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CITY OF LEEDS.

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REPORT

ON THE

**Health and Sanitary Administration**

OF THE CITY

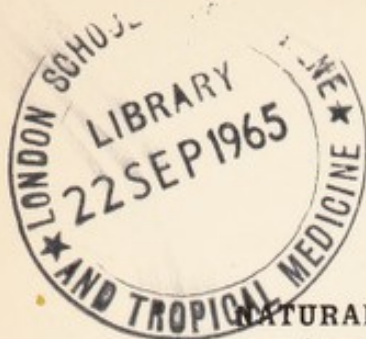
FOR THE YEAR 1927.

BY

J. JOHNSTONE JERVIS, M.D., D.P.H.,

*Medical Officer of Health.*





62496

## TABLE OF CONTENTS.

| NATURAL AND SOCIAL CONDITIONS. |    |    |    |    |    |    |    |    |    | PAGE |
|--------------------------------|----|----|----|----|----|----|----|----|----|------|
| AREA AND POPULATION            | .. | .. | .. | .. | .. | .. | .. | .. | .. | II   |
| RATEABLE VALUE                 | .. | .. | .. | .. | .. | .. | .. | .. | .. | II   |
| PRINCIPAL INDUSTRIES           | .. | .. | .. | .. | .. | .. | .. | .. | .. | I3   |
| METEOROLOGICAL CONDITIONS      | .. | .. | .. | .. | .. | .. | .. | .. | .. | I3   |
| VITAL STATISTICS—              |    |    |    |    |    |    |    |    |    |      |
| Marriages                      | .. | .. | .. | .. | .. | .. | .. | .. | .. | I3   |
| Births                         | .. | .. | .. | .. | .. | .. | .. | .. | .. | I4   |
| Birth-rate in Quarters         | .. | .. | .. | .. | .. | .. | .. | .. | .. | I4   |
| Excess of Births over Deaths   | .. | .. | .. | .. | .. | .. | .. | .. | .. | I    |
| Illegitimate Births            | .. | .. | .. | .. | .. | .. | .. | .. | .. | I9   |
| Deaths                         | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20   |
| Death-rate in Quarters         | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2I   |
| Death-rate in Wards            | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2I   |
| Causes of Death                | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2I   |
| Street Accidents               | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24   |
| Housing and Death              | .. | .. | .. | .. | .. | .. | .. | .. | .. | 28   |
| Deaths in Age Groups           | .. | .. | .. | .. | .. | .. | .. | .. | .. | 28   |
| Infantile Mortality            | .. | .. | .. | .. | .. | .. | .. | .. | .. | 30   |
| Comparison with Other Towns    | .. | .. | .. | .. | .. | .. | .. | .. | .. | 30   |
| CREMATION                      | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3I   |
| HOSPITAL ACCOMMODATION         | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3I   |
| SANITARY CIRCUMSTANCES.        |    |    |    |    |    |    |    |    |    |      |
| RIVERS AND STREAMS             | .. | .. | .. | .. | .. | .. | .. | .. | .. | 35   |
| WATER                          | .. | .. | .. | .. | .. | .. | .. | .. | .. | 35   |
| DRAINAGE AND SEWERAGE          | .. | .. | .. | .. | .. | .. | .. | .. | .. | 36   |
| SEWAGE DISPOSAL                | .. | .. | .. | .. | .. | .. | .. | .. | .. | 36   |
| CLOSET ACCOMMODATION           | .. | .. | .. | .. | .. | .. | .. | .. | .. | 37   |
| CLEANSING                      | .. | .. | .. | .. | .. | .. | .. | .. | .. | 38   |
| SANITARY ADMINISTRATION—       |    |    |    |    |    |    |    |    |    |      |
| The Rent Acts                  | .. | .. | .. | .. | .. | .. | .. | .. | .. | 42   |
| District Sanitary Inspection   | .. | .. | .. | .. | .. | .. | .. | .. | .. | 42   |
| Offensive Trades               | .. | .. | .. | .. | .. | .. | .. | .. | .. | 43   |
| Common Lodging Houses          | .. | .. | .. | .. | .. | .. | .. | .. | .. | 47   |
| University Lodgings            | .. | .. | .. | .. | .. | .. | .. | .. | .. | 47   |
| Residential Flats              | .. | .. | .. | .. | .. | .. | .. | .. | .. | 47   |
| Cellar Dwellings               | .. | .. | .. | .. | .. | .. | .. | .. | .. | 49   |
| Tents and Vans                 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 50   |
| Canal Boats                    | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5I   |
| Ice Cream Premises             | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5I   |
| Public Conveniences            | .. | .. | .. | .. | .. | .. | .. | .. | .. | 52   |
| Rat Repression                 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 53   |
| Factories and Workshops        | .. | .. | .. | .. | .. | .. | .. | .. | .. | 53   |
| Plans                          | .. | .. | .. | .. | .. | .. | .. | .. | .. | 54   |
| Work of Women Inspectors       | .. | .. | .. | .. | .. | .. | .. | .. | .. | 54   |
| Rag Flock                      | .. | .. | .. | .. | .. | .. | .. | .. | .. | 55   |
| SMOKE ABATEMENT                | .. | .. | .. | .. | .. | .. | .. | .. | .. | 59   |
| SUNSHINE                       | .. | .. | .. | .. | .. | .. | .. | .. | .. | 64   |
| SCHOOLS                        | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5I   |
| FOOD.                          |    |    |    |    |    |    |    |    |    |      |
| MILK                           | .. | .. | .. | .. | .. | .. | .. | .. | .. | 66   |
| COWS AND COWSHEDS              | .. | .. | .. | .. | .. | .. | .. | .. | .. | 68   |
| MILK AND DAIRIES ORDER, 1926   | .. | .. | .. | .. | .. | .. | .. | .. | .. | 69   |
| TUBERCULOSIS ORDER             | .. | .. | .. | .. | .. | .. | .. | .. | .. | 69   |
| DAIRY FARMS AND MILKSHOPS      | .. | .. | .. | .. | .. | .. | .. | .. | .. | 72   |
| MILK AND FOOD ANALYSIS         | .. | .. | .. | .. | .. | .. | .. | .. | .. | 73   |

**FOOD—Continued.**

|                                                           | PAGE |
|-----------------------------------------------------------|------|
| GUINEA PIG TESTS .. .. .                                  | 75   |
| SPECIAL BACTERIAL TESTS .. .. .                           | 76   |
| PUBLIC HEALTH PREVENTION OF TUBERCULOSIS REGULATIONS 1925 | 76   |
| DEPARTMENTAL LABORATORY .. .. .                           | 76   |
| MILK AND CREAM REGULATIONS .. .. .                        | 78   |
| FOOD AND DRUGS .. .. .                                    | 78   |
| CONDENSED AND DRIED MILK REGULATIONS .. .. .              | 78   |
| PUBLIC HEALTH (PRESERVATIVES, &C. IN FOOD) REGULATIONS    | 78   |
| MEAT .. .. .                                              | 82   |
| Tuberculous Carcasses .. .. .                             | 83   |
| Slaughterhouses .. .. .                                   | 83   |
| Humane Slaughtering .. .. .                               | 84   |
| Legal Proceedings.. .. .                                  | 84   |
| Public Health Meat Regulations, 1924 .. .. .              | 85   |
| Shellfish .. .. .                                         | 86   |

**INFECTIOUS AND OTHER DISEASES.**

|                                               |     |
|-----------------------------------------------|-----|
| SMALLPOX .. .. .                              | 87  |
| MEASLES .. .. .                               | 95  |
| WHOOPING COUGH .. .. .                        | 97  |
| DIPHTHERIA .. .. .                            | 97  |
| SCARLET FEVER.. .. .                          | 98  |
| ERYSIPELAS .. .. .                            | 100 |
| PUERPERAL FEVER AND PUERPERAL PYREXIA .. .. . | 101 |
| ENCEPHALITIS LETHARGICA .. .. .               | 102 |
| ACUTE ANTERIOR POLIO-MYELITIS .. .. .         | 103 |
| CEREBRO-SPINAL MENINGITIS .. .. .             | 104 |
| ENTERIC FEVER .. .. .                         | 104 |
| MALARIA, DYSENTRY AND TRENCH FEVER .. .. .    | 104 |
| OPHTHALMIA NEONATORUM .. .. .                 | 104 |
| DIARRHŒA AND ENTERITIS .. .. .                | 105 |
| INFLUENZA .. .. .                             | 108 |
| BRONCHITIS .. .. .                            | 109 |
| PNEUMONIA .. .. .                             | 110 |
| CANCER .. .. .                                | 110 |
| ANTHRAX .. .. .                               | 114 |
| INFECTIOUS DISEASES HOSPITAL .. .. .          | 115 |
| AMBULANCE WORK .. .. .                        | 118 |
| DISINFECTION .. .. .                          | 119 |
| VERMINOUS HOUSES AND PERSONS .. .. .          | 119 |
| BACTERIOLOGICAL WORK .. .. .                  | 120 |
| VENEREAL DISEASES .. .. .                     | 121 |
| Statistics .. .. .                            | 121 |
| Work of Treatment Centre .. .. .              | 121 |
| Institutions.. .. .                           | 123 |
| Supply of Salvarsan Substitutes .. .. .       | 123 |
| Pathological Work .. .. .                     | 124 |
| TUBERCULOSIS .. .. .                          | 125 |
| Statistics .. .. .                            | 125 |
| Factory-in-the-Field .. .. .                  | 129 |
| Dispensary and Sanatoria .. .. .              | 136 |
| Care Work .. .. .                             | 153 |

**MATERNITY AND CHILD WELFARE.**

|                                 |     |
|---------------------------------|-----|
| STATISTICS .. .. .              | 159 |
| Causes of Infant Death .. .. .  | 159 |
| Death-rate in Quarters .. .. .  | 163 |
| Deaths in Age Groups .. .. .    | 163 |
| Neo-natal Death-rate .. .. .    | 167 |
| Illegitimate Death-rate .. .. . | 167 |



# MATERNITY AND CHILD WELFARE—Continued.

PAGE

## SUPERVISION OF MIDWIVES—

|                                                       |     |
|-------------------------------------------------------|-----|
| Number of Midwives .. .. .                            | 168 |
| Inspection of Midwives .. .. .                        | 169 |
| Advising Medical Help .. .. .                         | 169 |
| Midwives' Emergencies .. .. .                         | 169 |
| Puerperal Fever Cases .. .. .                         | 170 |
| Pemphigus Neonatorum .. .. .                          | 170 |
| Ophthalmia Neonatorum.. .. .                          | 170 |
| Employment of Midwives .. .. .                        | 171 |
| Handywomen .. .. .                                    | 172 |
| STILL-BIRTHS .. .. .                                  | 173 |
| ANTE-NATAL WORK .. .. .                               | 174 |
| NATAL WORK .. .. .                                    | 176 |
| MATERNITY HOMES .. .. .                               | 178 |
| Illegitimate Births in Institutions .. .. .           | 178 |
| MATERNAL MORTALITY .. .. .                            | 179 |
| SPECIALIST SERVICE .. .. .                            | 180 |
| POST-NATAL WORK .. .. .                               | 180 |
| Home Visiting .. .. .                                 | 180 |
| Infant Welfare Centres (" Welcomes ") .. .. .         | 182 |
| Infant Consultations .. .. .                          | 183 |
| Leeds Babies' Welcome Association .. .. .             | 188 |
| Artificial Sunlight Clinic .. .. .                    | 189 |
| MILK DISTRIBUTION .. .. .                             | 190 |
| THE INFANTS' HOSPITAL, WYTHER .. .. .                 | 193 |
| DAY NURSERY .. .. .                                   | 196 |
| RESIDENTIAL NURSERY .. .. .                           | 196 |
| CONVALESCENT TREATMENT FOR MOTHERS AND BABIES .. .. . | 197 |

## HOUSING .. .. . 198

|                             |     |
|-----------------------------|-----|
| NUMBER OF HOUSES .. .. .    | 199 |
| NEW HOUSES .. .. .          | 199 |
| SMOKELESS HEATING .. .. .   | 199 |
| HOUSING SHORTAGE .. .. .    | 200 |
| OVERCROWDING .. .. .        | 201 |
| UNFIT HOUSES .. .. .        | 202 |
| STREET IMPROVEMENTS .. .. . | 203 |
| PUBLIC WASHHOUSE .. .. .    | 203 |
| UNHEALTHY AREAS .. .. .     | 203 |

## PROPAGANDA .. .. . 206

## STAFF CHANGES .. .. . 208

## CHARTS—

|                                                                 |                  |
|-----------------------------------------------------------------|------------------|
| BIRTH RATE, 1890-1927 .. .. .                                   | opposite page 14 |
| DEATH RATE, 1890-1927 .. .. .                                   | " " 20           |
| DEATHS FROM VEHICULAR TRAFFIC, 1911-1927 .. .. .                | " " 28           |
| DEATHS FROM CANCER OF DIFFERENT PARTS OF THE BODY, 1927 .. .. . | " " 110          |
| CANCER DEATH RATES IN WARDS, 1927 .. .. .                       | " " 112          |
| CANCER DEATH RATE, 1891-1927 .. .. .                            | " " 114          |
| TUBERCULOSIS DEATH RATE, 1890-1927 .. .. .                      | " " 132          |
| INFANT MORTALITY RATE, 1890-1927 .. .. .                        | " " 160          |

## APPENDICES—

|                                                           |               |
|-----------------------------------------------------------|---------------|
| ARTIFICIAL SUNLIGHT. ORTHOPEDIC AND DENTAL SCHEME .. .. . | 1             |
| SCHEME TO PREVENT DIPHTHERIA IN CHILDREN .. .. .          | 2             |
| MINISTRY OF HEALTH TABLES .. .. .                         | 3, 4, 5 and 6 |

## PUBLIC HEALTH COMMITTEE.

LORD MAYOR (George Ratcliffe).

*Chairman* : Councillor G. BRETT.

Councillor M. CLEGG.

" W. WITHEY.

" Dr. J. FRIEND.

" J. WORMALD.

" D. BEAVERS.

Councillor Dr. J. S. LOGAN.

" B. AINSWORTH.

" A. LEE.

" Dr. C. H. MOORHOUSE  
(*Deputy-Chairman*).

## SUB-COMMITTEES.

### MATERNITY AND CHILD WELFARE.

*Chairman* : Councillor M. CLEGG.

Councillor W. WITHEY.

" Dr. C. H. MOORHOUSE.

" Dr. J. FRIEND.

" G. BRETT.

" Dr. J. S. LOGAN.

Councillor B. AINSWORTH.

" J. WORMALD.

" A. LEE.

" D. BEAVERS.

### CO-OPTED MEMBERS.

Mrs. E. KITSON CLARK.

Mrs. L. OTTOLINI.

Mrs. E. THOMPSON.

Mrs. A. WOOD.

Mrs. AUSTYN BARRAN.

### TUBERCULOSIS.

*Chairman* : Councillor G. BRETT.

Councillor Dr. C. H. MOORHOUSE.

" W. WITHEY.

" Dr. J. FRIEND.

" J. WORMALD.

" Dr. J. S. LOGAN.

Councillor D. BEAVERS.

" A. LEE.

" M. CLEGG.

" B. AINSWORTH.

### SEACROFT HOSPITAL.

*Chairman* : Councillor Dr. C. H. MOORHOUSE.

Councillor D. BEAVERS.

" G. BRETT.

" M. CLEGG.

" W. WITHEY.

" Dr. J. FRIEND.

Councillor Dr. J. S. LOGAN.

" J. WORMALD.

" A. LEE.

" B. AINSWORTH.

### JOINT DAY NURSERIES.

*Representing Maternity and  
Child Welfare Committee.*

Councillor Dr. C. H. MOORHOUSE.

" M. CLEGG.

" D. BEAVERS.

*Representing Education  
Committee.*

Alderman D. B. FOSTER.

Councillor J. WORMALD.

Mrs. HOYLAND SMITH.

*Representing Leeds Day Nurseries Association :*

Mrs. W. H. CLARKE.

Mrs. G. HALBOT.

Mrs. A. E. IVES.



## PUBLIC HEALTH STAFF.

|                                                                                                              |                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Medical Officer of Health and Chief Tuberculosis Officer.                                                    | J. JOHNSTONE JERVIS, M.D., Ch.B., D.P.H.                                                                                                               |
| Assistant Medical Officer of Health ..                                                                       | ARTHUR MASSEY, M.D., Ch.B., D.P.H.                                                                                                                     |
| Assistant Medical Officer of Health for Maternity and Child Welfare and Medical Officer of Infants' Hospital | GLADYS E. AINSCOW, M.B., Ch.B., D.P.H.                                                                                                                 |
| Assistant Medical Officers for Maternity and Child Welfare .. ..                                             | SARAH N. S. BARKER, M.B., Ch.B., L.R.C.P., M.R.C.S.<br>CECILIA SHISKIN, B.A., M.B., Ch.B.<br>HARRY M. HOLT, M.B., Ch.B.<br>MARION KNOWLES, M.B., Ch.B. |
| Consulting Clinical Tuberculosis Officer                                                                     | H. de CARLE WOODCOCK, M.D., M.R.C.S., F.R.C.P. (Edin.), D.P.H.                                                                                         |
| Chief Clinical Tuberculosis Officer ..                                                                       | N. TATTERSALL, M.D., B.S., Ch.B.                                                                                                                       |
| Assistant Clinical Tuberculosis Officer                                                                      | L. W. HEARN, M.B., B.S.                                                                                                                                |
| Assistant Clinical Tuberculosis Officer                                                                      | ALEXANDRENA M. MACLENNAN, M.D., Ch.B.                                                                                                                  |
| Medical Superintendents—                                                                                     |                                                                                                                                                        |
| Infectious Disease Hospital (Seacroft).                                                                      | A. E. PEARSON, M.R.C.S., L.R.C.P.                                                                                                                      |
| Killingbeck Sanatorium .. ..                                                                                 | W. A. TODD, M.B., Ch.B.                                                                                                                                |
| Gateforth Sanatorium .. ..                                                                                   | H. E. REBURN, M.B., B.S., L.M.S.S.A.                                                                                                                   |
| Venereal Diseases Officer .. ..                                                                              | J. P. BIBBY, M.B., Ch.B., M.R.C.P.                                                                                                                     |
| Assistant Medical Officer for Venereal Disease .. ..                                                         | E. T. RUSTON, M.B., Ch.B.                                                                                                                              |
| Do. .. .. do. ..                                                                                             | DOROTHY PRIESTLEY, M.D., B.S.                                                                                                                          |
| City Bacteriologist .. ..                                                                                    | J. W. McLEOD, M.B., Ch.B.                                                                                                                              |
| Veterinary Assistant and Chief Meat Inspector .. ..                                                          | J. A. DIXON, M.R.C.V.S.                                                                                                                                |
| City Analyst .. ..                                                                                           | *B. A. BURRELL, F.I.C., F.C.S.                                                                                                                         |
| Chief Sanitary Inspector .. ..                                                                               | ARTHUR MASSEY, M.D., Ch.B., D.P.H.                                                                                                                     |
| Divisional Sanitary Inspectors and Executive Rats Officers                                                   | E. STANDISH.<br>G. F. MARSHALL.                                                                                                                        |
| Removal Officer .. ..                                                                                        | D. FERGUSON.                                                                                                                                           |
| Chief Health Visitor and Inspector of Midwives .. ..                                                         | MARY E. HUGHES.                                                                                                                                        |
| Principal Clerks—                                                                                            |                                                                                                                                                        |
| Finance .. ..                                                                                                | J. W. RIDSDALE.                                                                                                                                        |
| Statistics .. ..                                                                                             | J. P. MOIR.                                                                                                                                            |
| Sanitary .. ..                                                                                               | A. SPARKS.                                                                                                                                             |
| Infectious Diseases .. ..                                                                                    | H. O. PEAKE.                                                                                                                                           |

\*Died July 10th, 1927.

## STAFF.

|                                                                                                                                                                                                                                              |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Special Inspectors including Smoke, Lodging-houses, Food and Drugs,<br>Dairies, Meat, Housing and Workshops .. .. .                                                                                                                          | 14  |
| Laboratory Assistant .. .. .                                                                                                                                                                                                                 | 1   |
| Sanitary Inspectors .. .. .                                                                                                                                                                                                                  | 21  |
| Female Sanitary Inspectors .. .. .                                                                                                                                                                                                           | 2   |
| Health Visitors .. .. .                                                                                                                                                                                                                      | 21  |
| Chief Health Visitor and Inspector of Midwives .. .. .                                                                                                                                                                                       | 1   |
| Tuberculosis Nurses .. .. .                                                                                                                                                                                                                  | 12  |
| Clinic Nurses .. .. .                                                                                                                                                                                                                        | 15  |
| Dispensers .. .. .                                                                                                                                                                                                                           | 8   |
| Masseuses .. .. .                                                                                                                                                                                                                            | 2   |
| Clerical Staff .. .. .                                                                                                                                                                                                                       | 38  |
| Removal and Disinfecting Staff .. .. .                                                                                                                                                                                                       | 18  |
| City Hospital, Seacroft (2 Assistant Medical Officers, 1 Matron, 2<br>Assistant Matrons, 1 Sister Tutor, 75 Nurses, 57 Female Servants,<br>43 Male Servants, including Engineers, Porters, etc., 1 Dispenser<br>2 Clerks) .. .. .            | 184 |
| Killingbeck Sanatorium (1 Assistant Medical Officer, 1 Matron,<br>1 Assistant Matron, 1 Dispenser, 1 Clerk, 14 Porters, etc., 35<br>Nurses, 42 Maids, 2 Teachers, 1 Handicrafts Instructor .. .. .                                           | 99  |
| Gateforth Sanatorium (1 Matron, 2 Assistant Nurses, 1 Cook, 6 Maids,<br>1 Working Foreman, 1 Handyman and 1 Gardener .. .. .                                                                                                                 | 13  |
| The Hollies Children's Sanatorium (1 Matron, 1 Sister, 3 Assistant<br>Nurses, 2 Teachers, 1 Cook, 3 Maids, 1 Charwoman, 1 Handyman) .. .. .                                                                                                  | 13  |
| Infants' Hospital, Wyther (1 Matron, 1 Sister, 1 Masseuse, 3 Staff<br>Nurses, 14 Probationer Nurses, 1 Cook, 5 Maids, 2 Laundresses,<br>1 Handyman, 1 Gardener) .. .. .                                                                      | 30  |
| Red House Day Nursery (1 Matron, 1 Staff Nurse, 6 Probationer Nurses,<br>3 Maids) .. .. .                                                                                                                                                    | 11  |
| Cobden Place Day Nursery and Blenheim Hostel (1 Matron, 1 Home<br>Sister, 1 Staff Nurse, 9 Probationer Nurses, 2 Maids) .. .. .                                                                                                              | 14  |
| The Factory-in-the-Field (1 manager, 1 Clerk). Firewood Depart-<br>ment:—(1 Foreman, 15 Men, 4 Drivers, 6 Travellers). Brush<br>Department:—(1 Foreman, 4 Brushmakers, 1 Traveller). Printing<br>Department:—(1 Foreman, 2 Printers) .. .. . | 37  |



## CITY OF LEEDS.

---

*To the Chairman and Members of the Health Committee.  
Gentlemen,*

*I have pleasure in presenting my Annual Report for 1927.*

*In its pages will be found a record of the work of the Public Health Department and a general review of the health of the City for the year. Progress has been made, perhaps not so rapid as one would have wished, but, nevertheless, real and on right lines.*

*The death-rate has continued to fall and the infantile mortality rate reached a point lower than in any previous year. There were, however, fewer births, so that the nett gain to the population was less than it might otherwise have been.*

*With the exception of measles and small-pox, the prevalence of infectious sickness in the City was remarkably low. For the second consecutive year measles occurred in epidemic form though the type was generally mild, and the death-rate comparatively insignificant. Small-pox became threatening towards the end of the year and it looked for a time as though the City would be involved in a serious epidemic. Fortunately, the attack fizzled out and except for a few sporadic cases, the disease had practically disappeared by the end of the first quarter of the current year. That the City escaped so lightly is a matter for congratulation, especially in view of the experiences of some of the other towns in the North and Midlands.*

*There was another very welcome reduction both in the attack rate and the mortality rate from tuberculosis. This disease is slowly but surely relaxing its hold on the population and one may look forward with confidence to the time—not very far distant—when it will cease to be worthy of the title “the white scourge.” But ere that time arrives something must be done to deal with the slum problem which in this City is acute and is a serious bar to progress.*

*In the treatment of pulmonary tuberculosis a forward step has been taken by the acquisition from the Leeds Tuberculous Ex-Service Men's Society of the Factory-in-the-Field. This will afford the much needed facilities for offering men and women disabled by the disease remunerative employment of a suitable kind under the best conditions, thus saving them from, on the one hand idleness, and on the other ill-adapted and harmful occupations. It is an experiment of rather*



*a unique order, but one which I think is on right lines and worthy of public support. Its success or failure must not be judged alone by the profit or loss made, but rather by the effects which wholesome, regulated employment have on the minds and bodies of crippled men and women.*

*There is great need for increased accommodation for children with tuberculosis of the surgical type. Provision is being made for this in the plans for the new hospital at Elmet Hall now in process of preparation. When these plans are complete, I hope the Council will approve them and give the necessary sanction for the building to commence.*

*Smoke is one of the great prevailing environmental evils which influences the public health very closely and with which the City must deal in the near future. It is illogical to insist on pure food and pure water whilst tolerating impure air. A supply of clean air is just as necessary as a supply of pure water. It is strange that the average citizen should find such a self-evident truth so hard to comprehend. But until he does comprehend it and makes up his mind to alter existing conditions inside and outside the home, little progress can be made. The use of raw coal as a source of heat is wasteful and dirty and must be abandoned, its place being taken by smokeless fuel, supplies of which should be made available at reasonable rates to the community and distributed just as coal now is.*

*It is always a pleasure to acknowledge faithful service, and I desire once again to place on record my great appreciation of the loyal support which I have received from my staff in carrying on the multifarious duties of the Public Health Department during the year.*

*Special thanks are due to those who have collaborated with me in writing this report and whose names appear in connection with the sections for which they have been responsible.*

*To you, Sir, and the other members of the Health Committee, I extend my sincere thanks for your and their unvarying kindness and courtesy.*

*I am, Gentlemen,*

*Your obedient Servant,*

*J. JOHNSTONE JERVIS.*

*Public Health Department,  
Leeds,*

*August, 1928.*



# SUMMARY, 1927.

---

LATITUDE 53°48' North.      LONGITUDE 1°32' West.

AVERAGE HEIGHT ABOVE SEA LEVEL 250 feet.

|                                           |     |     |    |    |    |    |                             |
|-------------------------------------------|-----|-----|----|----|----|----|-----------------------------|
| AREA OF CITY                              | ..  | ..  | .. | .. | .. | .. | 30,136 $\frac{3}{4}$ Acres. |
| POPULATION (Registrar-General's estimate) | ..  | ..  | .. | .. | .. | .. | 477,600                     |
| ESTIMATED NUMBER OF HOUSES                | ..  | ..  | .. | .. | .. | .. | 121,620                     |
| RATEABLE VALUE                            | ... | ... | .. | .. | .. | .. | £3,148,874                  |
| SUM REPRESENTED BY A PENNY RATE           | ..  | ..  | .. | .. | .. | .. | £12,008                     |

|                                                                                      |    |    |    |    |    |       |                            |
|--------------------------------------------------------------------------------------|----|----|----|----|----|-------|----------------------------|
|                                                                                      |    |    |    |    |    |       | Average.<br>1927. 1917-26. |
| BIRTH RATE (births per 1,000 living)                                                 | .. | .. | .. | .. | .. | 16·31 | 18·97                      |
| DEATH RATE (deaths per 1,000 living)                                                 | .. | .. | .. | .. | .. | 12·98 | 14·69                      |
| NATURAL INCREASE OF POPULATION<br>(Excess of births over deaths in the year)         | .. | .. | .. | .. | .. | 1,592 | 1,988                      |
| INFANT MORTALITY RATE<br>(Deaths under 1 year per 1,000 births)                      | .. | .. | .. | .. | .. | 81    | 107                        |
| DEATH RATE from Pneumonia and Bronchitis                                             | .. | .. | .. | .. | .. | 1·73  | 2·55                       |
| "            "            Cancer                                                     | .. | .. | .. | .. | .. | 1·36  | 1·25                       |
| "            "            Diarrhœa and Enteritis (under 2 years)<br>per 1,000 births | .. | .. | .. | .. | .. | 11·30 | 16·04                      |

|                             |    |    |    |        |                |         |                |
|-----------------------------|----|----|----|--------|----------------|---------|----------------|
|                             |    |    |    | Cases. | Case-<br>rate. | Deaths. | Death<br>rate. |
| SCARLET FEVER               | .. | .. | .. | 773    | 1·62           | 6       | 0·01           |
| DIPHTHERIA                  | .. | .. | .. | 439    | 0·92           | 28      | 0·06           |
| TYPHOID FEVER               | .. | .. | .. | 14     | 0·03           | 2       | 0·00           |
| MEASLES                     | .. | .. | .. | 8,664  | 18·14          | 117     | 0·24           |
| PULMONARY TUBERCULOSIS      | .. | .. | .. | 811    | 1·70           | 457     | 0·96           |
| OTHER FORMS OF TUBERCULOSIS | .. | .. | .. | 155    | 0·32           | 101     | 0·21           |

# City of Leeds.

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## Natural and Social Conditions.

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**Area.**—The area of the City remains the same as in 1926, namely, 30,136 $\frac{3}{4}$  acres.

**Population.**—The population at the 1921 census was 458,232, adjusted later to 465,500. At the middle of the year 1927 the population as estimated by the Registrar General was 477,600, which is an advance of 4,200 on the population for 1926 and of 12,100 on the adjusted census population.

The number of occupied houses at the 1921 census was 108,534 and unoccupied 2,737. The total number of families occupying these houses was 110,182. On June 30th, 1927, the number of occupied houses was estimated at 118,499 and unoccupied as 1,740. On a basis of 4.2 occupants per occupied house, the average at the 1921 census, and assuming that the average has not altered the population at the middle of the year would work out at 497,696. The number of separate families cannot be estimated, but I think it fair to assume that there has been a considerable increase on the census figure.

The distribution of the population throughout the 17 wards into which the City is divided, as far as it can be ascertained, is given in the table on page 12. Owing to the opening out of the various new housing estates it is extremely difficult to estimate the correct ward populations.

**Rateable Value.**—The rateable value of the City was £3,148,874 and the sum represented by a penny rate £12,008. In 1926 the corresponding figures were £3,091,388 and £12,053. It will be noticed that the product of a penny rate is slightly less than in the preceding year, the explanation being that it was calculated in accordance with the Rating and Valuation Act, 1925, which requires the cost of collection to be deducted from the proceeds of the rate levied.



