham. This explanation is necessary to prevent the misinterpretation of small discrepancies in this report, but the difference between our numbers and rates are, as a rule, so small as to be of no practical importance.

According to the Registrar-General's Annual Summary for 1896, the average zymotic rate in the 33 great towns was 2·86 for that year. Fifteen of these towns had higher zymotic rates than Nottingham. These higher rates ranged from 2·80 in Bolton to 4·10 in Salford. Sixteen had lower rates, and these ranged from 1·10 in Halifax to 2·33 in Norwich.

Zymotic Death Rates.

Average for past Ten Years, and for 1896.

	Nottingham.		London.		33 Towns.	
	10 years. 1886-95.	1896.	10 years. 1886-95.	1896.	10 years. 1886-95.	1896.
Small Pox	0·01	0·00	0·01	0 00	0·02	0·00
Measles	0·41	0·88	0·61	0 82	0·60	0·71
Scarlet Fever ...	0·18	0·11	0·24	0·21	0·27	0·22
Diphtheria	0·07	0·06	0·41	0·60	0·27	0·38
Whooping Cough ...	0·46	0·39	0·60	0·65	0·55	0·57
Enteric Fever ...	0·30	0·34	0·15	0·14	0·21	0·19
Diarrhœa	1·03	0·69	0·70	0·72	0·88	0·79
Total Zymotic rate	2·46	2·47	2·72	3·14	2·80	2·86

Nottingham, 1896. Temperature, Rainfall, and Seasonal incidence of Zymotic Diseases.

		Thirteen Four-weekly Periods, Ending on													
		Jan. 25	Feb. 22	Mar. 21	April 18	May 16	June 13	July 11	Aug. 8	Sep. 5	Oct. 3	Oct. 31	Nov. 28	Dec. 26	Total.
Mean Temperature		40·1	39·4	42·3	44·6	49·7	56·2	60·4	59·6	56·2	54·4	44·6	39·8	38·9	..
Rainfall in Inches..		0·84	0·87	2·00	1·51	0·14	1·32	3·75	2·01	2·29	2·43	2·44	1·49	2·71	23·82
Onsets of ascertained Cases of	Scarlet Fever	82	77	65	39	59	60	46	41	41	51	47	44	47	699
	Diphtheria	6	7	3	3	14	2	1	2	2	1	5	5	8	59
	Enteric Fever	41	50	31	24	21	7	27	38	29	41	59	49	45	462
Recorded Deaths from	Measles	2	3	3	12	2	12	27	28	15	9	21	25	33	192
	Whooping Cough ..	..	..	..	..	6	2	3	6	7	12	9	12	23	80
	Diarrhœa	4	6	3	7	4	3	25	63	35	17	8	2	3	180

The figures in this table are compiled from the weekly returns, and therefore subject to slight correction.

Small-Pox.—Nottingham was entirely free from small-pox during 1896.

There were 534 deaths from this disease in England and Wales during the year, and 466 of these occurred in the 100 towns dealt with by the Registrar-General—25 in the 33 large towns, and 441 in the 67 smaller towns.

Among the larger towns, deaths from small-pox occurred in London, Bristol, West Ham, Cardiff, Swansea, Leeds, and Bradford: among the smaller towns, in Gloucester, Aston Manor, Newport, Wigan, Exeter, and Southampton; but the number of deaths in Gloucester (427), resulting from the extremely severe epidemic there, throws all the small-pox mortality elsewhere during 1896 entirely into the shade.

The anti-vaccinators are continually assuring us that small-pox has lost its sting, or that sanitary precautions "adequately—whatever this may mean—enforced," are "sufficient safeguard against its inroads." But here we have an epidemic, which, for generalness and fatality among the affected community, vies with some of the worst records in this respect which the past can shew, an epidemic, too, in a town which is neither better nor worse from a sanitary point of view than most others of the same class in this country, and still they are unconvinced of their error. It is true that isolation strictly practised from the very outset may nip an outbreak in the bud. This, indeed, we in Nottingham have proved more than once in the recent past. But the fact remains unalterably true that there is as much difference, so far as liability to small-pox is concerned, between a properly vaccinated and an unvaccinated community as there is, with regard to explosiveness, between wet and dry gunpowder.

Vaccination.—In the light of this last fact, it is the reverse of reassuring to contemplate the vaccination statistics of Nottingham for 1896, and other recent years.

Owing to unavoidable delay in the preparation of the vaccination statistics, I have lately been unable to publish with my health report the full year's statistics for the year under notice.

Vaccination in Nottingham Union. Summary of Statistics, 1883-96.

	Births.	Per centage.			Certified as Insusceptible of Vaccination.	Had Small-Pox.
		Successfully Vaccinated.	Died. Unvaccinated.	Not finally accounted for.*		
Average of 5 years 1883–88	6194	74·3	12·4	13·0	10	0
1889	5398	67·3	12·0	12·1	12	0
1890	5084	69·8	11·7	14·0	11	0
1891	5033	67·1	12·0	16·0	8	0
1892	5142	63·8	12·0	16·2	15	0
1893	5193	64·4	13·4	17·7	24	0
1894 1st half year ...	2632	62·5	12·7	11·2	9	0
1895 do. ...	2758	43·1	14·2	15·3	11	0
1896 do. ...	2728	29·4	11·7	16·4	3	0

* Up to July 31st of the next year.

The figures for the first half of each of the past three years (*which under these circumstances are all I have been able to give*) represent us as somewhat better vaccinated than do those for the whole year.

The average percentage of children born who were returned as successfully vaccinated during the ten years ending with 1883 was 78·5. During the five years ending with 1888 it had fallen to 74·3. From 1889 onwards to the present time it has fallen almost continuously; but by far the most rapid and considerable decline has been that of the past three years. The percentage of children born who were successfully vaccinated in the first six months of 1894 was 62·5. This percentage was only 29·5 in the first half of 1896, and is still going down.

We are often told that the "revelations" before the Royal Commission have brought about this state of things, but the best answer to such an absurd contention is the (Majority) Report of the Commission, which was published last year, and was signed by all but two of the Commissioners.

With regard to the value of vaccination this report states, *inter alia*, (*a*) that vaccination is a protection against small-pox, in proportion to the thoroughness with which it is performed and the recentness of its performance, and that when the disease does

occur in a vaccinated person its course is always rendered less severe by the operation, and (*b*) that, although protection becomes exhausted by the lapse of time, re-vaccination will restore it.

With respect to cases of alleged injury from vaccination—and all those of recent date brought to the notice of the Commissioners were, as far as possible, investigated by unofficial medical men appointed by the Commission—its pronouncement is exactly as follows:—"A careful examination of the facts which have been brought under our notice has enabled us to arrive at the conclusion that, although some of the dangers said to attend vaccination are undoubtedly real and not inconsiderable in gross amount, yet when considered in relation to the extent of vaccination work done they are insignificant. There is further occasion to believe that they are diminishing under the better precautions of the present day, and, with the addition of the further precautions which experience suggests, will do so still more in the future."

With regard to the much vaunted alternative of isolation, the report contains the following statement:—"We can see nothing, then, to warrant the conclusion that in this country vaccination might safely be abandoned, and replaced by a system of isolation. If such a change were made in our method of dealing with small-pox, and that which had been substituted for vaccination proved ineffectual to prevent the spread of disease (it is not suggested that it could diminish its severity in those attacked), it is impossible to contemplate the consequences without dismay."

"To avoid misunderstanding, it may be well to repeat that we are very far from underrating the value of a system of isolation. We have already dwelt upon its importance. But what it can accomplish as an auxiliary to vaccination is one thing; whether it can be relied on in its stead is quite another thing."

Such are the opinions of sober men of high judicial capacity, after hearing 187 witnesses (most of them drawn from the ranks of the anti-vaccinators), and a mass of evidence which few beside themselves can have the opportunity of weighing. The public

are accustomed to receive much of what they believe on authority. Seldom are they so fully justified in accepting statement on authority as in this case.

Measles.—In my Annual Report for 1895 I drew attention to the absence of this disease from the borough during that year. I have now to record for 1896 the highest mortality from measles which has occurred in Nottingham since 1880.

The actual number of deaths was 203, and the death-rate, per 1000 living, 0·88. But, high as was the local rate, no less than nine of the larger towns suffered more severely than Nottingham during 1896. The rates in these nine towns were as follows:—Gateshead, 1·37; Hull, 1·16; Oldham, 1·15; Manchester and Norwich, 1·06; Birkenhead and Plymouth, 1·04; Sunderland, 1·00; Salford, 0·94. The rate in London was 0·82, and the average rate in the 33 towns, 0·71.

The age incidence of the local mortality was as follows:—

NOTTINGHAM, 1896. Deaths from Measles.

Age Period.	0-1 Year	1-2 Years	2-3 Years	3-4 Years	4-5 Years	5-6 Years	6-7 Years	7-8 Years	8-9 Years	9-10 Years	10-11 Years	Total Deaths
Deaths ..	50	77	29	21	11	9	2	2	1	0	1	203

The deaths of males exceeded those of females by 13, but this excess was almost entirely confined to the deaths under 4 years of age. Of the 26 deaths above this age, 14 were of males and 12 of females. The proportional numbers of deaths under 2 years and under 5 years are almost exactly in accord with those given by Dr. Whitelegge as the normal, being 62 and 92 per cent., respectively, of the whole number of deaths.

In the absence of compulsory notification, I am unable to give even an approximate estimate of the case mortality, for, although I have a complete return of the absentees from schools during the year, I have no means of distinguishing (in the mass) between those who were attacked and those who escaped in affected households all the members of which were excluded

from school attendance; nor can I estimate the number of attacks during the long periods for which so many of the schools were closed, nor those among persons not attending the public elementary schools.

This brings me to the subject of compulsory notification of measles, upon which I must now say a few words. The subject has been much discussed in recent years, and last year a carefully compiled and lengthy report upon it was prepared by Dr. Theodore Thompson, of the Local Government Board. This report was favourable to notification and other ancillary measures. The recommendations of Dr. Thompson I have already briefly summarized elsewhere, as follows:—

(1) That dual notification of measles be made compulsory.

(2) That voluntary notification by and to school teachers, and other persons having intimate touch of the people, be systematically practised.

(3) That the officers of sanitary authorities take similar steps in investigating outbreaks of measles to those they ordinarily take in the case of, say, small-pox outbreaks.

(4) That cases be removed to hospital if possible, but otherwise that they be properly isolated at home.

(5) That all cases be consistently looked after by the officers of sanitary authorities, and that disinfection be insisted upon at their close.

(6) That public elementary and other schools be closed when necessary.

(7) When such schools are not closed, that infected children, and children from infected households and neighbourhoods, be excluded from attendance.

Dr. Thorne Thorne, in his introduction to the report, states that "in so far as the comprehensive character which must attach to any effectual measures directed against measles has been understood, by so far have the results obtained been found encouraging to the sanitary authorities concerned."

Still, notwithstanding the weight of these and other influential opinions in favour of the adoption of compulsory notification for measles, and the whole train of preventive measures which naturally follow in its train, we must not forget that there are yet many practical objections to it, which hold good with the greater cogency the larger the working class element in the population. The principal grounds of objection are:—

1. The slight regard of the general public for measles.

2. The early stage of its development at which the disease is infective.

3. The long incubation period, and consequent necessity for a lengthy period of quarantine.

4. The early age of the majority of the patients, and the consequent difficulty of securing either isolation at home, or removal to hospital.

5. The comparatively small number of cases attended by medical men.

6. The difficulty of establishing diagnosis, in order to enforce the observance of precautions or punish offenders against preventive regulations, in cases where the rash has disappeared before they come under official notice.

7. The great expense entailed upon sanitary authorities, especially in providing adequate hospital accommodation, and carrying out an effectual system of disinfection.

I am of course aware that measles is a distinctly preventable disease, and that the foregoing precautions, if consistently practised, would undoubtedly check its spread, but I am equally aware of the difficulties in the way of inducing many sanitary authorities with which I am acquainted to adopt such precautions.

Both Dr. Thorne Thorne and Dr. Thompson lay stress upon the necessity of endeavouring to confine the disease to houses in which it has occurred, by the strict quarantine of all their younger inmates while infection remains in such houses; and this, together with school closure and other like precautions already practised in this town, it seems to me is all you will be prepared, for the present at any rate, to sanction. We in Nottingham can rely upon the cordial and effective co-operation of all the school authorities of the town in endeavouring to discover cases of measles when it is present with us, and to these authorities principally, I fear, we must be contented to look for voluntary notification of the disease, until such time as the public shall have come to regard measles as the "dangerous infectious disease" which it most certainly is.

The local distribution of the disease with regard both to season and locality was somewhat anomalous during 1896. The aggregate fatality of the borough as a whole in the four successive quarters shewed a steady increase. In the first quarter there were 11 deaths, in the second 37, in the third 56, in the fourth 99. But the figures for the several sub-districts were much more variant.