The following table shows the constitution of the population in age groups at the 1921 census :—

1921 CENSUS POPULATIONS IN AGE GROUPS.

| Sex.       | Under<br>1 | 1 and<br>under<br>5 | 5 and<br>under<br>15 | 15 and<br>under<br>25 | 25 and<br>under<br>45 | 45 and<br>under<br>65 | 65 and<br>upwards | Total.  |
|------------|------------|---------------------|----------------------|-----------------------|-----------------------|-----------------------|-------------------|---------|
| Males ..   | 4,645      | 13,419              | 41,533               | 38,348                | 63,219                | 44,198                | 10,125            | 215,487 |
| Females .. | 4,511      | 13,217              | 41,354               | 45,677                | 76,492                | 47,830                | 13,664            | 242,745 |
| Total ..   | 9,156      | 26,636              | 82,887               | 84,025                | 139,711               | 92,028                | 23,789            | 458,232 |

POPULATION IN WARDS.

| WARD.            | Census,<br>April 2nd,<br>1911. | Census,<br>June 19th,<br>1921. | Adjusted<br>population,<br>1921. | Estimated<br>population<br>middle of 1927. |
|------------------|--------------------------------|--------------------------------|----------------------------------|--------------------------------------------|
| Central .. ..    | 14,503                         | 12,528                         | 12,727                           | 12,746                                     |
| North .. ..      | 41,968                         | 42,423                         | 43,096                           | 43,914                                     |
| North-East ..    | 36,239                         | 36,011                         | 36,582                           | 36,986                                     |
| New Ward* ..     | ..                             | 7,814                          | 7,938                            | 9,711                                      |
| East .. ..       | 34,701                         | 35,272                         | 35,832                           | 36,429                                     |
| South .. ..      | 12,562                         | 12,817                         | 13,020                           | 13,064                                     |
| East Hunslet† .. | 33,562                         | 35,264                         | 35,823                           | 38,287                                     |
| West Hunslet ..  | 35,766                         | 36,129                         | 36,702                           | 36,763                                     |
| Holbeck .. ..    | 29,679                         | 29,441                         | 29,908                           | 29,951                                     |
| Mill Hill .. ..  | 5,856                          | 5,286                          | 5,370                            | 5,320                                      |
| West .. ..       | 20,553                         | 22,029                         | 22,378                           | 22,271                                     |
| North-West ..    | 30,570                         | 31,531                         | 32,031                           | 31,983                                     |
| Brunswick ..     | 23,219                         | 23,930                         | 24,310                           | 24,215                                     |
| New Wortley ..   | 16,714                         | 17,773                         | 18,055                           | 18,166                                     |
| Armley & Wortley | 37,419                         | 36,762                         | 37,345                           | 37,834                                     |
| Bramley .. ..    | 23,937                         | 23,481                         | 23,853                           | 24,900                                     |
| Headingley‡ ..   | 48,302                         | 49,741                         | 50,530                           | 55,060                                     |
| City .. ..       | 445,550                        | 458,232                        | 465,500                          | 477,600                                    |

\*Roundhay, Seacroft, Shadwell, and Crossgates added to Leeds, November, 1912. (1911 Census, 7,398).

†Including Middleton added to Leeds, April 1st, 1920. (1911 Census, 1,207).

‡Including portion of Adel added to Leeds, April 1st, 1926. (1921 Census, 987).



**Principal Industries.**—The principal industries represented in the City continued to be as in previous years, namely, engineering, iron and steel, woollen, ready-made clothing, leather, boot and shoe, printing, and dyeing. No new industry of any importance has been added during the year. In addition Leeds is also an important commercial and railway centre. It possesses a modern university and medical school, a large well-equipped technical school, and is a well-known training centre for teachers.

**Meteorological Conditions.**—The year will be remembered for its lack of sunshine, abnormal rainfall, low temperature and high winds. No less than 35·09 inches of rain were recorded in the centre of the City, the highest previous record being 34·57 inches in 1912, whilst the hours of sunshine fell to 1,177 as compared with 1,221 for the previous year. The heaviest rainfall was in August which was unfortunate as that is the month when the majority of families, where there are children at school, take their holidays.

The meteorological data for the twelve months of the year are set out in the table on page 106.

### VITAL STATISTICS.

**Marriages.**—The number of marriages which took place during the year was 4,028. This figure includes marriages in the Registration District of Hunslet, part only of which is included in the City. The marriage rate for 1927 was 16·7 as compared with 14·8 for the previous year, an increase of 12·8 per cent. For the last three years the number of marriages has been steadily increasing, which sounds somewhat strange in view of the continued fall in the birth-rate. Statisticians used to speak of a definite relationship between the marriage rate and the birth-rate, but that certainly does not obtain now. The explanation of course is the increasing number of childless marriages and the number with only one child. The marriage rate has also been accepted as an index of commercial and industrial prosperity. Judged by that standard Leeds has left her lean days behind. The marriage rate for England and Wales was 15·7 as compared with 14·3 for the previous year, an increase of 9·8 per cent. or rather less than the increase recorded for the City.



**Births.**—The number of births registered in the City during the year was 8,075, comprising 4,092 males and 3,983 females. Of these, 190 males and 183 females did not belong to the City and were transferred out, whilst 47 males and 41 females belonging to Leeds, though born outside, were transferred in, making a nett total of 7,790 comprising 3,949 males and 3,841 females. Compared with the figures for the previous year this is a decrease of 207 males and 68 females or a total decrease of 275. The relatively greater fall in the number of males born as compared with females is significant.

The birth-rate was 16.3 as compared with 17.0 for the previous year, and an average of 18.2 for the previous five years. This is the lowest birth-rate ever recorded in the City's history, and one of the lowest amongst the large towns of the Country. Compared with the 11 other large towns in England and Wales with populations over 250,000, it is the lowest but three, namely, London, Sheffield and Bradford, *vide* page 130.

The table on page 16 shows the distribution of the births in the various wards. In seven of the wards, namely, South, East, East Hunslet, New Wortley, New, West and North East, the birth-rate was higher than for the whole City, whilst in the remainder it was lower. The wards with the highest rates were South (22.3) and East (21.8). Curiously enough the position of these wards in the scale is much the same as for 1926, the only difference being that South has advanced from fourth to the top of the scale, whilst East has dropped to second place. If the figures are analysed it will be noticed that the industrial wards of the City account for no less than 47.5 per cent. of the total births.

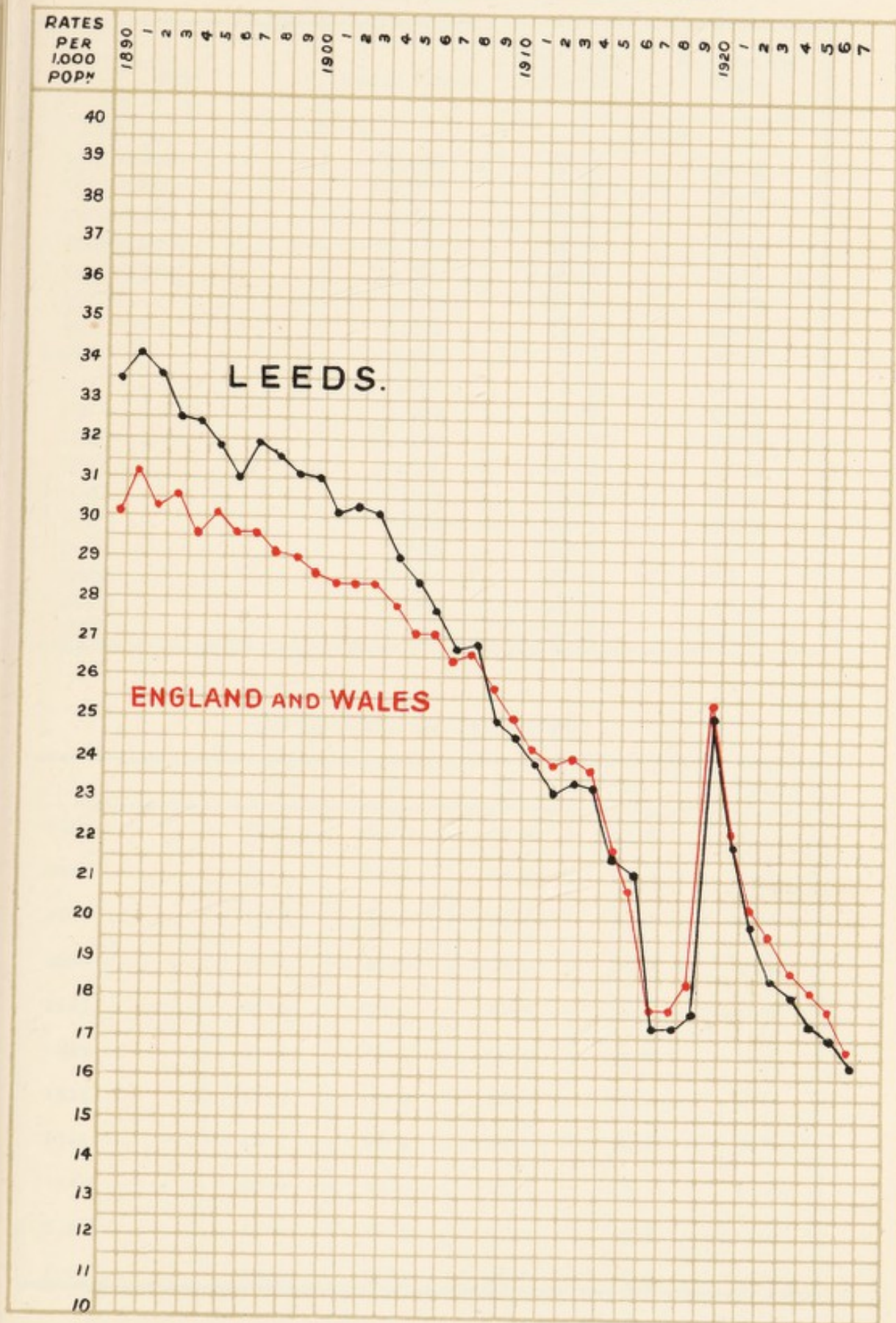
Details respecting the notification and visitation of births are given on page 182.

*Birth-Rate in Quarters.*—The highest rate was in the second quarter, 17.3 and the lowest in the fourth quarter, 15.4, whilst in the first and third quarters it was 17.0 and 15.6 respectively.

*Excess of Births over Deaths.*—The excess of births over deaths or what is generally spoken of as the "natural increase of population" was 1,592 as compared with 2,003 for last year and an average of 1,988 for the previous ten years. This is the lowest natural increment of population recorded since 1919 when there was a phenomenally high death-rate owing to the prevalence of influenza.



# BIRTH RATE, 1890 - 1927.







## BIRTH RATE.

| Year.           | No. of births. | Birth rate,<br>LEEDS. | England and<br>Wales. |
|-----------------|----------------|-----------------------|-----------------------|
| 1890-1894 .. .. | 62,270         | 33·2                  | 30·5                  |
| 1895-1899 .. .. | 63,873         | 31·5                  | 29·6                  |
| 1900-1904 .. .. | 64,791         | 30·1                  | 28·4                  |
| 1905-1909 .. .. | 59,117         | 26·9                  | 26·7                  |
| 1910-1914 .. .. | 53,267         | 23·6                  | 24·2                  |
| 1915 .. ..      | 9,877          | 21·5                  | 21·9                  |
| 1916 .. ..      | 9,432          | 21·1                  | 20·9                  |
| 1917 .. ..      | 7,566          | 17·3                  | 17·8                  |
| 1918 .. ..      | 7,392          | 17·3                  | 17·7                  |
| 1919 .. ..      | 7,564          | 17·6                  | 18·5                  |
| 1920 .. ..      | 11,229         | 25·0                  | 25·5                  |
| 1921 .. ..      | 10,144         | 21·8                  | 22·4                  |
| 1922 .. ..      | 9,253          | 19·8                  | 20·4                  |
| 1923 .. ..      | 8,684          | 18·5                  | 19·7                  |
| 1924 .. ..      | 8,558          | 18·1                  | 18·8                  |
| 1925 .. ..      | 8,180          | 17·3                  | 18·3                  |
| 1926 .. ..      | 8,065          | 17·0                  | 17·8                  |
| 1927 .. ..      | 7,790          | 16·3                  | 16·7                  |

## BIRTH RATE IN QUARTERS.

|            | I.   | II.  | III. | IV.  | Year. |
|------------|------|------|------|------|-------|
| 1917 .. .. | 19·2 | 18·0 | 16·2 | 15·7 | 17·3  |
| 1918 .. .. | 17·4 | 16·8 | 17·8 | 17·1 | 17·3  |
| 1919 .. .. | 13·6 | 14·6 | 17·5 | 24·4 | 17·6  |
| 1920 .. .. | 30·1 | 25·6 | 23·7 | 20·8 | 25·0  |
| 1921 .. .. | 21·9 | 22·4 | 22·2 | 20·7 | 21·8  |
| 1922 .. .. | 21·2 | 20·7 | 19·5 | 17·9 | 19·8  |
| 1923 .. .. | 18·9 | 19·5 | 18·1 | 17·4 | 18·5  |
| 1924 .. .. | 18·7 | 18·4 | 18·7 | 16·8 | 18·1  |
| 1925 .. .. | 17·0 | 19·0 | 17·5 | 15·7 | 17·3  |
| 1926 .. .. | 17·0 | 18·5 | 17·2 | 15·5 | 17·0  |
| 1927 .. .. | 17·0 | 17·3 | 15·6 | 15·4 | 16·3  |



## BIRTHS AND BIRTH RATE IN WARDS.

| MUNICIPAL WARD.    | Estimated<br>Population<br>middle of<br>1927. | Nett<br>births. | Birth-<br>rate. | Illegiti-<br>mate<br>births. | Percentage<br>of<br>illegitimate<br>births to<br>total births. |
|--------------------|-----------------------------------------------|-----------------|-----------------|------------------------------|----------------------------------------------------------------|
| Central .. ..      | 12,746                                        | 207             | 16·24           | 7                            | 3·4                                                            |
| North .. ..        | 43,914                                        | 636             | 14·48           | 24                           | 3·8                                                            |
| North-East .. ..   | 36,986                                        | 629             | 17·01           | 31                           | 4·9                                                            |
| New Ward*          | 9,711                                         | 181             | 18·64           | 2                            | 1·1                                                            |
| East .. ..         | 36,429                                        | 794             | 21·80           | 32                           | 4·0                                                            |
| South .. ..        | 13,064                                        | 291             | 22·27           | 21                           | 7·2                                                            |
| East Hunslet†      | 38,287                                        | 745             | 19·46           | 32                           | 4·3                                                            |
| West Hunslet       | 36,763                                        | 522             | 14·20           | 21                           | 4·0                                                            |
| Holbeck .. ..      | 29,951                                        | 488             | 16·29           | 17                           | 3·5                                                            |
| Mill Hill .. ..    | 5,320                                         | 77              | 14·47           | 7                            | 9·1                                                            |
| West .. ..         | 22,271                                        | 410             | 18·41           | 32                           | 7·8                                                            |
| North-West .. ..   | 31,983                                        | 475             | 14·85           | 35                           | 7·4                                                            |
| Brunswick .. ..    | 24,215                                        | 361             | 14·91           | 38                           | 10·5                                                           |
| New Wortley .. ..  | 18,166                                        | 346             | 19·05           | 20                           | 5·8                                                            |
| Armley and Wortley | 37,834                                        | 543             | 14·35           | 22                           | 4·1                                                            |
| Bramley .. ..      | 24,900                                        | 355             | 14·26           | 6                            | 1·7                                                            |
| Headingley† .. ..  | 55,060                                        | 730             | 13·26           | 24                           | 3·3                                                            |
| City .. ..         | 477,600                                       | 7,790           | 16·31           | 371                          | 4·8                                                            |

\*Roundhay, Seacroft, Shadwell, and Crossgates. †Including Middleton.

‡Including portion of Adel added to Leeds, April 1st, 1926.

In my Annual Report for 1926 I called attention to the fact that 71.4 per cent. of the total births investigated were into families of two children and under, whilst only 6.2 per cent. were into families of more than six children. Last year, the distribution was even more remarkable, 72.0 per cent. being into families of two and under two children and 5.3 per cent. only into families of more than six children. These figures are significant as they seem to provide a complete answer to the statement one frequently hears that the majority of the births are into large families and that whilst the families of the well-to-do are shrinking those of the poor continue unchanged.

BIRTHS OCCURRING IN ORDER OF SIZE OF FAMILY.

|                           | 1926.   |             | 1927.   |             |
|---------------------------|---------|-------------|---------|-------------|
|                           | Births. | Percentage. | Births. | Percentage. |
| No children..             | 2,645   | 33.03       | 2,633   | 34.04       |
| 1 child ..                | 1,924   | 24.03       | 1,787   | 23.11       |
| 2 children..              | 1,152   | 14.39       | 1,148   | 14.84       |
| 3 " ..                    | 771     | 9.63        | 759     | 9.81        |
| 4 " ..                    | 498     | 6.22        | 482     | 6.23        |
| 5 " ..                    | 325     | 4.06        | 314     | 4.06        |
| 6 " ..                    | 196     | 2.45        | 198     | 2.56        |
| 7 " ..                    | 166     | 2.07        | 144     | 1.86        |
| 8 " ..                    | 122     | 1.52        | 88      | 1.14        |
| 9 " ..                    | 86      | 1.07        | 68      | 0.88        |
| 10 " ..                   | 54      | 0.67        | 47      | 0.61        |
| 11 " ..                   | 35      | 0.44        | 29      | 0.37        |
| 12 " ..                   | 20      | 0.25        | 20      | 0.26        |
| 13 " ..                   | 3       | 0.04        | 6       | 0.08        |
| 14 " ..                   | 4       | 0.05        | 4       | 0.05        |
| 15 " ..                   | 4       | 0.05        | 4       | 0.05        |
| 16 " ..                   | 3       | 0.04        | 1       | 0.01        |
| 17 " ..                   | ..      | ..          | 2       | 0.03        |
| Total births investigated | 8,008   | 100         | 7,734   | 100         |



Taking the working-class wards of the City—East, South, Holbeck and New Wortley—one finds that the percentage born into families of more than six children has fallen considerably as compared with the previous year. Whereas, in the East Ward in 1926 the percentage was 12.0, in 1927 it was 8.6; in the South Ward in 1926 it was 11.1, in 1927, 6.8; in New Wortley in 1926 it was 9.3 and in 1927, 7.5. As a contrast, in Headingley Ward for 1926 the percentage was 1.9 as compared with 2.9 in 1927, and in North West Ward for 1926 the percentage was 1.5 as compared with 2.7 in 1927. In the whole City, in 1927, only 413 babies were born into families of more than six children, and whilst one readily admits that most of these families are to be found in the less attractive and most squalid parts of the City, it is by no means true to say that they are restricted to these parts. Neither is it true to say that the type of child, simply because it happens to be born into a large family, is poor either in mind or body. Judging from the statements which are constantly appearing in the public press and in articles by authorities on eugenics, one would gather that the majority of unfits come from the large families of the poor, and that the size of the family has something to do with the unfitness. My own impression is that size, *per se*, has very little to do with fitness; it is much more a question of nurture than of nature. I dare say if the question were asked of the average citizen why the size of family was diminishing in the South Ward, he would give as the reason "economic circumstances" and the difficulty of making adequate provision for large families under the existing conditions of industrial depression, but the same plea uttered on behalf of a family living in one of the well-to-do suburbs of the City would sound somewhat strange, and yet when one enquires as to why the families of the wealthy are so small the answer invariably is the same "economic circumstances." Perhaps that explains why the word "economics" has such a vogue at the present time.

The parents of a large family require no commiseration. In my experience they are happier and more contented with their lot than those who are childless or who have restricted their family to one. The latter may have pleasures which the former cannot afford but their pleasures are material and fleeting, whereas the joy of family life is spiritual and permanent. Contrast the lot of the only child



with the child who is one of a large family and judge between them as to which makes the best and most successful citizen. The advantage is surely with the latter. The one child family is not a natural family, it is unnatural, and the only child is—not in every case but in very many—the direct outcome of a wholly wrong conception of marriage. For this we must thank the advocates of birth control who, however well meaning their intentions, have perverted the minds of the present generation of parents and struck a fatal blow at English family life.

*Illegitimate Births.*—Of the 7,790 nett births registered 7,419 (3,770 males, 3,649 females) or 95·2 per cent. were legitimate and 371 (179 males, 192 females) or 4·8 per cent. were illegitimate. The ratio of illegitimate to legitimate was 1 to 20, last year it was 1 to 18.

| YEAR.   | Illegitimate births. | Percentage of nett births registered. | Rate per 1,000 estimated population. |
|---------|----------------------|---------------------------------------|--------------------------------------|
| 1917 .. | 576                  | 7·6%                                  | 1·31                                 |
| 1918 .. | 528                  | 7·1%                                  | 1·23                                 |
| 1919 .. | 567                  | 7·5%                                  | 1·32                                 |
| 1920 .. | 631                  | 5·6%                                  | 1·41                                 |
| 1921 .. | 565                  | 5·6%                                  | 1·21                                 |
| 1922 .. | 511                  | 5·5%                                  | 1·09                                 |
| 1923 .. | 438                  | 5·0%                                  | 0·93                                 |
| 1924 .. | 423                  | 4·9%                                  | 0·90                                 |
| 1925 .. | 422                  | 5·2%                                  | 0·89                                 |
| 1926 .. | 434                  | 5·4%                                  | 0·92                                 |
| 1927 .. | 371                  | 4·8%                                  | 0·78                                 |

Reference to the illegitimate death rate will be found on pages 165 and 167.



**Deaths.**—In 1927, 6,438 deaths, comprising 3,419 males and 3,019 females, were registered as having occurred in the City. The inward transfers numbered 338, namely 166 males and 172 females and the outward transfers 578, including 347 males and 231 females, which, after the necessary adjustment, leaves a nett total of 6,198 deaths debitable to the City, made up of 3,238 males and 2,960 females. The crude death-rate for the year was 13.5 and the nett 13.0, an increase of 0.02 in both rates as compared with those of the previous year. Compared with the average of the previous five years (13.3) the rate for 1927 shows a reduction of 0.3 or 2.3 per cent. Had the rate for 1927 remained the same as the average for the previous five years, there would have been a nett loss of 153 more lives, or instead of 6,198 the total number of deaths for the year would have been 6,351, against which must be put the loss entailed by the fall in the birth-rate which in the same period accounted for no fewer than 879 lives. The nett loss to the City was therefore 726 lives. This does not of course take into account the change in the size of the population resulting from emigration and immigration, particulars of which are not available.

The question is often asked does a falling death-rate compensate for a falling birth-rate. It does, but obviously only to a limited degree because in the case of the birth-rate the extent of the decline is practically unlimited, whereas the death-rate cannot under natural circumstances fall below a certain minimum figure. The time must therefore come, if the birth-rate continues to fall at the rate it has been doing in the last seven years, when the two rates will exactly balance. When that point is reached the population will be entirely without a reserve on which to draw in case of emergency, and as death will still continue to demand its toll, a process of attenuation will begin which sooner or later will have a serious effect on the prosperity and stability of the City.

Amongst the twelve large towns in England and Wales, Leeds occupied sixth place, the towns with lower rates being London, Birmingham, Sheffield, Bristol and Newcastle. For details see table on page 30.

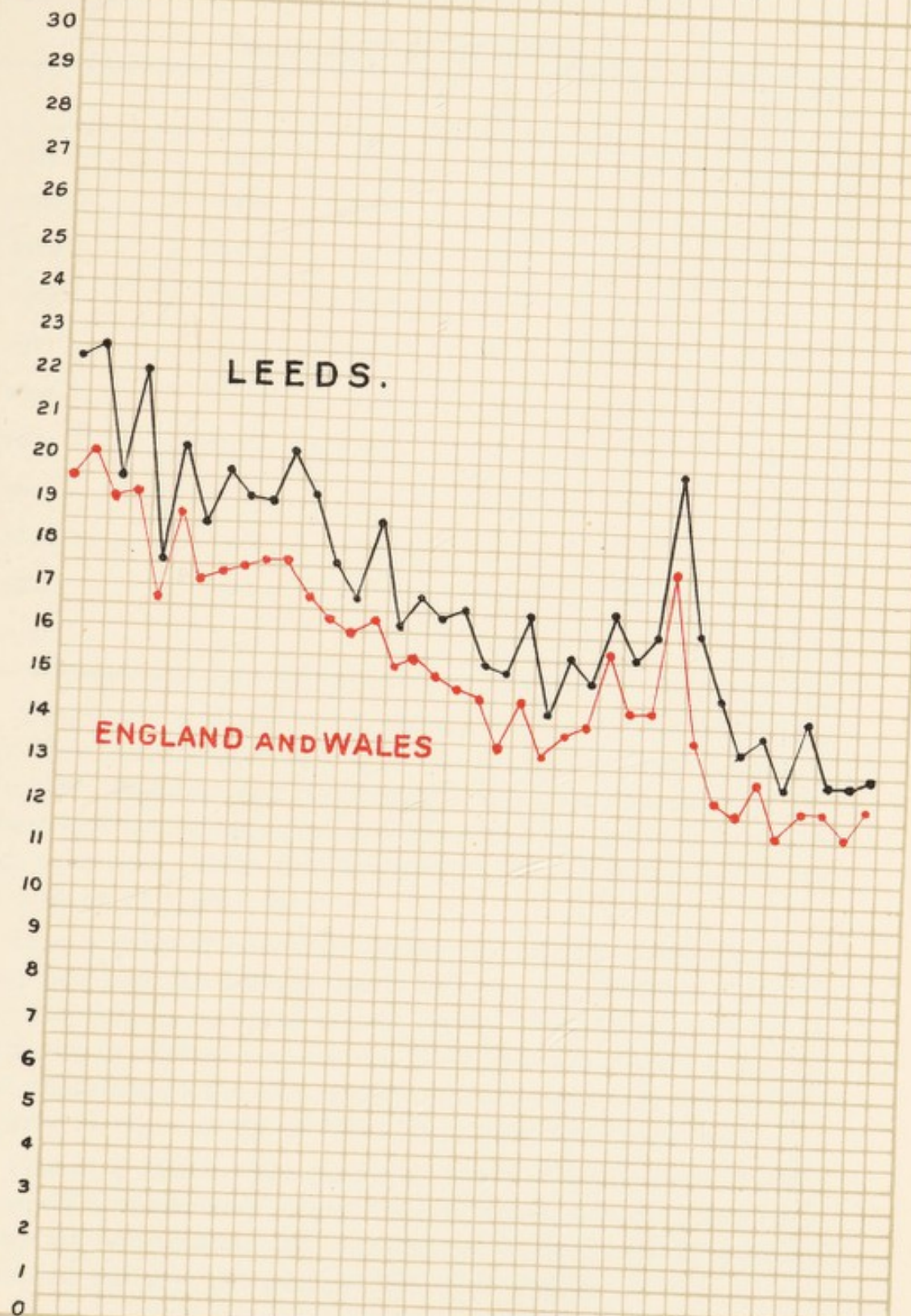
The death-rate for England and Wales for 1927 was 12.3 or 5.4 per cent. less than that for Leeds.



# DEATH RATE, 1890 - 1927.

RATES  
PER  
1,000  
POP.

1890 1 2 3 4 5 6 7 8 9 1900 1 2 3 4 5 6 7 8 9 1910 1 2 3 4 5 6 7 8 9 1920 1 2 3 4 5 6 7







*Death-rate in Quarters.*—The death-rate for the first quarter was 17·5, for the second and fourth, 12·2, and for the third, 10·1. That distribution is the usual one for the City; the first quarter is generally the highest and the third the lowest.

DEATH RATE IN QUARTERS.

|            | I.   | II.  | III. | IV.  | Year. |
|------------|------|------|------|------|-------|
| 1917 .. .. | 19·1 | 17·3 | 13·6 | 14·5 | 16·1  |
| 1918 .. .. | 19·7 | 16·0 | 14·3 | 29·8 | 19·9  |
| 1919 .. .. | 25·5 | 13·1 | 11·3 | 15·2 | 16·2  |
| 1920 .. .. | 20·6 | 13·9 | 11·2 | 13·1 | 14·7  |
| 1921 .. .. | 14·5 | 12·5 | 11·3 | 15·8 | 13·5  |
| 1922 .. .. | 17·5 | 14·6 | 10·6 | 12·9 | 13·9  |
| 1923 .. .. | 14·7 | 13·4 | 10·6 | 12·4 | 12·7  |
| 1924 .. .. | 22·4 | 12·9 | 9·9  | 12·2 | 14·3  |
| 1925 .. .. | 14·8 | 11·4 | 10·8 | 14·1 | 12·8  |
| 1926 .. .. | 15·7 | 12·7 | 9·9  | 13·1 | 12·8  |
| 1927 .. .. | 17·5 | 12·2 | 10·1 | 12·2 | 13·0  |

*Death-rates in Wards.*—The wards with the highest death-rates were West, Central and New Wortley whilst those with the lowest were New, Bramley and Headingley. The difference between the highest and the lowest, that is West and New, amounted to 4·62 or 42·3 per cent., whilst that between the highest and the City rate was 2·56 or 19·7 per cent.

It is worthy of note that during the last ten years the West Ward has had the highest death-rate on six occasions, and on the other four it occupied second place. Why this should be so is difficult to explain because the West Ward is certainly not the most unhealthy in the City, though it does possess an area of bad property in the vicinity of West Street and Kirkstall Road.

*Causes of Death.*—The principal causes of death were in order of numerical importance, organic heart disease, cancer, pneumonia, pulmonary tuberculosis and cerebral hæmorrhage, which together accounted for 47·5 per cent. of the total deaths.



## ANNUAL DEATHS AND DEATH RATE.

| Year. | Population. | Nett deaths. | Death-rate<br>LEEDS. | Death-rate<br>England and<br>Wales. |
|-------|-------------|--------------|----------------------|-------------------------------------|
| 1901  | 429,383     | 8,204        | 19.2                 | 16.9                                |
| 1902  | 431,043     | 7,699        | 17.6                 | 16.3                                |
| 1903  | 432,703     | 7,263        | 16.8                 | 15.5                                |
| 1904  | 434,363     | 8,039        | 18.6                 | 16.3                                |
| 1905  | 436,023     | 7,047        | 16.2                 | 15.3                                |
| 1906  | 437,683     | 7,350        | 16.9                 | 15.5                                |
| 1907  | 439,343     | 7,167        | 16.4                 | 15.1                                |
| 1908  | 441,003     | 7,430        | 16.6                 | 14.8                                |
| 1909  | 442,663     | 6,806        | 15.4                 | 14.6                                |
| 1910  | 444,323     | 6,711        | 15.2                 | 13.5                                |
| 1911  | 445,983     | 7,331        | 16.5                 | 14.6                                |
| 1912  | 447,746     | 6,396        | 14.3                 | 13.3                                |
| 1913  | 457,295     | 7,237        | 15.6                 | 13.8                                |
| 1914  | 459,260     | 6,885        | 15.0                 | 14.0                                |
| 1915  | 459,260     | 7,609        | 16.6                 | 15.7                                |
| 1916  | 446,349     | 6,946        | 15.6                 | 14.4                                |
| 1917  | 438,254     | 7,052        | 16.1                 | 14.4                                |
| 1918  | 427,589     | 8,529        | 19.9                 | 17.6                                |
| 1919  | 430,834     | 6,992        | 16.2                 | 13.7                                |
| 1920  | 448,913     | 6,591        | 14.7                 | 12.4                                |
| 1921  | 465,500     | 6,285        | 13.5                 | 12.1                                |
| 1922  | 466,700     | 6,479        | 13.9                 | 12.8                                |
| 1923  | 469,900     | 5,986        | 12.7                 | 11.6                                |
| 1924  | 471,600     | 6,747        | 14.3                 | 12.2                                |
| 1925  | 472,900     | 6,037        | 12.8                 | 12.2                                |
| 1926  | 473,400     | 6,062        | 12.8                 | 11.6                                |
| 1927  | 477,600     | 6,198        | 13.0                 | 12.3                                |

Diseases of the respiratory system including pneumonia, bronchitis, and influenza, but excluding pulmonary tuberculosis, accounted for 1,070 or 17.3 per cent. of the total deaths from all causes. This is an improvement on last year's record when this group of respiratory diseases accounted for 18.1 per cent. of the total deaths. Diseases of the respiratory system in young children are frequently secondary to other diseases such as measles and whooping cough. This fact is not always sufficiently appreciated by parents as is demonstrated by the line of treatment adopted in quite a large proportion of cases. As soon as a child gets one

## DEATHS AND DEATH RATE IN WARDS.

| MUNICIPAL WARD.       | Area<br>in<br>Acres. | Estimated<br>population<br>middle of<br>1927. | Nett<br>deaths. | Death-<br>rate. |
|-----------------------|----------------------|-----------------------------------------------|-----------------|-----------------|
| Central .. ..         | 209                  | 12,746                                        | 190             | 14·91           |
| North .. ..           | 3,026                | 43,914                                        | 543             | 12·37           |
| North-East .. ..      | 1,268                | 36,986                                        | 531             | 14·36           |
| New Ward*             | 4,677                | 9,711                                         | 106             | 10·92           |
| East .. ..            | 1,650                | 36,429                                        | 523             | 14·36           |
| South .. ..           | 343                  | 13,064                                        | 179             | 13·70           |
| East Hunslet† .. ..   | 3,022 $\frac{3}{4}$  | 38,287                                        | 534             | 13·95           |
| West Hunslet .. ..    | 1,414                | 36,763                                        | 459             | 12·49           |
| Holbeck .. ..         | 507                  | 29,951                                        | 412             | 13·76           |
| Mill Hill .. ..       | 233                  | 5,320                                         | 61              | 11·47           |
| West .. ..            | 291                  | 22,271                                        | 346             | 15·54           |
| North-West .. ..      | 732                  | 31,983                                        | 387             | 12·10           |
| Brunswick .. ..       | 498                  | 24,215                                        | 287             | 11·85           |
| New Wortley .. ..     | 412                  | 18,166                                        | 262             | 14·42           |
| Armley and Wortley .. | 1,604                | 37,834                                        | 471             | 12·45           |
| Bramley .. ..         | 4,599                | 24,900                                        | 279             | 11·20           |
| Headingley‡ .. ..     | 5,651                | 55,060                                        | 628             | 11·41           |
| City .. ..            | 30,136 $\frac{3}{4}$ | 477,600                                       | 6,198           | 12·98           |

\*Roundhay, Seacroft, Shadwell, and Crossgates. †Including Middleton.

‡Including portion of Adel added to Leeds, April 1st, 1926.



or other of these diseases, it is either boxed-up in an over-heated, airless room, or else it is allowed to run about amongst its fellows. In either case, it is inviting respiratory trouble in the shape of catarrhs or pneumonia. Recurring bronchitis or broncho pneumonia in a child are very disabling conditions. They frequently run a long course and cause profound changes in the texture of the lung tissue, which persist practically throughout the rest of the child's life. The greatest care should therefore be taken to protect children who are subject to catarrhs as well as those who happen to fall victims to the common infections of childhood.

It will be observed that organic heart disease is still the most important single cause of death. In no fewer than 995 cases it was either the primary cause or the most important contributory cause. It is very closely associated with rheumatic infection, indeed, in quite a large number of cases, it is the direct outcome of this condition, hence the importance of early and adequate treatment for all persons, especially children and young people, suffering from acute rheumatism or allied diseases.

Cancer takes second place in the list. As a cause of death it grows in importance every year, though last year it accounted for fewer deaths than in 1926. This fact does not warrant the assumption that the disease is losing its grip on the population, much as one would desire to see evidence of this. It probably is but a passing phase to be succeeded in another year by a further advance. The subject is further dealt with on page 110.

*Street Accidents.*—An arresting feature in the causes of death during the last 17 years has been the phenomenally rapid rise in the mortality from accidents and injuries, particularly those due to mechanically propelled vehicles. In 1911, street accidents accounted for a total of 17 deaths, of which eight were due to motor vehicles and the remainder to vehicles of other descriptions and pedal cycles. Five years later (1916) the total jumped to 27 of which 16 were due to motor vehicles and 11 to vehicles of other descriptions. Last year the total was 57 of which 91·2 per cent. were due to motor vehicles and 8·8 per cent. to vehicles of other descriptions. In other words, in the 17 years, the mortality rate from street accidents of all kinds has increased by 235 per cent., whilst that for motor vehicles alone has increased by no less than 550 per cent.

## PRINCIPAL CAUSES OF DEATH.

| Death rate. | Diseases.                                                          | No. of deaths in 1927 (nett.) | Increase or decrease compared with 1926. | Houses.  |               |
|-------------|--------------------------------------------------------------------|-------------------------------|------------------------------------------|----------|---------------|
|             |                                                                    |                               |                                          | Through. | Back-to-back. |
| 0.00        | Enteric Fever .. ..                                                | 2                             | + 1                                      | 1        | 1             |
| ..          | Small-pox .. ..                                                    | ..                            | ..                                       | ..       | ..            |
| 0.24        | Measles .. ..                                                      | 117                           | + 97                                     | 30       | 87            |
| 0.01        | Scarlet Fever .. ..                                                | 6                             | + 1                                      | 2        | 4             |
| 0.09        | Whooping Cough .. ..                                               | 44                            | - 75                                     | 11       | 33            |
| 0.06        | Diphtheria .. ..                                                   | 28                            | + 2                                      | 9        | 19            |
| 0.36        | Influenza .. ..                                                    | 173                           | + 73                                     | 68       | 105           |
| 0.04        | Erysipelas .. ..                                                   | 18                            | + 6                                      | 7        | 11            |
| 0.96        | Pulmonary Tuberculosis ..                                          | 457                           | - 20                                     | 127      | 328           |
| 0.21        | Other Tuberculous Diseases                                         | 101                           | - 7                                      | 29       | 72            |
| 1.36        | Cancer, malignant disease                                          | 649                           | - 8                                      | 279      | 367           |
| 0.07        | Rheumatic Fever .. ..                                              | 32                            | + 7                                      | 13       | 19            |
| 0.04        | Meningitis .. ..                                                   | 17                            | - 29                                     | 8        | 9             |
| 0.76        | Cerebral Hæmorrhage ..                                             | 363                           | + 12                                     | 141      | 219           |
| 2.08        | Organic Heart Disease ..                                           | 995                           | + 221                                    | 365      | 621           |
| 0.75        | Arterio-sclerosis .. ..                                            | 358                           | + 93                                     | 148      | 209           |
| 0.73        | Bronchitis .. ..                                                   | 351                           | - 88                                     | 120      | 231           |
| 1.00        | Pneumonia (all forms) ..                                           | 477                           | - 7                                      | 137      | 340           |
| 0.14        | Other diseases of respiratory organs .. ..                         | 69                            | - 7                                      | 27       | 42            |
| 0.22        | Diarrhœa and Enteritis ..                                          | 105                           | - 80                                     | 25       | 80            |
| 0.08        | Appendicitis and Typhlitis                                         | 38                            | + 15                                     | 16       | 22            |
| 0.04        | Cirrhosis of Liver .. ..                                           | 18                            | - 5                                      | 14       | 4             |
| 0.40        | Nephritis and Bright's Disease .. ..                               | 192                           | + 17                                     | 86       | 106           |
| 0.03        | Puerperal Fever .. ..                                              | 14                            | - +                                      | 3        | 11            |
| 0.05        | Other accidents and diseases of Pregnancy and Parturition .. ..    | 24                            | - 3                                      | 9        | 15            |
| 0.46        | Congenital Debility and Malformation, including Premature Birth .. | 222                           | - 32                                     | 79       | 143           |
| 0.39        | Violent Deaths, excluding Suicide .. ..                            | 184                           | + 7                                      | 70       | 110           |
| 0.08        | Suicide .. ..                                                      | 38                            | - 19                                     | 16       | 22            |
| 2.31        | Other Defined Diseases ..                                          | 1,103                         | - 26                                     | 465      | 636           |
| 0.01        | Diseases ill-defined or unknown .. ..                              | 3                             | - 10                                     | ..       | 3             |
| 12.98       | Totals .. ..                                                       | 6,198                         | + 136                                    | 2,305    | 3,869         |

Of the 6,198 deaths, 24 had no home.



## CAUSES OF, AND AGES AT DEATH DURING THE CALENDAR YEAR, 1927.

| CAUSES OF DEATH.                                                       | Nett Deaths at the subjoined ages of " Residents " whether occurring within or without the District. |               |                      |                      |                       |                        |                        |                        |                 | Total Deaths whether of " Residents " or " Non-Residents " in Institutions in the District. |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------|----------------------|----------------------|-----------------------|------------------------|------------------------|------------------------|-----------------|---------------------------------------------------------------------------------------------|
|                                                                        | ALL AGES.                                                                                            | Under 1 year. | 1 and under 2 years. | 2 and under 5 years. | 5 and under 15 years. | 15 and under 25 years. | 25 and under 45 years. | 45 and under 65 years. | 65 and upwards. |                                                                                             |
| 1. Enteric Fever .. ..                                                 | 2                                                                                                    | ..            | ..                   | ..                   | ..                    | 1                      | 1                      | ..                     | ..              | 2                                                                                           |
| 2. Small-pox .. ..                                                     | ..                                                                                                   | ..            | ..                   | ..                   | ..                    | ..                     | ..                     | ..                     | ..              | ..                                                                                          |
| 3. Measles .. ..                                                       | 117                                                                                                  | 21            | 53                   | 33                   | 10                    | ..                     | ..                     | ..                     | ..              | 44                                                                                          |
| 4. Scarlet Fever .. ..                                                 | 6                                                                                                    | ..            | 2                    | ..                   | 4                     | ..                     | ..                     | ..                     | ..              | 7                                                                                           |
| 5. Whooping Cough .. ..                                                | 44                                                                                                   | 18            | 17                   | 5                    | 4                     | ..                     | ..                     | ..                     | ..              | 15                                                                                          |
| 6. Diphtheria .. ..                                                    | 28                                                                                                   | ..            | 3                    | 11                   | 13                    | 1                      | ..                     | ..                     | ..              | 27                                                                                          |
| 7. Influenza .. ..                                                     | 173                                                                                                  | 10            | 8                    | 3                    | 6                     | 9                      | 29                     | 49                     | 59              | 15                                                                                          |
| 8. Erysipelas .. ..                                                    | 18                                                                                                   | 2             | ..                   | ..                   | ..                    | ..                     | 2                      | 8                      | 6               | 14                                                                                          |
| 9. Pulmonary Tuberculosis ..                                           | 457                                                                                                  | 3             | 5                    | 4                    | 15                    | 93                     | 173                    | 146                    | 18              | 187                                                                                         |
| 10. Other Tuberculous Diseases                                         | 101                                                                                                  | 7             | 19                   | 19                   | 15                    | 16                     | 10                     | 10                     | 5               | 69                                                                                          |
| 11. Cancer, malignant disease                                          | 649                                                                                                  | ..            | ..                   | 2                    | 3                     | 1                      | 55                     | 304                    | 284             | 290                                                                                         |
| 12. Rheumatic Fever .. ..                                              | 32                                                                                                   | ..            | ..                   | ..                   | 3                     | 5                      | 8                      | 9                      | 7               | 7                                                                                           |
| 13. Meningitis .. ..                                                   | 17                                                                                                   | 3             | ..                   | 2                    | 7                     | 1                      | ..                     | 4                      | ..              | 10                                                                                          |
| 14. Cerebral Hæmorrhage, &c...                                         | 363                                                                                                  | ..            | ..                   | ..                   | ..                    | ..                     | 9                      | 114                    | 240             | 70                                                                                          |
| 15. Organic Heart Disease ..                                           | 995                                                                                                  | ..            | ..                   | ..                   | 7                     | 11                     | 77                     | 296                    | 604             | 351                                                                                         |
| 16. Arterio-sclerosis .. ..                                            | 358                                                                                                  | ..            | ..                   | ..                   | ..                    | ..                     | 3                      | 56                     | 299             | 142                                                                                         |
| 17. Bronchitis .. ..                                                   | 351                                                                                                  | 20            | 2                    | 2                    | 2                     | 2                      | 13                     | 101                    | 209             | 26                                                                                          |
| 18. Pneumonia (all forms) ..                                           | 477                                                                                                  | 99            | 64                   | 31                   | 20                    | 16                     | 57                     | 117                    | 73              | 152                                                                                         |
| 19. Other diseases of respiratory organs .. ..                         | 69                                                                                                   | 3             | 1                    | 3                    | 3                     | 4                      | 10                     | 14                     | 31              | 23                                                                                          |
| 20. Diarrhœa and Enteritis ..                                          | 105                                                                                                  | 79            | 9                    | 3                    | 2                     | 3                      | 4                      | 1                      | 4               | 59                                                                                          |
| 21. Appendicitis and Typhlitis                                         | 38                                                                                                   | ..            | ..                   | 1                    | 4                     | 11                     | 11                     | 10                     | 1               | 54                                                                                          |
| 22. Cirrhosis of Liver .. ..                                           | 18                                                                                                   | ..            | ..                   | ..                   | ..                    | ..                     | 1                      | 14                     | 3               | 3                                                                                           |
| 23. Nephritis and Bright's Disease .. ..                               | 192                                                                                                  | 1             | 1                    | 2                    | 2                     | 5                      | 23                     | 84                     | 74              | 93                                                                                          |
| 24. Puerperal Fever .. ..                                              | 14                                                                                                   | ..            | ..                   | ..                   | ..                    | 2                      | 12                     | ..                     | ..              | 17                                                                                          |
| 25. Other accidents and diseases of Pregnancy and Parturition .. ..    | 24                                                                                                   | ..            | ..                   | ..                   | ..                    | 2                      | 20                     | 2                      | ..              | 22                                                                                          |
| 26. Congenital Debility and Malformation, including Premature Birth .. | 222                                                                                                  | 213           | 1                    | 5                    | 1                     | ..                     | 1                      | 1                      | ..              | 110                                                                                         |
| 27. Violent Deaths, excluding Suicide .. ..                            | 184                                                                                                  | 21            | 4                    | 8                    | 30                    | 19                     | 33                     | 40                     | 29              | 159                                                                                         |
| 28. Suicide .. ..                                                      | 38                                                                                                   | ..            | ..                   | ..                   | ..                    | 7                      | 12                     | 12                     | 7               | 10                                                                                          |
| 29. Other Defined Diseases ..                                          | 1,103                                                                                                | 129           | 15                   | 26                   | 32                    | 37                     | 149                    | 317                    | 398             | 580                                                                                         |
| 30. Diseases ill-defined or unknown .. ..                              | 3                                                                                                    | ..            | ..                   | ..                   | ..                    | ..                     | 1                      | 2                      | ..              | ..                                                                                          |
| Totals .. ..                                                           | 6,198                                                                                                | 629           | 204                  | 160                  | 183                   | 246                    | 714                    | 1,711                  | 2,351           | 2,558                                                                                       |

Details are shown in the appended table and chart. An analysis of these figures is interesting. It shows that the deaths can be divided roughly into two groups, namely: (1) those of children under 15 years and old people over 65 years, and (2) those between 15 and 65. In the former group, there were 29 deaths in 1927 and in the latter, 28. The children's deaths may be attributed to pure accident, but one cannot escape the feeling that

DEATHS FROM VEHICULAR TRAFFIC IN AGE GROUPS, 1911-1927.

| Year. | -5 | 5-15 | 15-25 | 25-45 | 45-65 | 65+ | Totals. |
|-------|----|------|-------|-------|-------|-----|---------|
| 1911  | 4  | 6    | 2     | 2     | 1     | 2   | 17      |
| 1912  | 2  | 3    | 2     | 3     | 2     | 2   | 14      |
| 1913  | 1  | 5    | 2     | 6     | 9     | 5   | 28      |
| 1914  | 1  | 2    | 4     | 4     | 7     | 7   | 25      |
| 1915  | 1  | 11   | 2     | 5     | 8     | 7   | 34      |
| 1916  | 2  | 4    | 2     | 3     | 10    | 6   | 27      |
| 1917  | 4  | 8    | 3     | 7     | 8     | 7   | 37      |
| 1918  | 3  | 4    | 3     | 2     | 11    | 6   | 29      |
| 1919  | 1  | 8    | —     | 1     | 13    | 7   | 30      |
| 1920  | —  | 3    | 6     | 8     | 5     | 5   | 27      |
| 1921  | 3  | 9    | 3     | 3     | 1     | 7   | 26      |
| 1922  | 3  | 10   | 2     | 5     | 8     | 2   | 30      |
| 1923  | 2  | 6    | 7     | 7     | 12    | 6   | 40      |
| 1924  | 5  | 9    | 6     | 5     | 7     | 7   | 39      |
| 1925  | 5  | 7    | 6     | 5     | 6     | 5   | 34      |
| 1926  | 6  | 12   | 7     | 8     | 17    | 12  | 62      |
| 1927  | 4  | 20   | 9     | 6     | 13    | 5   | 57      |

many of the adult deaths were due to carelessness, recklessness and bad driving. In any case it cannot be gainsaid that a considerable proportion was avoidable. It seems quite impossible for some motorists to resist the temptation to "scorch" even when the conditions are adverse, whilst others seem to have an inordinate passion for taking risks. One sees it every day in almost every



thoroughfare in the City, and so long as we have this irresponsible class of motorist, accidents will continue to increase in number and the mortality rate to rise accordingly. Great efforts are being put forth to reduce the death-rate from cancer and from conditions associated with childbirth, but it will avail the population but little if persons survive these dangers only to be cut down in a motor accident. If it is necessary to find means of preventing death from disease, it is surely just as necessary to think out a way of reducing death and damage due to street accidents. As a means of attaining this object, I would suggest (1) that greater discrimination be observed in the issue of licences and that licences be issued only to those able to pass a satisfactory test in driving ; (2) that the penalties for careless or reckless driving be increased ; (3) that an adequate number of crossing places for pedestrians be fixed in all busy thoroughfares ; and (4) that the children be taught at home and in school the necessity of exercising care and vigilance in crossing streets with fast moving traffic and in boarding and alighting from tramcars or buses. If some such steps as these are not taken, and the death-rate continues to advance as it has done in the last 10 years, the motor car, far from being a blessing to the community, may actually become a curse.

For notes on infantile diarrhœa, bronchitis, and pneumonia, and tuberculosis see pages 105, 109, 110 and 125.

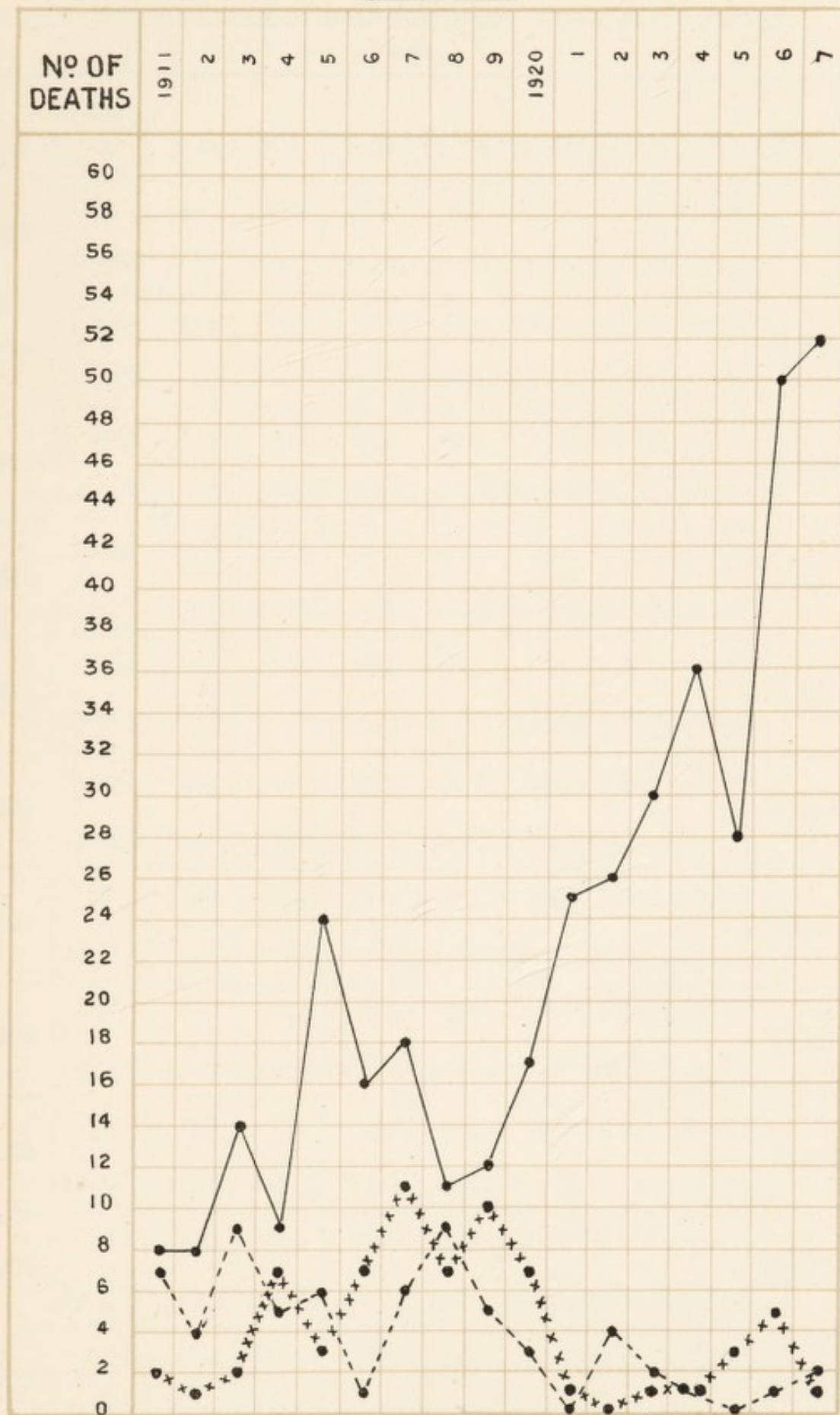
*Housing and Death.*—Of the total number of deaths which occurred in Leeds during the year 3,869, or 62·4 per cent., occurred in back-to-back houses, 2,305, or 37·2 per cent., in throughs, whilst 24, or 0·4 per cent., had no fixed domicile.

*Deaths in Age Groups.*—The table on page 29 sets out the deaths according to age groups. It will be noticed that the 0-1 age group showed the greatest decrease ; in 1927 there were 629 deaths, or 10·1 per cent. of the total deaths in this age group as compared with 748 and 12·3 per cent. in 1926. Adding together the deaths in the age groups 0-1, 1-2, and 2-5 we get a total of 993, which is equal to 16·0 per cent. of the total deaths, as compared with 1,144 and 18·8 per cent. in 1926. These figures are encouraging and demonstrate the value of the work of the Maternity and Child Welfare Service. I do not mean to imply that there were no other contributory influences ; education, improved environment, and a higher standard of living, all had their effect in removing or minimizing the dangers which beset the life of a child in a large City like Leeds.

# LEEDS.

## DEATHS FROM VEHICULAR TRAFFIC.

— 1911 - 1927. —



— MOTORS ETC.  
 - - - - HORSE DRAWN VEHICLES.  
 x x x x TRAMCARS.



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## DEATHS IN AGE GROUPS (NETT), 1917-27.

Together with the percentage of the total deaths, represented by each group  
(in italics).

| Year. | Under<br>1            | 1-2                | 2-5                | 5-15               | 15-25              | 25-45                 | 45-65                 | 65+                   | Total. |
|-------|-----------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|-----------------------|-----------------------|--------|
| 1917  | 1,023<br><i>14.5%</i> | 400<br><i>5.7%</i> | 422<br><i>6.0%</i> | 331<br><i>4.7%</i> | 302<br><i>4.3%</i> | 835<br><i>11.8%</i>   | 1,734<br><i>24.6%</i> | 2,005<br><i>28.4%</i> | 7,052  |
| 1918  | 984<br><i>11.5%</i>   | 474<br><i>5.6%</i> | 743<br><i>8.7%</i> | 514<br><i>6.0%</i> | 579<br><i>6.8%</i> | 1,214<br><i>14.2%</i> | 2,007<br><i>23.5%</i> | 2,014<br><i>23.6%</i> | 8,529  |
| 1919  | 899<br><i>12.9%</i>   | 239<br><i>3.3%</i> | 298<br><i>4.3%</i> | 299<br><i>4.3%</i> | 344<br><i>4.9%</i> | 957<br><i>13.7%</i>   | 1,780<br><i>25.4%</i> | 2,176<br><i>31.2%</i> | 6,992  |
| 1920  | 1,232<br><i>18.7%</i> | 255<br><i>3.9%</i> | 283<br><i>4.3%</i> | 283<br><i>4.3%</i> | 291<br><i>4.4%</i> | 844<br><i>12.8%</i>   | 1,572<br><i>23.9%</i> | 1,831<br><i>27.8%</i> | 6,591  |
| 1921  | 997<br><i>15.9%</i>   | 278<br><i>4.4%</i> | 130<br><i>2.1%</i> | 202<br><i>3.2%</i> | 297<br><i>4.7%</i> | 765<br><i>12.2%</i>   | 1,562<br><i>24.9%</i> | 2,054<br><i>32.7%</i> | 6,285  |
| 1922  | 935<br><i>14.4%</i>   | 283<br><i>4.4%</i> | 211<br><i>3.3%</i> | 198<br><i>3.1%</i> | 282<br><i>4.4%</i> | 766<br><i>11.8%</i>   | 1,661<br><i>25.6%</i> | 2,143<br><i>33.1%</i> | 6,479  |
| 1923  | 773<br><i>12.9%</i>   | 189<br><i>3.2%</i> | 153<br><i>2.6%</i> | 166<br><i>2.8%</i> | 277<br><i>4.6%</i> | 751<br><i>12.5%</i>   | 1,620<br><i>27.1%</i> | 2,057<br><i>34.4%</i> | 5,986  |
| 1924  | 921<br><i>13.7%</i>   | 270<br><i>4.0%</i> | 202<br><i>3.0%</i> | 173<br><i>2.6%</i> | 275<br><i>4.1%</i> | 786<br><i>11.6%</i>   | 1,804<br><i>26.7%</i> | 2,316<br><i>34.3%</i> | 6,747  |
| 1925  | 748<br><i>12.4%</i>   | 177<br><i>2.9%</i> | 161<br><i>2.7%</i> | 159<br><i>2.6%</i> | 297<br><i>4.9%</i> | 709<br><i>11.7%</i>   | 1,657<br><i>27.4%</i> | 2,129<br><i>35.3%</i> | 6,037  |
| 1926  | 748<br><i>12.3%</i>   | 206<br><i>3.4%</i> | 190<br><i>3.1%</i> | 158<br><i>2.6%</i> | 251<br><i>4.1%</i> | 676<br><i>11.2%</i>   | 1,658<br><i>27.4%</i> | 2,175<br><i>35.9%</i> | 6,062  |
| 1927  | 629<br><i>10.1%</i>   | 204<br><i>3.3%</i> | 160<br><i>2.6%</i> | 183<br><i>3.0%</i> | 246<br><i>4.0%</i> | 714<br><i>11.5%</i>   | 1,711<br><i>27.6%</i> | 2,351<br><i>37.9%</i> | 6,198  |



COMPARISON OF PERCENTAGES OF DEATHS IN THE VARIOUS AGE GROUPS OF 1927, AS COMPARED WITH THE PREVIOUS DECENNIOUM.

| Period.      | -1   | 1-2  | 2-5  | 5-15 | 15-25 | 25-45 | 45-65 | 65+  |
|--------------|------|------|------|------|-------|-------|-------|------|
| 1917-1926 .. | 13·9 | 4·2  | 4·2  | 3·7  | 4·8   | 12·4  | 25·5  | 31·3 |
| Year 1927 .. | 10·1 | 3·3  | 2·6  | 3·0  | 4·0   | 11·5  | 27·6  | 37·9 |
| Decrease -   | -3·8 | -0·9 | -1·6 | -0·7 | -0·8  | -0·9  | ..    | ..   |
| Increase +   | ..   | ..   | ..   | ..   | ..    | ..    | +2·1  | +6·6 |

*Infant Mortality.*—The number of deaths of children under one year numbered 629 or 10·1 per cent. of the total deaths. The infant mortality rate corresponding was 81 per thousand births or 12 less than for the previous year (93).

This subject is dealt with in detail on page 157.

Comparative Statistics of the larger English Cities, 1927.

|                | RATE PER 1,000 POPULATION. |             |             |                       |                          | DEATH RATE PER 1,000 BIRTHS. |                                  |
|----------------|----------------------------|-------------|-------------|-----------------------|--------------------------|------------------------------|----------------------------------|
|                | Population.                | Birth Rate. | Death Rate. | Phthisis. Death Rate. | Other Tuberculosis Rate. | Deaths under One Year.       | Diarrhoea and Enteritis under 2. |
| London ..      | 4,550,000<br>4,541,000     | 16·1        | 12·1        | 0·91                  | 0·14                     | 59                           | 7·6                              |
| Birmingham ..  | 969,752                    | 17·8        | 11·6        | 0·89                  | 0·17                     | 75                           | 11·5                             |
| Liverpool ..   | 856,266                    | 22·2        | 13·9        | 1·1                   | 0·24                     | 94                           | 18·4                             |
| Manchester ..  | 764,420                    | 17·1        | 13·8        | 1·15                  | 0·23                     | 86                           | 11·3                             |
| Sheffield ..   | 524,900                    | 16·2        | 12·3        | 0·70                  | 0·19                     | 91                           | 8·1                              |
| Leeds ..       | 477,600                    | 16·3        | 13·0        | 0·96                  | 0·21                     | 81                           | 11·3                             |
| Bristol ...    | 386,000<br>385,700         | 16·3        | 12·3        | 1·03                  | 0·18                     | 57                           | 4·3                              |
| Hull ..        | 296,600                    | 21·0        | 13·2        | 0·96                  | 0·26                     | 82                           | 7·9                              |
| Bradford ..    | 293,200                    | 14·7        | 14·6        | 0·79                  | 0·19                     | 94                           | 7·6                              |
| Newcastle ..   | 288,500                    | 18·7        | 12·4        | 1·09                  | 0·29                     | 88                           | 9·6                              |
| Stoke-on-Trent | 276,900                    | 21·2        | 13·4        | 1·06                  | 0·29                     | 99                           | 7·7                              |
| Nottingham ..  | 265,700                    | 17·4        | 14·1        | 0·93                  | 0·18                     | 81                           | 16·4                             |



**Cremation.**—Of the 6,198 deaths which occurred in the city during the year, cremation was the method of disposal selected in only 32 cases, or 0.52 per cent. of the total. For a city of the size and character of Leeds, this is a very small number indeed and proves once more how necessary it is for greater efforts to be made to enlighten the people on this most important subject of the disposal of the dead. The arguments in favour of cremation, especially for populous areas, are to my mind unanswerable. It is the only method which can properly be called hygienic. Earth burial is not only un-hygienic, but it involves the putting out of commission of a large area of valuable land which might be used to promote the general welfare of the community by utilising it as parks, open spaces, or for building purposes.