The disease was present in Basford, N.W., S.W., and S.E., during the first quarter. During the second quarter it spread rapidly in Basford, N.W. and S.E., appeared anew in N.E. and Wilford, but disappeared (temporarily) from S.W. In the third quarter it declined greatly in Basford, but increased in N.W., S.E. and Wilford, was still present to a slight extent only in N.E., and re-appeared at several points in S.W. During the fourth quarter it first appeared in Bulwell, but, though late in its appearance, it caused there the highest mortality, reckoned as for the full year (from measles). Its behaviour in the Bulwell sub-district appeared the more remarkable by contrast with that in the neighbouring sub-district of Basford (where it was shewing but little tendency to further spread at this time). It increased also very rapidly, and to a very serious extent during the fourth quarter in N.E., S.W., and S.E. (especially N.E. and S.E.); but it practically disappeared at the same time from N.W. and Wilford.

Deaths from Measles during each of the four quarters of 1896, in the Registration Sub-Districts of the Borough.

District.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.
Bulwell	..	..	..	27	27
Basford	3	15	4	4	26
N.W.	..	8	25	1	34
N.E.	..	4	3	29	36
S.W.	7	..	6	10	23
S.E.	1	9	16	28	54
Wilford	..	1	2	..	3
Total	11	37	56	99	203

During the progress of the epidemic, and from time to time according to the local incidence of the disease, the public elementary schools of the town were closed either singly or in groups. All the younger members of households in which cases occurred were also, as far as possible, kept at home, so long as infection was likely to remain in such households. I am pleased to say that the school authorities gave to me and to officers of my department all the assistance in their power in dealing with infected children and families. The school registers were freely placed at my disposal, to enable me to obtain lists of absentees from school, and thus be in a position to circulate leaflets and otherwise afford instruction and warning to those in charge of the sick.

I have endeavoured to ascertain whether the closure of the schools could be shewn (statistically) to have checked the extension of the disease, but, owing to the irregularity of the epidemic wave, both in time and place, and the consequent irregularity in the school closure, I have not succeeded as well as I could have wished. The general effect, however, of this preventive measure, in checking the spread of the disease in particular localities, as indicated by the reduction in the number of deaths during the month following the closure, as compared with those in the corresponding period preceding it, has been unmistakeable on many occasions.

Whooping-Cough.—The liability to simultaneous occurrence on the part of measles and whooping-cough epidemics is often noted, and has once again been illustrated in this town during 1896.

In some instances the diseases are truly concurrent, but in this, although both rapidly spread and increased in fatality from an early part of the year onwards, the measles distinctly led the way at almost all points. A few non-fatal cases only of whooping-cough came to my knowledge in the first quarter, whereas measles was already in full swing in three districts during this period, and caused eleven deaths before its close.

Deaths from Whooping-Cough, during each of the Four Quarters of 1896, in the Registration Sub-Districts of the Borough.

District.	First Quarter.	Second Quarter	Third Quarter.	Fourth Quarter	Totals.
Bulwell	..	..	5	5	10
Basford	..	..	..	4	4
N.W...	..	7	4	2	13
N.E.	..	2	9	22	33
S.W...	..	1	2	3	6
S.E.	..	..	4	18	22
Wilford	..	..	..	1	1
Totals	..	10	24	55	89

These first cases of whooping-cough were reported from the N.W. district, and the earliest deaths were registered in N.W., N.E., and S.W., during the second quarter. The disease was present and causing considerable mortality in all but Basford and Wilford by the middle of the third quarter, and by the beginning of November seems to have spread to all the sub-districts and almost all parts of the town. Deaths were registered in all the sub-districts during the last quarter of the year.

But, though the distribution of the disease and its mortality were thus general, some districts suffered much more severely than others. Bulwell, N.E., and S.E., had far higher rates of mortality for the year than the rest. Sixty-eight of the 91 total deaths (or 75 per cent.) occurred in these districts, and they contain less than half the entire population of the borough. The deaths occurred within the age groups usually most affected, and in about the same proportion as is commonly observed. There were 35 deaths under one year, and the balance, 56, occurred before the fifth year. The total number of deaths during the year were slightly under the average for the past ten years (being 91, as compared with 97.)

No less than 19 of the greater towns had higher death-rates from whooping-cough than Nottingham during 1896. The highest rate was that of Salford, 0·88 per 1000. The rate in London was 0·65, and that in the 33 great towns, taken together, 0·57.

I have purposely said nothing above about compulsory notification, and its attendant train of special preventive measures, for whooping-cough, because, so far at least as working-class communities are concerned, these are held by most authorities to be without the range of practical politics for the present. But, if we are to weigh the question of their applicability by the usual criteria of infectiousness and aggregate fatality, then whooping-cough is almost as much deserving of special attention as measles, or any other of the seven principal zymotic diseases.

The average annual number of deaths from each of the latter, during the ten years 1886–95, per 100,000 of the total population in the 33 greater towns of the country, were as follows:—from diarrhœa, 88; from measles, 60; *from whooping-cough*, 55; from scarlet fever and diphtheria, each, 27; from enteric fever, 21; from small-pox, 2.

Scarlet Fever.—The cases of scarlet fever notified in Nottingham during 1896 numbered 731 (in 502 separate houses), and the deaths 27.

The cases during the preceding five years had averaged 1197 per annum, and the deaths 50. The deaths per cent. of cases therefore were 3·7 during 1896, and 4·2 during the preceding five years, last year having the advantage by 0·5 per cent.

Notifications of Scarlet Fever during the four quarters of 1896, in the Registration Sub-Districts of the Borough.

District.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell	30	2	1	9	42
Basford	35	20	19	8	82
N.W.	51	53	29	22	155
N.E.	42	42	47	43	174
S.W.	32	21	12	29	94
S.E.	58	30	47	47	182
Wilford	..	1	1	..	2
Total	248	169	156	158	731

The distribution of the disease was again very general throughout the Borough; the only sub-district in which cases were not notified during any entire quarter was Wilford (which was thus free in the first and last quarters), but the population of Wilford is only 2211, so that the fact implies very little. But though the disease was generally distributed, it displayed a decided tendency to decline in the northern sub-districts of Bulwell, Basford, and N.W., while continuing practically without diminution in the more southerly sub-districts of N.E., S.W., and S.E. In the first three, 116 cases were notified during the first quarter, and only 39 in the last quarter of the year, whereas in the last three sub-districts the cases were 132 in the first quarter, and 119 in the last.

The following were the numbers of cases and deaths in the commonly adopted age periods:—0-5 years, 225 cases and 15 deaths—a case mortality of 6·7 per cent.; 5-15 years, 423 cases and 10 deaths—2·4 per cent.; 15-25 years, 67 cases and 2 deaths —3·3 per cent.; 25-35 years, 10 cases, no deaths; 35-45 years, 5 cases, no deaths; 45-55 years, 1 non-fatal case.

Further details respecting the scarlet fever cases in the Borough will be found in the portion of the report dealing with the Isolation Hospital.

Diphtheria.—The town has suffered but little, comparatively speaking, from this disease during the past twelve months. Sixty cases have been notified, and 12 deaths registered. Neither of these totals, however, can be taken as representing the full numbers, respectively, due to this disease.

Many mild cases escape detection, and on the other hand many deaths from diphtheria are ascribed to croup, simple laryngitis, and other causes. Again, diphtheria, as a complication of such diseases as scarlet fever, is lost for statistical purposes in the primary disease.

The notified cases occurred in almost all parts of the town, but were least numerous (as usual) during the summer months.

The irregularity in the apparent case mortality in different districts (as indicated by the number of cases and deaths returned for the several sub-districts) is further evidence in support of my statement above, respecting the incompleteness of the diphtheria returns.

Notifications of Diphtheria during each of the four quarters of 1896 in the Registration Sub-Districts of the Borough.

Districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals
Bulwell	..	..	..	1	1
Basford	2	5	..	1	8
N.W.	5	3	2	5	15
N.E.	4	1	2	2	9
S.W.	2	2	2	7	13
S.E.	3	8	..	3	14
Wilford	..	..	..	..	..
Total	16	19	6	19	60

So far as the figures I have enable me to judge, the cases and deaths at the several age periods were as follows:—0-5 years, 22 cases and five deaths; 5-15 years, 23 cases and 6 deaths; 15-25 years, 4 cases and 1 death; 25-35 years, 3 non-fatal cases; 55-65 years, 1 non-fatal case. I have (as already stated) received 7 further notifications of diphtheria during the year, but am unable to give the ages of the cases to which they refer.

The serum treatment of diphtheria is no longer on its trial. It has been shown by carefully compiled statistics in various parts of the world, and notably by those of the Metropolitan Asylum Board Hospitals, to be instrumental in largely reducing the mortality from diphtheria, whenever it is used sufficiently early in the disease.

In endeavouring, however, to estimate the value of this treatment by a study of statistics, two facts especially must be borne in mind, viz.: (1) that the treatment is necessary only, and is for the most part only applied, in well marked cases; and (2) that it is practically useless in the latter unless applied early.

The number of diphtheria cases admitted to Bagthorpe Hospital, and of those developing in the scarlet fever wards there, is altogether too small to afford subject for statistics; but all these cases are now treated as promptly as possible with antitoxic serum prepared by Messrs. Allen & Hanbury under the direction of the British Institute of Preventive Medicine.

In order to obtain the serum with the utmost promptitude, it is necessary to wire to the factory address of the above, or any other firm preparing it, specifying the amount required, the address to which it is to be sent, and "urgency." A parcel containing bottles of the serum will then be returned at once by special messenger and passenger train.

Enteric Fever.—I have once more to put on record the occurrence of an excessive number of cases and of deaths from enteric fever in this town, for the 12 months under review. No less than 478 cases were notified, in 304 separate houses, and 75

deaths were registered during the year. The number of the notified cases and of the deaths have each only once been exceeded (in 1893 and 1888 respectively) since the last extension of the borough. The cases numbered 490 during 1893 (which, however, was a year specially notable for the prevalence of diarrhœal diseases), and the deaths 89 during 1888.

Notifications of Enteric Fever during the four quarters of 1896 in the Registration Sub-Districts of the Borough.

Districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell	12	1	..	7	20
Basford	10	8	3	24	45
N.W.	37	15	23	40	115
N.E.	33	17	30	39	119
S.W.	16	9	12	19	56
S.E.	41	13	28	33	115
Wilford	1	3	1	3	8
Total	150	66	97	165	478

A record of this character in a clean and well-sewered town like Nottingham, with a pure water supply, is in the highest degree unsatisfactory, and one affording subject for grave reflection.

The actual increase, as compared with other years, is of course somewhat discounted by the continual growth of population, but, with all due allowance for this growth, we cannot get rid of the fact that enteric fever is unduly prevalent in Nottingham. The best standard by which to measure the accuracy of this statement is the experience of the other great towns of the country in the same particular. During 1896 only three of these towns had higher death-rates from enteric fever than Nottingham. The rate in Sunderland was 0·37 per 1000 (or 37 per 100,000), that in

Bolton 0·39 (or 39 per 100,000), and that in Wolverhampton 0·41 (or 41 per 100,000). The average rate in all the 33 towns was 0·19 (or 19 per 100,000), and that in London 0·14 (or 14 per 100,000) during the same period. Six only of the great towns had higher average death-rates from enteric fever than Nottingham during the ten years 1886-95, viz., Portsmouth (0·31), Birkenhead (0·32), Liverpool (0·37), Preston (0·39), Salford (0·42), and Sunderland (0·48). The rate for Nottingham during this period was 0·30, *i.e.*, double the rate in London, and more than 40 per cent. in advance of the average rate in all the 33 towns taken together.

Now, from a sanitary point of view, Nottingham compares favourably, except in one particular, with almost all the large manufacturing towns in this country. The defective exception is the conservancy system, to which I have so often called your attention. In the special report on conservancy and water-carriage systems for the removal of excreta in 78 towns of Great Britain and Ireland, which I drew up in 1894, I showed *(inter alia)* that Nottingham contained a larger relative number of pail-closets than any other of these large towns, and a larger actual number than any other except Manchester. Nottingham at the present time contains some 40,225 pail-closets, furnished moreover, I regret to say, for the most part with wooden pails. The numbers of houses in the town furnished with water-closets and privies are, as nearly as possible, 7200 and 440 respectively.

I have now in course of preparation a report upon enteric fever in Nottingham during the past ten years. I shall give here one tabular extract from the report, to show the relative incidence of the disease upon houses with different types of closet. It may be noticed that the total numbers of cases of fever for each year shown in the accompanying table are less than those given elsewhere in the report. The discrepancy is due to the exclusion from this table of cases in Public Institutions, and other establishments, either furnished with various closet accommodation, or otherwise not admitting of classification in the table.

Enteric Fever in Nottingham, 1887–96.

Cases and proportion of cases in Houses furnished respectively with Pail Closets, Midden-Privies, and Water-Closets.

1887.

Houses.			Cases.		Ratio.
35,786	Houses with	Pail closets	... 369 cases	= 1 case in	97 Houses
1,598	,,	,, Privies	... 45 ,,	= 1 ,, in	35 ,,
6,000	,,	,, W.C.'s	... 12 ,,	= 1 ,, in	500 ,,

1888.

37,038	Houses with	Pail closets	... 354 cases	= 1 case in	104 Houses
1,532	,,	,, Privies	... 29 ,,	= 1 ,, in	52 ,,
6,091	,,	,, W.C.'s	... 11 ,,	= 1 ,, in	554 ,,

1889.