In a very interesting report issued by the Cremation Society of England attention is drawn to the very extensive area of land, not less than 8,400 acres, in 166 of the more important towns in England and Wales set aside for grave-yards and cemeteries, at an annual cost to the rates of £162,000. Many of these grave-yards and cemeteries are situated in the midst of thickly populated areas and cannot be looked upon as in any way improving their amenities, indeed one might go so far as to say that they constitute a distinct danger as far as the public health is concerned.

In Leeds we are about to extend the area reserved for purposes of earth burial by opening another cemetery on the South of the river, and whilst I take no exception to the proposed site, I can visualise the time when, with the natural increase of the population and house building proceeding at the pace it has been doing in recent years, this new cemetery will be surrounded on all sides by dwelling-houses, and be open to the same criticism now levelled at many of the existing burial grounds situated within the built-up area of the city. I think, therefore, the time has come when the people should consider very seriously whether they are doing a service to the city and to posterity by perpetuating what is generally acknowledged to be an evil from the public health standpoint. Because a thing bears the mark and seal of tradition, does not necessarily mean that it is right, and in the case of earth burial there is surely ample proof that it is wrong. That being so, it is the obvious duty of enlightened citizens to break with this tradition and usher in a new era when sense and not sentiment will rule.

**Hospital Accommodation.**—In this connection I am glad to be able to report a further advance. Two of the larger Poor Law Institutions in Leeds, namely, St. James' Hospital and St.



## CREMATIONS IN LEEDS, 1905-1927.

| Year. |    |    |    | No. of<br>Leeds people<br>cremated. | Nett<br>total deaths<br>in City. | Percentage<br>of cremations<br>on nett deaths<br>(Leeds people<br>cremated). |
|-------|----|----|----|-------------------------------------|----------------------------------|------------------------------------------------------------------------------|
| 1905  | .. | .. | .. | 7                                   | 7,047                            | 0·10                                                                         |
| 1906  | .. | .. | .. | 10                                  | 7,350                            | 0·14                                                                         |
| 1907  | .. | .. | .. | 12                                  | 7,167                            | 0·17                                                                         |
| 1908  | .. | .. | .. | 16                                  | 7,430                            | 0·22                                                                         |
| 1909  | .. | .. | .. | 9                                   | 6,806                            | 0·13                                                                         |
| 1910  | .. | .. | .. | 5                                   | 6,711                            | 0·07                                                                         |
| 1911  | .. | .. | .. | 7                                   | 7,331                            | 0·10                                                                         |
| 1912  | .. | .. | .. | 14                                  | 6,396                            | 0·22                                                                         |
| 1913  | .. | .. | .. | 7                                   | 7,237                            | 0·10                                                                         |
| 1914  | .. | .. | .. | 18                                  | 6,885                            | 0·26                                                                         |
| 1915  | .. | .. | .. | 13                                  | 7,609                            | 0·17                                                                         |
| 1916  | .. | .. | .. | 9                                   | 6,946                            | 0·13                                                                         |
| 1917  | .. | .. | .. | 10                                  | 7,052                            | 0·14                                                                         |
| 1918  | .. | .. | .. | 23                                  | 8,529                            | 0·27                                                                         |
| 1919  | .. | .. | .. | 18                                  | 6,992                            | 0·26                                                                         |
| 1920  | .. | .. | .. | 13                                  | 6,591                            | 0·20                                                                         |
| 1921  | .. | .. | .. | 9                                   | 6,285                            | 0·14                                                                         |
| 1922  | .. | .. | .. | 17                                  | 6,479                            | 0·26                                                                         |
| 1923  | .. | .. | .. | 11                                  | 5,986                            | 0·18                                                                         |
| 1924  | .. | .. | .. | 24                                  | 6,747                            | 0·36                                                                         |
| 1925  | .. | .. | .. | 26                                  | 6,037                            | 0·43                                                                         |
| 1926  | .. | .. | .. | 14                                  | 6,062                            | 0·23                                                                         |
| 1927  | .. | .. | .. | 32                                  | 6,198                            | 0·52                                                                         |
| Total | .. | .. | .. | 324                                 | 157,873                          | 0·21                                                                         |

Mary's Infirmary, Bramley, have opened their doors to members of the ordinary public requiring treatment and willing to pay the very moderate charges levied by the Guardians. In the case of St. Mary's Infirmary the scheme is only just in the embryonic stage, but at the St. James' Hospital it has advanced considerably beyond this and a full staff of consulting physicians and surgeons, as well as specialists in such diseases as those affecting the eye, ear, nose, and throat, etc., has been appointed, whose services are available for all classes of patients receiving attention in this institution.

The list of cases awaiting admission to the Leeds General Infirmary is still large, and there seems very little hope of its being reduced by any extension of the present building. The solution of the difficulty of providing additional bed accommodation for the sick poor lies with the Poor Law institutions, not of course under the ægis of the Poor Law, but as public institutions under the control of the Council and maintained out of the city funds. This is one of the proposals of the new Poor Law Reform Bill and one which, if the Bill passes into law, will confer an enormous advantage on the whole country.

The children's wards at the St. James' Hospital have been entirely remodelled during the year and are now capable of admitting a larger number of children. I mention this because Leeds has no separate institution for sick children, a somewhat severe handicap to a City of its size. The improved accommodation at St. James' will to some extent reduce this handicap, if doctors and parents will but take advantage of the facilities offered.

On page 176 allusion is made to the building operations now going on in connection with the extension of the Maternity Hospital. By the end of the current year the new wards ought to be nearing completion. Possibly some of them may be ready for occupation before then, but the whole scheme of extension will certainly be complete by the end of another year, when Leeds will have a maternity hospital equal in size and equipment to any in the North of England.

Proposals for the erection of a new hospital on the Elmet Hall Estate for the treatment of orthopædic deformities, surgical tuberculosis, and the nutritional disorders of infants are now taking shape. Plans are in course of preparation and will, I hope, be submitted for the approval of the Council during the current year. When completed, this hospital will have accommodation for upwards of 200 children. I hope to be in a position to give a fuller description of the hospital in my next report.



## LEEDS CITY HOSPITALS, SEACROFT.

## ABSTRACT FROM REGISTERS.

| YEAR 1927.                                                                               | Small Pox. | Measles.      | Scarlet Fever. | Diphtheria.  | Typhus. | Enteric Fever. | Pneumonia.     | Inf. Diarr.    | Other Diseases. | For Quarantine (Cottages). | Total.           |
|------------------------------------------------------------------------------------------|------------|---------------|----------------|--------------|---------|----------------|----------------|----------------|-----------------|----------------------------|------------------|
| Patients remaining in Hospitals and Isolation Cottages, on Saturday, January 1st, 1927   | ..         | 14<br>(1)     | 102<br>(131)   | 44<br>(49)   | ..      | 2              | 1<br>(1)       | ..             | 26<br>(28)      | ..                         | 189<br>(210)     |
| Admitted from January 2nd, 1927, to December 31st, 1927                                  | 59<br>(5)  | 134<br>(97)   | 716<br>(708)   | 424<br>(362) | ..      | 9<br>(3)       | 39<br>(29)     | 13<br>(43)     | 413<br>(343)    | 127<br>(10)                | 1,934<br>(1,600) |
| Total treated ..                                                                         | 59<br>(5)  | 148<br>(98)   | 813<br>(839)   | 468<br>(411) | ..      | 11<br>(3)      | 40<br>(30)     | 13<br>(43)     | 439<br>(371)    | 127<br>(10)                | 2,123<br>(1,810) |
| Discharged ..                                                                            | 43<br>(5)  | 130<br>(83)   | 721<br>(732)   | 396<br>(343) | ..      | 8<br>(1)       | 22<br>(25)     | 10<br>(28)     | 389<br>(311)    | 114<br>(10)                | 1,833<br>(1,538) |
| Died ..                                                                                  | ..         | 18<br>(1)     | 6<br>(5)       | 25<br>(24)   | ..      | 1              | 10<br>(4)      | 3<br>(15)      | 22<br>(34)      | ..                         | 85<br>(83)       |
| Mortality per cent. ..                                                                   | ..         | 12.2<br>(1.2) | 0.8<br>(0.7)   | 5.9<br>(6.5) | ..      | 11.1           | 31.2<br>(13.8) | 23.1<br>(34.9) | 5.4<br>(9.9)    | ..                         | 4.4<br>(5.1)     |
| Patients remaining in Hospitals and Isolation Cottages, on Saturday, December 31st, 1927 | 16         | ..<br>(14)    | 91<br>(102)    | 47<br>(44)   | ..      | 2<br>(2)       | 8<br>(1)       | ..             | 28<br>(26)      | 13                         | 205<br>(189)     |

NOTE.—Bracketed figures are the corresponding figures of the previous year.

## Sanitary Circumstances.

BY

A. MASSEY, M.D., D.P.H., *Assistant Medical Officer of Health.*

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**Rivers and Streams.**—The usual vigilance was maintained during the year to prevent pollution of water-courses.

In the Adel area action was repeatedly necessary in this connection. This area in which rural sanitary conditions largely obtain was brought within the city as recently as April, 1926. The sanitary circumstances of such an area cannot be made to attain to urban standards in a day but progress is being made. Fourteen houses and cottages in Adel which formerly drained into cesspools (from which nearby streams were being polluted) were during the year connected up to convenient sewers—the cesspools being abolished.

In the Roundhay district in consequence of the collapse of part of a wall the Gipton beck was blocked causing pollution from the damming up of refuse from adjacent gardens. This was rectified as a result of representations from the Public Health Department.

The River Aire, running from West to East, practically bisects the Leeds area and receives trade effluents from the many and diverse manufactories along its banks. A certain amount of pollution is inevitable but by constant vigilance this is reduced to a minimum. During the year special investigations were made into the nature of the effluents from two large oil and grease works abutting on to the river with the result that in both cases improvement was effected.

**Water.**—I am indebted to Mr. Shortreed, the Waterworks Manager, for the following information.

During the year ended 31st March, 1928, a 20-inch concrete-lined main has been laid from Bramley Reservoir to Whingate, for a distance of 4,188 yards, in order to meet the increasing demand



for water throughout the Bramley, Farnley and Wortley districts. A 12-inch main has also been laid from the Headingley pumping station to Tinshill reservoir, 5,046 yards in length, forming part of a scheme for the distribution of water in the Tinshill, Adel, Bramhope, Pool, Huby and Weeton districts. Huby and Weeton it is interesting to mention, are now supplied with filtered water, in place of the former unfiltered supply from the Washburn Trunk Mains.

*Weetwood Filter Beds.*—The filter beds have been maintained in a satisfactory working condition.

Throughout the whole of the area an ample supply of water has been maintained during the year, and the reservoirs have been full practically throughout the whole of the period.

The total consumption of water during the year was 6,685,533,000 gallons, equal to an average daily consumption of 18,266,482 gallons, which shews an increase of 597,929 gallons per day as compared with the previous year.

**Sewage Disposal.**—The main Sewage Purification Works are situated at Thorpe Stapleton, about three miles from the centre of the City, to the South-East, and are completed to approximately three-fourths of their ultimate capacity.

These works have been in process of construction since 1909 and when completed will be capable of dealing with a dry weather flow of 26 million gallons per day from a population estimated at 650,000 persons. They deal with the sewage of practically the whole of the city with the exception of a small area on the South-West boundary which is served by the Rodley Works.

The works at Rodley have been extended and remodelled and are now capable of dealing with a dry weather flow of 660,000 gallons per day from a population of 20,000 persons.

With two such outfall works at Thorpe Stapleton and Rodley both constructed on the most modern principles Leeds possesses a sewage disposal system second to none in the country.

I have to thank Mr. E. H. Howatson, the Sewerage Engineer, for the above information.

**Drainage and Sewerage.**—During 1927, as in previous years, requests from the Health to the City Engineer's Department for sewer extensions and the like met with a helpful response. Some



570 yards of additional branch sewers have been constructed, allowing of the conversion of eight privies, the abolition of eight cesspools and the connection to sewers of the drains of 19 houses.

**Closet Accommodation.**—The problem of decent sanitary provision for certain classes of property in Leeds is one of considerable moment. It presents a dual aspect, namely, type of closet and sufficiency.

With regard to the type of closet, a notable sanitary advance was effected during the year under survey by the conversion of 1,737 trough-closets into modern pedestal water-closets. Towards the cost of this work the Corporation paid £11,436 2s. 6d. in grants-in-aid to the property owners concerned. This expenditure is amply justified in that a marked improvement of sanitary environment has thereby been secured to some 15,000 of the poorer population of the city. In 1925 and 1926 the numbers of trough-closet conversions were respectively 559 and 537; 1927 therefore saw a large and welcome increase. During 1927 also, 39 additional water-closets were provided by various property owners on representations from this Department and 38 privies were converted into modern water-closets.

On July 29th, 1927, the Leeds Corporation Act, 1927 came into force in the city. Section 97 of this Act empowers the Corporation to compel conversion of trough-closets and provides, with certain qualifications, for financial assistance by the Corporation towards the cost of the necessary work. The present policy of the Corporation is to make a grant-in aid to property owners of 75 per cent. of the actual cost of conversion, provided such cost is reasonable and that the trough-closet, at the time of service of the notice to convert, is not in such a state as to constitute a nuisance. The way then is clear for continued progress in replacing this obsolete and unsatisfactory type of closet by the modern and more satisfactory pedestal.

The problem of sufficiency is not so easy of solution. The interpretation of "sufficiency" as used in Section 36 of The Public Health Act, 1875, is not evident and the term rather invites controversy.

It might be argued, that sufficiency in this connection implies not only numerical adequacy but also reasonable proximity of the closets to the dwellings they serve. Assuming this to be so, it is



clear that, in order to obtain sufficiency in many streets in the city, house demolition would have to be resorted to, to provide the necessary sites. At the present juncture, with the existing shortage of houses for the working classes such a policy would hardly be practicable. When eventually, however, the housing situation becomes easier, this problem of sufficiency of closet accommodation will have to be tackled.

The photographs on pages 40 and 41 depicting two sides of a typical row of back-to-back houses illustrate the points mentioned. There are 22 houses in this street (with occupants totalling 86) served by 6 trough-closets. On a basis of two houses per closet, there is a shortage of five closets. It will be observed that the occupiers of the furthest off houses have to traverse some 60 yards to reach the closets. There is therefore insufficiency not only in numbers but also in accessibility. Bedrooms of two of the houses extend over the closets, a condition of affairs very much to be condemned. The only solution to the difficulty thus presented is to demolish two houses in the middle of the block (at the point marked X on photographs) and erect on the cleared site a sufficient number of modern water-closets and a suitable platform for an adequate number of ashbins—the old trough-closets and ashpits to be abolished.

During the latter part of 1927 a special census was made of the trough-closets in the city, showing that on December 31st there remained 6,447. During the year 1,737 were converted and therefore the number at the end of 1926 must have been 8,184—not 7,685 as computed in last year's annual report.

**Cleansing.**—Household refuse collected by the Cleansing Department during 1927, amounted to 166,405 tons, of which 91,540 tons were dealt with at the destructors, 74,801 tons were disposed of at tips and for agricultural purposes and 64 tons were sold as manure to farmers. (I am indebted for this information to Mr. S. Thornley, the Cleansing Superintendent).

As compared with 1926, a larger proportion of refuse was consigned to the destructors and a smaller tonnage disposed of by tipping. This is a step in the right direction and a welcome improvement.

In response to representations from the Department 3,700 metal ashbins were provided during the year and of this number 310 were provided by the Corporation in default.

The general position with regard to the various types of sanitary conveniences in the City on December 31st, 1927, was as follows :— Privies 294, Pail-Closets 197, Trough-Closets 6,447 and Cistern Water-Closets approximately 100,000.

TABLE SHEWING NUMBERS OF TROUGH CLOSETS, PRIVIES AND PAIL CLOSETS IN THE CITY DURING THE LAST TWENTY-THREE YEARS.

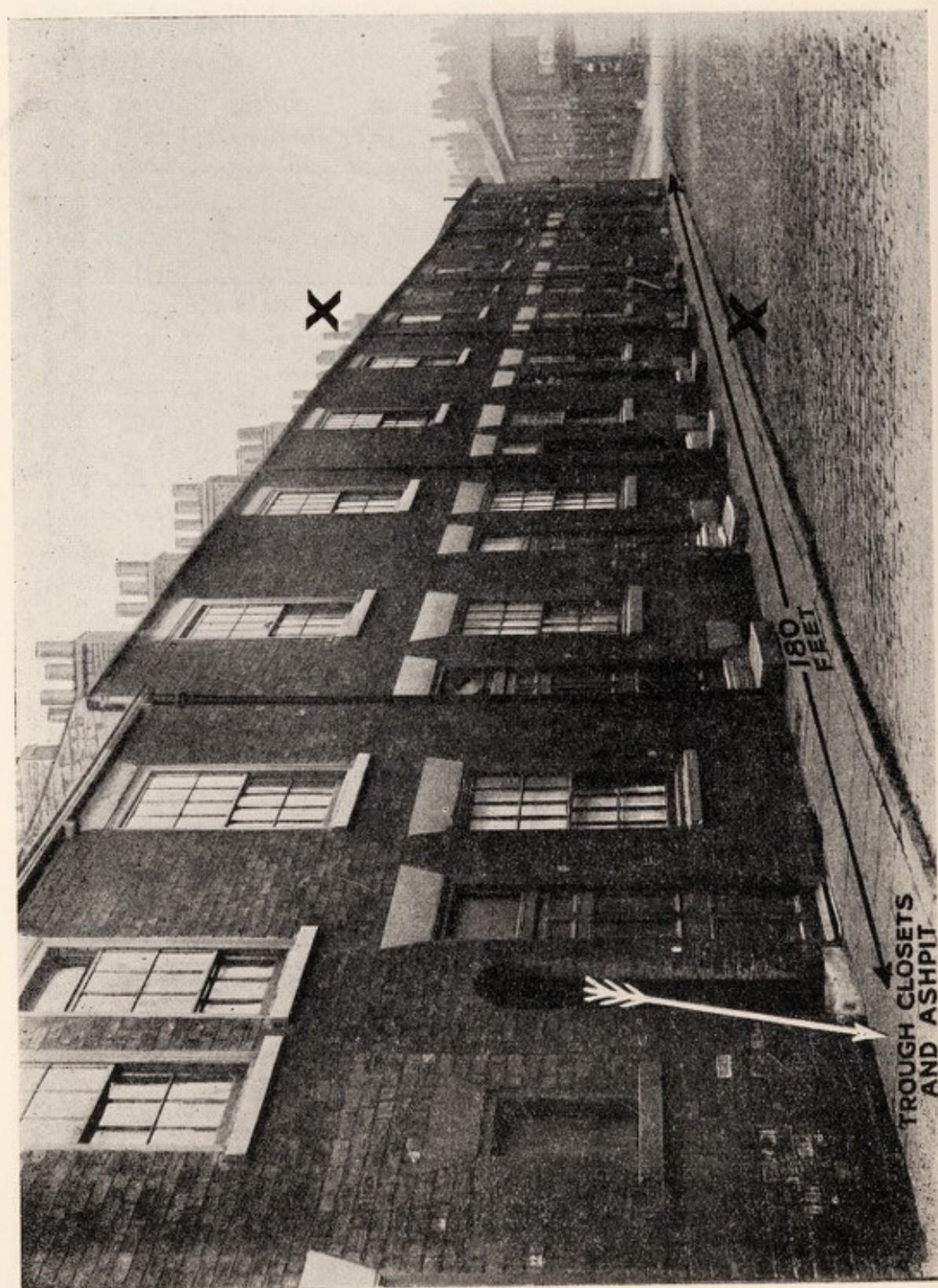
| Year. | Trough Closets. | Privies. | Pail Closets. |
|-------|-----------------|----------|---------------|
| 1905  | 10,507          | 1,669    | 231           |
| 1906  | 10,461          | 1,193    | 229           |
| 1907  | 10,424          | 963      | 228           |
| 1908  | 10,410          | 875      | 202           |
| 1909  | 10,120          | 851      | 198           |
| 1910  | 10,047          | 821      | 165           |
| 1911  | 9,963           | 785      | 164           |
| *1912 | 9,934           | 1,284    | 221           |
| 1913  | 9,790           | 1,269    | 217           |
| 1914  | 9,760           | 1,211    | 207           |
| 1915  | 9,738           | 1,047    | 188           |
| 1916  | 9,725           | 1,026    | 185           |
| 1917  | 9,723           | 1,023    | 169           |
| 1918  | 9,693           | 1,022    | 166           |
| 1919  | 9,655           | 1,014    | 166           |
| †1920 | 9,594           | 1,051    | 155           |
| 1921  | 9,521           | 900      | 128           |
| 1922  | 9,324           | 651      | 111           |
| 1923  | 9,256           | 558      | 102           |
| 1924  | 8,781           | 472      | 101           |
| 1925  | 8,222           | 332      | 94            |
| ‡1926 | 7,685           | 332      | 219           |
| 1927  | 6,447           | 294      | 197           |

\*Roundhay, Seacroft, Shadwell and Crossgates were brought within the city boundary in this year. In this area there were 502 privies and 61 pail closets.

†Middleton was brought within the city boundary in this year. In this area there were 148 privies.

‡Portion of Adel was brought within the city boundary in this year. In this area there were 65 privies and 136 pail closets.











The requirement of one bin per house has been maintained wherever space has permitted of such provision. In certain parts of the city it is evident that householders need educating up to the use of ashbins. The unfair usage to which bins are often subjected makes the necessity of replacement unduly frequent.

**The Rent and Mortgage Interest Restrictions Acts.**—Since July 1920, when the Rent Acts were introduced, up to the end of 1927, 1,322 applications for certificates have been received and 1,244 certificates and 27 reports issued by this Department. Of these 100 applications, 98 certificates and two reports belong to the year under review. In practice it is usual to find that remedial work is done by the owner concerned without more ado on presentation of the certificate by the tenant; hence the number of reports issued each year is small. The Rent Acts in so far as they relate to domestic sanitation have proved of great utility in obtaining rectification of those defects (affecting the interiors of dwellings) which do not come within the scope of the nuisance sections of the Public Health Acts as apart from the Housing Acts. It is now necessary, however, to anticipate the possible expiration of the Rent Acts at the end of 1928 and to revise departmental procedure in connection with the obligation of owners to render houses "in all respects reasonably fit for human habitation" under Section 3 of the Housing Act, 1925. The latter section is adequate and perhaps its outstanding virtue is the power to do work in default. In Leeds up to now, the administration of Section 3 has been the concern of the housing rather than the sanitary inspector. With the possible early expiration of the Rent Acts and in view of the fact that Section 3 of the Housing Act 1925 is closely associated with general sanitary work, it would appear necessary, in order to preserve the advantages of the Rent Acts to extend the application of the section to district sanitary work.

**District Sanitary Inspection.**—A satisfactory standard of routine inspectorial work has been maintained throughout 1927 and this despite exacting counter claims upon the inspectors' time occasioned by the smallpox epidemic during the latter half of the year. The volume of work performed will be better appreciated by referring to the appropriate tables on pages 44, 45 and 46.

The number of preliminary notices served during the year for the abatement of nuisances and for the repair of defective properties



was 10,213 and the number of statutory notices 3,823. Of the latter, 3,191 had been effective and 632 were outstanding at the year end.

In two cases only were legal proceedings necessary to enforce requirements of notices served under the Public Health Acts. It is usual to obtain a ready response from owners and agents to representations from this Department. Certain owners however—fortunately only a limited few—will do nothing except under extreme pressure, the application of which inevitably involves delay.

*Training of Sanitary Inspectors.*—Seven student sanitary inspectors received training in the Department during the year. The type of student was distinctly good and likely to help in maintaining that improved status of the sanitary inspector's calling which is happily apparent to-day.

*Offensive Trades.*—Six applications were made during the year for permission to establish the offensive trade of fish-frying in the City; of these applications five were granted and one refused.

For some time, a high hygienic standard for new fish-frying premises has been insisted upon by this department and there are now to be found in the City several model fried-fish shops. Every effort is being made to bring the old established premises, where such are unsatisfactory, up to the modern standard. In considering applications for the establishment of fish-frying businesses, the question of suitability of district may arise. Save in exceptional circumstances however, suitability of premises constitutes the main criterion on which applications are decided.

One application was granted for the extension of premises used for the trade of "fat melting."

In one case, the offensive trade of rag and bone dealer was found to have been commenced without permission on premises in the Meanwood Road district. The offender was summarily dealt with and the trade discontinued.

The total number of establishments in which the various offensive trades were being conducted in the City at the end of 1927 was 615, of which 495 were fish frying businesses.

During the year 1,327 visits of inspection were made in respect of offensive trades.



# Analysis of work done by District Inspectors in the several Wards, 1927.

| Northern Division. |             |      |       |                                 |         |             |            |          |            | Southern Division. |                                                                                   |       |     |     |     |     |     |     |     |       |        |
|--------------------|-------------|------|-------|---------------------------------|---------|-------------|------------|----------|------------|--------------------|-----------------------------------------------------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-------|--------|
| North.             | North East. | New. | West. | Headingley, Kirkstall and Adel. | Burley. | North West. | Brunswick. | Central. | Mill Hill. | Total.             | HOUSE INSPECTION.                                                                 |       |     |     |     |     |     |     |     |       |        |
| 145                | 142         | 57   | 71    | 47                              | 117     | 95          | 101        | 69       | 16         | 860                | 1. Houses and premises completely examined on account of                          | 141   | 44  | 169 | 102 | 120 | 56  | 98  | 46  | 776   | 1,636  |
| 10                 | 6           | 2    | 38    | 32                              | 19      | ..          | ..         | 11       | ..         | 118                | 2. Infectious disease                                                             | 2     | ..  | 8   | 3   | 1   | 17  | 6   | 9   | 46    | 164    |
| 39                 | 132         | ..   | 123   | 288                             | 72      | 3           | 67         | 146      | 210        | 1,080              | 3. Alleged nuisances                                                              | 144   | 132 | 136 | 134 | 132 | 132 | 114 | 141 | 1,065 | 2,145  |
| 14                 | 22          | 1    | 4     | 8                               | 3       | 1           | 3          | 1        | 2          | 59                 | 4. Houses and premises examined only as to                                        | 17    | 18  | 34  | 15  | 19  | 3   | 6   | 2   | 114   | 173    |
| 313                | 218         | 32   | 294   | 558                             | 249     | 227         | 475        | 393      | 64         | 2,823              | 5. Occupants                                                                      | 909   | 389 | 468 | 561 | 120 | 165 | 288 | 206 | 3,106 | 5,929  |
| 24                 | ..          | 4    | 60    | 64                              | 39      | 4           | 161        | 2        | 1          | 359                | 6. Alleged nuisances                                                              | 67    | 2   | 50  | 182 | 6   | 26  | 36  | 43  | 362   | 721    |
| 545                | 520         | 96   | 590   | 997                             | 499     | 330         | 807        | 622      | 293        | 5,299              | 7. Number of houses wholly or partly examined                                     | 1,280 | 585 | 865 | 947 | 398 | 399 | 548 | 447 | 5,469 | 10,768 |
| 289                | 247         | 27   | 381   | 724                             | 210     | 187         | 746        | 451      | 133        | 3,395              | 8. Total number of above houses where sanitary defects or nuisances were found .. | 1,170 | 438 | 613 | 582 | 240 | 230 | 416 | 272 | 3,961 | 7,356  |
|                    |             |      |       |                                 |         |             |            |          |            |                    | NUISANCES FOUND DURING ABOVE EXAMINATIONS AND DAILY INSPECTIONS.                  |       |     |     |     |     |     |     |     |       |        |
| 19                 | 14          | 2    | 20    | 2                               | 6       | 5           | 15         | 9        | 12         | 104                | 9. Houses dirty ..                                                                | 31    | 2   | 7   | 14  | 6   | 15  | 8   | 1   | 84    | 118    |
| 35                 | 27          | 2    | 3     | 10                              | 5       | 11          | 22         | 7        | 3          | 125                | 10. Overcrowded houses ..                                                         | 31    | 12  | 33  | 10  | 11  | 6   | 4   | 1   | 108   | 233    |
| 437                | 252         | 56   | 330   | 296                             | 165     | 337         | 450        | 705      | 156        | 3,184              | 11. Defective roofs, fallpipes and spouting, &c. ...                              | 628   | 215 | 402 | 424 | 480 | 353 | 359 | 128 | 2,989 | 6,173  |
| 67                 | 36          | 18   | 55    | 66                              | 25      | 18          | 52         | 27       | 25         | 389                | 12. Defective drains ..                                                           | 115   | 19  | 139 | 112 | 107 | 170 | 162 | 19  | 843   | 1,232  |
| 2                  | ..          | 5    | 2     | 43                              | 3       | ..          | ..         | 9        | ..         | 64                 | 13. Houses without proper drains ..                                               | 3     | ..  | 3   | ..  | 2   | 12  | 29  | 24  | 73    | 137    |
| 3                  | ..          | ..   | 2     | 7                               | ..      | 1           | 4          | 14       | ..         | 31                 | 14. " without proper water supply                                                 | ..    | ..  | ..  | ..  | ..  | 4   | 6   | 2   | 12    | 43     |
| ..                 | 1           | ..   | 1     | 7                               | 2       | ..          | ..         | ..       | ..         | 11                 | 15. Privies ..                                                                    | ..    | ..  | ..  | ..  | 1   | ..  | ..  | ..  | 1     | 12     |
| 2                  | ..          | 9    | ..    | 10                              | ..      | ..          | 1          | ..       | ..         | 22                 | 16. " badly lighted or ventilated ..                                              | 2     | ..  | 4   | ..  | 6   | ..  | 10  | 9   | 25    | 47     |
| 1                  | ..          | ..   | ..    | 1                               | ..      | ..          | ..         | ..       | 1          | 3                  | 17. Additional closets required ..                                                | 4     | ..  | 5   | 6   | 1   | 8   | 4   | 2   | 35    | 38     |
| 1                  | ..          | ..   | ..    | ..                              | ..      | ..          | ..         | ..       | ..         | 54                 | 18. Pail closets ..                                                               | ..    | 1   | ..  | ..  | 1   | ..  | 2   | 19  | 23    | 24     |
| 293                | 173         | 12   | 89    | 58                              | 66      | 12          | 98         | 102      | 51         | 954                | 19. Defective or unsuitable trough or water closets                               | 630   | 64  | 324 | 214 | 254 | 228 | 183 | 30  | 1,927 | 2,881  |
| 6                  | 7           | ..   | 3     | 7                               | 19      | 2           | 9          | 10       | 1          | 64                 | 20. Ashpits (a) Sunken ..                                                         | 9     | ..  | 11  | 9   | 8   | 2   | 21  | 4   | 64    | 128    |
| 33                 | 11          | ..   | 20    | 14                              | 11      | 2           | 12         | 17       | ..         | 120                | 20. Ashpits (b) Other than sunken ..                                              | 6     | ..  | 25  | 28  | 30  | 8   | 16  | 7   | 120   | 240    |
| 708                | 353         | 42   | 287   | 356                             | 421     | 290         | 279        | 121      | 101        | 2,988              | 21. Houses with unsuitable or insufficient ashes accommodation ..                 | 339   | 138 | 289 | 343 | 255 | 156 | 444 | 215 | 2,179 | 5,167  |
| 27                 | 34          | 2    | 18    | 11                              | 13      | 1           | 35         | 16       | 14         | 171                | 22. Dirty closets ..                                                              | 90    | 12  | 38  | 3   | 25  | 20  | 28  | 1   | 217   | 388    |



Analysis of work done by District Inspectors in the several Wards, 1927—continued.

| Northern Division.  |             |      |       |                                 |         |             |            |          |            | Southern Division. |     |       |        |               |               |          |              |                     |          |        |              |       |
|---------------------|-------------|------|-------|---------------------------------|---------|-------------|------------|----------|------------|--------------------|-----|-------|--------|---------------|---------------|----------|--------------|---------------------|----------|--------|--------------|-------|
| North.              | North East. | New. | West. | Headingley, Kirkstall and Adel. | Burley. | North West. | Brunswick. | Central. | Mill Hill. | Total.             |     | East. | South. | East Hunslet. | West Hunslet. | Holbeck. | New Wortley. | Armley and Wortley. | Bramley. | Total. | City Totals. |       |
| 40                  | 7           | 1    | 15    | 15                              | 7       | 4           | 34         | 3        | 27         | 153                | 23. | 31    | 1      | 3             | 13            | 54       | 3            | 24                  | 3        | 8      | 132          | 285   |
| 89                  | 121         | 24   | 71    | 82                              | 62      | 63          | 168        | 95       | 131        | 906                | 24. | 164   | 100    | 197           | 118           | 117      | 164          | 66                  | 45       | 3      | 971          | 1,877 |
| 470                 | 280         | 21   | 262   | 125                             | 170     | 215         | 261        | 97       | 113        | 2,014              | 25. | 353   | 87     | 342           | 220           | 235      | 339          | 220                 | 88       | 1,884  | 3,898        |       |
| 2,650               | 1,673       | 188  | 1,603 | 852                             | 1,074   | 1,009       | 1,582      | 1,230    | 543        | 12,404             | 26. | 2,451 | 771    | 2,071         | 1,555         | 1,593    | 1,541        | 1,468               | 571      | 12,021 | 24,425       |       |
|                     |             |      |       |                                 |         |             |            |          |            |                    | 27. |       |        |               |               |          |              |                     |          |        |              |       |
| 40                  | 20          | 16   | 34    | 20                              | 14      | 7           | 25         | 12       | 37         | 225                |     | 8     | 18     | 17            | 13            | 4        | 4            | 16                  | 3        | 83     | 308          |       |
| ..                  | ..          | ..   | ..    | 19                              | ..      | ..          | ..         | ..       | ..         | 19                 | 28. | ..    | ..     | ..            | ..            | ..       | ..           | ..                  | ..       | ..     | ..           |       |
| ..                  | ..          | ..   | ..    | 3                               | ..      | ..          | ..         | ..       | ..         | 41                 | 29. | ..    | ..     | ..            | ..            | ..       | ..           | ..                  | ..       | ..     | ..           |       |
| ..                  | ..          | ..   | ..    | 5                               | 15      | 2           | 7          | 5        | ..         | 44                 | 30. | ..    | 4      | 1             | 5             | 2        | 1            | 5                   | 3        | 1      | ..           |       |
| 2,337               | 1,351       | 218  | 1,222 | 1,157                           | 1,006   | 945         | 1,476      | 1,249    | 672        | 11,633             | 31. | 2,451 | 673    | 1,841         | 1,533         | 1,598    | 1,498        | 1,610               | 602      | 11,806 | 23,439       |       |
| 45                  | 29          | 1    | 32    | 47                              | 27      | 9           | 3          | ..       | ..         | 193                | 32. | 6     | ..     | 14            | 7             | 28       | 7            | 10                  | 3        | 75     | 268          |       |
| 1,121               | 4,600       | 146  | 322   | 112                             | 365     | 485         | 198        | 355      | 16         | 7,720              | 33. | 457   | 86     | 84            | 133           | 99       | 35           | 62                  | 43       | 909    | 8,719        |       |
| 2,306               | 2,334       | 97   | 1,144 | 468                             | 1,043   | 1,150       | 1,029      | 1,915    | 242        | 11,728             | 34. | 1,095 | 321    | 1,491         | 1,919         | 480      | 725          | 675                 | 511      | 7,217  | 18,945       |       |
| 615                 | 317         | 117  | 404   | 206                             | 262     | 320         | 352        | 218      | 120        | 2,931              | 35. | 1,066 | 215    | 520           | 846           | 617      | 468          | 391                 | 210      | 4,333  | 7,264        |       |
| 536                 | 308         | 493  | 127   | 35                              | 56      | 96          | 263        | 39       | 1,033      | 2,986              | 36. | 36    | 110    | 365           | 219           | 8        | 83           | 395                 | 223      | 1,439  | 4,425        |       |
|                     |             |      |       |                                 |         |             |            |          |            |                    |     |       |        |               |               |          |              |                     |          |        |              |       |
| 17                  | 17          | 16   | 674   | 82                              | 11      | ..          | ..         | 115      | ..         | 932                | 37. | 839   | ..     | 959           | 247           | 143      | 679          | 807                 | 82       | 3,756  | 4,688        |       |
| 18                  | 3           | 19   | 7     | ..                              | ..      | 28          | 7          | 70       | 30         | 182                | 38. | 252   | 39     | 87            | 144           | 178      | 88           | 84                  | 121      | 993    | 1,175        |       |
| ..                  | 1           | 11   | 1     | 3                               | ..      | 11          | 3          | 29       | 2          | 66                 | 39. | 63    | 3      | 30            | 21            | 8        | 28           | 13                  | 6        | 172    | 2,288        |       |
| 123                 | 104         | 63   | 105   | 264                             | 148     | 104         | 90         | 249      | 116        | 1,366              | 40. | 412   | 222    | 257           | 371           | 314      | 144          | 258                 | 206      | 2,184  | 3,550        |       |
| 105                 | 77          | 15   | 58    | 50                              | 25      | 31          | 67         | 3        | 28         | 459                | 41. | 135   | ..     | 59            | 142           | 119      | 96           | 94                  | 62       | 707    | 1,166        |       |
| 1,174               | 656         | 46   | 584   | 383                             | 417     | 444         | 831        | 691      | 200        | 5,426              | 42. | 701   | 502    | 788           | 619           | 743      | 622          | 597                 | 215      | 4,787  | 10,213       |       |
| 565                 | 287         | 49   | 186   | 159                             | 146     | 135         | 168        | 204      | 112        | 2,011              | 43. | 268   | 112    | 310           | 261           | 328      | 180          | 241                 | 112      | 1,812  | 3,823        |       |
| NUISANCE ABATEMENT. |             |      |       |                                 |         |             |            |          |            |                    |     |       |        |               |               |          |              |                     |          |        |              |       |
| 577                 | 275         | 40   | 102   | 281                             | 297     | 100         | 139        | 43       | 98         | 1,952              | 44. | 297   | 66     | 277           | 301           | 217      | 148          | 329                 | 113      | 1,748  | 3,700        |       |
| 12                  | 9           | ..   | 5     | 1                               | 6       | 2           | 5          | 8        | 7          | 55                 | 45. | 30    | 2      | 8             | 5             | 5        | 13           | 4                   | 1        | 68     | 123          |       |
| 1                   | 5           | 1    | 9     | 2                               | 1       | 5           | 4          | 3        | 1          | 32                 | 46. | 14    | 1      | 7             | 1             | 3        | 4            | 1                   | ..       | 31     | 63           |       |

\*In addition to the above, 152 visits were paid by the Workshops Inspectors to Offensive Trades; also 1,433 visits to premises (other than shops) where ice-cream is manufactured were paid by the two special inspectors who carry out this inspection along with other duties.



Analysis of work done by District Inspectors in the several Wards, 1927—continued.

| Northern Division. |             |      |       |                                 |         |             |            |          |            | Southern Division. |       |                                                              |               |               |          |              |                      |          |        |              |        |       |
|--------------------|-------------|------|-------|---------------------------------|---------|-------------|------------|----------|------------|--------------------|-------|--------------------------------------------------------------|---------------|---------------|----------|--------------|----------------------|----------|--------|--------------|--------|-------|
| North              | North East. | New. | West. | Headingley, Kirtstall and Adel. | Burley. | North West. | Burnswick. | Central. | Mill Hill. | Total.             | East. | South.                                                       | East Hunslet. | West Hunslet. | Holbeck. | New Wortley. | Armsley and Wortley. | Bramley. | Total. | City Totals. |        |       |
| 456                | 228         | 44   | 349   | 315                             | 199     | 403         | 346        | 634      | 151        | 3,125              | 47.   | Defective roofs, fallpipes and spouting, &c. repaired .. ..  | 676           | 185           | 392      | 418          | 482                  | 337      | 436    | 109          | 3,035  | 6,160 |
| 28                 | 2           | 4    | 5     | 13                              | 7       | 2           | 5          | ..       | 5          | 71                 | 48.   | Disconnection of house drains .. ..                          | 72            | 8             | 22       | 41           | 32                   | 91       | 89     | 16           | 371    | 442   |
| 69                 | 19          | 14   | 17    | 59                              | 6       | 21          | 31         | 29       | 19         | 284                | 49.   | Other drainage works .. ..                                   | 59            | 14            | 108      | 102          | 63                   | 59       | 72     | 23           | 500    | 784   |
| ..                 | ..          | 1    | ..    | 35                              | 1       | ..          | ..         | ..       | ..         | 37                 | 50.   | Houses provided with proper drains .. ..                     | 2             | ..            | 2        | ..           | 3                    | ..       | 17     | 16           | 40     | 77    |
| ..                 | ..          | ..   | ..    | 5                               | 3       | ..          | ..         | ..       | ..         | 8                  | 51.   | Houses supplied with town's water .. ..                      | ..            | ..            | ..       | ..           | ..                   | ..       | ..     | 11           | 11     | 19    |
| ..                 | 1           | ..   | ..    | 11                              | 2       | ..          | ..         | ..       | ..         | 14                 | 52.   | Improved lighting and ventilation for houses .. ..           | ..            | ..            | ..       | ..           | ..                   | ..       | ..     | 1            | 1      | 15    |
| 2                  | ..          | 9    | ..    | 2                               | ..      | ..          | ..         | ..       | ..         | 13                 | 53.   | Privies abolished or converted into water closets .. ..      | ..            | ..            | 5        | ..           | ..                   | 10       | 10     | 25           | 38     |       |
| ..                 | 4           | 1    | 3     | 1                               | ..      | ..          | ..         | ..       | ..         | 9                  | 54.   | Water closets erected (a) Outside .. ..                      | ..            | ..            | 3        | 6            | 3                    | ..       | 3      | 22           | 31     |       |
| 1                  | ..          | 1    | ..    | ..                              | ..      | ..          | ..         | ..       | ..         | 2                  | 55.   | Pail closets abolished or converted into water closets .. .. | ..            | ..            | ..       | 1            | 2                    | ..       | ..     | 6            | 8      |       |
| ..                 | ..          | ..   | ..    | 2                               | ..      | ..          | ..         | ..       | ..         | 2                  | 56.   | Trough closets converted into water closets .. ..            | 613           | 77            | 139      | 133          | 167                  | 111      | 19     | 20           | 22     |       |
| 57                 | 84          | ..   | 46    | 9                               | 5       | 73          | 120        | 18       | 4          | 416                | 57.   | Trough and water closets repaired .. ..                      | 37            | 53            | 179      | 85           | 105                  | 146      | 79     | 2            | 1,321  |       |
| 297                | 137         | 18   | 108   | 45                              | 81      | 24          | 71         | 105      | 34         | 920                | 58.   | Asphits abolished (a) Sunken .. ..                           | 11            | 3             | 13       | 3            | 10                   | 4        | 37     | 37           | 1,737  |       |
| 36                 | 7           | ..   | 2     | 11                              | 24      | 5           | 11         | 9        | 3          | 108                | 59.   | Houses provided with suitable ashes accommodation .. ..      | 1             | 9             | 24       | 33           | 35                   | 25       | 20     | 3            | 67     |       |
| 34                 | 7           | ..   | 10    | 9                               | 5       | 4           | 6          | 8        | ..         | 83                 | 60.   | Closets cleansed (linewashed, etc.) .. ..                    | 309           | 89            | 342      | 335          | 279                  | 171      | 14     | 3            | 144    |       |
| 863                | 350         | 44   | 244   | 342                             | 497     | 165         | 203        | 186      | 100        | 2,994              | 61.   | Yard surfaces repaired or renewed .. ..                      | 77            | 19            | 37       | 2            | 17                   | 29       | 34     | ..           | 2,153  |       |
| 31                 | 31          | 2    | 26    | 12                              | 8       | 27          | 29         | 32       | 10         | 208                | 62.   | Stopped drains cleared .. ..                                 | 31            | ..            | 3        | 23           | 54                   | 1        | 16     | 149          | 322    |       |
| ..                 | ..          | ..   | ..    | ..                              | ..      | ..          | ..         | ..       | ..         | ..                 | 63.   | Other nuisances remedied .. ..                               | 187           | 85            | 199      | 99           | 108                  | 55       | 48     | 949          | 1,866  |       |
| ..                 | ..          | ..   | ..    | ..                              | ..      | ..          | ..         | ..       | ..         | ..                 | 64.   | Total houses for which above work done .. ..                 | 310           | 84            | 320      | 124          | 225                  | 177      | 63     | 1,556        | 3,328  |       |
| 2,839              | 1,646       | 177  | 1,543 | 887                             | 1,106   | 1,002       | 1,334      | 1,186    | 553        | 12,333             | 65.   | Offensive accumulations removed .. ..                        | 2,426         | 825           | 2,052    | 1,562        | 1,607                | 1,572    | 540    | 12,174       | 24,507 |       |
| 47                 | 7           | 13   | 19    | 5                               | 12      | 7           | 20         | 14       | 37         | 181                | 66.   | New manure pits or metal receptacles provided .. ..          | 8             | 13            | 17       | 4            | 4                    | 2        | 8      | ..           | 56     | 237   |
| 2                  | 2           | 1    | 1     | ..                              | ..      | ..          | 1          | 10       | ..         | 17                 | 67.   | Manure pits repaired .. ..                                   | ..            | 3             | ..       | ..           | ..                   | ..       | ..     | 3            | 20     | 3     |
| 1                  | 1           | ..   | ..    | ..                              | ..      | ..          | ..         | ..       | ..         | 2                  | 68.   | Pollutions of river or streams abated .. ..                  | ..            | 1             | ..       | ..           | ..                   | ..       | ..     | 1            | 14     | 14    |
| ..                 | ..          | ..   | ..    | 14                              | ..      | ..          | ..         | ..       | ..         | 14                 | 69.   | Animals improperly kept removed .. ..                        | ..            | 4             | 1        | 3            | 2                    | 1        | 4      | ..           | 16     | 37    |
| 1                  | 4           | ..   | 2     | 2                               | 2       | 1           | 6          | 3        | ..         | 21                 | 70.   | Offensive urinals dealt with .. ..                           | 1             | ..            | ..       | ..           | ..                   | ..       | ..     | 7            | 26     | 7     |
| 5                  | 3           | 3    | 2     | 3                               | 1       | ..          | 2          | ..       | ..         | 19                 | 71.   | Cesspools filled up .. ..                                    | ..            | ..            | 2        | 1            | ..                   | ..       | 2      | 2            | 8      | 15    |
| ..                 | ..          | ..   | ..    | 7                               | ..      | ..          | ..         | ..       | ..         | 7                  | 72.   | Public or private wells abolished .. ..                      | ..            | ..            | ..       | ..           | ..                   | ..       | ..     | 1            | 1      | 3     |
| ..                 | ..          | ..   | ..    | 2                               | ..      | ..          | ..         | ..       | ..         | 2                  | 73.   | Total nuisances abated .. ..                                 | 2,438         | 650           | 1,824    | 1,419        | 1,602                | 1,423    | 539    | 11,534       | 23,040 |       |
| 2,551              | 1,305       | 205  | 1,179 | 1,100                           | 1,078   | 966         | 1,226      | 1,231    | 665        | 11,506             | ..    | ..                                                           | ..            | ..            | ..       | ..           | ..                   | ..       | ..     | ..           | ..     | ..    |



**Common Lodging Houses.**—At the end of the year there were in the City 31 registered common lodging-houses, 28 for men and three for women. During the year, internal structural alterations were effected at the premises at 47, 49 and 51, Holbeck Lane, as a result of which 21 additional beds were registered. There were at the year end 1,748 beds for males and 127 for females and children available in Leeds common Lodging-houses. In the men's houses there were accommodated during the year 3,949 permanent and 49,347 casual lodgers, whilst in the women's the numbers were 269 permanent and 1,336 casual lodgers and 572 children.

As stated in last year's report, the women's common lodging-house at 54, Lady Lane will be abolished when the street improvements contemplated in this area are put in hand.

There are in addition to the common lodging-houses enumerated above, three unregistered houses for men which are administered by the Salvation Army and Church Army. These houses are structurally ideal for their purpose and the management is satisfactory. The three houses together have 338 beds and during the year were occupied on 123,370 occasions.

The general standard of cleanliness in all the common lodging-houses was well maintained during the year. Drastic action was taken by this Department with regard to the Keepers of two houses owing to laxity of management, and a much improved state of affairs resulted in each case.

During the year four changes of Keeper and seven changes of Deputy were approved.

On the last day of the year a case of smallpox occurred in the New Lane lodging-house. Infection had been contracted outside the city. Vigorous preventive measures were practised and no further case followed.

**University Lodgings.**—As in previous years, the lodgings on the register of approved premises for the use of University students were duly inspected and the results reported to the University Authorities. In this connection the following details are given:—

|                                        | HOUSES. ROOMS. |     |
|----------------------------------------|----------------|-----|
| New lodgings inspected during 1927 ..  | 14             | 32  |
| Old lodgings re-inspected .. ..        | 83             | 237 |
| Drains tested—270 drains in 74 houses. |                |     |

Details of sanitary defects ascertained and rectified are included in the table under houses-let-in-lodgings.

**Residential Flats.**—In 45 houses there are 172 flats to which 56 visits of inspection were made by the appropriate inspector; 15 sanitary defects were found and abated.







Those who occupy rooms in registered houses-let-in-lodgings belong to the working classes as defined in the 1925 Housing Act. In many cases they are sorely exploited in the matter of rental by the sub-lessors. Apart from this unfortunate economic aspect, many of these so-called homes are occupied by families the size and sex-composition of which permit of little chance of sanitary or moral environment. To house these people satisfactorily is a great difficulty ; at the end of 1927 it must still be apparent that the housing of the poorer working classes stands an unsolved problem. It is true that building proceeds apace and that during the year 1927 more Council houses were erected. The rentals of the latter, however, come within the means of only the more highly paid worker or of the family with more than one breadwinner. If a lower-paid worker takes a Council house, he finds he must perforce sublet or take in lodgers—thus tending to reproduce the very conditions he wished to escape. The position emphasises the need for the erection of decent dwellings to let at say 5s. per week, or alternatively the provision of flats at a similar rental (100 flats are being erected by the Corporation during the current year, 1928) and the systematic reconditioning of defective houses in suitable areas.

The problem is clearly an economic one. If prevailing land prices and building costs will not ordinarily permit of the production of suitable dwellings at a rental adapted to the meagre incomes of the many families at present uncatered for, then only liberal subsidising or frank philanthropy will meet the case. The latter possibility might be more fully explored. There are two bodies in Leeds which have done good work on quasi-philanthropic lines, namely, the \*Sutton Trust and the \*Church Army Housing Ltd., The Leeds Industrial Dwellings Co. Ltd.—owning some 800 houses—has also rendered good service by reconditioning insanitary houses in various parts of the city.

**Cellar Dwellings and Underground Sleeping Rooms.**—There are only eight cellar dwellings in the city. These are situate in Bath Street, York Road, and are occupied by old-age pensioners who pay 1s. 8d. per week for each dwelling.

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\*The Sutton Trust has built 221 houses suitable for the working classes on an estate off the York Road, near Killingbeck to let at from 8s. per week clear. The Church Army Ltd. has built 12 houses of a similar type at Harehills Lane to let at 11s. per week clear.



Some 23 underground rooms, used as combined rooms, were found during the year. Alternative accommodation was arranged in 20 cases and the remainder were still under consideration at the end of the year.

Below are particulars of visits, nuisances found and notices issued :—

|                                            |        |         |
|--------------------------------------------|--------|---------|
| Visits to cellar dwellings .. .. .         | 17     |         |
| Visits to underground sleeping-rooms ..    | 27     |         |
| Visits on account of nuisance abatement .. | 40     |         |
| Preliminary notices served .. .. .         | 21     |         |
| Statutory notices served .. .. .           | —      |         |
| Verbal notices given .. .. .               | 3      |         |
| <hr/>                                      |        |         |
| Nuisances :—                               | FOUND. | ABATED. |
| Underground sleeping-rooms .. .. .         | 23     | 20      |
| Other nuisances .. .. .                    | 2      | 2       |

**Tents and Vans.**—The number of camping grounds for vandwellers increased from 28 at the end of 1926 to 32 on December 31st, 1927. At one time during the year the number was as high as 39. Seven of these places, however, were closed down in consequence of having no water supply or sanitary conveniences. The limitation of the number of camping grounds would conduce to more complete supervision. An attempt to reduce the number will be made during the current year.

|                                                       |        |         |
|-------------------------------------------------------|--------|---------|
| Visits to vans (262 vans) .. .. .                     | 972    |         |
| Visits to tents (8 tents) .. .. .                     | 63     |         |
| Visits on account of infectious disease ..            | 51     |         |
| Visits to camping grounds .. .. .                     | 183    |         |
| Visits on account of nuisances .. .. .                | 365    |         |
| <hr/>                                                 |        |         |
| Nuisances :—                                          | FOUND. | ABATED. |
| Dirty camping grounds .. .. .                         | 2      | 2       |
| Dirty vans .. .. .                                    | 10     | 10      |
| Overcrowded vans .. .. .                              | 4      | 4       |
| Camping places without sanitary accommodation .. .. . | 12     | 7       |
| Other nuisances .. .. .                               | 221    | 204     |

**Schools.**—A separate report is issued by the School Medical Officer, which deals with the sanitary circumstances of the elementary schools and the health of children between five and fourteen years of age.

**Canal Boats.**—The work in connection with the registration and inspection of canal boats has been carried on as in past years. Details appear in the table appended.

#### CANAL BOATS.

|                                                                                     |     |
|-------------------------------------------------------------------------------------|-----|
| Registered during the year 1927 .. .. .                                             | 6   |
| Re-registered and Transferred to fresh owners ..                                    | 11  |
| Struck off register (on revising register) .. ..                                    | 7   |
| Remaining on register at end of year.. .. .                                         | 166 |
| Visits of inspection to wharves and locks .. ..                                     | 587 |
| Complete inspections of boats (242 boats) .. ..                                     | 701 |
| Cases of infectious disease .. .. .                                                 | ..  |
| Cases of overcrowding .. .. .                                                       | ..  |
| Dirty cabins .. .. .                                                                | 3   |
| Absence of registration certificate .. .. .                                         | 10  |
| Boats not marked with registered number .. ..                                       | 12  |
| „ not properly ventilated .. .. .                                                   | 1   |
| „ requiring painting or repairing .. .. .                                           | 8   |
| Number of children of school age found on<br>registered boats—20 boats, 24 children |     |

**Ice Cream—Manufacturers and Vendors—Premises.**—Section 96 of the Leeds Corporation Act, 1927, which came into force in the city on July 29th, 1927, makes compulsory the registration of premises—except hotels and restaurants—on which ice-cream is made or sold. This new power enables a tighter supervision to be maintained over manufacturers and vendors of this article of food.

The Section exempts “restaurants” from registration, but no definition of “restaurant” is given which is somewhat regrettable. The work of registration was still in progress at the end of the year. On December 31st there were 68 names on the register.

The hygienic standard of manufacture and distribution of ice-cream in the city has been maintained throughout the year.



## ICE CREAM STREET VENDORS AND PLACES OF MANUFACTURE.

|                                                       |       |    |
|-------------------------------------------------------|-------|----|
| Number of ice-cream sheds at the end of 1927          | 83    |    |
| " " " vendors at the end of 1927 .. ..                | 154   |    |
| " " " carts .. ..                                     | 305   |    |
| " " " places registered ..                            | 27    |    |
| " " visits to ice cream sheds (83 sheds)              | 1,433 |    |
| " " ice cream carts inspected (305 carts) .. ..       | 1,391 |    |
| Unsuitable ice cream sheds .. ..                      | 29    |    |
| Ice cream sheds repaired .. ..                        | 17    |    |
| Sheds closed on account of unsuitability ..           | 12    |    |
| Visits on account of nuisance abatements ..           | 280   |    |
| Nuisances :—                                          |       |    |
| Dirty ice cream places .. ..                          | 10    | 10 |
| Defective walls and floors .. ..                      | 5     | 5  |
| Defective or stopped drains .. ..                     | 6     | 6  |
| Other structural defects .. ..                        | 56    | 56 |
| Ice-cream carts not marked with owner's address .. .. | 15    | 15 |
| TOTAL ..                                              | 92    | 92 |

**Public Conveniences.**—Two new public conveniences have been completed during the year, the accommodation in each consisting of six stalls for males and three water-closets for females. The new conveniences are situate respectively at the junction of Roundhay Road and North Street and at the junction of Woodhouse Lane and Cookridge Street.

The projected erection of a public convenience on the new Middleton Park Estate, mentioned in last year's Annual Report, is likely to materialize during the current year. A suitable site has been obtained and plans approved.

With regard to the proposed conveniences at the Killingbeck and Lawnswood tram termini, circumstances have not permitted progress during the year.

There is need of a convenience at the Meanwood tram terminus, and attempts have been made to find a suitable site but so far without success.

Necessity has lately arisen for a women's convenience at the North end of Vicar Lane on account of its selection as a bus terminus for the Wetherby and Harrogate buses. Steps are being taken to supply this need.

At the end of 1927 there were in the city 55 public conveniences under the control of the Health Committee—exclusive of those in parks, etc., controlled by the Parks and Allotments Committee.

**Rat Repression.**—The conduct of rat repression work during the year has been successfully carried on by the two executive rats officers. The need for a whole-time rat catcher was mentioned in the last year's report.

Leeds, unlike a sea-port, is not directly threatened by rat-borne disease from overseas; even so, from the economic viewpoint alone, rat extermination is an urgent need and demands constant attention.

Particulars of the work done during 1927 under the Rats and Mice (Destruction) Act, 1919, are given hereunder:—

|                                                                                                |       |
|------------------------------------------------------------------------------------------------|-------|
| Complaints received .. .. .                                                                    | 245   |
| Premises inspected .. .. .                                                                     | 569   |
| Premises cleared .. .. .                                                                       | 306   |
| Rats caught or found poisoned .. .. .                                                          | 3,490 |
| Visits for purposes of observation of work in progress                                         | 635   |
| Visits for other causes such as interviews with<br>owners of infested premises and the like .. | 273   |
| Informal notices served .. .. .                                                                | 7     |
| Notices complied with .. .. .                                                                  | 9     |

The Annual Rat Week was held in November and during this period appropriate propaganda work was conducted. Spasmodic campaigns, however, cannot replace constant effort; in other words "every week should be a rat week."

**Factory and Workshop Act, 1901.**—On pages 56 and 57 will be found a complete summary of work done during the year under the above Act, including a record of bakehouse inspections.

The question has arisen from time to time as to whether the Health Authority can forbid the use of an underground room as a preparation-place in connection with the trade of say a pork-butcher. In such a case the preparation-room would not constitute a "bake-house" within the meaning of the Act, for such articles of food



as pork-pies, sausage-rolls and the like are generally held not to come within the scope of the terms "bread, biscuits or confectionery" as used in the definition of a bakehouse. There is therefore at present no legal power to forbid the use of underground rooms for this purpose; it is the policy, however, of this Department to discourage the use of basements for food preparation; if, nevertheless, basements are so used, they are subjected to special and frequent inspection under the powers contained in Section 72 of the Public Health Act, 1925.

OTHER VISITS PAID BY MALE WORKSHOPS INSPECTORS.

|                             | Factories. | Workshops. | Workplaces. |
|-----------------------------|------------|------------|-------------|
| Non-abatements .. ..        | 273        | 234        | 43          |
| Drain Inspection .. ..      | 110        | 8          | 62          |
| Drains tested .. ..         | 43         | 4          | 21          |
| Disease enquiries .. ..     | 401        | 12         | 178         |
| River pollution .. ..       | 2          | ..         | ..          |
| Complaints .. ..            | 68         | 37         | 5           |
| Measurement of workrooms .. | ..         | 16         | ..          |
| Other causes .. ..          | 562        | 109        | 34          |
| TOTAL .. ..                 | 1,459      | 420        | 343         |

**Plans.**—The system whereby plans submitted to the Building Surveyor and dealing with alterations to property involving sanitary works are reviewed by this Department before being finally approved by the Corporation was continued throughout the year. The total number of plans examined and commented upon was 278, as compared with 321 for the previous year.

**Work of Women Inspectors.**—Two women sanitary inspectors are constantly engaged in visiting the homes of outworkers, carrying out investigations into outbreaks of infectious disease in factories, workshops and schools, and attending to complaints received from the factory inspectors or other sources as to sanitary defects affecting the health of the workers in factories and workshops, also in making routine inspection of workshops and restaurants.

The following is a summary of their work :—

*Infectious Diseases.*—The following visits were made :—

|                                                 |         |       |
|-------------------------------------------------|---------|-------|
| To schools (on account of 725 cases)            | ..      | 1,439 |
| To absent pupils                                | .. .. . | 67    |
| To factories (45 cases)                         | .. .. . | 44    |
| To workshops                                    | .. .. . | —     |
| To workplaces, including restaurants (18 cases) |         | 15    |
| To absent employees                             | .. .. . | —     |

*Factories and Workshops.*—Part of the work done by the women inspectors under this heading appears on pages 56 and 57.

In addition to that appearing in the table the following visits were paid :—

|                                   |         |             |
|-----------------------------------|---------|-------------|
| Outworkers' homes                 | .. .. . | 830         |
| Outworkers, employers' premises   | ..      | 169         |
| Factories                         | .. .. . | 51          |
| Workshops (routine and complaint) | ..      | 133         |
| Workplaces and restaurants do.    | ..      | 30          |
| Special visits                    | .. .. . | 5           |
|                                   |         | <hr/> 1,218 |

Inspections of public sanitary conveniences

for women .. .. . 58

Nuisances found 63, abated 59.

**Rag Flock Act, 1911.**—During the year, 16 visits were made to premises occupied by persons engaged in the manufacture or use of rag flock. Six samples were taken and submitted for analysis, five of which were found to comply with the requirements of the Rag Flock Act. One sample was found to contain 79·5 parts of chlorine per 100,000 or 49·5 parts in excess of the legal standard. Proceedings were instituted against the offender and a penalty of £10 and costs inflicted.

The practice of washing rags before being converted into flock has become general throughout the City and there is now little (if any) unwashed rag flock imported into the City.

The use of white cotton flock in place of rag flock continues to increase. This material, whilst not so satisfactory from a commercial point of view, is more hygienic, as owing to its vegetable origin, it is less liable to pollution. Cotton flock not being made from " rags " is not subject to the restrictions laid down in the Act.