37,539	Houses with	Pail closets	... 326 cases	= 1 case in	115 Houses
1,343	,,	,, Privies	... 31 ,,	= 1 ,, in	43 ,,
6,200	,,	,, W.C.'s	... 10 ,,	= 1 ,, in	620 ,,

1890.

38,133	Houses with	Pail closets	... 305 cases	= 1 case in	125 Houses
1,195	,,	,, Privies	... 23 ,,	= 1 ,, in	52 ,,
6,280	,,	,, W.C.'s	... 9 ,,	= 1 ,, in	694 ,,

1891.

38,571	Houses with	Pail closets	... 337 cases	= 1 case in	114 Houses
880	,,	,, Privies	... 27 ,,	= 1 ,, in	33 ,,
6,295	,,	,, W.C.'s	... 11 ,,	= 1 ,, in	572 ,,

1892.

38,834	Houses with	Pail closets	... 178 cases	= 1 case in	218 Houses
711	,,	,, Privies	... 12 ,,	= 1 ,, in	59 ,,
6,360	,,	,, W.C.'s	... 8 ,,	= 1 ,, in	795 ,,

1893.

40,097	Houses with	Pail closets	... 435 cases	= 1 case in	92 Houses
600	,,	,, Privies	... 19 ,,	= 1 ,, in	31 ,,
7,000	,,	,, W.C.'s	.. 25 ,,	= 1 ,, in	280 ,,

1894.

40,414	Houses with	Pail closets	... 304 cases	= 1 case in	133 Houses
500	,,	,, Privies	... 20 ,,	= 1 ,, in	25 ,,
7,000	,,	,, W.C.'s	... 10 ,,	= 1 ,, in	700 ,,

1895.

40,532	Houses with	Pail closets	... 385 cases	= 1 case in	105 Houses
460	,,	,, Privies	... 23 ,,	= 1 ,, in	20 ,,
7,100	,,	,, W.C.'s	... 14 ,,	= 1 ,, in	507 ,,

1896.

40,225	Houses with	Pail closets	... 400 cases	= 1 case in	101 Houses
440	,,	,, Privies	... 24 ,,	= 1 ,, in	18 ,,
7,200	,,	,, W.C.'s	... 20 ,,	= 1 ,, in	360 ,,

The facts brought out by this table are simple enough: the only question that can arise is with regard to the extent to which the class of closet is the determining factor in producing the special incidence of the disease.

The table shews that the proportion of cases to houses during the ten years has ranged, (*a*) as regards pail-closet houses, from 1 case in 97 houses to 1 in 218; (*b*) as regard houses with midden privies, from 1 in 19 to 1 in 59; and (*c*) as regards houses with water-closets, from 1 in 280 to 1 in 795. The ratios have varied year by year with varying degrees of local incidence of the disease, but the variations have been for the most part contemporaneously in the same direction for each class. There has been a somewhat greater uniformity in the case of the pail-closet houses than in the other two, but this is no more than we should have expected.

By summarizing the figures for the ten years, we obtain the following result:—(*a*) pail-closet houses, 1 case in 120 houses; (*b*) midden-privy houses, 1 case in 37 houses; (*c*) water-closet houses, 1 case in 558 houses. In other words, the proportional incidence of the disease upon houses with privies was more than three times as great as that upon houses with pail-closets, and that upon houses with pail-closets more than $4\frac{1}{2}$ times greater than that upon houses with water-closets

With respect to the question of how far the type of closet is the determining factor in this special distribution of the disease, I shall have more to say in my full report; but, before leaving the subject here, I may refer to one or two facts which bear upon it, and state that the more we look into the matter, the more certain it appears that the conservancy closet is one of the principal sources of the mischief. The privies are now very few and a large proportion of them are attached to a good class of houses, but still the ratio of cases to houses furnished with them seems rather to increase than diminish. Houses with water-closets, again, are now scattered all over the town, and by no means

confined to superior neighbourhoods, but, wherever situated, the same relative immunity appears to characterize them. Although their numbers have increased, the ratio of incidence has shewed no tendency in the same direction.

I have already alluded to the comparative uniformity of the case incidence upon pail-closet houses year by year throughout the decennium. This is another fact the special significance of which is, I think, unmistakeable. But the most significant circumstance I shall mention here, in support of the case against conservancy closets, is the marked liability of enteric fever to spread in houses and neighbourhoods where such closets are in use. This tendency I have frequently observed, and instances illustrating it have been repeatedly recorded by myself and others. It may be urged that we always provide special covered pails for the reception of typhoid stools and other infective material, when cases are nursed at home; but it must be remembered that the provision of such pails does not ensure their proper use, that they can seldom be brought into use until cases are well developed, owing to the frequent difficulty of diagnosing enteric fever in its earlier stages, and that they afford no protection against undetected cases—probably a numerous class.

Nineteen cases of enteric fever, which urgently required removal to hospital, and which could not secure admission to the General Hospital, were sent to Bagthorpe Hospital during the year, under your recent decision to admit such cases.

The distribution of the disease in the town was very general —as already indicated in the tables and sections dealing with cases and deaths in the sub-districts. Bulwell, S.W., and S.E. suffered somewhat more severely than other parts, but there was no special concentration of cases at any point.

The table of notifications of enteric fever which accompanies this section gives the numbers of notifications in each of the sub-districts during each quarter of the year, and speaks for itself. To shew how general was the distribution of the disease with respect to season (as well as locality), I may mention that the only four-weekly period in which the cases fell below 21 was that ending with June 13th.

Tables giving the cases and deaths, in age periods, of the notifiable infectious diseases, the ratio of deaths to cases, and the deaths from the non-notifiable infectious diseases, which have occurred in Nottingham during 1896 and other recent years. Further notification tables will be found under the special sections dealing separately with notifiable infectious diseases.

1891.

		0-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever	*Cases*	302	466	80	31	10	6	..	..	..	895
	Deaths	14	13	1	..	..	..	..	..	..	28
Diphtheria	*Cases*	31	33	13	16	6	1	..	..	..	100
	Deaths	14	6	..	1	..	..	..	..	..	21
Enteric Fever	*Cases*	29	150	99	66	26	15	8	1	1	396
	Deaths	5	15	19	12	4	7	6	1	1	70

1892.

		0-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever	*Cases*	313	711	108	24	6	1	..	..	..	1163
	Deaths	17	23	3	..	..	..	..	..	..	43
Diphtheria	*Cases*	25	20	11	13	5	1	..	..	1	76
	Deaths	25	3	..	..	1	1	..	..	..	30
Enteric Fever	*Cases*	20	64	58	32	16	10	3	1	1	205
	Deaths	3	7	12	6	5	1	1	..	1	36

1893.

		0-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small Pox	*Cases*	1	3	12	18	9	6	4	..	..	53
	Deaths	1	..	1	1	1	1	..	..	..	5
Scarlet Fever	*Cases*	412	918	145	25	8	2	1	..	..	1511
	Deaths	50	27	3	2	1	..	..	..	..	83
Diphtheria	*Cases*	14	35	13	12	7	..	..	..	..	81
	Deaths	7	7	..	..	1	..	..	..	..	15
Enteric Fever	*Cases*	30	170	146	71	42	23	7	1	..	490
	Deaths	6	12	19	12	8	5	6	..	..	68

1894.

		0-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small Pox	*Cases*	2	8	21	11	13	2	1	..	..	58
	Deaths	1	2	..	..	1	..	..	..	..	4
Scarlet Fever	*Cases*	364	705	67	19	7	2	..	..	..	1164
	Deaths	24	22	1	1	1	..	..	..	..	49
Diphtheria	*Cases*	20	23	6	5	1	..	..	1	..	56
	Deaths	16	4	1	..	..	..	..	1	..	22
Enteric Fever	*Cases*	25	114	101	66	34	10	9	3	1	363
	Deaths	1	11	21	8	10	5	2	3	..	61

1895.

		0-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small Pox	*Cases*	..	1	1	..	1	..	..	..	..	3
	Deaths	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	*Cases*	438	707	76	20	8	1	..	..	..	1250
	Deaths	32	17	1	1	..	..	..	..	..	51
Diphtheria	*Cases*	13	16	12	3	2	..	1	..	..	47
	Deaths	8	3	..	..	..	..	..	..	..	11
Enteric Fever	*Cases*	42	158	124	71	43	17	4	1	1	461
	Deaths	6	6	24	11	4	3	..	..	1	55

1896.

		0-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever	*Cases*	225	423	67	10	5	1	..	..	..	731
	Deaths	15	10	2	..	..	..	..	..	..	27
Diphtheria	*Cases*	22	23	4	3	..	..	1	..	..	53*
	Deaths	5	6	1	..	..	..	..	..	..	12
Enteric Fever	*Cases*	48	172	115	80	22	13	9	2	..	459*
	Deaths	7	19	19	16	7	3	4	..	..	75

* Total number of cases of which particulars as to age are forthcoming.

Nottingham. Notification Data up to the end of 1896.

	Scarlet Fever.*			Enteric Fever †			Small-Pox.			Diphtheria. ‡			Deaths from Non-Notified Zymotic Diseases.			
	Deaths.	Known cases	Ratio of known cases to Deaths.	Deaths.	Known cases	Ratio.	Deaths.	Known cases	Ratio.	Deaths.	Known cases	Ratio.	Measles.	Whooping Cough.	Diarrhœa.	TOTAL.
1878	72	..	..	62	..	..	..	..	..	6	..	..	47	83	197	327
1879	180	..	..	42	..	..	1	..	..	1	..	..	73	68	93	234
1880	134	..	..	58	..	..	..	..	..	6	..	..	265	87	273	625
1881	353	..	..	61	..	..	4	..	..	7	..	..	34	88	202	324
1882	280	1029	3·7	71	68	1·0	51	446	8 7	21	..	..	133	73	225	431
1883	59	428	7·3	73	159	2 2	2	23	11·5	34	125	3·7	14	76	168	258
1884	37	384	10·4	68	218	3 2	..	11	..	39	113	2 9	145	129	377	651
1885	31	390	12 6	44	326	7 4	2	10	5 0	28	85	3·0	112	116	163	391
1886	13	351	27·0	61	317	5·2	2	12	6·0	10	68	6·8	175	90	328	593
1887	22	615	28 0	74	411	5·6	..	2	..	10	50	5·0	58	153	315	526
1888	25	643	25·7	89	426	4 8	12	59	4 9	34	152	4·5	115	81	157	353
1889	32	1047	32·7	66	395	5·9	..	..	..	11	66	6·0	86	153	263	502
1890	33	984	29·8	58	348	6·0	..	..	..	16	64	4·0	52	47	185	284
1891	28	895	31·9	70	396	5·6	..	..	..	21	103	4 9	110	121	180	411
1892	43	1163	27.0	36	205	5·6	..	..	..	30	76	2·5	118	117	158	393
1893	82	1511	18·4	68	490	7·2	5	53	10·6	15	81	5·4	25	59	358	442
1894	51	1164	22 8	62	363	5·8	4	59	15·8	18	56	3·1	134	118	134	386
1895	51	1250	24·5	55	461	8 3	..	3	..	11	47	4·2	1	33	444	478
1896	27	731	27·1	75	478	6·4	..	..	..	12	60	5·0	203	91	175	469

* Notification of Small-Pox and Scarlet Fever, from February, 1882.
† Notification of Enteric Fever and Typhus, from June, 1883.
‡ Notification of Diphtheria, from August, 1885.

Diarrhœa. — The corrected number of deaths from primary diarrhœa, in Nottingham during 1896, was 175—a very moderate total as compared with that of 1895, and most other recent years. The death-rate for the year, per 1000 living, was equal to 0·69; the rate for the ten years, 1886–1895, was 1·03. This disease was less fatal than in 1895 in the majority of the towns of this country, but the reduction was less marked in most cases than in Nottingham. The diarrhœa death-rate in London during 1896 was 0·72, and the average rate in the 33 towns 0·79 per 1000 living.

The distribution of the disease in this town was, as usual, somewhat uneven, and the parts which suffered most were (also as usual) the low-lying portions of the S.W., S.E., and Wilford sub-districts. In the last two divisions the diarrhœa deaths for the year exceeded a rate of one and two per 1000 respectively.

The seasonal rise of fatal diarrhœa was well marked during the past year. One hundred and forty out of the 175 total deaths, or 80%, occurred during the sixteen weeks ending with October 3. The fatalities among infants under one year, were relatively more numerous than usual: 144 of all the deaths, or 82%, occurred within this age limit. The deaths in other age periods were as follows:—1 to 5 years, 19 deaths; 15 to 25 years, 1; 25 to 35 years, 1; 35 to 45 years, 1; 45 to 55 years, 2; 55 to 65 years, 1; 65 to 75 years, 3; 75 to 85 years, 2; 85 years and upwards, 1.

The usual tables, giving the mean temperature of the soil at a depth of one and four feet respectively below the ground surface, and the number of deaths from diarrhœa during each of the weeks of summer and autumn prevalence, accompany this section. These tables—as most persons interested in this subject are aware—are by way of illustration to the late Dr. Ballard's discovery of the essential relation of deep subsoil temperature to diarrhœa prevalence and fatality. But, while these records bear out Dr. Ballard's statement, that a temperature of 56° at a depth of four feet below the surface is sufficient to herald the rise of the seasonal curve, they also show that no considerable mortality occurs in this town unless the deep temperature exceeds this figure by about two degrees.