## 3. 4. 5.—OTHER MATTERS.

|                                                                                                                                      | Number of                                                                         |       |     |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|-----|
|                                                                                                                                      | Lists.                                                                            | C.    | W.  |
| <b>Homework :—</b>                                                                                                                   |                                                                                   |       |     |
| <i>List of Outworkers (S. 107) :—</i>                                                                                                |                                                                                   |       |     |
| (No homeworkers on our register except amongst those engaged in making wearing apparel)                                              | ..                                                                                | ..    | ..  |
| Lists received twice in the year                                                                                                     | 372                                                                               | 558   | 914 |
| "    once in the year                                                                                                                | 34                                                                                | 23    | 74  |
| Addresses of \ received from other Authorities                                                                                       |                                                                                   | 133   |     |
| outworkers / forwarded to other Authorities                                                                                          |                                                                                   | ..    | ..  |
| Notices to occupiers as to keeping or sending lists                                                                                  |                                                                                   | 505   | ..  |
| Prosecutions..                                                                                                                       |                                                                                   | 866   | ..  |
| Inspection of Homeworkers' premises                                                                                                  |                                                                                   |       |     |
| <i>Homework in unwholesome premises :—</i>                                                                                           |                                                                                   |       |     |
| Instances                                                                                                                            |                                                                                   | 56    |     |
| Notices                                                                                                                              |                                                                                   | 56    |     |
| Prosecutions..                                                                                                                       |                                                                                   | ..    |     |
| <i>Homework in infected premises :—</i>                                                                                              |                                                                                   |       |     |
| Instances                                                                                                                            |                                                                                   | 9†    |     |
| Orders made (S. 110)                                                                                                                 |                                                                                   | 9     |     |
| Prosecutions (SS. 109, 110)                                                                                                          |                                                                                   | ..    |     |
| [Infectious cases removed, disinfection carried out under ordinary powers.]                                                          |                                                                                   |       |     |
| <b>Workshops on the Register (S. 131) at the end of year :—</b>                                                                      |                                                                                   |       |     |
| Ordinary (138 trades)                                                                                                                |                                                                                   | 1,137 |     |
| Domestic (5 trades)                                                                                                                  |                                                                                   | 48    |     |
| Bakehouses on register as workshops                                                                                                  |                                                                                   | 324   |     |
| Do. domestic                                                                                                                         |                                                                                   | 322   |     |
| Total number of workshops on Register                                                                                                |                                                                                   | 1,831 |     |
| <b>Matters notified to H.M. Inspectors of Factories :—</b>                                                                           |                                                                                   |       |     |
| Failure to affix Abstract of the Factory and Workshop Act (S. 133)                                                                   |                                                                                   | 31    |     |
| Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act (S. 5) | Notified by H.M. Inspector<br>Reports (of action taken) sent to H.M. Inspectors.. | 83    |     |
| Other                                                                                                                                |                                                                                   | 54    |     |
| <b>Underground Bakehouses (S. 101) :—</b>                                                                                            |                                                                                   |       |     |
| Certificates granted during the year                                                                                                 |                                                                                   | ..    |     |
| In use at the end of 1927                                                                                                            |                                                                                   | 27    |     |

† Scarlet Fever patients.

The above table is that required by the Home Office and represents work done by the male workshops inspectors and by the women inspectors.



## BAKEHOUSES.

| WARD.                  | OVERGROUND.                         |                                   |                              | UNDERGROUND.                        |                                   |                              | Total visits to all. |
|------------------------|-------------------------------------|-----------------------------------|------------------------------|-------------------------------------|-----------------------------------|------------------------------|----------------------|
|                        | Em-<br>ployees<br>beyond<br>family. | Work-<br>shop<br>bake-<br>houses. | Domestic<br>bake-<br>houses. | Em-<br>ployees<br>beyond<br>family. | Work-<br>shop<br>bake-<br>houses. | Domestic<br>bake-<br>houses. |                      |
| Central .. ..          | 106                                 | in 20                             | ..                           | 7                                   | in 3                              | ..                           | 249                  |
| North .. ..            | 88                                  | .. 31                             | 9                            | 5                                   | .. 3                              | 1                            | 123                  |
| North-East .. ..       | 33                                  | .. 22                             | 32                           | 2                                   | .. 1                              | ..                           | 104                  |
| *New Ward .. ..        | 17                                  | .. 10                             | 1                            | ..                                  | ..                                | ..                           | 63                   |
| East .. ..             | 87                                  | .. 26                             | 26                           | ..                                  | ..                                | ..                           | 412                  |
| South .. ..            | 16                                  | .. 8                              | 18                           | 2                                   | in 1                              | ..                           | 222                  |
| East Hunslet .. ..     | 16                                  | .. 9                              | 31                           | 6                                   | .. 2                              | ..                           | 257                  |
| West Hunslet .. ..     | 35                                  | .. 19                             | 33                           | 4                                   | .. 2                              | ..                           | 371                  |
| Holbeck .. ..          | 187                                 | .. 13                             | 26                           | ..                                  | ..                                | ..                           | 314                  |
| Mill Hill .. ..        | 47                                  | .. 11                             | 7                            | ..                                  | ..                                | ..                           | 116                  |
| West .. ..             | 49                                  | .. 23                             | 17                           | ..                                  | ..                                | ..                           | 105                  |
| North-West .. ..       | 76                                  | .. 14                             | 32                           | 5                                   | in 2                              | 4                            | 104                  |
| Brunswick .. ..        | 47                                  | .. 14                             | 9                            | 4                                   | .. 1                              | ..                           | 90                   |
| New Wortley .. ..      | 16                                  | .. 16                             | ..                           | ..                                  | ..                                | ..                           | 144                  |
| Armley & Wortley .. .. | 53                                  | .. 29                             | 19                           | ..                                  | ..                                | ..                           | 258                  |
| Bramley .. ..          | 23                                  | .. 15                             | 15                           | ..                                  | ..                                | ..                           | 206                  |
| Headingley .. ..       | 60                                  | .. 26                             | 38                           | 7                                   | in 3                              | 4                            | 412                  |
| Totals.. ..            | 956                                 | in 306                            | 313                          | 42                                  | in 18                             | 9                            | 3,550                |

\* Roundhay, Seacroft, Shadwell and Crossgates.

These visits made by Ward Inspectors only. This work is included in the figures given in table on page 45.

## Smoke Abatement.

---

I am glad to be able to report a further improvement in the state of the atmosphere. There has been a perceptible decrease in the amount of pollution due to smoke. This improvement is attributable to two factors: (1) the reduction of factory smoke, unfortunately in some measure due to bad trade, but chiefly I think as a result of improved methods of stoking adopted by manufacturers and the substitution of electric for steam power, and (2) the extended use in the houses of the people of smokeless appliances for heating and cooking. On every hand one hears that the consumption of raw coal by householders is on the downgrade and the recent introduction of low carbonisation smokeless fuels is likely to cause further shrinkage. I am hopeful that by the end of another decade the smoke cloud which has overhung the City for such a long time will have disappeared, not entirely (that is too much to expect), but sufficiently to make a noticeable improvement in the amount of sunlight as well as of actual daylight in the centre of the City. The smoke problem, I feel sure, is within sight of solution and, if only manufacturers and householders can be got to realise their obligations to the community and to the public health, Leeds will be smokeless before the end of the present generation. I make no apologies for reiterating the appeal made in previous reports, to all citizens to join in the crusade for a cleaner atmosphere.

There are still factories in the City which offend against the law by emitting excessive smoke as may be observed from the table on page 63. One or two of these, owing to poor trade, have not been in a position to afford the money necessary to purchase new, or improve existing plants. They have therefore been working under difficulties for which due allowance has been made. But whilst that is an excuse for some, it by no means applies to all; carelessness, indifference and failure to appreciate the advantage to themselves—apart altogether from any benefit the City might gain—of improving their plants and methods of steam raising have been responsible.

There is need for closer sympathy between the office and the stokehole. If only the manufacturer would extend his interest to the man engaged in attending the boilers, on which the whole



efficiency of the factory depends, he would not only get better work but he would also effect considerable savings in his fuel bill. A good stoker is worthy of encouragement, and if that encouragement could take the form of monetary reward or bonus, so much the better, because the man would then realize that his efforts were being appreciated. Bonus schemes have been adopted in many parts of the country and have proved most successful, both from a point of view of fuel economy and of smoke emission.

As regards domestic smoke, much yet remains to be done in the way of abolishing the open coal fire for heating and cooking and substituting gas, electricity, or a smokeless fuel of the type already referred to. I have had an opportunity of seeing this new smokeless fuel burning under all conditions in all types of ranges and I have been struck with its efficiency. It lights readily, burns brightly, has a low ash content, is perfectly smokeless, and gives out quite as much heat as coal. Being lighter and more bulky than coal it takes less to maintain a room at an even temperature. The cost at the present time is about the same as that of the best household coal, but there is every possibility of a reduction as the demand increases.

The Public Health (Smoke Abatement) Act, 1926, came into force in July. A special letter drawing attention to this fact was sent to all manufacturers in which was embodied an appeal to support the endeavours of the Public Health Authority to make the administration of the Measure successful. At the beginning of the current year the Council decided to adopt the model bye-law of the Ministry of Health fixing the time standard for the emission of black smoke from chimneys other than those of private dwellings. The bye-law was sent to the Ministry of Health for approval but owing to the opposition of certain trading interests that approval up to the present has been withheld. The bye-law enacts that black smoke emitted for a period of two minutes in the aggregate in a period of 30 minutes constitutes a nuisance.

*Regional Smoke Abatement Committee.*—The West Riding of Yorkshire Regional Smoke Abatement Committee has continued to function throughout the year. It has directed its attention to the following matters:—(1) the drafting of bye-laws under Sections 2 and 5 of the Public Health (Smoke Abatement) Act, 1926; (2) the introduction of smokeless appliances for cooking and heating in new buildings; (3) instruction to engineers and stokers and the issue of a special certificate to men who have qualified by attendance at classes recognised by the Committee and passing a special test; and (4) propaganda.



The suggested Bye-laws under Sections 2 and 5 of the Public Health (Smoke Abatement) Act, 1926, were as follows:—

*Definition of Black Smoke.*—The term Black Smoke shall be held to mean black smoke of such density that light cannot be seen through it as it issues from the chimney top.

*Definition of Dense Smoke.*—The term Dense Smoke shall be held to mean dense smoke of any colour or shade whatsoever, other than black smoke, of such density that light cannot be seen through it as it issues from the chimney top.

*Smoke Standards for Black or Dense Smoke Emissions.*—Black or dense smoke emissions discharged from a chimney (not being the chimney of a private dwelling house) for two minutes in the aggregate within any continuous period of 30 minutes shall be deemed to be an offence liable to be dealt with summarily in manner provided by the Public Health (Smoke Abatement) Act, 1926, and the Public Health Act, 1875.

*Cooking and Heating in New Buildings.*—That plans of buildings (other than private dwelling-houses) submitted to local authorities for approval should show such arrangements for cooking and heating as are calculated to prevent or reduce the emission of smoke.

*Smoke Gauges.*—The amount of soot and ash deposited from the atmosphere has continued to be recorded at the four stations, namely, Headingley, Park Square, York Road and Hunslet. In the summer of the year a fifth smoke gauge was installed at Elmet Hall, Roundhay. The records of the smoke gauges are shown in the accompanying table.

SOOT AND ASH GAUGES.  
MONTHLY DEPOSIT IN ENGLISH TONS PER SQUARE MILE.  
YEAR 1927.

| Period.     | STATIONS.            |                 |               |          |                    |
|-------------|----------------------|-----------------|---------------|----------|--------------------|
|             | Heading-<br>ley.     | Park<br>Square. | York<br>Road. | Hunslet. | Roundhay.          |
| January ..  | 10·2                 | 43·5            | 28·6          | 25·9     | ..                 |
| February .. | 7·7                  | 24·8            | 22·7          | 28·6     | ..                 |
| March ..    | 11·0                 | 35·9            | 28·6          | 36·1     | ..                 |
| April ..    | 15·8                 | 23·0            | 34·4          | 27·3     | ..                 |
| May ..      | 6·1                  | 25·2            | 35·0          | 73·0     | ..                 |
| June ..     | 11·1                 | 29·3            | 41·0          | 53·7     | 12·9               |
| July ..     | 20·6                 | 29·1            | 34·9          | 41·4     | 11·6               |
| August ..   | 11·2                 | 32·2            | 50·4          | 45·4     | 17·0               |
| September   | 14·3                 | 29·3            | 25·6          | 39·2     | 13·5               |
| October ..  | 16·4                 | 38·4            | 36·8          | 57·0     | 15·8               |
| November..  | 9·1                  | 19·0            | 27·2          | 36·0     | 5·2                |
| December    | ..*                  | 24·8            | 26·7          | 37·6     | 3·3                |
| Year ..     | 133·5<br>(11 m'ths.) | 354·5           | 391·9         | 501·2    | 79·3<br>(7 m'ths.) |

\*Gauge broken by frost.





The work of the smoke inspectors is given in detail in the subjoined table.

|                                                                            | (1)     | 1927.               | 1926.            |
|----------------------------------------------------------------------------|---------|---------------------|------------------|
| Furnaces inspected .. .. .                                                 | .. .. . | 1,721               | 1,913            |
| Observation of chimneys (1 hour each) ..                                   | ..      | 4,185               | 4,114            |
| Number of minutes dense smoke .. ..                                        | .. ..   | 2,164 $\frac{3}{4}$ | 2,548            |
| Average duration of dense smoke per observation of one hour .. .. .        | .. .. . | 0 mins. 31 secs.    | 0 mins. 37 secs. |
| Number of chimneys found emitting dense smoke three minutes per hour .. .. | .. ..   | 58                  | 63               |
| Smoke prevention appliances adapted to furnaces .. .. .                    | .. .. . | 16                  | 6                |
| Furnaces altered or reconstructed .. ..                                    | .. ..   | 41                  | 32               |
| Furnaces superseded, plant electrified (8 firms)                           | .. ..   | 26                  | —                |
| Firms who have adopted smokeless fuel ..                                   | ..      | 41                  | 17               |
| Chimneys newly erected .. .. .                                             | .. .. . | 10                  | 6                |
| Furnaces in connection with new chimneys                                   | .. ..   | 10                  | 6                |
| Notices served on manufacturers .. ..                                      | .. ..   | 40                  | 15               |
| Notices served on stokers .. .. .                                          | .. .. . | 2                   | 23               |
| Prosecutions (one firm, two summonses) ..                                  | ..      | 2                   | 3                |
| Total amount in fines .. .. .                                              | .. .. . | To pay costs.       | Case dismissed.  |

#### SMOKE OBSERVATIONS, 1922-1927.

(2)

| Year. | Observations of Chimneys (1 hour each). | No. of Chimneys found emitting dense smoke (three minutes per hour). | Percentage to observations. |
|-------|-----------------------------------------|----------------------------------------------------------------------|-----------------------------|
| 1922  | 3,853                                   | 275                                                                  | 7.1                         |
| 1923  | 6,007                                   | 202                                                                  | 3.3                         |
| 1924  | 6,773                                   | 113                                                                  | 1.7                         |
| 1925  | 4,373                                   | 92                                                                   | 2.1                         |
| 1926  | 4,114                                   | 63                                                                   | 1.5                         |
| 1927  | 4,185                                   | 58                                                                   | 1.4                         |



**Sunshine.**—The sunshine record for the year shows that the sunniest month was June and the most sunless December. In the former the hours of actual sunshine numbered 171·3 and in the latter 17·0. The daily mean for June was 5·71 and for December 0·55, whilst the average for the whole year was 3·22.

The observations on the amount of actinic light in the atmosphere by means of the acetone methylene blue tubes have been continued throughout the year. One of these tubes is fixed at each of the five smoke stations and another at Middleton and a daily record made of the amount of active sunlight. The results are set out in the table on page 62. It will be noted that as compared with the previous year an increase was recorded at four of the stations and a decrease at two, notwithstanding the fact that taken as a whole the year was abnormally sunless.

# Food.

Including Report by J. A. DIXON, M.R.C.V.S.,  
*Chief Veterinary Inspector.*

---

During the year the department concerned with Food and Drugs, including meat inspection and the supervision and control of the milk supply of the city has been conducted on lines very much similar to those of previous years.

The year saw the introduction of the Public Health (Preservatives, etc., in Food) Regulations, 1925, though the provisions of these Regulations will not come into full operation until the middle of next year.

That the Regulations will materially benefit the community by ensuring a cleaner and safer food supply cannot be gainsaid, but there is just the danger that they may increase the number of food substitutes especially for such articles as milk and cream. As a people, we are coming to depend far too much on substitutes to the exclusion of the genuine article. The difficulty about substitutes is that, being proprietary articles, many of them are composed of ingredients which, from the point of view of food value, are inferior and the fact that many of these substitutes are manufactured abroad makes it all the more difficult to control the place and method of manufacture. Cheap food is not an unmixed blessing because very frequently cheapness connotes inferiority. Nevertheless one must recognise that to the housewife with a limited housekeeping allowance food which is attractively got up and cheap presents an almost irresistible temptation to buy. Then there is the additional advantage to the busy or the lazy housewife, as the case may be, that many of the substitutes for fresh food now on the market require no cooking. Cooking is rapidly becoming a lost art in this country for this very reason. Even in establishments employing trained cooks, the proportion of tinned or preserved food used grows year by year. Hardly a menu is presented to-day, whether in the private house or the public restaurant, which does not include one food substitute or another. To the public health that is of serious import, especially in an island country like Great Britain which has to depend on foreign sources for a large part of its food



supply. The utmost vigilance is therefore necessary to ensure the quality and freshness of foreign produced food. Above all the home producer should be encouraged to increase his output by protecting the home market against the importation of spurious and worthless foreign goods. This is the surest way of cutting out the "substitute."

#### Graded Milk and Issue of Licences.—

LICENCES ISSUED UNDER THE MILK (SPECIAL DESIGNATIONS) ORDER, 1923, DURING THE YEAR, AND SHOWING COMPARISON WITH OTHER YEARS.

| Description of Licences.                                                        | Number in force on<br>31st December. |       |       |       |
|---------------------------------------------------------------------------------|--------------------------------------|-------|-------|-------|
|                                                                                 | 1924.                                | 1925. | 1926. | 1927. |
| (1) Producers' Licences to use the designation<br>"Grade A" .. .. .             | —                                    | 4     | 5     | 4*    |
| (2) Dealers' Licences to use the designation<br>"Certified" .. .. .             | 2                                    | 1     | 2     | 8     |
| (3) Dealers' Licences to use the designation<br>"Grade A (Tuberculin Tested)":— |                                      |       |       |       |
| (a) Bottling establishments .. .. .                                             | —                                    | 2     | 3     | 4     |
| (b) Shops .. .. .                                                               | —                                    | 57    | 53    | 35    |
| (4) Dealers' Licences to use the designation<br>"Grade A":—                     |                                      |       |       |       |
| (a) Bottling establishments .. .. .                                             | —                                    | —     | 4     | 4     |
| (b) Shops .. .. .                                                               | 2                                    | 100   | 140   | 179   |
| (5) Dealers' Licences to use the designation<br>"Pasteurised":—                 |                                      |       |       |       |
| (a) Pasteurising establishments .. .. .                                         | —                                    | —     | —     | —     |
| (b) Shops .. .. .                                                               | —                                    | —     | —     | —     |

\*Two licences were revoked during the year by the City Council for failing to comply with the requirements of the Milk (Special Designation) Order, 1923, and are not included in the above figures for 1927.

Although at the end of the year there existed only four licensed producers of "Grade A" milk, during the greater portion of the year the number was higher. Of the five producers holding licences at the end of 1926, one ceased to produce "Grade A" milk in the first quarter of the year and did not renew the licence, two licences were revoked for failure to observe the conditions upon which the



licences were issued. During the year two new licences were issued for the production of "Grade A" milk. The number of distributors of "Grade A" milk increased from 140 to 179, whilst the number handling "Grade A (Tuberculin Tested)" milk decreased from 53 to 35. The latter is largely accounted for by the fact that the "Grade A (Tuberculin Tested)" milk has to be brought considerable distances, which to some extent affects its keeping qualities.

The amount of graded milk produced per day in the City approximates 380 gallons, all of which is bottled at the place of production. Both home produced and imported graded milk is strictly supervised as to cleanliness by routine bacteriological examination, from which it is found that the home produced article is much cleaner than the imported. It is rather disappointing to observe the lack of expansion in the amount of "Grade A" milk produced in the City and the continued reluctance on the part of farmers to produce "Certified" or "Grade A (Tuberculin Tested)" milk. It is a sad commentary on the enterprise of the Leeds producers that four years after the issue of the "Milk (Special Designations) Order" only four are producing "Grade A" milk and none at all "Certified" or "Grade A (Tuberculin Tested)."

The price charged for "Grade A" milk to the consumer is undoubtedly a hindrance to the expansion of the demand. Other reasons are the practice on the part of some dairymen of bottling ordinary milk and selling it at an enhanced price, and the considerable quantity of bottled sterilized milk now on sale in the City. These bottled milks are regarded by many people as "graded" milk, and being no better than ordinary milk, sometimes worse, graded milk is unjustly condemned. The only way to prevent fraud—for that is what it amounts to—of this kind is to make the sale of milk in bottles illegal except under licence or alternatively to make the bottling of all milk sold for human consumption compulsory, the graded variety being distinguished from the ordinary by special caps.

The cows and premises of all producers of graded milk are inspected monthly by the Veterinary Inspector, who reports his findings to the Medical Officer of Health with any criticisms or remarks he wishes to make. This has entailed 96 visits to farms, 216 inspections of sheds, and 3,300 inspections of cows, all this work being in addition to the routine inspections carried out under



the Milk and Dairies Order of 1926. In the interval between the Veterinary Inspector's visits, the farms are visited by the Dairies and Cowsheds Inspector who sees that the premises are maintained in a cleanly and proper condition, that the methods of production employed are such as to conform with the requirements of the Order, and that any instructions issued by the Veterinary Inspector are duly carried into effect.

Apart from that produced in the City the following approximate amounts of graded milk are imported by road or rail every day :— " Certified " milk, 30 gallons ; " Grade A (Tuberculin Tested) " milk, 50 gallons ; and " Grade A " milk, 390 gallons (including 150 gallons produced at Templenewsam Home Farm).

The City Council farm at Templenewsam renewed its licence from the West Riding County Council to produce " Grade A " milk, whilst the farm at Skelton Grange, although not in possession of a licence, produces milk of " Grade A (Tuberculin Tested) " quality. Both farms are regularly inspected and reported upon just as in the case of all graded milk herds. The milk produced at both these farms is consumed by the inmates of institutions belonging to the City Council.

**Cows and Cowsheds.**—The total number of farms in the City visited for purposes of inspection of cows and cowsheds was 150, and the total number of visits paid was 618. At six of the farms there were no cows kept ; five farmers discontinued and one commenced the keeping of dairy cows during the year, leaving at the end of the year a total of 145 farms in use as dairy farms in the City. The average number of cows kept in the City was 2,188, and the total number of examinations made was 8,963. At 8,745, or 97·6 per cent., of the examinations the cows were found to be clean, and at 218, or 2·4 per cent., dirty. As regards the health of the 2,188 cows examined, 27, or 1·2 per cent., were found to be diseased, five, or 0·2 per cent., having tuberculosis of the udder, 6, or 0·3 per cent., generalised tuberculosis, and 16, or 0·7 per cent., diseases other than tuberculosis. In all cases where tuberculosis was diagnosed the animals affected were dealt with under the Tuberculosis Order of 1925.

The number of cowsheds inspected was 237, and the total number of inspections 964, whilst the number of yards inspected was 144, with a total of 582 inspections. At 923, or 95·7 per cent.,



of the visits the sheds were reported clean, whilst at 41, or 4·3 per cent., they were dirty; the yards at 538, or 92·4 per cent., of the visits were clean, and dirty at 44, or 7·6 per cent. of the visits.

The outstanding feature in connection with milk production in this City is the improvement in the cleanliness of cows and cowsheds brought about largely by the Milk and Dairies Order (1926).

**Milk and Dairies Order, 1926.**—As a whole the cowkeepers made a real endeavour to comply with the requirements of the Order though it was found necessary in seven cases to institute legal proceedings to obtain satisfactory conditions at the farms *vide* table on page 70.

Although under the conditions imposed by the Order it is not yet possible to enforce our demands for satisfactory lighting, ventilation, paving and water supply, improvements have been effected in these respects and 65 cowsheds have been reconstructed or improved under the Department's supervision. The water supply of many dairy farms still presents considerable difficulty which will have to be faced at the expiration of the 18 months' notice allowed by the Order.

During the year the special provisions of the Order with reference to the cooling of milk came into operation and, although many of the dairymen within the City can claim exemption from the compulsory cooling of milk, it is pleasing to report that in only a few places is the cooling of milk not practised. Observations have been taken on this point with respect to milk arriving in the City by road and rail from which it would appear that the cooling of milk is not regularly practised in places outside the City, though at the suggestion of the Department the retailers are becoming more insistent that milk shall be cooled before despatch to them.

**Tuberculosis Order of 1925.**—During the year 32 notifications of tuberculosis in cattle under the Tuberculosis Order were reported, 14 being from owners and two from Veterinary practitioners, whilst 16 animals affected by the disease were discovered by the Veterinary Inspector during the course of his routine inspections under the Milk and Dairies Order of 1926. Thus again, as in previous years, experience has proved that the Tuberculosis Order can only be effectively applied when regular routine veterinary inspection is carried out.



MILK AND DAIRIES ORDER, 1926.  
PROSECUTIONS FOR THE YEAR 1927.

| No. | Article.          | Result of Hearing.                                            | Remarks.       |
|-----|-------------------|---------------------------------------------------------------|----------------|
| 1   | Article 22 (2) .. | Fined £5 .. .. .                                              | Farmer.        |
| 2   | Article 22 (2) .. | Dismissed on payment of costs ..                              | Farmer.        |
| 3   | Article 6 (3) ..  | Fined £2 and costs .. ..                                      | Milk retailer. |
| 4   | Article 15 ..     | Fined £5 .. .. .                                              | Farmer.        |
|     | „ 23 (2) ..       | Fined £5 .. .. .                                              | Farmer.        |
| 5   | Article 23 (2) .. | Dismissed under Probationers Act<br>on payment of costs .. .. | Farmer.        |
|     | „ 23 (3) ..       | do. do. ..                                                    | Farmer.        |
|     | „ 15 ..           | do. do. ..                                                    | Employee.      |
|     | „ 15 ..           | do. do. ..                                                    | Employee.      |
|     | „ 15 ..           | do. do. ..                                                    | Employee.      |
| 6   | Article 23 (2) .. | Fined £5 .. .. .                                              | Farmer.        |
| 7   | Article 23 (2) .. | Fined 40/- and costs .. ..                                    | Farmer.        |
|     | „ 23 (5) ..       | Fined 20/- and costs .. ..                                    | Farmer.        |

The investigations conducted under the Order involved the examination of 479 cows in milk, 38 cows including a number of heifers, and nine other bovine animals, whilst four cows were tested with tuberculin; 19 animals were slaughtered, all of which, on post-mortem examination, were found to be affected, four with tuberculosis of the udder, six with tuberculous emaciation, and nine otherwise. The owners of the 19 cows condemned received compensation as follows:—14 at the lowest rate, namely, one-fourth of the agreed value or 45/-, whichever was the highest, whilst five received compensation at the rate of three-fourths of the agreed value. It is interesting to observe that of the 19 animals slaughtered, the average cost in compensation to the City was 14/2. In addition to dealing with cows suffering from tuberculosis within the City, the Tuberculosis Order empowers the Veterinary Inspector to order the removal from a cattle market any animal which he considers to be affected with tuberculosis within the terms of the Order, and during the year such action was taken with respect to three cows at the Victoria Cattle Market. On slaughter two of these animals were found to be affected with tuberculous emaciation and the carcasses and organs were condemned, whilst the third animal was found to be affected with Johnes disease, the carcass in this case being passed as fit for human consumption.

## TUBERCULOSIS ORDER OF 1925.

Annual Return on the working of the above-mentioned Order for the year ending December 31st, 1927.

|                                                                                   |    |    |      |    |    |    |           |
|-----------------------------------------------------------------------------------|----|----|------|----|----|----|-----------|
| TOTAL NUMBER OF ANIMALS REPORTED—                                                 |    |    |      |    |    |    | 32        |
| (a) By Owner .. .. .                                                              | .. | .. | ..   | .. | .. | .. | 14        |
| (b) By Veterinary Advisor to owner .. .. .                                        | .. | .. | ..   | .. | .. | .. | 2         |
| (c) By Veterinary Inspector acting under the Milk and Dairies Order, 1926 .. .. . | .. | .. | ..   | .. | .. | .. | 16        |
| ANIMALS EXAMINED—                                                                 |    |    |      |    |    |    |           |
| (a) Cows in milk .. .. .                                                          | .. | .. | ..   | .. | .. | .. | 479       |
| (b) Other Cows or Heifers .. .. .                                                 | .. | .. | ..   | .. | .. | .. | 38        |
| (c) Other Bovine animals.. .. .                                                   | .. | .. | ..   | .. | .. | .. | 9         |
| ANIMALS TESTED WITH TUBERCULIN .. .. .                                            |    |    |      |    |    |    | 4         |
| RESULTS OF POST-MORTEM EXAMINATION—                                               |    |    |      |    |    |    |           |
| (a) Having Tuberculosis of the Udder .. .. .                                      | .. | .. | ..   | .. | .. | .. | 4         |
| (b) Giving Tuberculous Milk and showing lesions of Tuberculosis .. .. .           | .. | .. | ..   | .. | .. | .. | —         |
| (c) Suffering from Tuberculous Emaciation .. .. .                                 | .. | .. | ..   | .. | .. | .. | 6         |
| (d) Affected, but not as in a, b, or c .. .. .                                    | .. | .. | ..   | .. | .. | .. | 9         |
| COMPENSATION PAYABLE—                                                             |    |    |      |    |    |    | £ s. d.   |
| (a) Full value .. .. .                                                            | .. | .. | (0)  | .. | .. | .. | 0 0 0     |
| (b) Three-fourths value .. .. .                                                   | .. | .. | (5)  | .. | .. | .. | 56 5 0    |
| (c) One-fourth value or 45/- .. .. .                                              | .. | .. | (14) | .. | .. | .. | 35 0 0    |
| Total Compensation .. .. .                                                        |    |    |      |    |    |    | £91 5 0   |
| Total Salvage received .. .. .                                                    |    |    |      |    |    |    | 37 5 2    |
| Nett Compensation .. .. .                                                         |    |    |      |    |    |    | 53 19 10  |
| Recoverable from Government, 75% of Net Compensation .. .. .                      |    |    |      |    |    |    | 40 9 11   |
| Nett Cost to City Council .. .. .                                                 |    |    |      |    |    |    | 13 9 11   |
| Average Cost per animal to the City Council as Compensation .. .. .               |    |    |      |    |    |    | £0 14 2   |
| ADMINISTRATION EXPENSES—                                                          |    |    |      |    |    |    | £ s. d.   |
| (a) 1. Veterinary examinations .. .. .                                            | .. | .. | ..   | .. | .. | .. | 0 0 0     |
| 2. Cost of tuberculin .. .. .                                                     | .. | .. | ..   | .. | .. | .. | 0 4 0     |
| 3. Notification fees .. .. .                                                      | .. | .. | ..   | .. | .. | .. | 0 5 0     |
| (b) Reference to a Pathological Institute .. .. .                                 | .. | .. | ..   | .. | .. | .. | 1 11 6    |
| (c) Valuation of Animals slaughtered .. .. .                                      | .. | .. | ..   | .. | .. | .. | 0 0 0     |
| (d) Cost of travelling .. .. .                                                    | .. | .. | ..   | .. | .. | .. | 26 13 7½  |
| Total Expenses .. .. .                                                            |    |    |      |    |    |    | £28 14 1½ |

In addition to the particulars mentioned above, three animals were discovered by the Veterinary Inspector at the Victoria Cattle Market and ordered to be removed and slaughtered. On post-mortem examination, two of the animals were found to be suffering from tuberculous emaciation, and the carcasses and organs were condemned. The third animal was found to be suffering from Johnes disease and the carcase was passed.



**Dairy Farms and Milkshops.**—The following tables show the number of registered dairy farms and milkshops in the City on December 31st, 1927.

#### DAIRY FARMS.

|                                                      |    |    |    |    |     |
|------------------------------------------------------|----|----|----|----|-----|
| Number of dairy farms in the City on the register on |    |    |    |    |     |
| December 31st, 1926 .. .. .                          | .. | .. | .. | .. | 149 |
| Number added to register during the year .. ..       | .. | .. | .. | .. | 1   |
| Number removed from register during the year ..      | .. | .. | .. | .. | 5   |
| Number on register on December 31st, 1927 .. ..      | .. | .. | .. | .. | 145 |

#### MILKSHOPS.

|                                                    |    |    |    |    |     |
|----------------------------------------------------|----|----|----|----|-----|
| Number of milkshops in the City on the register on |    |    |    |    |     |
| December 31st, 1926 .. .. .                        | .. | .. | .. | .. | 417 |
| Number added to register during the year .. ..     | .. | .. | .. | .. | 119 |
| Number removed from register during the year ..    | .. | .. | .. | .. | 12  |
| Number on register on December 31st, 1927 .. ..    | .. | .. | .. | .. | 524 |

The following visits were paid during the year by the Food and Drugs Inspectors and Dairies and Cowsheds Inspector in connection with the Milk and Dairies Acts and Orders :—

|                                                       |    |    |    |    |    |        |
|-------------------------------------------------------|----|----|----|----|----|--------|
|                                                       |    |    |    |    |    | VISITS |
| To milkshops .. .. .                                  | .. | .. | .. | .. | .. | 1,414  |
| To cowsheds .. .. .                                   | .. | .. | .. | .. | .. | 1,162  |
| To railway stations.. ..                              | .. | .. | .. | .. | .. | 684    |
| To farms or milkshops <i>re</i> infectious disease .. | .. | .. | .. | .. | .. | 20     |
| To food shops and bottled milk stores .. ..           | .. | .. | .. | .. | .. | 849    |

**Milk and Food Analysis.**—The subjoined tables set out the number of samples of milk taken during the year and examined by the City Analyst, with information as to quality and composition and results of Court proceedings.

**SAMPLES OF MILK AND CREAM SENT TO THE CITY  
ANALYST FOR EXAMINATION DURING 1927.**

| Article.           | Genuine.   | Adul-<br>terated. | Total.     | Taken formally. |                   | Taken informally. |                   |
|--------------------|------------|-------------------|------------|-----------------|-------------------|-------------------|-------------------|
|                    |            |                   |            | Genuine.        | Adul-<br>terated. | Genuine.          | Adul-<br>terated. |
| Milk .. ..         | 831        | 96                | 927        | 820             | 95                | 11                | 1                 |
| Skim Milk ..       | 1          | ..                | 1          | 1               | ..                | ..                | ..                |
| Cream .. ..        | 4          | 2                 | 6          | 4               | 2                 | ..                | ..                |
| Preserved Cream    | 15         | ..                | 15         | 15              | ..                | ..                | ..                |
| <b>TOTAL .. ..</b> | <b>851</b> | <b>98</b>         | <b>949</b> | <b>840</b>      | <b>97</b>         | <b>11</b>         | <b>1</b>          |
|                    |            |                   |            | 937             |                   | 12                |                   |

The average composition of the 927 milk samples taken during the year was :—

|                        | 1927.                  | Standard.              |
|------------------------|------------------------|------------------------|
| Non-fatty solids ..    | 9.04 per cent.         | 8.50 per cent.         |
| Fat .. ..              | 3.83 „                 | 3.00 „                 |
| <b>Total solids ..</b> | <b>12.87 per cent.</b> | <b>11.50 per cent.</b> |

Of the 96 samples of milk found to be adulterated, 61 were adulterated by the addition of water, 34 by the partial abstraction of fat, and one by the addition of water and the partial abstraction of fat.

The largest amount of added water found in any sample was 23.5 per cent., whilst the most serious deficiency of fat was 33.4 per cent.



SUMMONSES ISSUED DURING 1927, UNDER THE SALE OF FOOD  
AND DRUGS ACTS.

| No. of Sample | Article.    | Adulteration or Offence.                                                                                               | Fines.<br>£ s. d. | Remarks.                                                                   |
|---------------|-------------|------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------|
| 156           | Dried Peas  | 0.1 grn. of crystallized copper sulphate.                                                                              | ..                | Adjourned <i>sine die</i> out of court; retailer.                          |
| 157           | Dried Peas  | 0.2 grn. of crystallized copper sulphate                                                                               | ..                | Dismissed under Probationers' Act on payment of costs; retailer.           |
| 158           | Dried Peas  | 0.1 grn. of crystallized copper sulphate                                                                               | ..                | Dismissed under Probationers' Act on payment of costs; retailer.           |
| 220           | Milk ..     | 7.3% of added water and 12.7% deficient in fat                                                                         | ..                | Dismissed under Probationers' Act on payment of costs; retailer.           |
| 393           | Milk ..     | 17.6% added water ..                                                                                                   | 2 0 0             | To pay £1 1s. costs; retailer.                                             |
| 394           | Milk ..     | 14.8% added water ..                                                                                                   | 2 0 0             | To pay £1 1s. costs; retailer.                                             |
| 412           | Milk ..     | 15.7% added water ..                                                                                                   | 5 0 0             | To pay £1 5s. 6d. costs; farmer.                                           |
| 427           | Milk ..     | 10.1% added water ..                                                                                                   | ..                | Dismissed under Probationers' Act on payment of costs, £1 5s. 6d.; farmer. |
| 435           | Milk ..     | 13.2% added water ..                                                                                                   | 2 0 0             | To pay £1 16s. 6d. costs; farmer.                                          |
| 436           | Milk ..     | 23.5% added water ..                                                                                                   | 5 0 0             |                                                                            |
| 492           | Butter      | 3.3% excess of water ..                                                                                                | ..                | Dismissed on payment of 20/- costs; retailer.                              |
| 495           | Sweet Nitre | 96.6% deficient in the minimum amount required of Ethyl Nitrite and 83.4% deficient in the required amount of alcohol. | ..                | Dismissed on payment of 15/- costs; retailer.                              |
| 497           | Milk ..     | 6.6% added water ..                                                                                                    | ..                | Dismissed on payment of 25/- costs; retailer.                              |
| 498           | Sweet Nitre | 89.5% deficient in the minimum amount required of Ethyl Nitrite, and about half the required amount of alcohol         | 2 0 0             | Fined (including costs); retailer.                                         |

SUMMONSES ISSUED DURING 1927 UNDER THE SALE OF FOOD  
AND DRUGS ACTS—*Continued.*

| No. of<br>sample | Article.    | Adulteration<br>or Offence.                                     | Fines. |    |    | Remarks.                                      |
|------------------|-------------|-----------------------------------------------------------------|--------|----|----|-----------------------------------------------|
|                  |             |                                                                 | £      | s. | d. |                                               |
| 99               | Sweet Nitre | 94.7% deficient in the minimum amount required of Ethyl Nitrite | ..     |    |    | Dismissed on payment of 15/- costs; retailer. |
| 100              | Milk ..     | 5.6% added water ..                                             | 10     | 0  | 0  | To pay 13/6 costs; farmer.                    |
| 105              | Milk ..     | 5.4% added water ..                                             | ..     | .. |    | Dismissed on payment of 20/- costs; retailer. |
| 140              | Milk ..     | 8.2% added water ..                                             | 2      | 0  | 0  | To pay 10/6 costs; retailer.                  |
| 143              | Milk ..     | 8.7% added water ..                                             | ..     | .. |    | Dismissed on payment of 10/6 costs; retailer. |
| 147              | Milk ..     | 5.8% added water ..                                             | ..     | .. |    | Dismissed on payment of 20/- costs; retailer. |
| 152              | Milk ..     | 10.1% added water                                               | 10     | 0  | 0  | { To pay £3 os. 6d. costs; farmer.            |
| 153              | Milk ..     | 8.7% added water                                                |        |    |    |                                               |
| 156              | Milk ..     | 8.0% added water ..                                             | 2      | 0  | 0  | To pay £4 5s. costs; farmer.                  |
| 162              | Milk ..     | 5.8% added water ..                                             | 1      | 0  | 0  | To pay £1 11s. 6d. costs; farmer.             |
| 163              | Milk ..     | 7.0% added water ..                                             | ..     | .. |    | Dismissed on payment of 25/- costs; retailer. |

**Guinea Pig Tests.**—During the year in addition to the samples of milk submitted to the City Analyst, 57 samples were sent to the School of Medicine for examination for the presence of the tubercle bacillus, and two (or 3.5 per cent.) were returned as positive, one being from a farm within the City and the other from a farm outside the City. In the case of the former the sample was taken from a cow which, although on clinical examination it appeared to be suffering from tuberculosis of the udder, had failed to react to the tuberculin test. In the case of the other sample (mixed milk) the local authority in whose district the milk had been produced was informed in accordance with Section 4 (1) of the Milk and Dairies (Consolidation) Act, 1915, and the Veterinary Inspector, in company with the Veterinary Officer of the district concerned, visited the farm and inspected 53 cows in milk and 8 dry cows. Special samples of milk were obtained from suspected cows, one of which, on examination, was found to be tuberculous. In both cases the cows (2) were found on slaughter to be suffering from tuberculosis and dealt with under the Tuberculosis Order of 1925.



**Special Bacterial Tests.**—Three samples were submitted to the City Bacteriologist for bacteriological analysis. Two were of milk produced in the City by farmers who had applied for graded milk licences, and the other was of dried milk. The two former were returned as being well within the standard prescribed by the Ministry of Health. The third was also found to be up to standard.

**Public Health (Prevention of Tuberculosis) Regulations, 1925.**—Although no official action was necessary under the above-mentioned Regulations, it should be noted that they have been found of great use as the existence of these Regulations have rendered it possible for the Department to prevent a man suffering from pulmonary tuberculosis from becoming a registered dairyman.

**Departmental Laboratory.**—During the year 321 samples of milk were examined in the departmental laboratory, comprising 219 graded milks, 15 obtained informally at the railway stations, 44 taken on delivery to local institutions, nine ordinary loose milks, five ordinary milks in bottles and 29 miscellaneous (*i.e.*, samples brought to the laboratory by private persons). All the samples were examined for (1) keeping properties, (2) the number of bacteria of all kinds present in 1 c.c., and (3) the presence of *B. Coli.* in the three dilutions 1/10, 1/100 and 1/1000 c.c. These involved the making of 963 tests.

The average keeping quality of the samples of graded milk examined was 3.4 days, the average for the institution milks 2.6 days, station milks 2 days, ordinary loose milks 2 days, and ordinary milk in bottles 2.2 days.

Particulars of the samples examined are as follows:—

SAMPLES EXAMINED AS TO BACTERIAL CONTENT.

| Bacterial Content per c.c. | Graded milk. | Institution milks. | Station milks. | Ordinary Loose milks. | Ordinary Milk in bottles. | Total. |
|----------------------------|--------------|--------------------|----------------|-----------------------|---------------------------|--------|
| 1— 5,000 ..                | 102          | 10                 | 2              | 1                     | 3                         | 118    |
| 5,001— 10,000 ..           | 35           | 9                  | 2              | 1                     | ..                        | 47     |
| 10,001— 50,000 ..          | 60           | 14                 | 5              | 3                     | ..                        | 82     |
| 50,001— 100,000 ..         | 9            | 5                  | 3              | ..                    | 1                         | 18     |
| 100,001— 200,000 ..        | 8            | 4                  | ..             | 2                     | 1                         | 15     |
| 200,001— 300,000 ..        | 5            | ..                 | 1              | ..                    | ..                        | 6      |
| 300,001— 400,000 ..        | ..           | 1                  | ..             | ..                    | ..                        | 1      |
| 400,001— 500,000 ..        | ..           | ..                 | ..             | ..                    | ..                        | ..     |
| 500,001—1,000,000 ..       | ..           | 1                  | 1              | ..                    | ..                        | 2      |
| 1,000,001+ ..              | ..           | ..                 | 1              | 2                     | ..                        | 3      |
| Total Samples ..           | 219          | 44                 | 15             | 9                     | 5                         | 292    |

# SAMPLES EXAMINED AS TO B. COLI. CONTENT.

|                                   | Number<br>of samples. | B. Coli.<br>present in<br>1/10 c.c. | B. Coli.<br>present in<br>1/100 c.c. | B. Coli.<br>present in<br>1/1000 c.c. | B. Coli.<br>absent. |
|-----------------------------------|-----------------------|-------------------------------------|--------------------------------------|---------------------------------------|---------------------|
| Graded milk ..                    | 219                   | 44                                  | 15                                   | 10                                    | 150                 |
| Institution milk ..               | 44                    | 11                                  | 9                                    | 6                                     | 18                  |
| Station milk ..                   | 15                    | 3                                   | 5                                    | 5                                     | 2                   |
| Ordinary loose milk               | 9                     | 1                                   | 2                                    | 3                                     | 3                   |
| Ordinary milk in<br>bottles .. .. | 5                     | 1                                   | 1                                    | 2                                     | 1                   |
| Totals ..                         | 292                   | 60                                  | 32                                   | 26                                    | 174                 |

Each sample of milk was tested in the morning and evening each day till the souring point was reached. Some 20 vessels of one sort or other were cleansed and sterilized for each sample of milk.

*Milk Samples tested by the Gerber Method.*—During the year 751 samples of milk were tested in the departmental laboratory by the Gerber method, the results of which were as follows:—

| Total. | Genuine. | Deficient in<br>fat only. | Deficient in<br>Solids-not-fat<br>only. | Deficient in<br>fat and<br>Solids-not-fat. |
|--------|----------|---------------------------|-----------------------------------------|--------------------------------------------|
| *751   | 637      | 43                        | 57                                      | 14                                         |

\* These were all informal samples.

The average composition of the 751 samples was:—

|                      |                |
|----------------------|----------------|
| Fat .. ..            | 3.48 per cent. |
| Solids-not-fat .. .. | 8.79 per cent. |

|                 |                 |
|-----------------|-----------------|
| Total solids .. | 12.27 per cent. |
|-----------------|-----------------|

Other substances examined:—

Milk examined for the presence of tubercle

|                                             |             |
|---------------------------------------------|-------------|
| bacillus .. ..                              | 20 samples. |
| Diseased meat for microscopical examination | 6 ..        |
| Chocolate for the presence of arsenic ..    | 1 ..        |
| Urine .. ..                                 | 8 ..        |



Article 13 (1) of the Milk and Dairies Order, 1926, demands that the water supply to farms shall be suitable and sufficient, and 12 samples of water from farms and other premises have been examined as to their bacterial content with the following results:—

B. Coli. present = 7. B. Coli. absent = 5.

#### OTHER WORK DONE.

|                                                                                                          |       |
|----------------------------------------------------------------------------------------------------------|-------|
| Throat swabs made and issued .. ..                                                                       | 1,600 |
| Tubes of media prepared .. ..                                                                            | 1,630 |
| Microscopic slides prepared, stained and<br>examined in connection with various<br>bacterial tests .. .. | 84    |
| Plate counts—bacteriological examination<br>of milk .. ..                                                | 642   |

Farmers, dairymen, students and members of the public have visited the laboratory and had the various steps in the examination of milk samples explained to them.

**Milk and Cream Regulations.**—All samples of milk submitted to the Analyst were tested for the presence of preservatives, and in all cases were found to be free.

Two samples of fresh cream proved on analysis to contain boron compounds. In both cases the retailers were warned by letter from the Medical Officer of Health.

**Food and Drugs.**—The Food and Drugs Inspectors took 397 formal and six informal samples of food other than milk, the results of the analysis of which appear in the table on pages 80 and 81. The total number of formal samples of all kinds taken during the year was 1,334 and informal 18.

**Condensed and Dried Milk Regulations.**—During the year three samples of dried milk and five samples of condensed milk were submitted to the City Analyst for examination. In all cases the contents were reported as complying with the Regulations, as also were the labels on the samples.

**Public Health (Preservatives, &c. in Food) Regulations.**—As in former years all samples submitted to the City Analyst for examination were examined for the presence of preservatives, colouring matter, etc.



During the year fourteen samples of dried peas were submitted for analysis and in each sample crystallized copper sulphate was reported as being present in amounts varying from 0.1 to 0.2 grn. per pound.

In three cases legal proceedings were instituted, and two of them heard on the same day were dismissed under the Probationers' Act on payment of costs. The defence put forward was that not only was it impracticable to "add" any preservative to dried peas, but also impossible, and what copper sulphate there was present had been acquired naturally during growth. In view of this statement expert opinion was obtained which supported the contention that, in vegetables, including peas, grown in certain prepared ground copper exists. It was therefore decided to adjourn the third case *sine-die*.

This controversy was no doubt responsible for the recommendation sent out by the Ministry of Health in a circular letter to local authorities dated 29th June, 1927, para. 3, drawing attention "to the fact that traces of some of the prohibited preservatives and colouring matters are naturally present in certain foods, *e.g.* boric acid and benzoic acid in some fruits, and copper in peas and other vegetables. The quantities so present are usually insignificant, being much less than those which would be required for effective preservation or artificial colouring. What the Regulations prohibit is the importation, manufacture or sale of articles of food containing "added" preservative or colouring matter. It would, therefore, appear to be desirable that Local Authorities, before instituting legal proceedings in respect of the presence of small traces, should satisfy themselves that the circumstances are such as to afford *prima facie* grounds for the assumption that the prohibited substances have been artificially introduced."

In the eleven other cases of adulterated samples of dried peas no further action was taken.

A sample of strawberry jam was reported as containing 45 parts per million of sulphur dioxide, or 5 parts per million in excess of the maximum amount allowed under the Regulations. The retailer was warned by letter.



SAMPLES OF FOOD OTHER THAN MILK AND CREAM, SENT TO  
THE CITY ANALYST FOR EXAMINATION DURING 1927.

| Article.                | Genuine. | Adul-<br>terated. | Total. | Taken formally. |                   | Taken informally. |                   |
|-------------------------|----------|-------------------|--------|-----------------|-------------------|-------------------|-------------------|
|                         |          |                   |        | Genuine.        | Adul-<br>terated. | Genuine.          | Adul-<br>terated. |
| Vinegar .. ..           | 9        | 1                 | 10     | 9               | 1                 | ..                | ..                |
| Malt Vinegar .. ..      | 6        | ..                | 6      | 6               | ..                | ..                | ..                |
| Pears .. ..             | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Salmon .. ..            | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Tomato Soup .. ..       | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Oatmeal .. ..           | 11       | ..                | 11     | 11              | ..                | ..                | ..                |
| Polony .. ..            | 5        | ..                | 5      | 5               | ..                | ..                | ..                |
| Potted Meat .. ..       | 6        | 1                 | 7      | 6               | 1                 | ..                | ..                |
| Margarine .. ..         | 14       | 1                 | 15     | 14              | 1                 | ..                | ..                |
| Butter .. ..            | 32       | 1                 | 33     | 31              | 1                 | 1                 | ..                |
| Epsom Salts .. ..       | 5        | ..                | 5      | 5               | ..                | ..                | ..                |
| Beer .. ..              | 22       | 1                 | 23     | 22              | 1                 | ..                | ..                |
| Tea .. ..               | 27       | ..                | 27     | 27              | ..                | ..                | ..                |
| Rice .. ..              | 12       | ..                | 12     | 12              | ..                | ..                | ..                |
| Sago .. ..              | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Baking Powder .. ..     | 18       | ..                | 18     | 18              | ..                | ..                | ..                |
| Carbonate of Soda .. .. | 7        | ..                | 7      | 7               | ..                | ..                | ..                |
| Jam .. ..               | 8        | 1                 | 9      | 8               | 1                 | ..                | ..                |
| Pepper .. ..            | 6        | ..                | 6      | 6               | ..                | ..                | ..                |
| Mineral Waters .. ..    | 14       | ..                | 14     | 14              | ..                | ..                | ..                |
| Whiskey .. ..           | 5        | 1                 | 6      | 5               | 1                 | ..                | ..                |
| Rum .. ..               | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| White Flour .. ..       | 19       | ..                | 19     | 19              | ..                | ..                | ..                |
| Peas (Dried) .. ..      | ..       | 14                | 14     | ..              | 13                | ..                | 1                 |
| Lard .. ..              | 12       | ..                | 12     | 12              | ..                | ..                | ..                |
| Lard Compound .. ..     | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Gregory Powder .. ..    | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Coffee .. ..            | 8        | ..                | 8      | 8               | ..                | ..                | ..                |
| Sugar .. ..             | 6        | ..                | 6      | 6               | ..                | ..                | ..                |
| Cocoa .. ..             | 10       | ..                | 10     | 10              | ..                | ..                | ..                |
| Cream of Tartar .. ..   | 8        | ..                | 8      | 8               | ..                | ..                | ..                |
| Condensed Milk .. ..    | 16       | ..                | 16     | 16              | ..                | ..                | ..                |
| Carried forward .. ..   | 296      | 21                | 317    | 295             | 20                | 1                 | 1                 |

SAMPLES OF FOOD OTHER THAN MILK AND CREAM, SENT TO THE  
CITY ANALYST FOR EXAMINATION DURING 1927—*Continued.*

| Article.                            | Genuine. | Adul-<br>terated. | Total. | Taken formally. |                   | Taken informally. |                   |
|-------------------------------------|----------|-------------------|--------|-----------------|-------------------|-------------------|-------------------|
|                                     |          |                   |        | Genuine.        | Adul-<br>terated. | Genuine.          | Adul-<br>terated. |
| Brought forward ..                  | 296      | 21                | 317    | 295             | 20                | 1                 | 1                 |
| Health Salts .. ..                  | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Treacle .. ..                       | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Shredded Suet .. ..                 | 1        | 1                 | 2      | 1               | 1                 | ..                | ..                |
| Curds .. ..                         | 1        | 2                 | 3      | 1               | 2                 | ..                | ..                |
| Dripping .. ..                      | 3        | ..                | 3      | 3               | ..                | ..                | ..                |
| Self Raising Flour ..               | 5        | ..                | 5      | 5               | ..                | ..                | ..                |
| Ground Rice .. ..                   | 8        | ..                | 8      | 8               | ..                | ..                | ..                |
| Dried Milk .. ..                    | 4        | 1                 | 5      | 2               | ..                | 2                 | 1                 |
| Fruit Wine .. ..                    | 6        | ..                | 6      | 6               | ..                | ..                | ..                |
| Lemon Curd .. ..                    | 4        | ..                | 4      | 4               | ..                | ..                | ..                |
| Cod Liver Oil .. ..                 | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Sponge Cake .. ..                   | 3        | ..                | 3      | 3               | ..                | ..                | ..                |
| Olive Oil .. ..                     | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Custard Powder .. ..                | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Sweet Nitre .. ..                   | 2        | 5                 | 7      | 2               | 5                 | ..                | ..                |
| Sausage .. ..                       | 4        | ..                | 4      | 4               | ..                | ..                | ..                |
| Zinc Ointment .. ..                 | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Medicine .. ..                      | 1        | ..                | 1      | ..              | ..                | 1                 | ..                |
| Jellies .. ..                       | 4        | ..                | 4      | 4               | ..                | ..                | ..                |
| Corn Flour .. ..                    | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| White Precipitate<br>Ointment .. .. | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Glycerine and Borax ..              | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Glycerine .. ..                     | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Chocolate Ice-Cream ..              | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Fruit Crystals .. ..                | 7        | ..                | 7      | 7               | ..                | ..                | ..                |
| Cascara Sagrada .. ..               | 2        | ..                | 2      | 2               | ..                | ..                | ..                |
| Candy .. ..                         | 1        | ..                | 1      | 1               | ..                | ..                | ..                |
| Apples .. ..                        | 4        | ..                | 4      | 4               | ..                | ..                | ..                |
| Total .. ..                         | 373      | 30                | 403    | 369             | 28                | 4                 | 2                 |
|                                     |          |                   |        | 397             |                   | 6                 |                   |



## MEAT.

During the year the staff of meat inspectors remained as in 1926, namely, one Veterinary Inspector and three lay meat inspectors. The system of inspection continued unaltered. In addition to maintaining a close supervision over the Public Abattoir, Kirkgate Market and all the private slaughterhouses, an attempt was made to exercise a closer supervision over butchers' shops and particularly those premises where articles of food are prepared, and it was found that supervision of these latter premises was so necessary that the Health Committee appointed an extra lay meat inspector for this purpose, who will assume that special duty in 1928.

Besides maintaining the principle that there should be an inspector on duty at all times when slaughtering is in progress at the Public Abattoir, an inspector is engaged every Sunday morning in visiting the slaughterhouses open at that time and those areas where it is still customary for some butchers' shops to do business. Practically the only slaughterhouses where slaughtering is practised on Sunday morning are those occupied by wholesale pig butchers, and having regard to the prevalence of tuberculosis amongst pigs, an attempt is made to see every pig slaughtered.

The appended table indicates the amount of diseased and unsound foodstuffs which was condemned and disposed of during the year.

MEAT, ETC., DESTROYED BY CONSENT.

|                   | 1927.        | 1926.        | 1925.        | 1924.        |
|-------------------|--------------|--------------|--------------|--------------|
| Beef .. ..        | 159,943 lbs. | 122,471 lbs. | 134,725 lbs. | 137,660 lbs. |
| Veal .. ..        | 5,295 "      | 7,580 "      | 7,767 "      | 8,103 "      |
| Mutton .. ..      | 12,545 "     | 8,894 "      | 8,279 "      | 8,214 "      |
| Bacon and Ham ..  | 384 "        | 160 "        | 82 "         | 224 "        |
| Pork .. ..        | 27,003 "     | 16,785 "     | 14,987 "     | 9,004 "      |
| Goat Flesh .. ..  | "            | "            | 70 "         | 80 "         |
| Offals .. ..      | 53,988 lbs.  | 43,521 lbs.  | 39,931 "     | 25,971 "     |
| Rabbits .. ..     | 9,607 "      | 11,815 "     | 9,839 "      | 16,407 "     |
| Poultry .. ..     | 1,954 "      | 3,267 "      | 2,758 "      | 10,825 "     |
| Game .. ..        | 541 "        | 549 "        | 545 "        | 111 "        |
| Cheese .. ..      | 1,456 "      | "            | "            | 56 "         |
| Fish .. ..        | 75,363 "     | 91,537 lbs.  | 80,882 lbs.  | 100,502 "    |
| Shellfish .. ..   | 43,718 "     | 72,901 "     | 70,621 "     | 86,952 "     |
| Fruit .. ..       | 12,184 "     | 42,439 "     | 27,606 "     | 24,336 "     |
| Vegetables .. ..  | 60,536 "     | 159,525 "    | 75,581 "     | 66,087 "     |
| Inedible fungi .. | 95 "         | "            | "            | "            |
| Edible fungi ..   | 43 "         | 50 lbs.      | 634 lbs.     | 120 lbs.     |
| Yeast .. ..       | 736 "        | 4,794 "      | 2,381 "      | 448 "        |
| Tinned Goods ..   | 3,430 "      | 1,538 "      | 7,883 "      | 3,947 "      |
| Sundries .. ..    | 190 "        | 30 "         | 465 "        | "            |
| TOTALS .. ..      | 469,011 lbs. | 587,856 lbs. | 485,036 lbs. | 499,047 lbs. |
| No. of Eggs ..    | 2,325        | 7,725        | 23,110       | 15,453       |



**Tuberculous Carcases.**—The number of carcases condemned for tuberculosis during 1927 was as follows:—182 carcases of beef with organs, and 53 carcases of pork with organs.

**Slaughterhouses.**—During the year the number of private slaughterhouses remained the same as in the preceding year. The following table shows that one registered slaughterhouse was removed from the register and this was rendered possible by the decision of the owner to demolish the property. The increase of one in the number of licensed slaughterhouses is accounted for by the renewal of a slaughterhouse licence which, owing to a difference of opinion between the landlord and occupier, had been allowed to lapse for one year. The private slaughterhouses, both registered and licensed, have been well conducted, and it has not been necessary to institute proceedings for a breach of the slaughterhouse bye-laws.

During the year an addition was made to the slaughterhouse bye-laws which demands that the interior of a slaughterhouse shall always be effectively screened from the public view. The growing disposition on the part of certain licensees and occupiers of private slaughterhouses to permit other butchers to use their premises is much to be deplored. In some cases to such an extent is this sub-letting done that the slaughterhouses have become, in fact, small unofficial public abattoirs. The Department is officially advised that the practise cannot be prohibited, and can only take legal action when the slaughterhouse bye-laws are infringed; but in several instances the overcrowding of private slaughterhouses is so pronounced that it is anticipated that it may be necessary in the near future for the Corporation to apply for special powers to deal with this irregularity. At the moment it is considered advisable to await the completion of the new extension of the Public Abattoir. We can then see whether it is possible to persuade some of the butchers to transfer their slaughtering there.

#### SLAUGHTERHOUSES IN USE.

|                                          | 1920. | January,<br>1927. | December,<br>1927. |
|------------------------------------------|-------|-------------------|--------------------|
| Public Abattoir .. ..                    | 1     | 1                 | 1                  |
| Private slaughter-houses<br>(registered) | 63    | 47                | 46                 |
| Do. (licensed)                           | 8     | 8                 | 9                  |
| Knackers' Yards .. ..                    | 2     | 2                 | 2                  |



Of the 55 private slaughterhouses remaining on the register, some are used every day, whilst others are not used on more than one or two days a week. The inspectors paid a total of 8,836 visits to these slaughterhouses, or an average of 161 visits or three visits per week to each private slaughterhouse.

**Humane Slaughtering.**—The subject of what is commonly called humane slaughtering received attention throughout the year. In connection with the annual meeting of the British Association held at Leeds during the autumn the subject was discussed and a demonstration of the use of a mechanical instrument was arranged at the Public Abattoir. The demonstration proved the entire efficiency of the mechanical instrument and incidentally the unreliability of the pole-axe in the slaughter of cattle.

Shortly after this, the Royal Society for the Prevention of Cruelty to Animals arranged with a pork butcher in this City for the curing of six hams from pigs slaughtered by the mechanical instrument, and the transport of these hams round the world. Cold storage was not employed but the six hams travelled round the world packed in malt dust and at the end of the journey, on reaching this City, they were carefully examined and it was found that the meat had preserved quite satisfactorily, thus disproving the statement that the flesh of animals killed by the humane killer cannot be preserved. At present it is considered advisable to continue our efforts to educate the butchers on the advantages of the humane killer and there is reason to believe that the prejudice in favour of the pole-axe is slowly but gradually waning. The fact of the matter is that the pole-axe is obsolete and should be superseded by the more effective and more certain mechanically operated instrument.