1891.

	WEEK ENDING.														
	Aug. 1	Aug. 8	Aug. 15	Aug. 22	Aug. 29	Sept. 5	Sept. 12	Sept. 19	Sept. 26	Oct 3	Oct. 10	Oct. 17	Oct. 24	Oct. 31	Nov. 7
Earth Temperature 1 ft. below surface of ground ..	58·5	58·1	58·6	59·5	57·9	56·8	57 7	58·7	56·5	54·7	53·7	52 1	49·2	47·6	46 0
Earth Temperature 4 ft. below surface of ground ..	57 9	57·2	57 1	57·7	57·5	57·0	56 7	57·7	57·2	56·2	55·1	54·3	52·5	51·2	49·0
Deaths from Diarrhœa	5	5	8	4	6	5	6	12	13	15	10	5	5	4	3

1892.

	WEEK ENDING													
	July 21	July 28	Aug. 4	Aug. 11	Aug. 18	Aug. 25	Sept. 1	Sept. 8	Sept. 15	Sept. 22	Sept. 29	Oct. 6	Oct. 13	Oct. 20
Earth Temperature 1 ft. below surface of ground	55·6	57·4	58·0	57·7	59·2	61 5	59·7	55·7	55·8	54·2	54·0	50·0	48·5	47·7
Earth Temperature 4 ft. below surface of ground	56·0	55·8	56·1	56·5	57·1	58·2	58 8	58·1	56·7	56·0	55·2	53·5	51·4	47 5
Deaths from Diarrhœa..	3	4	5	5	8	10	10	12	13	12	10	10	3	1

1893.

	WEEK ENDING														
	June 17	June 24	July 1	July 8	July 15	July 22	July 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26	Sept. 2	Sept. 9	Sept. 16	Sept. 23	Sept. 30	Oct. 7
Earth Temperature 1 ft. below surface ..	59·2	67·4	59·7	63·1	62·1	60·7	61·2	61·2	62·5	66·8	63·1	60·2	61·1	56·8	56 0	53 4	51·4
Earth Temperature 4 ft. below surface ..	55·0	56·8	57·4	58·0	59·5	58·7	59·0	59·5	60·0	62·1	62·3	61·2	61·0	59·5	58 6	56·6	55·6
Deaths from Diarrhœa..	2	9	12	15	31	41	29	11	28	22	18	20	16	14	11	9	3

1894.

	WEEK ENDING																	
	July 7	July 14	July 21	July 28	Aug. 4	Aug. 11	Aug. 18	Aug. 25	Sept. 1	Sept. 8	Sept. 15	Sept. 22	Sept. 29	Oct. 6	Oct. 13	Oct. 20	Oct. 27	Nov. 3
Earth Temperature 1 ft. below surface ..	62 3	61·1	59·4	61·1	61·8	60·0	58·8	57·1	57 9	56·0	54·6	55·3	53·8	51·1	53·2	49 8	47·0	48·
Earth Temperature 4 ft. below surface ..	56·7	58 0	57 9	58·1	59·1	58·9	58·7	57·7	57 4	57·3	56 1	55·7	55·4	53·9	53 4	53·2	51·1	50·
Deaths from Diarrhœa ..	3	3	5	6	13	13	10	16	3	4	5	3	5	8	7	4	2	8

1895.

	WEEK ENDING																	
	July 6	July 13	July 20	July 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31	Sept. 7	Sept. 14	Sept. 21	Sept. 28	Oct. 5	Oct. 12	Oct. 19	Oct. 26	Nov. 2
Earth Temperature 1 ft. below surface ..	60 6	61 5	60·8	60 5	61·0	60·5	62 0	63 4	60·5	60 8	59·4	57·5	58 0	56·5	51·6	50 0	44·5	43·
Earth Temperature 4 ft. below surface ..	58·5	58·9	59·0	59·3	59·5	59 5	59·5	60·4	60 3	60·1	60 0	59·1	58·5	58·4	56·7	54·2	52·0	49·
Deaths from Diarrhœa ..	5	9	20	25	27	29	28	27	28	33	24	33	32	15	26	7	8	10

1896.

	WEEK ENDING												
	June 27	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8	Aug. 15	Aug. 22	Aug. 29	Sept. 5	Sept. 12	Sept. 19	Sept. 26
Earth Temperature 1 ft. below surface of ground	60 6	60·6	62·4	63 7	63 0	60·7	59·4	59·5	58 8	57·7	57·4	58·4	57 2	53·2
Earth Temperature 4 ft. below surface of ground	57·8	58·0	58·3	59·7	60·1	59·9	59·8	59·1	59·0	58·7	58 0	57·8	58·1	56·8
Deaths from Diarrhœa	6	4	13	13	20	16	14	12	13	8	2	7	6	2

The deaths in the following sections, dealing with groups of diseases, are (as usual) given for the most part in actual numbers, instead of rates per 1000 living.

Dietic Diseases.—The total number of deaths returned as due to this group of diseases during 1896, a group which includes such prolific death causes as the starvation of children in its various methods and degrees, and chronic alcoholic intemperance in adults, is only twelve. This number represents so small a fraction of the whole mortality from such causes that comment and comparison of these deaths in detail are useless. There are probably few of us, whether medical men or laymen, who would not be prepared, from our own personal knowledge and experience during the same period, to certify a much larger number of deaths from each.

Many deaths primarily due to chronic alcoholism are certified by medical men as caused by some diseased condition to which the indulgence has given rise. Cirrhosis of the liver, for instance, (which is caused in most cases—though not invariably—by spirit drinking) is frequently certified as the primary death cause, in order to spare the feelings of friends, no mention being made of the suicidal habit through which it has arisen.

Constitutional Diseases.—The deaths from diseases in this class amounted to 688 during 1896, as compared with 747 in 1895.

Rheumatism, acute and chronic, was again less fatal than usual. It was certified as causing only 17 deaths, whereas the annual average of the previous five years had been 26. Two deaths only were attributed to gout, but this disease is seldom given as a primary death cause. Rickets was responsible for 19 deaths, or 14 less than in 1895.

Malignant new growths—"Cancer"—were credited with 185 deaths, as compared with 200 during 1895. The reduction was almost entirely confined to the deaths of females. One hundred and eighty, or 97 per cent. of all the deaths, were those

of persons aged 25 years and upwards. The deaths ascribed to tubercular diseases were 435 in number, and 36 less than in 1895. They exceeded the average of other recent years, however, and the excess was entirely due to an increase under the heading of phthisis, or consumption of the lungs.

The deaths from purpura, anæmia, etc., and diabetes, though few in number, are fairly constant year by year. These were 3, 10, and 17, respectively, during 1896. The average annual number of deaths from diabetes during the preceding five years was almost exactly 17.

Developmental Diseases.—The number of deaths certified as due to these was 340 during the past year. This is the smallest annual total yet recorded from this group. The deaths ascribed to premature birth numbered 155. These vary but little year by year, but of course increase slightly with the increase of population. The average of the preceding five years was 149. The deaths from congenital malformations were only 13 in number, against 39 in 1895.

"Old age" was credited with only 170 deaths; the annual average of the preceding five years was 182. As I have frequently pointed out before, a reduction in the number of deaths stated to be due to old age (as such) commonly implies more careful certification. Death is mostly due to some constitutional malady with a name, or to the failure or disease of certain organs, and, whatever the age of the person dying, should be thus accounted for if possible. The more this is done in the case of aged persons, the fewer deaths shall we have referred to "old age."

Local Diseases.—These were apparently responsible for 1,898 deaths during the year 1896. This annual total is the largest since 1892. In the absence of any such cause as epidemic influenza to swell the total, it is somewhat difficult to account for the increase. In all probability, however, the increase, beyond what might be expected from growth of population, is rather

apparent than real, and due to the inclusion of deaths like those already alluded to under "old age," which might otherwise have appeared under different headings, for the total mortality of the borough from all causes during the year is by no means excessive. With this preface, I shall now compare the mortality from local diseases in detail, as indicated by the returns supplied to me, in 1896 and other recent years.

Diseases of the nervous system were credited with a larger number of deaths than in any year since 1889. Notwithstanding what I have said above, there are three items—numerically small, but important by their nature—which show an increase that is probably real. These are the deaths from insanity, general paralysis of the insane, and epilepsy, which together amount to 50, the largest number yet recorded as due to these diseases in any one year. Three hundred and forty-six deaths were referred to diseases of the circulatory system. This total is slightly below that of 1895 (359), but otherwise the highest on record. Diseases of the heart (valvular and other) were the sub-headings under which the whole of the increase occurred. Diseases of the respiratory system were credited with only 742 deaths—a very moderate number—, 117 less than in 1895, and 202 less than in 1894. There was an advance in the number of deaths from diseases of the digestive system, both as compared with 1895 and other years, excepting 1893; but the advance was not very considerable, considering the natural fluctuations under this heading. Diseases of the urinary system were ostensibly rather less fatal than usual. Diseases of the reproductive system shewed a slight increase.

Diseases of bones and joints, and of the integumentary system, caused 15 and 11 deaths respectively, numbers which approximate closely to the corresponding totals of other recent years.

Violence.—The deaths from violence were 133 in number. They amounted to 127 in 1895, and have fluctuated between a maximum of 149 (1893), and a minimum of 101 (1888), since 1886. The number of violent deaths due to accident during

1896 was identical with that in 1895, and closely corresponds with the average of other recent years. There were two deaths from homicide, the quinquennial average being four. Suicides numbered 28, as compared with 23 in 1895, and a five years' average also of 23. There were two executions.

Ill-defined Death Causes.—These were 269 in number, against 304 in 1895. Previous to 1895 there had been no annual total equal to 269 since 1891.

Uncertified Deaths.—These numbered 56 according to my returns, and 57 according to those of the Registrar-General. Either total corresponds with a percentage of 1·4 of all deaths in the borough. This percentage is 0·1 higher than in 1894 and 1895. The corresponding proportion in London during 1896 was 0·6, and that in the 33 greater towns 1·5, both almost exactly identical with those of the year before. The percentages in the great towns ranged from *nil* in Croydon (as in 1895), to 5·0 in Birmingham. Birmingham led the way also during 1895 with 4·8 per cent. In the 67 lesser towns of the country the average was 2·1 per cent, and Dover again had the largest proportion with 10·6 per cent.

Inquests.—The number of inquests held in Nottingham during 1896 was 283, as compared with 236 during 1895. This number is equal to 6·9 per cent. of all deaths. The corresponding rate in London was 9·1, and in the 33 greater towns taken together 7·4. The highest percentage among the latter was once more that in Derby (9·3), and the lowest that in Birmingham (2·5). In the 67 lesser towns the average inquest rate was 5·8, the lowest being that of Aston Manor (1·5), and the highest those of Exeter, Southampton, and Tottenham (equal, at 9·5).

Annual Chart of Meteorology, Births, and Deaths in Nottingham (1896).—The usual chart, giving information in diagramatic form under this heading, is furnished at the end of the report. The chart is prepared under the joint direction of the Borough engineer and myself.

THE BOROUGH ISOLATION HOSPITAL, BAGTHORPE.

The hospital has accommodated a smaller number of patients during 1896 than in any other year since the opening in 1891. The total number admitted was 660; 631 were admitted for scarlet fever, 19 for enteric fever, 3 for diphtheria, and 7 with or for other diseases. The smallest previous total, for any full year since the opening, was 1016 in 1894. The average annual number during the four years 1892–95 was 1099.

The largest number of patients in the hospital upon any day of 1896 was 201, on January 1st, the smallest 76, on August 8th. The average daily number for the whole year was 110·9. The number of beds occupied fell slowly from Jan. 1st to Aug. 8th, and again slowly advanced from the last date onwards. To the above total, of 660 patients admitted during 1896, must be added the number remaining in hospital at the end of 1895, in order to obtain the total number treated during the year. These remaining patients were 201 in number, and all were suffering from scarlet fever. This last additional number must, however, be eliminated in dealing with the vital statistics of the hospital for the year, as they have already been accounted for in the hospital report for 1895.

Total Cases in Hospital.

	Remaining at end of 1895.	Admitted during 1896.	Recovered.	Died.	AVERAGE RESIDENCE IN DAYS.		Remaining at end of 1896.
					Non-fatal Cases.	Fatal Cases.	
Scarlet Fever	201	631	704	19	59	17	109
Enteric Fever	..	19	13	2	40·5	11	4
Diphtheria	..	3	3	..	35	..	..
Other Diseases	..	7	6	..	15	..	1
TOTAL	201	660	726	21	37·4	14	114

Of the 631 cases of scarlet fever admitted, 19 died during the year, and 6 after its completion, making 25 in all. This total mortality is equal to 3·96 per cent. of all admissions. The average stay of the non-fatal scarlet fever cases in hospital was eight weeks and three days.

The 631 cases of scarlet fever removed to hospital constituted 86 per cent. of all the notified cases of that disease. Although the proportion of removal to hospital has somewhat fallen off, there has been no decline in the promptitude with which removal has been effected after onset, and, as the latter depends largely upon promptitude of notification, we may take it that this has been satisfactorily maintained. Twenty-two per cent. of all the cases taken to hospital were removed on the day of rash, and rather less than 77 per cent. within the first week after its appearance.

Nineteen cases of enteric fever, which required removal but could not secure admission to the General Hospital, were admitted to Bagthorpe Hospital during the year. This, however, I have already explained. Notwithstanding that several of these cases were extremely severe, all but two recovered, the four cases remaining in the hospital at the end of the year being included among the recoveries. The case mortality (10·5 per cent.) is lower than that of the town as a whole during 1896 (this was 15 per cent.), and also below the average case death-rate usually given for both sexes in this country (about 18 per cent.), and speaks well for the hospital treatment. The average duration of stay of the non-fatal typhoid cases in hospital was five weeks and five days.

Three cases of diphtheria, and seven of other incidental diseases, were also admitted during the year: all recovered.

The age and sex distribution of the scarlet fever cases, fatal and otherwise, claims somewhat more attention than usual. The cases under 5 years, which, according to Dr. Whitelegge, constitute about 45 per cent. of all attacks, were here less than 30 per cent. in both sexes (males 29·8,

females 27·8). The cases between 5 and 10 years were both less than the normal (40 per cent.). The cases between 10 and 15 years were nearly twice as numerous as usual (nearly 20 per cent., as compared with a normal 11 per cent) These facts hold good, equally, whether we include or exclude the cases nursed at home.

Age and sex distribution of non-fatal and fatal cases of Scarlet Fever admitted to Bagthorpe Hospital during 1896.

	MALES.		FEMALES.	
	Cases.	Deaths.	Cases.	Deaths.
Under 1 year	3	–	4	–
Between 1 and 2 years ..	11	1	12	1
„ 2 and 3 „ ..	13	2	20	6
„ 3 and 4 „ ..	28	–	31	3
„ 4 and 5 „ ..	31	2	32	–
„ 5 and 10 „ ..	112	1	128	9
„ 10 and 15 „ ..	53	–	71	–
„ 15 and 20 „ ..	22	–	30	–
„ 20 and 25 „ ..	9	–	7	–
„ 25 and 30 „ ..	4	–	6	–
„ 30 and 35 „ ..	–	–	1	–
„ 35 and 40 „ ..	2	–	–	–
„ 40 and 45 „ ..	–	–	–	–
„ 45 and 50 „ ..	1	–	–	–
„ 50 and 55 „ ..	–	–	–	–
Totals ..	289	6	312	19

Total cases, 631. * Total deaths, 25. *Case mortality*, 3·96%.

* These represent the total deaths among the cases admitted during the year, six of which occurred after the end of the year.

But the most extraordinary circumstance of all connected with the local age and sex distribution of scarlet fever, is the very high rate of mortality at certain age periods among the females. Females are commonly somewhat more liable to attack than males, but their death-rate is normally lower than that of the males. The male deaths were here equal to a case mortality of 2·07 per cent., whereas those of the females amounted to 5·5 per cent.—more than 2½ times greater. Among female children aged between 2 and 3 years, there were 20 cases and 6 deaths. The death-rate here is no less than 30 per cent. Between 3 and 5 years there were 31 female cases, and 3 deaths—a mortality of nearly 10 per cent. Between 5 and 10 years there were 128 cases and 9 deaths —a mortality of over 7 per cent. However, I am bound to call this high female mortality accidental, in the total absence of any other reasonable explanation.

I have gone somewhat exhaustively into the subject of return cases of scarlet fever (or cases resulting, or appearing to result, from a return of patients to their homes after isolation in hospital) in previous annual reports for some years past. Hitherto the proportion of such cases occurring in connection with Bagthorpe Hospital has ranged from about 4·5 to 5 per cent. I am pleased to be able to report that the return cases during 1896, estimated by exactly the same criteria as before, have fallen to 2·3 per cent. of all cases. Whether this reduction be due, either wholly or in part, to any measures adopted by us, or to intrinsic change in the infection itself (the endemic wave has certainly shown a declining tendency during the latter part of 1896), I am of course unable to say; but during the past year we have certainly exercised the utmost precaution against the propagation of infection through the discharge of patients from hospital. One result of the extra care has been the raising of the average period spent in hospital by nearly seven days. This additional length of stay, however, has been brought about less by a desire to keep the patients longer in hospital, than through the necessity of giving their friends time to make arrangements for their temporary sequestration from other children after their discharge. I strongly deprecate the keeping of patients in a hospital like ours, without convalescent wards, a day longer than is necessary for the protection of others with whom they will mix when they go out. Such a practice retards convalescence, and even exposes them to risk of re-infection; but the interests of the community must be considered before those of the individual, and when there is, in the opinion of the responsible medical man, any appreciable risk of a patient spreading infection, such a patient should not be allowed to go out and mix with susceptible persons. I have frequently recorded the fact that in our experience there is a marked tendency to special severity in those cases arising from contact with old hospital cases, and this is another argument against allowing any laxity of practice in this respect. I have long been of opinion that no isolation hospital for scarlet fever should be established without a convalescent section of adequate capacity attached to it, either on the same site, or (preferably) at some little distance. In this provision probably lies the solution of the difficulty I have here shadowed forth.

The following is a record of the more common complications of scarlet fever occurring among the 631 cases of that disease admitted to Bagthorpe Hospital during the year.

Otitis	52	8·2%	Post-aural Abscess ..	3	0·4%
Nephritis	14	2·2„	Second Attack ..	6	0·9„
Rheumatism	15	2·3„	Broncho-pneumonia ..	7	1·1„
Secondary Sore Throat	8	1·2„	Erysipelas	3	0·4„
Glandular Abscess ..	13	2·0„			

One point of special interest connected with several of these complications is the liability of persons suffering from them to communicate the original disease to other susceptible persons with whom they come in contact.

The Borough Accountant gives the whole cost of the hospital during the year ending with March 31st, 1897, as £4522. This is the smallest annual cost since the hospital was opened, and the reduction as compared with other years is due to the comparatively small number of patients accommodated. There was one item of extraordinary expenditure. A new ambulance was purchased at a cost of £115. The purchase money of this ambulance should of course be distributed over other years in calculating the annual cost, but the sum seems too small to call for such distribution.

The average daily number of patients in hospital, as I have already stated, was 110·9. The average cost of each occupied bed, therefore, throughout the year was some £40 15s. 0d. The average cost per patient was £5 5s. 0d. Both these average amounts are greater than in other years, when the aggregate number of patients was larger. In the first place, it must necessarily be proportionately cheaper to support a large than a small number of persons in a public institution like this; in the second, the increase of the average duration of stay of patients in hospital, to which I have already alluded, must have the effect of increasing the average cost per head.

Mr. George Cole, M.R.C.S., L.R.C.P., having purchased a practice in Nottingham, resigned the appointment of Resident

Medical Officer of the hospital in June, and was succeeded, at the beginning of July, by Mr. J. H. Murray, M.B., London, M.R.C.S., L.R.C.P. This latter gentleman after holding this appointment for rather more than 4 months, obtained a much better one at the City Hospital, Birmingham, and was in turn succeeded at Bagthorpe by Mr. Thomas O'Neill Roe, M.R.C.S., L.R.C.P., who undertook, in deference to your wishes, to remain for at least six months, and who still holds the appointment.

All these gentlemen had excellent credentials from the medical schools at which they were trained, and have performed their responsible duties at Bagthorpe Hospital in an eminently satisfactory manner.

Miss Nina Fox continued to hold the office of Matron up to the end of the year, though intimating her intention to resign in the spring of the current year, on account of her approaching marriage. You have frequently expressed your approval of the manner in which this lady has performed her duties.

I may here once more call your attention to the fact that you have at present no hospital which you are entitled to use for the isolation of small-pox cases. It certainly behoves you without delay to secure a site for the erection of such a hospital. I have already indicated two sites which I consider suitable for the purpose; both are in the neighbourhood of Bagthorpe Hospital.

Handbills, Leaflets, &c., (*Distributed from the Health Department.*)—Copies of these, having reference to (*a*) the feeding and care of infants, (*b*) the prevention of diarrhœa and cholera, (*c*) the prevention of tubercular consumption, (*d*) the care of scarlet fever patients discharged from Fever Hospitals, and (*e*) the provisions of the Shop Hours Acts, will be found in the Appendix of this report.

Disinfection.—The number of articles disinfected in the steam disinfecting apparatus at the two public stations (in the Eastcroft and at Bagthorpe Hospital, respectively) shews a marked reduction as compared with that of any other year since their establishment. This falling off is due entirely to the decline of scarlet fever prevalence.

The disinfection of bedding, clothing, and the like, is now much more commonly sought than formerly for such diseases as enteric fever and tuberculosis, but there has been no commensurate increase of these to compensate for the decline of scarlet fever.

A severe outbreak of measles has occurred during the year, and warning leaflets have been widely circulated, urging upon the public the desirability of using disinfection, among other precautions, to check the spread of the disease, and offering it gratuitously. But, as I have already stated, I fear the generality of the public will require a great deal of further persuasion to induce them to regard measles as a dangerous infectious disease.

Articles Disinfected at the Public Stations in Nottingham, 1884-96.

	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
Bedding ..	1767	2154	2411	4956	5250	5683	6020	5357	6735	8521	2943	10990	8822
Clothing ..	1025	944	1316	3674	4827	5513	7577	4741	10253	11266	20579	12652	9012
Furniture & Hangings	492	687	572	1091	799	757	585	401	439	726	1541	1277	2184
Miscells. Articles	1127	2378	2147	6273	7565	10118	11548	8586	13319	10573	10303	13272	8394
Total ..	4411	6163	6446	15994	18441	22071	25730	19085	30746	31086	35366	38191	28392

Mortuaries.—I have at length to report upon two mortuaries instead of one only; for the new mortuary, which, with the police and fire stations, free library and reading room, and public convenience, make up the block of public buildings on the Gregory Boulevard, at the junction of this thoroughfare with Radford Road, Hyson Green, was formally opened by the Mayor on December 22nd, 1896.

A strange fatality occurred in connection with the one admission made to this establishment between its completion and the end of the year. The stone mason's sawyer, who had been employed upon the buildings throughout the whole period of their construction, had practically put the finishing touches to his work on December 3rd. Upon the same day he fell dead, while entering the door of his house in Hyson Green, and was straightway brought back as the first lodger in that grim hostel he himself had helped to build.

I have again to record a large increase in the number of bodies housed at the Eastcroft Mortuary during the year. One hundred and fifty-four were brought in during 1896, as compared with 106 the year before, and an annual average of 48 since the opening in 1883. Ninety-six of those admitted during 1896 were of males, and 58 of females.

The following table shows the numbers of each admitted during each month of the year:—

EASTCROFT MORTUARY.

Bodies taken in during each month of 1896.

	Male Bodies.	Female Bodies.	Total.
January	12	6	18
February	6	9	15
March	9	5	14
April	7	4	11
May	10	3	13
June	10	2	12
July	5	2	7
August	3	3	6
September	8	5	13
October	7	7	14
November	9	3	12
December	10	9	19
	96	58	154

HYSON GREEN MORTUARY (opened Dec. 22nd, 1896).

	Male Bodies.	Female Bodies.	Total.
December	1	0	1

During the current year (1897) the admissions to the Eastcroft Mortuary bid fair greatly to out-number those of last year, and those at the Hyson Green establishment to demonstrate the pressing need that must formerly have existed for mortuary accommodation in that neighbourhood.

Cemeteries and Burial Grounds.—I must once more remind you that the local need for more burial space is an urgent one. More than 4,000 bodies have been buried in the town since I last reported to you upon the subject. Most of these bodies, moreover, have been interred in burial grounds already containing too many. Of all the grounds in this last category, St. Catherine's is probably the least fit for further use.

Application should, I think, be made to the Home Office, without delay, for an inspection of this cemetery with a view to its speedy closure. There would, I believe, be no serious opposition to the closure.

Common Lodging Houses.—There were at the close of 1895 fifty-six Common Lodging Houses on the Borough register, entered in the names of 40 separate persons. According to the register, these 56 houses contained bed accommodation for 1,101 persons. The actual number of beds in use, however, is only 881; 739 being single, and 142 double.

As I stated in my last annual report, the new railway works failed to bring any considerable access of business to the Common Lodging House Keepers of the town. The accommodation of the average common lodging house is certainly not sufficiently good for the regular navvies, and the casual labourers even appear to prefer the smaller public houses.

Although the town is rapidly increasing in size, the Common Lodging Houses shew no disposition to increase in number, or individually to develop. Still, they are certainly better kept than they were, and under the inspectorship of Mr. G. A. Read, whom you have appointed since the close of the year, I have hopes that a condition of decency may be slowly brought about in even the lowest of the Narrow Marsh Houses.

Although belonging strictly to the current year, I cannot pass over without mention the death of Inspector John Golding. This officer thoroughly understood the class of people he had to deal with in these houses, and, until incapacitated by the illness which ultimately proved fatal to him, he performed his duties in a highly efficient manner.

The following table gives the number of beds in the Corporation Lodging Houses, and the numbers of lodgers taken in during 1896 and other recent years.

Situation of lodging house.	No. of beds.	No. of Lodgers admitted in each of the years.							
		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Millstone Lane (Closed.)	18	3,696	3,803	3,786	4,276	3,769	—	—	—
Popham Street (men only)	38	5,172	5,810	6,442	7,708	7,273	7,813	7,492	7,331
Parliament St. (women only)	20	3,804	4,107	4 720	5,110	5,387	5,555	5,663	6,252
		12,672	13,720	14,948	17,094	16,429	13,368	13,155	13,583

I desire once more to draw attention to the pressing need there now is in Nottingham for a clean and cheap temporary home for respectable women who are not domestic servants. The Servants' Home accommodates the latter class, but there is no clean and decent lodging in the town for other women of good character.

Housing of the Working Classes Act, 1890. — Insanitary Dwellings, etc. — Sixteen houses have been certified by me as unfit for human habitation, under Sec. 30, Part II., of the 1890 Act, during the past year. Their situations were as follows :—

In	Poplar Square	3
„	Fleet Place, Narrow Marsh	2
„	Park Lane, Old Basford	2
„	St. Michael's Street	2
„	Bloom Square, Ilkeston Road	1
„	Forest Square, Hyson Green	4
„	Forest Street, Hyson Green	2

Unfortunately, however, it does not follow, because the Medical Officer of Health, the Borough Engineer, and the Health Committee are satisfied of the unfitness of a house for habitation, that the magistrates, when called upon to make a closing order, will take the same view. In the case of many houses recently condemned by us in Nottingham, the magistrates have held that they were fit for habitation, and should continue in use.

In addition to the houses certified under the Housing of the Working Classes Act as unfit for habitation, 65 others in various parts of the town which were dilapidated, dirty, or overcrowded, have been rendered fit for habitation at the instance of the District Inspectors. But the new railway has done on a large scale and promptly, what we can only effect piecemeal and with tedious slowness, unless, indeed, we are prepared to embark upon the condemnation of areas. The M., S. & L. line in its passage through the town, and the Great Northern in forming a junction with it, have swept away no less than 1300 houses (M., S. & L. 1200, Great Northern 100), most of which were old, cramped and dirty. The area of the new Central Station, especially, was occupied by a dense neighbourhood of very poor dwellings, of which the town is well rid. I made allusion to this subject last year, but have now been able to furnish almost the exact number of houses removed by the railways.

Factory & Workshop Acts, 1878-1891.—The inspection work carried out by Mr. Flint and Miss Hawksley, the inspectors of workshops in which males and females are respectively employed, is set out in tables under the appropriate headings at the end of this report. Lists of the work done, and of nuisances abated as a result of their inspection, will be found in the same place.

If further evidence were necessary to prove that the population and prosperity of the town are alike on the increase, it could be adduced from these tables, for the number of trades, the number of workshops in which they are carried on, and the number of workpeople engaged in them, all of which are given in these tables, have largely increased during the last few years. Perhaps the most notable increase is that among new trades recently introduced into the town.

I may once more remind you that Nottingham has not yet adopted Part III. of the Public Health Acts Amendment Act of 1890, a piece of adoptive legislation which strengthens the hands of sanitary authorities in many important particulars, and, among others, with regard to the provision of sanitary conveniences in factories. The right of dealing with such conveniences in factories practically rests with H.M. Inspector of Factories for the district, unless and until this portion of the Amendment Act is adopted by the local authority.

Section 3 of the Factory and Workshop Act of 1891 requires the Medical Officer of Health to notify H.M. Inspector of Factories of cases of the employment of children, young persons, or women in workshops, which may come to his knowledge. Ninety-one such cases have come to my knowledge during the past year, principally through the agency of Mr. Flint and Miss Hawksley, and all have been notified at once to Mr. H. M. Robinson, H.M. Inspector.

Shop Hours Acts.—The provisions of these Acts are still very difficult to enforce. Undoubtedly many young persons under 18 years of age (whose employment these Acts are intended to regulate) are employed in "Shops," "Markets," "Stalls," and "Warehouses," contrary to law, for a longer aggregate period than 74 hours each week, but it is extremely difficult to prove this without the assistance of the young persons against whom the offence is committed, and their assistance is hardly to be looked for, considering that they have engaged themselves voluntarily for the work, and that the continuation of their employment is often dependent upon their willingness to

ignore the legal provision for their protection. Still, cases of undoubted infringement of the Acts have been brought to your notice during the past year, and you have decided that, being "first offences," it was sufficient to reprimand the offenders, and warn them that a second offence would be more severely dealt with.

The official notice issued under the Shop Hours Acts, which every employer whose premises come within their jurisdiction is bound to exhibit in a conspicuous place, under a penalty of 40s., is printed in the appendix of this report.

Canal Boats Acts, 1877-84.—The present Inspector of Canal Boats, Mr. F. W. Franks, was not formally appointed until after the end of 1896. He was instructed, however, to inspect the boats plying on the local canals from time to time during the past year. He reports that he inspected 71 boats altogether, and had to complain of 8 breaches of the Acts and Regulations. Notices were served upon the owners in all cases, requiring alteration of the illegal conditions. The notices were complied with in all cases, and in no case was it necessary to take legal proceedings in order to secure compliance.

The following were the offences complained of:—

Offences.	Cases.
Dirty condition of Cabin	4
Obliteration of Marking	1
Excessive number of Persons	2
Incorrect numbering on Boat	1
	8

The 71 boats inspected carried 34 women, 21 children between 5 and 12 years of age, and 25 children under 5 years, but none of the boats carrying children belonged to Nottingham.

Abatement of Nuisances.—The routine work of the District Inspectors, a tabular statement of which is given on page 73, has undergone some reduction in amount during 1896, as compared with the previous year. A large part of this reduction

is due to a falling off in items of structural alteration and conversion of closets, doubtless brought about by the unwillingness of property owners to incur the expense of putting in w.c.'s in lieu of conservancy closets; for, by the resolution of the Town Council dated July 1, 1895, it is no longer allowable to erect pail closets except where w.c.'s cannot be put up. Owners of house property who judiciously maintain the closets attached to their houses in a good state of repair, are, under existing conditions, practically exempt from interference on the part of the inspector.

It is not my intention to suggest that a large scheme for the conversion of the conservancy system of excrement disposal to one of water carriage should be at once undertaken, but I wish to point out that you can hardly expect to make much headway in the work of conversion so long as the dry closet is not regarded as a nuisance in itself, apart from its state of repair or special environment.

I have already discussed the relation which I believe to exist between the local incidence of typhoid fever and the dry closets of the town. The evil influence these closets exert is, I believe, due as much to the absorbent character of the wooden pails, as to soil pollution and other accidental concomitants. I wish once more to suggest that the wooden pails should be replaced with steel drums. These have the advantage of being non-absorbent and cleanable—which the wooden pails are not—and, further, leaks can be readily detected and repaired in the steel pails, so long as they are repairable.

In a return which I obtained some little time since, giving various items of information in connection with conservancy closets in other large towns of this country, it was shown that Nottingham is the only considerable town which continues to use the wooden pail. It behoves a sanitary authority, of course, before all others, to set a good example in refraining as far as possible from creating a nuisance in connection with any work

they may be called upon to do, and in my opinion the substitution of steel for wooden pails would have the effect of reducing very greatly the nuisance which, in a certain degree, is inseparable from the pail system.

The nuisance arising from the ultimate disposal of offensive refuse in this town could be largely reduced by increasing the number of cells in the existing destructor. This increase indeed is now urgently required, and there can be no doubt that, in the very near future, the need for more furnace power for the burning of organic refuse will be much more pressing even than it is at present.

Diseases of Animals Act, 1894. Orders, Regulations, &c., of the Board of Agriculture.—These are still, for all practical purposes, administered by the Board of Agriculture, through their inspectors. The responsibility, therefore, of taking the initiative in any preventive action on a large scale, in connection with outbreaks of the contagious diseases of animals, no longer rests with the local authority, and, when any action is required of them, their duties (as under the Rabies Order) are clearly specified. Notification, however, of the occurrence of cases, or reputed cases, of any of the scheduled diseases in this class, must still be sent from the local authority to the Board's offices in London. Eighty-five reputed cases of swine fever have been thus reported, and 5 of rabies, but only 25 of the former and 3 of the latter proved to be actual cases.

The verified cases of swine fever had the following monthly distribution:—

January ..	.. 2	May ..	.. 4	September	.. 1
February ..	.. 3	June ..	.. 1	October ..	.. 0
March ..	.. 4	July ..	.. 0	November	.. 1
April ..	.. 8	August ..	.. 0	December	.. 1

Total—25.

The three verified cases of rabies (all in dogs) occurred in January and October, one in the first, and two in the second month. One human being only was bitten, and that by the last

dog affected in October. This person was the owner of the dog, a man of 48. Acting upon your instruction, I took him to the Pasteur Institute in Paris, where he attended for a period of three weeks, and underwent the Pasteur treatment. This man has remained perfectly well ever since.

Food Material Condemned.—The work of inspecting the meat supplies of the town has been carried out during the past year by Inspector Moore in a highly efficient manner. But, however zealous and capable the executive officers may be, the meat prepared in the town cannot possibly be properly inspected, so long as the killing of animals is carried out in private slaughter houses, scattered over all parts of the town.

The establishment of public abattoirs, in which all the animals furnishing butchers' meat which are slaughtered in the town must be slaughtered, and in which their entire carcases, with the internal organs complete, must undergo official inspection before any part can be sold as food, is the only means by which the interests of the Public in this respect can be reasonably safeguarded.

The quantities of the different kinds of meat seized during the year are shewn in the first list of the accompanying table. The total amount is more than four times greater than that of 1895.

An account of the legal proceedings arising out of meat seizures will be found under the heading of "Prosecutions."

The game, poultry, fish, vegetable, etc., sold in the town are under the supervision of Inspector Fisher. A large part of the material seized by this officer (particulars of which are given in the accompanying table) is taken at the railway goods depôts, before reaching either wholesale or retail dealers. The amount of game and poultry seized during 1896 was very much less than that in 1895, but nearly 1,000 stones more fish were confiscated than in the preceding year. The fruit and vegetables taken were less than usual.

1896.

MEAT.

	Stones.
Pork	414
Beef	335¾
Mutton	128½
Veal	18
Beasts' Liver..	3½
	899¾

GAME, POULTRY, &c.

Hazel Grouse	64
Rabbits	31½
Turkeys	5
Pheasants	4½
Ducks	2
	107

FISH.

	Stones.
Herrings	894
Cod	399½
Kippers	323
Skate	134
Mackerel	116
Finneys	112
Bloaters	90
Shrimps	87
Halibut	71
Hake	57
Cat Fish	55

FISH—continued.

	Stones.
Whiting	40
Haddocks	35
Sprats..	32
Ling	30
Reds	24
Gurnards	24
Spragg	22
Coal Fish	20
Plaice	10
Dabs	9
Prawns	8
Salmon	4
Conger Eel	1
	2597½

SHELL FISH.

	Stones.
Mussels	152
Crabs	42
Whelks	32
Oysters	20
Lobsters	4
	250

VEGETABLES.

	Stones.
Tomatoes	1

FRUIT.

	Stones.
Apples..	4

Particulars of legal proceedings successfully taken against the vendor of some unwholesome crabs will be found in the section headed "Prosecutions."

Sale of Food and Drugs Acts.—Nearly three times as many samples were taken during 1896 as in the preceding year. The falling off in the number taken in 1895 was due to the regrettable illness of Dr. E. B. Truman, the late Borough Analyst. Mr. S. R. Trotman, M.A., the present Analyst for the Borough, is now established at the Borough Laboratory,

University College, in a position to perform with the utmost promptitude any analytical work sent to him, and the return for the current year already shews that this branch of *Public Health* work is now being as well attended to in Nottingham as in any other large town of this country.

Particulars of the samples taken, with the result of the subsequent analysis, will be found in the accompanying table.

	No. of samples taken.	No. Pure.	No. deficient or adulterated.	
Milk	69	55	Deficient in Fat.	With added water.
			1. 20·0%	1. 15·0%
			1. 17·0%	1. 14·0%
			1. 15·0%	1. 12·0%
			1. 14·0%	3. 10·0%
				1. 6·0%
				1. 3·0%
				1. 2·0%
			13	
Lard	19	19		
Butter	12	12		
Laudanum	10	10		
Pepper	9	9		
Sweet Spirits of Nitre	9	2	Deficient in Nitrites.	With added water.
			1. 90·0%	1. 8·0%
			1. 65·0%	1. 7·0%
			1. 34·0%	1. 6·0%
			2. 30·0%	1. 5·0%
			1. 25·0%	
			1. 17·0%	
			1. 8·0%	
			12	
Mustard	8	5	With added flour	1. 20·0 to 25·0%
Whisky	3	3		1. 18·0%
Gin	3	3		1. 12·0%
	142	118		3

An account of proceedings taken will be found later, under the heading "Prosecutions."

Dairies and Cowsheds.—There were 917 dairymen and milksellers on our borough register at the close of 1896, seventeen fresh names having been added to the list during the year. Owing, however, to the difficulty of obtaining a complete return of those persons who have left the business, it is impossible to say how far this total represents the actual number of those still engaged in it.

The registered cow-keepers are still 160 in number, but the same remark applies to them that I have made about the dairymen, and even with greater force. The cow-keepers of the borough are rapidly diminishing in number—a fact upon which we may congratulate ourselves—but as the names of persons who have retired from the business are frequently left on the register, the latter cannot be accepted as a reliable record of the local trade. In order to set this matter right in both cases, I have lately arranged for the preparation of a complete return of dairymen and cow-keepers actually engaged in business in Nottingham at the present time.

Slaughter Houses.—Six applications were made during the year for licence to establish new slaughter-houses within the borough. Three were granted and three refused.

	Situation of proposed Slaughter House.	Result of Application.
1.	Beech Avenue	Granted.
2.	Main Street, Bulwell	Granted.
3.	Walnut Tree Lane	Granted.
4.	Bertram Street	Refused.
5.	Haydn Road	Refused.
6.	Kirke White Street	Refused.

The number of slaughter-houses now on the borough register is 154.

I have already referred to the subject of public abattoirs under "Food Material Condemned." I shall here, therefore, content myself by reminding you that new and more elaborate private slaughter-houses are continually coming into existence, and that every one of these entered on the register must render the task of establishing abattoirs in the town more difficult and more costly.

I must say a few words in this section on the subject of the slaughtering of horses and disposal of their carcases. This work is now done in a very unsatisfactory way in this town. I am disposed to recommend the introduction of Otte's plant and machinery at the Eastcroft, for the immediate and inoffensive reduction of the carcases of horses and other animals by the aid of super-heated steam.

Notices.—Two hundred and forty statutory, and 1008 ordinary notices have been issued during the year. The first are considerably less numerous than usual, but the last are far above the average of other recent years. The total of both differs but little from the average aggregate. Statutory notices for the most part are only issued in cases where there is likely to be difficulty in inducing the responsible persons to do the work required.

Prosecutions.—Proceedings have been instituted by my Department, in respect of offences against the Public Health and other Acts, under the circumstances and with the results detailed below:—

SALE OF FOOD AND DRUGS ACTS.

Offence.	Result.
Sale of Milk deficient in fat 20%	Fine of 10/-
" " " 14%	" 10/-
" containing 14% added water	" £2
" " 10% "	" £1

PUBLIC HEALTH AND OTHER ACTS.

Offence.	Result.
Deposit of unsound carcase for sale	1 month's imprisonment.
Exposure for sale of "unsound Meat"	Fine of £50
" " " "	" £5
" " " carcase	" £5
" " " crabs	" £2
Keeping an unlicensed slaughterhouse	" £4

Abatement of Nuisances.

Description of Work Done.	Inspector Copley.	Inspector Old.	Inspector Byrns.	Inspector Betts.	Total.
Houses repaired	6	2	11	17	36
Houses cleansed	5	..	6	5	16
Houses overcrowded	..	7	3	3	13
Bath wastes disconnected	2	11	17	21	51
" " trapped	..	..	..	..	..
Drains repaired and cleansed	114	114	198	221	647
Sink wastes disconnected	19	4	48	27	98
" " trapped	..	2	..	2	4
Drains trapped	86	21	30	75	212
Water closets repaired	23	9	47	77	156
Pail " "	91	57	108	152	408
Pail closets provided	..	..	..	..	..
Waste water closets provided	12	2	9	..	23
Ashpits abolished	18	3	44	55	120
Privies abolished	19	6	25	34	84
Water closets provided in lieu of privies..	10	6	17	31	64
Soft water cisterns cleansed	12	10	10	15	47
Courts and yards paved	50	50	54	72	226
Piggeries abolished	6	28	10	7	51
Stables, &c. drained	2	6	4	3	15
Urinals repaired, &c.	11	..	10	7	28
Manure pits repaired, &c.	1	1	5	3	10
Offensive accumulations removed.. ..	24	41	32	21	118
Miscellaneous	20	13	15	23	71
Totals	531	393	703	871	2498

(b) Workshops.

Inspector Flint. (Male).

Work done.

Workshops and bakehouses limewashed	363
Insanitary workshops and bakehouses closed	6
Drains removed from bakehouses	9
Workshops and bakehouses repaired	12
Overcrowding abated in workshops	5
Additional ventilation provided in workshops and bakehouses ..	5
Offensive refuse removed	18
	418

Inspector Hawksley. (Female).

Work done.

Workrooms limewashed	103
Workrooms painted	5
Additional ventilation provided in workrooms	3
Additional ventilation provided in W.C.'s and other offices	9
Heating apparatus provided	2
Overcrowding abated in workrooms	18
Additional exits provided	14
Wooden floors substituted for stone	1
Chappuis' Daylight Reflector provided	1
	156

Inspection of Workshops in which Males are employed.

Branch of Trade.	Number of Workshops.	Number of Employées.	Number of Visits.
Aerated Water Manufacturers ..	19	190	24
Bakers and Confectioners ..	252	490	1590
Bamboo Furniture Maker ..	1	4	1
Basket Makers and Wicker Workers	36	368	63
Baking Powder Maker	1	1	1
Beer Bottlers	4	89	6
Bicycle Makers	11	84	12
Blacksmiths	60	135	83
Box Makers	9	67	12
Boat Builder	1	2	1
Boot and Shoe Makers	62	160	98
Brewers	3	30	3
Brass Founders	2	7	2
Brass Workers	2	18	2
Brick Makers	4	150	4
Brush Makers	6	30	10
Cabinet Makers	28	290	43
Card Punchers	4	9	4
Carvers and Gilders	2	6	3
Chair Makers	3	10	4
Chemists (Manufacturing) ..	2	6	3
Cigar Box Maker	1	20	2
Clog Maker	1	6	1
Coachbuilders and Wheelwrights	33	190	50
Confectioners and Sugar Boilers	17	132	28
Coopers	6	34	8
Copper Smith	1	3	2
Corn and Seed Merchant ..	1	40	2
Currier	1	6	1
Cricket Outfitter	1	6	2
Dropper and Box Maker ..	1	4	1
Druggist, Wholesale	1	10	1
Engravers	3	5	3
Engineers and Machinists ..	4	25	4
Fellmonger	1	10	2
Fire-wood Merchants	8	46	9
Framesmith	1	10	2
Frame-work knitters	13	120	19
Furniture Painters & Polishers	5	27	8
General Smiths	16	75	24
Gut Cleaners	8	31	17
Hatter	1	1	1
Hosiery Manufacturers	14	205	14
Hosiery Trimmers	3	20	6

Trade.	Number of Workshops.	Number of Employées.	Number of Visits.
Ice Cream Makers	5	7	14
Iron Founders	5	48	6
Joiners and Builders	126	490	149
Lace Designers	7	42	9
Lace Manufacturers	5	205	5
Lath Renders	2	4	2
Leather Dressers	6	38	10
Lime Light Operator	1	5	2
Maltsters	5	20	9
Marine Store Keepers & Waste Merchants	16	89	32
Mattress Makers	3	21	4
Needle Makers	4	33	10
Optician	1	2	1
Packing Case Makers	4	26	7
Painters and Decorators	9	72	11
Paper Rulers	3	17	9
Perambucot Makers	7	51	9
Picture Frame Makers	2	6	3
Pipe Clay and Pipe Makers	3	15	5
Plated Measure Maker	1	2	4
Plumbers	30	130	45
Rope and Twine Makers	2	11	4
Saddlers	21	118	29
Sauce Manufacturers	2	4	3
Scale Makers	2	6	3
Screw Maker	1	1	1
Sculptors	7	25	10
Setter-up of Lace Machines	1	2	1
Silk Hosiery Makers	5	43	11
Sinker Makers	4	23	6
Size and Glue Makers	2	23	4
Soap Makers	4	35	5
Steel Bar Makers	1	4	1
Stonemasons	7	52	10
Surgical Hosiery Makers	4	25	7
Surgical Appliance Maker	1	3	3
Tailors	122	621	216
Tallow Chandlers	3	13	4
Ticket Writers	4	12	5
Tin Plate Workers	25	69	40
Undertakers	4	16	7
Upholsterers	6	29	10
Venetian Blind Makers	3	6	4
Watch Makers	2	5	3
Warpers	2	2	2
Whip Makers	4	23	8
Whitesmiths	10	27	10
	1147	5693	2929

Inspection of Workshops in which Females are employed.

Trade.	Number of Workshops.	Number of Employées.	Number of Visits.
Blind Makers	2	3	2
Box Makers	26	200	40
Book Folder	1	20	2
Boot and Shoe Maker	2	6	3
Confectioner	1	5	2
Corset Makers	2	2	3
Curtain Dressers	3	6	4
Cricket Outfitter	1	2	2
Cap and Cap-shape Makers	11	54	13
Cigar Box Maker	1	19	2
Cork Sock Manufacturer	1	8	2
Curtain Manufacturer	1	14	2
Dressmakers	210	770	470
Embroiderers	3	37	3
Furrier	1	1	1
Hosiery Manufacturers	27	680	61
Hair Net Manufacturers	2	8	3
Jam Maker	1	13	1
Lace Menders	24	342	28
Laundresses	19	88	30
Lace Clippers & Chenille Spotters	54	662	132
Lace Manufacturers	180	3009	481
Marine Store Keepers	9	53	13
Makers up of Hosiery	27	126	39
Milliners	44	145	71
Makers-up of Underclothing	1	2	1
Pneumatic Tyre Makers	2	5	4
Paper Bag Makers	2	8	4
Perambucot Makers	1	3	1
Pipe Maker	1	4	2
Shirt Makers	5	20	7
Sleeve Extenders	1	26	4
Surgical Appliance Makers	5	29	9
Sun Bonnet, Mob Cap, and Apron Manufacturers	7	118	14
Sugar Boilers	4	61	4
Sweet Exporters	2	8	2
Tailors	57	259	124
Toy Maker	1	7	2
Upholsterers	9	56	12
	751	6878	1600

Bakehouses in Nottingham, 1896.

Bakehouses in use	250
" underground	82
" partly underground	20
Underground Bakehouses approached from interior of premises only..	45
" " " from outside only	25
" " with entrance from both inside and outside	12

The largest Bakehouse is above ground, and contains a space of 18,000 cubic feet. This Bakehouse is 10 ft. 8 in. in height, and is efficiently ventilated at the highest point of the walls. This Bakehouse is undergoing further enlargement during the current year (1897).

The smallest Bakehouse contains a space of 450 cubic feet.

The greatest number of men working in any one Bakehouse is 17.

The minimum height of any Bakehouse from floor to ceiling is 6ft. 8in.

APPENDIX.

The following statistics are furnished by Mr. T. R. Swaine, the General Manager of the Sanitary Depots:—

COLLECTION AND DISPOSAL OF REFUSE.

Number of Pails Collected, 15 Years ending 31st December, 1896.

YEAR.	NOTTM.	BASFORD AND BULWELL.	RADFORD AND LENTON.	TOTAL.	WEEKLY AVERAGE.
1881	1,009,323	168,105	117,432	1,294,860	24,901
1882	1,162,665	301,833	184,107	1,648,605	31,703
1883	1,309,917	407,820	254,667	1,972,404	37,930
1884	1,431,399	480,443	329,057	2,240,899	43,094
1885	1,473,833	513,822	365,211	2,352,866	45,247
1886	1,505,784	541,086	375,270	2,422,140	46,579
1887	1,555,937	535,950	423,885	2,515,772	48,380
1888	1,514,633	532,730	417,186	2,464,549	47,395
1889	1,482,102	535,206	418,806	2,436,114	46,848
1890	1,485,880	547,659	425,586	2,495,125	47,290
1891	1,503,674	560,127	432,324	2,496,125	48,002
1892	1,523,965	580,061	446,687	2,550,713	49,052
1893	1,525,804	587,718	443,960	2,557,482	49,182
1894	1,559,608	605,349	445,606	2,610,563	50,203
1895	1,594,130	631,219	432,450	2,657,799	51,111
1896	1,598,814	636,951	441,126	2,676,891	51,478

Pails in use - - - - - - - -	40,225
Ashpits cleared (exclusive of Basford and Bulwell) -	3,678
Dry-Ash-Tubs in use - - - - - -	5,393
Dry-Ash-Covers in use - - - - - -	1,186

Number of Loads Collected.

	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
NOTTINGHAM.—Pail Closets	68,161	70,182	71,704	74.092	72,125	70,576	70,756	71,603	72,570	72,657	74,267	75,911	76,134
Night Ashpits ..	7,403	5,034	4,116	3,645	3,408	3,056	2,775	2,939	2,896	2,418	2,287	2,460	2,278
Dry Ashpits and Dry Ash Tubs	5,935	7,704	8,153	8,038	7,495	7,588	7,170	7,199	7,463	8,301	8,378	8,820	9,518
Slaughter House ..	885	887	858	906	867	884	907	975	973	969	975	975	1,037
Pot Cart	502	483	489	490	485	483	499	849	916	1,229	1,286	1,348	1,379
BASFORD AND BULWELL. Pail Closets	22 878	24,467	25,766	25,521	25,368	25,485	26,079	26,672	27,622	27,986	28,826	30,058	30,331
RADFORD & LENTON Pail Closets..	15,669	17,391	17,870	20,185	19,866	19,943	20,266	20,587	21,271	21,141	21,219	20,593	21,006
RADFORD & LENTON Night Ashpits	3,916	3,324	3,062	2,271	2,206	2,238	2,163	2,182	2,047	1,973	1,967	1,951	2,666
Totals	125,349	129,472	132,018	135,148	131,820	130,253	130,615	133,006	135,758	136,674	139,205	142,116	144,349
WEEKLY AVERAGES ..	2,410	2,489	2,538	2,599	2,535	2,504	2,511	2,557	2,610	2,629	2,677	2,733	2,775

Disposal of Refuse.

	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
Number of Wagons sent out ..	1,863	2,653	3,203	4,022	4,628	4,753	4,940	4,994	4,999	4,342	3,669	3,510	4,481	4,085	4,109	3,134
Average Weight of Night-soil per Truck ..	..	..	..	..	T. c. q. 8·1·2	T. c. 8·2	T. c. q. 7·19·2	T. c. q. 7·17·2	T. c. 7·16	T. c. 7·16	T. c. 8·0	T. c. q. 8·1·1	T. c. q. lbs. 7·17·3·20	T. c. q. lbs. 7·19 0·18	T. c. q. lbs. 7·17·1·17	T. c. q. lbs. 7·18·1.12
Number of Boats sent out ..	576	554	585	646	555	327	371	350	293	278	247	547	320	415	359	574
Average Weight of Night-soil per Boat	..	..	..	..	T. c. 35·10	T. c. 37·0	T. c. 35·10	T. c. q. 38·11 2	T. c. q. 37·10·3	T. c. q. 36·13·1	T. c. q. 35·0·2	T. c. q. 34·10·3	T. c. q.lbs. 32·10·3·21	T. c. q.lbs. 32·6 2·9	T. c. q. lbs. 32·9·3·23	T. c. q.lbs. 32·10 0·3

HANDBILLS & LEAFLETS.

Borough of Nottingham. The Feeding and Care of Infants.

1.—The natural and best food for a young infant is its mother's milk.

2.—The child should be suckled once every two hours during the day, and once every four hours during the night, until it is about three months old, and at gradually lengthening intervals after the lapse of this period.

3.—The child should, if possible, receive no other food than its mother's milk until it is at least 6 or 7 months old.

4.—During the suckling period the mother should take plenty of good, plain, nourishing food, but should avoid alcoholic stimulants and spices.

5.—The mother should wash her nipples each time after suckling, and if they become sore should apply some glycerine or lanoline to them, and, if necessary, use a nipple-shield carefully cleaned with soap and warm water after each time of suckling.

The following instructions may be advantageously followed, at the earlier ages in cases where the mother is unable to suckle her infant, and at the later ages in all cases :—

(*a*) During the first six weeks after birth the child should be fed every two hours throughout the day, reckoned between 4 a.m. and 10 p.m., and once again between these hours in the night. Its food should consist of one part of fresh, pure cow's milk, and two parts of water, mixed and boiled, and, after boiling, sweetened with a small teaspoonful of brown sugar to each pint (of the mixture). Barley water may sometimes with advantage be used instead of plain water, but lime water is better avoided. The mixture should be kept in a clean covered vessel, and in a clean cool place, between meals. The temperature of the food given to a young child should be 95 degrees Fahrenheit, *i.e.*, about the heat of the human hand. One-and-a-half ounce (three tablespoonfuls) to two ounces (four tablespoonfuls) should be given to a child each time it is fed.

Two bottles should always be used, each alternately; one being scalded and rinsed, and afterwards left to soak, while the other is in actual use. The bottles should have no tube or neck, but have a mouth large enough to admit the first finger, and this should be fitted with an indiarubber teat only. The teats should be washed inside and out, with soap and warm water, after each time of using.

(*b*) From six weeks to three months old, the child should be fed with a mixture of equal quantities of cow's milk and water, with sugar as above; but two teaspoonfuls of cream may now be advantageously added to each meal. The quantity given at each meal should be about four ounces (eight tablespoonfuls). The interval between meals should now be gradually, but continually lengthened.

(*c*) From three months to seven months old, the child should have a mixture of two parts of cow's milk to one of water. About four ounces (eight tablespoonfuls) should at first be given at each meal, but, the intervals between meals being still lengthened, a larger quantity than this will soon be required for each meal. The quantity of cream given with each meal may now be increased from 2 to 3 or 4 teaspoonfuls.

The following is a useful working rule for the feeding of a child, with such substitutes for mother's milk as mentioned above, during the period in which liquids should be exclusively used :—

Begin with about 16 oz. a day of 24 hours, as under (*a*). Increase this by the addition of 1 oz. to 2 oz. a week up to the end of the first month. After the first month add 4 oz. a month up to the end of the seventh month. At this period, unless the child is regularly to have some quantity of the farinaceous food mentioned in the next paragraph, its milk should amount to at least 40 oz. a day. At 9 months a milk-fed child should have three pints in the 24 hours.

(*d*) From 7 months to 12 months old, the child should be given five meals in a day of 24 hours. The number of meals will thus have been reduced by a little more than one-half (from 11 to 5) in the first seven months. Each meal should consist at the first of about 5 or 6 ounces (10 or 12 tablespoonfuls) of undiluted cow's milk, with cream as under (*c*); but three of the meals may also each contain about a teaspoonful or more of some whole-meal farinaceous food, well boiled and stirred up with the milk. All the meals in this period should be given between 6 or 7 a.m. and 9 or 10 p.m.

(*e*) From 12 months to 18 months old, the child should still be fed only during the day, and at about the same intervals, on five occasions, between early morning and night. The amount of milk should be about twice as great as given under (*d*), and porridge, bread and milk, bread and gravy, bread and butter, and a lightly boiled egg occasionally, may with advantage be given with, or in place of the milk as time goes on. It must not be forgotten, however, that pure fresh cow's milk, well boiled, is an excellent and sustaining food as well as a palatable drink for human beings at all ages.

The quantities of food given above are those generally suitable, but the capacity of children for food varies much, and signs of indigestion due to overfeeding should not be overlooked because a comparatively moderate amount of food is being taken.

It is unwise for a mother to undertake the medical treatment of her child, except, perhaps, to the extent of giving it a little opening medicine occasionally. She should never give it sleeping or quieting medicine except under medical advice.

A young child should be warmly but loosely clothed over the whole of its body and limbs, and as few pins as possible should be used in dressing it.

It should be remembered that a young child is exceedingly liable to suck or to swallow anything within its reach which admits of being so treated.

It should also be borne in mind that a young child has no dread of fire or hot things unless or until it is actually burnt.

PHILIP BOOBBYER, M.B.,

Medical Officer of Health, Nottingham.

Borough of Nottingham. Prevention of Diarrhœa and Cholera.

These diseases may in great measure be avoided by the exercise of common care. Cleanliness of person and surroundings, and a judicious diet, are the best possible safeguards against them. Their germs enter the system through contaminated air, water, and food; it is most important, therefore, to secure the utmost possible purity of these three vital agents.

All parts of a house should be freely ventilated both by day and night:—there is as a rule much less harm to be apprehended from too much than too little fresh air, whatever its temperature or degree of moisture. No decomposing refuse should be allowed to remain in the house or its neighbourhood; all vegetable refuse should be burnt in the kitchen fire. The floors of all rooms, passages, and stairways should be frequently washed with soap and water, and all private courts, alleys, and yards should be flushed with fresh water as often as possible. All dirty walls should be scraped and limewashed. All drains in the neighbourhood of the house should be flushed at short intervals, and all obstructions to the drainage and faults in the drains, which cannot be dealt with by the tenant, should be reported at once to the Health Department in the Guildhall. It is most important that all house drains should be completely disconnected from the sewers. All other offensive nuisances which are not receiving the necessary attention should also be at once reported.

The Public Water supply of the town is now happily above the suspicion of contamination, but no water even from this source should be allowed to stand before being used for drinking purposes, and all water from private wells, or other like sources, should invariably be boiled before use.

Only sound and fresh flesh of any kind should be used as food, and this should be well cooked. The same remark applies to cooking vegetables of every kind. Unripe or over-ripe fruit should be rigorously avoided. Infants under nine months of age should receive nothing but milk, or milk and water, well boiled, when the milk is from any other source than the mother's breast. All food utensils, and especially milk vessels and babies' feeding bottles, should be well washed and soaked before use, in clean, and, if possible, boiling water.

A qualified medical man should be at once called in to every case of severe bowel disturbance. It is a wise precaution to disinfect with strong solution of carbolic acid the bowel discharges of all Diarrhœa patients, before placing them in the closet pail. All articles or material soiled with such discharges should be at once soaked and cleansed with the same solution.

After it has been ascertained that a patient is suffering from Asiatic Cholera, it is essential that the strictest isolation should be maintained at home or in hospital, and that all discharges from the patient's body should be disinfected and placed in a separate receptacle, which will be provided and scavenged by the Corporation; and, further, that all articles soiled with such discharges should be promptly disinfected, or destroyed by fire. Persons attending upon Cholera patients should not touch with their hands, their own or other persons' faces, or any food or food utensil

intended for their own, or other unaffected person's use. Any case suspected to be one of Cholera should be at once notified to me at the Health Department in the Guildhall.

Diarrhœa mixture my be obtained without payment, by poor persons, at the Police Stations of the Borough, or in the Health Department at the Guildhall.

PHILIP BOOBBYER,

Guildhall, Nottingham. *Medical Officer of Health.*

Borough of Nottingham. Prevention of Tubercular Consumption.

This disease is infectious, and liable to spread among persons living in contact with those suffering from it.

Where the lungs are principally affected, the spit of the patients contains most of the poison. This should be received into a vessel containing a strong solution of Carbolic Acid (1 of Carbolic to 20 of Water), and all washing materials and utensils soiled by the patients should be soaked in the same solution before being washed.

Consumptive patients should always sleep alone.

The rooms of consumptive patients should be aired every day, and disinfected and cleaned at least once a month.

In case of the death or removal of any consumptive patient, the Health Department will undertake the disinfection of the infected house and materials.

PHILIP BOOBBYER,

Guildhall, Nottingham. *Medical Officer of Health.*

Nottingham Corporation. Bagthorpe Hospital. Scarlet Fever.

To Parents, Guardians, and others.

Although every care is exercised to prevent the carriage of infection by persons discharged from Bagthorpe Hospital, it is impossible in some instances to insure against such an accident, for no one can say with certainty how long scarlet fever may lurk in the system. Parents and others are warned against allowing recently discharged patients to come into unnecessarily intimate contact with others. No person discharged from a Fever Hospital should be allowed to sleep in the same bed as another until at least a fortnight after discharge. A short holiday in the country, with plenty of fresh air, apart from others, is always desirable after convalescence from scarlet fever. But all persons recovering from scarlet fever should be warmly clothed, and otherwise protected against cold. Any recently discharged person who complains of sore throat, nose, or ears, or who has a breaking out on the skin, should be at once isolated, and placed under the care of a medical man. In any case the Corporation cannot accept responsibility or liability for the outbreak of infection subsequent to the discharge of patients from hospital.

PHILIP BOOBBYER, M.B.,

Medical Superintendent.

Official Notice under the Shop Hours Acts, 1892 to 1895, to amend the Law relating to the Employment of Young Persons in Shops.

NOTICE IS HEREBY GIVEN that, under the above Acts, a young person cannot be employed in or about a shop for a longer period than seventy-four hours, including meal times, in any one week.

A young person cannot, to the knowledge of his employer, be employed in a shop who has been previously on the same day employed in any factory or workshop, as defined by the Factory and Workshop Act, 1878, for the number of hours permitted by the said Acts, or for a longer period than will, together with the time during which he has been so previously employed, complete such number of hours.

In every shop in which a young person is employed a notice must be kept exhibited by the employer in a conspicuous place, referring to the provisions of these Acts, and stating the number of hours in the week during which young persons may lawfully be employed therein. If any employer fails to keep exhibited this notice in the manner required, he is liable to a fine not exceeding forty shillings.

Where any young person is employed in or about a shop contrary to the provisions of these Acts, the employer will be liable to a fine not exceeding one pound for each person so employed.

The council of any county or borough, and in the city of London the common council, may appoint such inspectors as they may think necessary for the execution of these Acts within the areas of their respective jurisdictions, and sections 68 and 70 of the Factory and Workshop Act, 1878, shall apply in the case of any such inspector as if he were appointed under that Act, and as if the expression "Workshop," as used in those sections, included any shop within the meaning of these Acts.

In these Acts, unless the context otherwise requires, "Shop" means retail and wholesale shops, markets, stalls, and warehouses, in which assistants are employed for hire, and includes licensed public houses and refreshment houses of any kind.

"Young person" means a person under the age of eighteen years.

Other words and expressions have the same meanings respectively as in the Factory and Workshop Act, 1878.

Nothing in these Acts applies to shops where the only persons employed are members of the same family dwelling in the building of which the shop forms part, or to which the shop is attached, or to members of the employer's family so dwelling, or to any person wholly employed as a domestic servant.

And Notice is hereby given that no young person can be employed in or about these premises for a longer period than seventy-four hours, including meal times, in any one week.

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