**Legal Proceedings.**—During the year proceedings were taken in the following cases and convictions obtained. One butcher was fined £10 for exposing diseased meat for sale, and another count against the same butcher for depositing diseased meat for the purpose of preparation for sale was dismissed on payment of costs. Another butcher was fined £10 for depositing diseased meat for the purpose of sale, whilst a pork butcher was fined £5 for exposing unsound brawn for sale and dismissed on payment of costs for depositing unsound brawn for the purpose of sale. A fishmonger,



of Newcastle, was fined £5 on each of the following charges contrary to the Salmon and Freshwater Fisheries Act, 1923, and 5 guineas costs—(a) for failing to mark the box containing the trout, (b) for being in possession of unseasonable trout, and (c) for being in possession of unclean trout.

**Public Health (Meat) Regulations, 1924.**—The Public Health (Meat) Regulations have continued to be energetically applied. The butchers give notice of intention to slaughter and appear to be anxious to comply with the Regulations in every respect, but an incident occurred in the early part of the year which proved that there still exists amongst slaughterhouse occupiers either gross ignorance of the appearance of disease or carelessness in giving notice of the finding of disease. The butcher in question was discovered with a tuberculous pig and its pluck in his shop. They were seized and the butcher was fined £10 for exposing unsound meat for sale, and had to pay costs for depositing unsound meat for sale as already mentioned under the heading of Legal Proceedings. He had also to pay costs for failing to give notice of the finding of disease.

Shortly after this event the Veterinary Inspector, at the request of the Leeds and District Retail Butchers' Association, gave a lecture to butchers and demonstrated the more common diseases affecting animals used for human food. Another incident occurred during the year showing the difficulty which may arise from Article 9 of these Regulations in its present form. The carcase and organs of a cow affected with disease were found in a private slaughterhouse and in the absence of the owner duly seized, but by the first post the following morning there was received a notice under Article 9 which, in view of a previous decision of the Bench had to be considered valid. In this case there is no doubt that the notice of the finding of disease was despatched after the Inspector had seized the carcase and organs, but no action could be taken.

The Regulations concerning shops and stalls, and the handling and transport of meat continue to be observed satisfactorily.



The following is a summary of the cases taken into Court under the Regulations during the year :—

THE PUBLIC HEALTH (MEAT) REGULATIONS, 1924.  
PROSECUTIONS FOR THE YEAR 1927.

| No. | Offences.                                                   | Result of Hearing.               | Remarks.      |
|-----|-------------------------------------------------------------|----------------------------------|---------------|
| 1   | Article 9.—Failing to give notice of the finding of disease | Fined 40/- .. ..                 | Butcher.      |
| 2   | Article 21 (2) — Conveying uncovered meat in a vehicle      | Fined £3 or 21 days imprisonment | Meat Carrier. |
| 3   | Article 9.—Failing to give notice of the finding of disease | Dismissed on payment of costs.   | Butcher.      |

**Shellfish.**—Shellfish have been kept under close observation throughout the year and care has been taken that mussels have not been introduced from places prohibited by order of the Ministry of Agriculture and Fisheries. There have been no reasons to complain of the quality of shellfish and no samples have been submitted for bacteriological investigation.

# Infectious and Other Diseases.

BY

ARTHUR MASSEY, M.D., Ch.B., D.P.H., *Assistant Medical Officer of Health.*

A complete summary of all cases of notifiable infectious diseases notified to this department during the year will be found in the Appendix (Table II.).

The most arresting feature of the year's record was the outbreak of small pox during the latter half of the year. There was also an increased prevalence of diphtheria during 1927 and the special table given in connection with this disease will show that domestic overcrowding has some influence upon its incidence. There was a marked increase in the number of measles cases reported and the disease accounted for no less than 117 deaths. The high mortality from measles was somewhat mitigated by a very marked fall in the number of deaths from whooping-cough.

**Smallpox.**—There were 59 cases of smallpox reported in the City during 1927, the sequence of which is shown, as far as possible, in the accompanying epidemiological trees. (Diagrams A and B).

The cases were distributed in respect of age, sex and vaccinal condition thus :—

| Under 5 years. |               | 5-10 years. |               | 11-15 years. |               | 16-20 years. |               | 21-30 years. |               | 31-40 years. |               | 41-50 years. |               | 51-60 years. |               | Over 60 years. |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|---------------|-------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|----------------|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M.             | F.            | M.          | F.            | M.           | F.            | M.           | F.            | M.           | F.            | M.           | F.            | M.           | F.            | M.           | F.            | M.             | F.            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Vaccinated.    | Unvaccinated. | Vaccinated. | Unvaccinated. | Vaccinated.  | Unvaccinated. | Vaccinated.  | Unvaccinated. | Vaccinated.  | Unvaccinated. | Vaccinated.  | Unvaccinated. | Vaccinated.  | Unvaccinated. | Vaccinated.  | Unvaccinated. | Vaccinated.    | Unvaccinated. |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -              | 1             | -           | 3             | -            | 3             | -            | 7             | -            | 6             | -            | 3             | 2            | 1             | -            | 6             | -              | 4             | - | 3 | 1 | - | 1 | - | 3 | - | 2 | 1 | 4 | - | 2 | - | 4 | 1 | 1 | - |

and as regards wards thus :—North-East 19, North 9, North-West 8, East 6, West Hunslet 5, Central 4, Headingley 3, East Hunslet 2, South 1, Armley and Wortley 1, New 1.

Of the total, 39 cases, or 66·1 per cent., were unvaccinated and 20, or 33·9 per cent., were vaccinated; 15 of the latter were over



40 years of age had been vaccinated in infancy but never re-vaccinated. This shows how the immunity conferred by infant vaccination tends to be gradually lost as age advances, life-long protection being assured only by vaccination in infancy and regular revaccination thereafter. In no case did a vaccinated child or a revaccinated adult contract smallpox. It is surely convincing testimony to the absolute protection afforded the older child by vaccination in infancy that, although outbreaks occurred in two large elementary schools with a total of 17 cases, no vaccinated child contracted the disease.

In view of the general prevalence of smallpox in England—the North and Midlands particularly—during the year, 59 cases in a City of close upon half a million inhabitants is not a formidable total, especially in view of the geographical situation of Leeds. Leeds enjoyed remarkable freedom from smallpox during the first half of the year. The epidemic began in July and continued during the remainder of the year.

| Jan. | Feb. | March. | April. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. |
|------|------|--------|--------|------|-------|-------|------|-------|------|------|------|
| —    | 1    | 1      | —      | —    | —     | 2     | 8    | 8     | 9    | 9    | 21   |

It was always well under control and there were never more than 18 cases in hospital at any one time. The type was mild and, as a rule, did not present to the practitioner first in attendance the clinical picture expected. Hence it was not uncommon in the earlier stages of the epidemic to have cases reported to the Department at a stage when vaccination or revaccination of contacts could no longer be relied upon to afford protection. Other cases there were which never sought medical advice and which were discovered only after careful search, but not before they had passed on the infection to others. Again there were atypical cases diagnosed by the medical attendant as "Influenza" or "Chickenpox" whose true nature was revealed only by subsequent events. The modified type of smallpox undoubtedly had the effect of confusing the diagnosis especially in the early days of the epidemic and this in turn caused delay in applying preventive measures. As the outbreak proceeded however, medical practitioners became more familiar with the type and in consequence the number of missed cases diminished.



On November 1st Chickenpox was made notifiable in the City, and during November and December 42 cases (selected usually because they were unvaccinated) were visited and two were found to be smallpox.

*Isolation of Contacts.*—The Isolation Cottages at Seacroft were utilized to the best advantage for the segregation of family contacts. Ninety-two contacts were removed to these cottages for the quarantine period and of these, 11 contracted the disease. The latter fact would appear to justify the practice of isolating contacts, notably in the case of members of large families where home-supervision presents difficulty.

Leeds persons to the number of 160 who had been in contact with cases of smallpox in other towns were kept under observation by daily visits during the quarantine period.

*Vaccination.*—The number of routine primary vaccinations of infants by Public Vaccinators during 1927 was 3,472 or 44.6 per cent. of the nett births registered. Vaccination or revaccination of contacts was in all cases practised as promptly as circumstances would permit, but unfortunately there were instances where this could not be done early enough to avert the disease.

In connection with the outbreak 7,973 contacts were kept under observation in their own homes during the quarantine period; of these 5,274 were vaccinated or revaccinated.

*Visiting.*—The Inspectors paid 10,865 visits for observation or investigation in the various wards.

*Clinical Considerations.*—The majority of cases, even the very mild, presented definite prodromal symptoms. These frequently resembled Influenza and led the practitioner in attendance for a time to regard the case as such. In two cases the prodromal symptoms appeared to have lasted as long as a week. In investigating the source of infection in certain cases, it was found that another member of the family had had "Influenza" about a fortnight previously. As has been stated the type of disease generally was mild. The distribution of the eruption in the large majority of cases proved the most reliable guide to diagnosis. Occasionally however a case presented itself which collective skilled opinion had difficulty in labelling. On the other hand, six cases were of the



"text-book" variety, with generous eruption of typical distribution. One of the latter had an epithelioma on the thigh around the site of which the rash was especially profuse. Another case had recently had an abscess opened in the forearm and here again the eruption showed a predilection for the inflamed area of skin. In two cases considerable pitting remained. In one case the sight of one eye was seriously impaired.

During the year 108 cases—practically all occurred during the latter half of the year—were referred as "doubtful smallpox" by medical practitioners in the City for the opinion of this Department. The cases included:—Smallpox 40, Chickenpox 20, Acne 6, Impetigo 5, Syphilis 2, Erythema 2, Scarlet Fever 1, Drug rash 1, Boils 1, indefinite but "not Smallpox" 30.

*Epidemiological Trees.*—In the accompanying epidemiological "trees" the cases are divided into two sections according to original sources of infection.

In tree (A) each source of infection was established outside the City. In six of these no secondary cases occurred; in two there were two secondary cases.

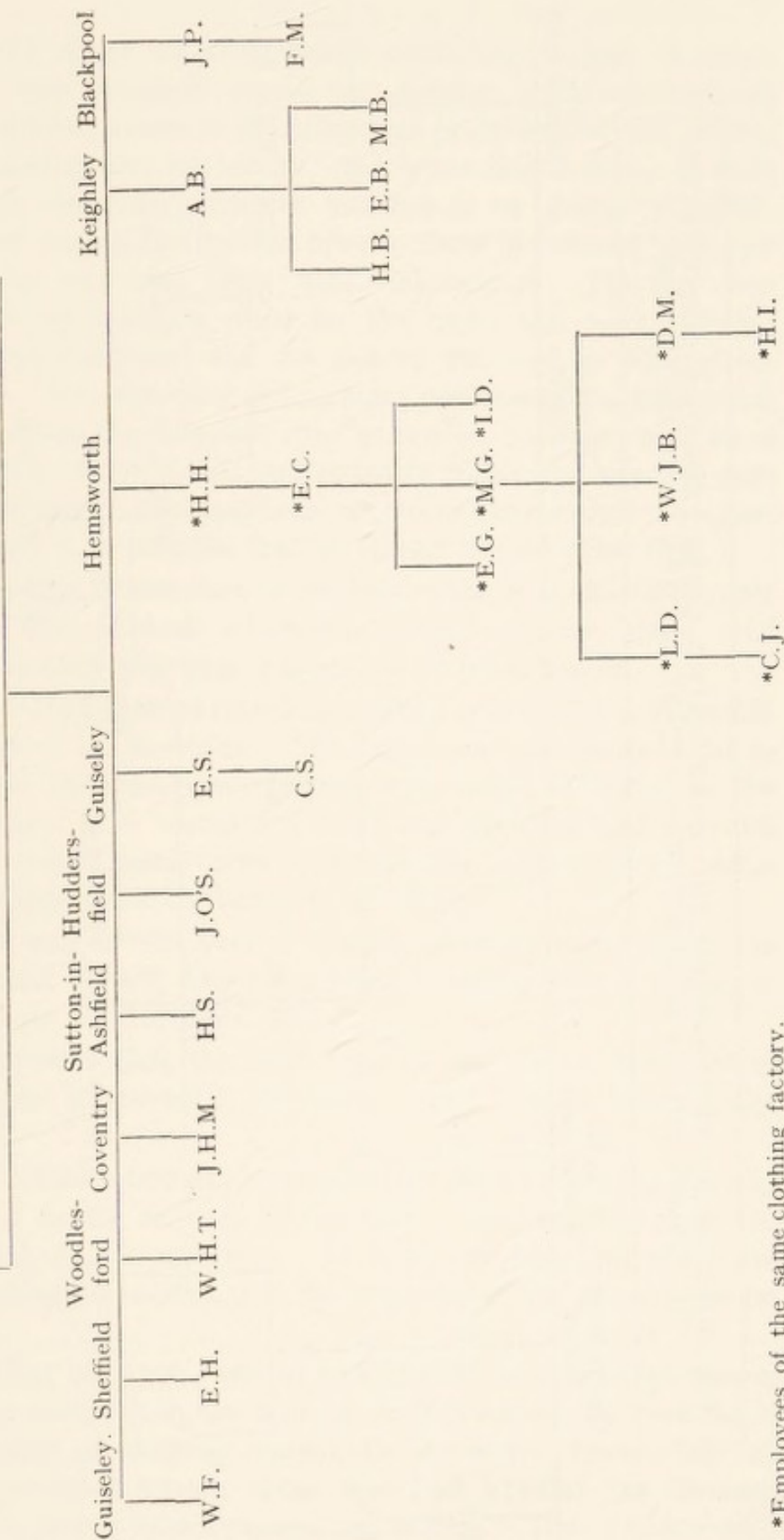
"E.S." contracted smallpox in a neighbouring town; the attack was so mild that medical advice was not sought. The case was discovered during investigations into the case of "C.S." (the father of "E.S."). Prior to discovery "E.S." while in the eruptive stage had attended on two occasions an evening class of 70 students. Apart from the case "C.S." there were no other secondary cases.

Another case "A.B." contracted infection in Keighley and owing to some delay in completing the diagnosis, three further cases (members of the same household) occurred.

"H.H." was an employee in a large Leeds Clothing Factory employing some 4,000 hands. He was removed to hospital suffering from smallpox on August 19th. Before reporting sick he had been at work in the eruptive stage, thus initiating a series of 10 cases in the factory before the outbreak was stamped out. That the cases were limited to 10, was under the circumstances a stroke of good fortune upon which both employers and workers are to be congratulated. In connection with this factory outbreak 2,700 vaccinations and revaccinations were performed.

# EPIDEMIOLOGICAL TREE A.

## SOURCES OF INFECTION ESTABLISHED OUTSIDE LEEDS.

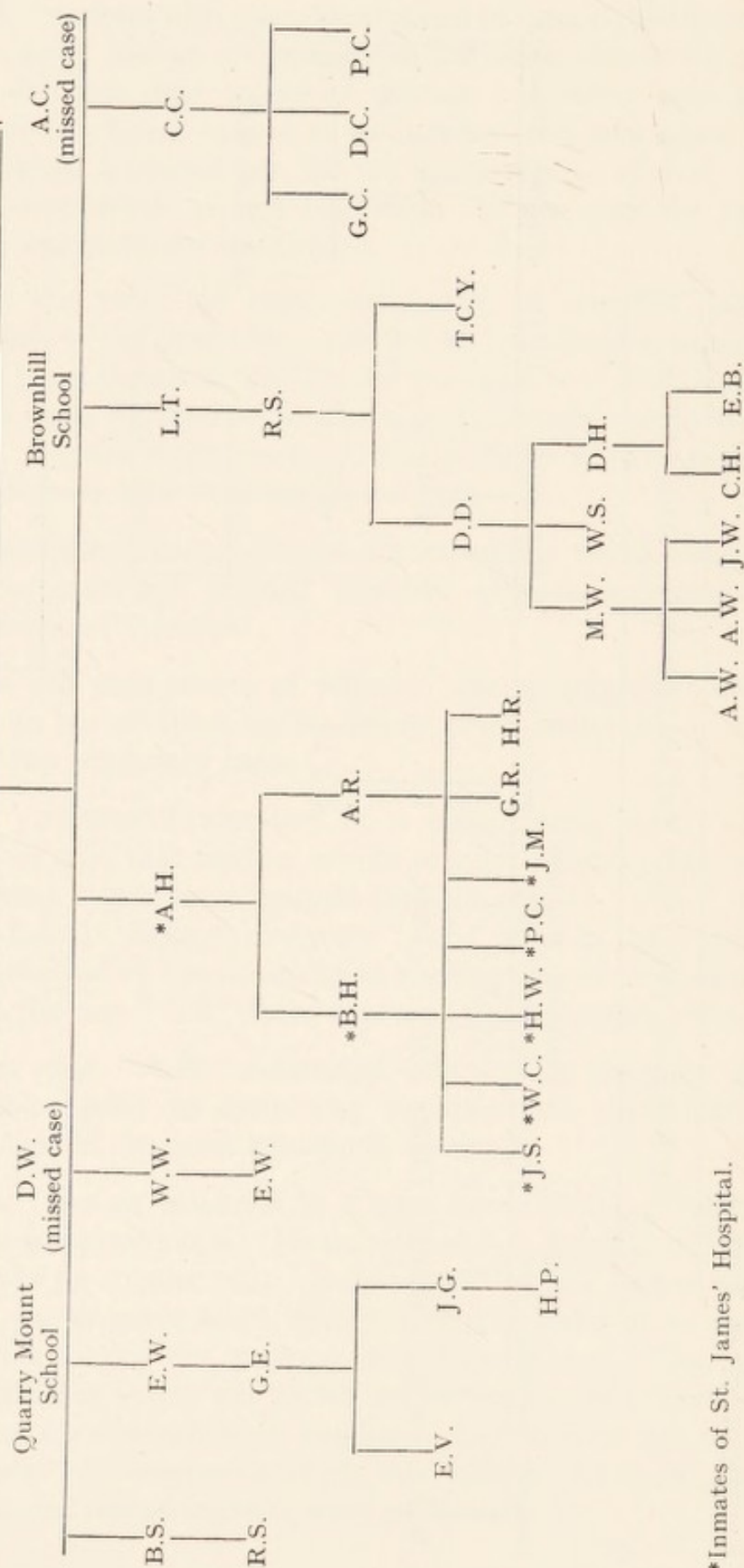


\*Employees of the same clothing factory.



# EPIDEMIOLOGICAL TREE B.

PREVIOUS MILD UNRECOGNISED AND UNREPORTED CASES PROBABLY CONSTITUTED THE ORIGIN (THIS WAS DEFINITELY ESTABLISHED IN MANY INSTANCES).



\*Inmates of St. James' Hospital.

Tree (B) shows six independent outbreaks, in two of which the origin was definitely traced to previous mild unrecognised cases. A similar source of infection was probable but not proved in the remaining four outbreaks; the latter included one in each of two large elementary schools, and one in St. James' Hospital. Into the last named Institution, infection was introduced by a boy "A.H." who was sent there with Chickenpox. The boy was admitted to an isolation ward for the night and next morning smallpox was diagnosed and the patient removed to Killingbeck accordingly. Six secondary cases among patients of the Institution followed. How the infection was conveyed to these was for a time a matter of doubt. It subsequently transpired however that the boy had been in the hospital some weeks previously for another condition and it is possible that he spread the infection then.

The Medical Authorities of the Institution co-operated heartily in quelling the outbreak which was limited to seven cases. Of patients and staff 584 were vaccinated or revaccinated.

A series of 12 cases occurred in children attending the Brownhill Council School in Harehills. The cases were extremely mild in type and on two occasions children were found at school in the eruptive stage. No vaccinated child was attacked and parental prejudice against vaccination undoubtedly accounted for some delay in bringing the outbreak to an end.

At the end of the year a similar outbreak occurred at the Quarry Mount School, five cases being reported over a period of four weeks up to December 31st.

It is evident that the mild type of the disease leads many parents to be indifferent; the more severe type is much easier to control.

These school outbreaks emphasize the need for closing the gap between the health services of the City. Co-operation, even the most cordial, is not sufficient. It is in the fact that there are two controlling authorities that the weakness of the present system lies.

*The Effect of Steam Pressing and Ironing in the Disinfection of Cloth.*—The outbreak in the clothing factory raised the question of the infectivity of clothing leaving the factory. Fortunately all the cases occurred among those who had handled the clothing prior to its being steam-pressed or ironed. The "buttoners," "packers," "labellers," etc. were unaffected. In four cases



employees had actually been at work in the eruptive stage of the disease. Every garment which was known or thought to have been handled by these employees was removed and disinfected by this Department. The output of the factory, however, is some 3,000 suits per diem and it could not always be established definitely which garments had been handled by infected persons.

Every garment is either machine pressed or hand ironed before leaving the factory which means that the cloth is subjected to a certain degree of heat. It was important therefore to ascertain what disinfecting power if any steam-pressing and ironing had. The cheaper garments are treated in the Hoffman steam press while the better-class clothing is hand-pressed by hot irons. In the former process the cloth is permeated by steam at a temperature varying from 100° to 125° Centigrade for a period of 10-20 seconds ; in hand-pressing considerable moist heat is applied for a longer period. In this connection it might be mentioned that Hahn and Strauss of the Berlin Hygiene Institute have announced the results of cloth disinfection experiments performed with mechanical ironing machines. Clothing smeared with tubercle bacilli, Staphylococci, and B. Coli, was found to be entirely freed from the bacilli by the ironing process after 23-30 seconds exposure, although spore-bearing bacilli were not destroyed. These findings hardly correspond with the results of the writer's brief experiments with cloth impregnated with other micro-organisms and treated under the steam-press and iron, thus :—

Hoffman Steam Press :—

| Cloth impregnated<br>with B. Pyocyaneus. | 5 sec. exposure. | Growth obtained.    |
|------------------------------------------|------------------|---------------------|
|                                          | 15 " "           | " "                 |
|                                          | 30 " "           | No growth obtained. |
| Cloth impregnated<br>with B. Subtilis.   | 5 sec. exposure. | Growth obtained.    |
|                                          | 15 " "           | " "                 |
|                                          | 30 " "           | " "                 |

After the same experiment with the hand iron, growth was obtained in all cases.

The infection of cloth by the smallpox virus, when it occurs, is probably light and, despite the above findings, it would appear not unreasonable to suppose that the usual methods of pressing which obtain in clothing factories are likely to destroy it. Howbeit there was no evidence pointing to clothing as a vehicle of infection.

## MEASLES.

| Year. | Cases notified. | Case-rate. | Deaths. | Death-rate. LEEDS. | Death-rate England and Wales. |
|-------|-----------------|------------|---------|--------------------|-------------------------------|
| 1917  | 5,094           | 11.62      | 277     | 0.63               | 0.31                          |
| 1918  | 6,719           | 15.71      | 417     | 0.98               | 0.29                          |
| 1919  | 2,605           | 6.05       | 48      | 0.11               | 0.10                          |
| 1920  | 5,523           | 12.30      | 148     | 0.33               | 0.19                          |
| 1921  | 240             | 0.52       | 5       | 0.01               | 0.06                          |
| 1922  | 10,078          | 21.59      | 152     | 0.33               | 0.15                          |
| 1923  | 5,224           | 11.12      | 50      | 0.11               | 0.14                          |
| 1924  | 7,037           | 14.92      | 46      | 0.10               | 0.12                          |
| 1925  | 5,301           | 11.21      | 39      | 0.08               | 0.14                          |
| 1926  | 7,702           | 16.27      | 20      | 0.04               | 0.09                          |
| 1927  | 8,664           | 18.14      | 117     | 0.24               | 0.09                          |

## AGES AT DEATH FROM MEASLES.

| 1927          | 0-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-10 | 10-15 | Total. |
|---------------|-----|-----|-----|-----|-----|------|-------|--------|
| No. of Deaths | 21  | 53  | 18  | 9   | 6   | 9    | 1     | 117    |

**Measles.**—The unexpected happened in regard to the prevalence of measles in the City during 1927. The table below will show how the incidence of this disease tends to wax and wane in alternate years; 1927 however proved a heavy year, with 8,664 cases, and upset the usual sequence. There were 117 deaths giving a death rate of 0.24. Children under 2 years of age are shown to be most vulnerable and those under 5 years to be especially liable to the disease. Every effort should therefore be made by parents to keep young children away from sources of infection. Above all, parents should be made to realise that measles is to be regarded



seriously—with far more concern for example than scarlet fever. They should know that measles may lead to serious respiratory complications such as pneumonia and that the disease may be an antecedent of tuberculosis. Measles spreads rapidly and is difficult of control because it is highly infectious in its early stage prior to the appearance of the rash. Conscientious parents however can do much to prevent its spread. There is no doubt that more cases of measles should be removed from unfavourable home surroundings for treatment in hospital.

#### WHOOPING COUGH

| Year. | Deaths. | Death-rate.<br>LEEDS. | Death-rate<br>England and<br>Wales. |
|-------|---------|-----------------------|-------------------------------------|
| 1917  | 69      | 0·16                  | 0·13                                |
| 1918  | 130     | 0·30                  | 0·30                                |
| 1919  | 66      | 0·15                  | 0·07                                |
| 1920  | 100     | 0·22                  | 0·12                                |
| 1921  | 72      | 0·15                  | 0·12                                |
| 1922  | 115     | 0·25                  | 0·17                                |
| 1923  | 32      | 0·07                  | 0·11                                |
| 1924  | 87      | 0·18                  | 0·10                                |
| 1925  | 47      | 0·10                  | 0·16                                |
| 1926  | 119     | 0·25                  | 0·11                                |
| 1927  | 44      | 0·09                  | 0·09                                |

#### AGES AT DEATH FROM WHOOPING COUGH.

| 1927          | 0-1 | 1-2 | 2-3 | 3-4 | 4-5 | 5-10 | 10-15 | Total. |
|---------------|-----|-----|-----|-----|-----|------|-------|--------|
| No. of deaths | 18  | 17  | 1   | 4   | ..  | 4    | ..    | 44     |

**Whooping Cough.**—Turning from measles to whooping cough some compensation is to be found in the fact that there were 75 fewer deaths from whooping cough in 1927 than in the previous year. The mortality from whooping cough shows the same tendency as measles to rise and fall in alternate years, and in this case 1927 maintained the sequence. Whooping cough has much in common with measles; the disease may initiate severe respiratory complications and may be the precursor of tuberculosis. Whooping cough therefore, like measles, should be treated by parents with no small concern.

**Diphtheria.**—The number of cases notified during 1927 was 439, with a case-rate of 0.92. There were 28 deaths equivalent to a death-rate of 0.06. How these figures compare with those of previous years is shown in the table on page 98.

Of the total cases notified 96.8 per cent. were treated in hospital.

Diphtheria has never responded dramatically to public health measures. Since the cause of the disease was discovered in 1884 however, certain progress has been made in its treatment and prevention. Treatment by antitoxin, introduced in 1894, for some years occasioned a progressive and welcome fall in the case-mortality.

During the last 20 years however, this decline in the case-mortality has slowed down or stopped and of late the incidence and to some extent the virulence of diphtheria have increased. This position demanded a new line of attack and the timely work of Schick an Austrian physician met this demand. Since 1920 the testing of susceptibility to diphtheria by the Schick method and the subsequent immunization of susceptibles have been practised in various parts of this country and elsewhere. For some time past immunization against diphtheria of nurses at the Leeds City Fever Hospital has been practised with success. It is now known that the majority of children between the ages of six months and 5 years are susceptible to diphtheria, hence this is the age group which responds best to immunization. This fact justifies the elimination of preliminary testing. Young children may now therefore be immunized by the simple expedient of three injections of toxoid-antitoxin which will secure protection during the susceptible years and until the natural immunity of later life is established.



## DIPHTHERIA AND MEMBRANOUS CROUP.

| Year. | Cases notified. | Case-rate. | Deaths. | Death-rate. LEEDS. | Death-rate England and Wales. |
|-------|-----------------|------------|---------|--------------------|-------------------------------|
| 1917  | 549             | 1.25       | 60      | 0.14               | 0.13                          |
| 1918  | 542             | 1.27       | 47      | 0.11               | 0.14                          |
| 1919  | 811             | 1.88       | 43      | 0.10               | 0.13                          |
| 1920  | 885             | 1.97       | 64      | 0.14               | 0.15                          |
| 1921  | 665             | 1.43       | 38      | 0.08               | 0.13                          |
| 1922  | 470             | 1.01       | 28      | 0.06               | 0.11                          |
| 1923  | 368             | 0.78       | 20      | 0.04               | 0.07                          |
| 1924  | 289             | 0.61       | 27      | 0.06               | 0.06                          |
| 1925  | 422             | 0.89       | 39      | 0.08               | 0.07                          |
| 1926  | 374             | 0.79       | 26      | 0.05               | 0.08                          |
| 1927  | 439             | 0.92       | 28      | 0.06               | 0.07                          |

These benefits are now available at the Infant Welfare Centres in Leeds as the result of a scheme evolved during the year. The facilities offered under the scheme are earnestly commended to parents from whom any enquiries on the subject will be welcomed.

The scheme is printed in full in the appendix.

**Scarlet Fever.**—The number of cases of scarlatina notified in the City during the year was 773 as compared with 756 for the previous year. The years 1926 and 1927 both showed a low incidence compared with the years 1919 to 1925. The case-rate for 1927 was 1.62 and that for the previous year 1.60. The mortality was again very low, there being only six deaths, equivalent to a death-rate of 0.01. The death-rate from scarlet fever for England and Wales was also 0.01, so that the prevailing type of the disease was generally benign.

The number of cases removed to hospital was 716 or 92.6 per cent. of the total notifications.

During the year 31 "return" cases were reported. Eight of the primary cases were re-admitted to hospital for further treatment.

YEAR 1927. DIPHTHERIA INCIDENCE IN ITS RELATION TO HOUSING CONDITIONS.  
NUMBER OF CASES PER 1,000 HOUSES OF EACH GROUP.

| Number of rooms in houses. | Number of Occupants of Houses. |            |            |            |            |            |            |            |            |             |                  |
|----------------------------|--------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------------|
|                            | 1 person.                      | 2 persons. | 3 persons. | 4 persons. | 5 persons. | 6 persons. | 7 persons. | 8 persons. | 9 persons. | 10 persons. | Over 10 persons. |
| 1                          | ..                             | 3.33       | ..         | ..         | ..         | ..         | ..         | ..         | ..         | ..          | ..               |
| 2                          | ..                             | 0.75       | 2.94       | 6.35       | 8.78       | 12.52      | 6.41       | 10.15      | 14.71      | ..          | ..               |
| 3                          | ..                             | 3.60       | 3.92       | 7.16       | 8.24       | 6.45       | 6.86       | 11.09      | 2.44       | ..          | ..               |
| 4                          | ..                             | ..         | 1.89       | 4.86       | 5.36       | 5.83       | 7.32       | 2.69       | 5.36       | 3.26        | 11.83            |
| 5                          | ..                             | 0.53       | 3.11       | 2.13       | 4.54       | 5.07       | 5.48       | 5.85       | ..         | ..          | ..               |
| 6                          | ..                             | ..         | 1.85       | 3.10       | 2.55       | 4.56       | 5.57       | 9.17       | 3.11       | 5.49        | 20.00            |
| Over 6                     | ..                             | ..         | ..         | 0.92       | 1.04       | 3.28       | 5.39       | 4.09       | 13.42      | 23.71       | 28.18            |

This table is exclusive of institutional cases of which 40 were reported during the year. Of the 439 cases notified during the year, 425 or 96.8 per cent. were removed to hospital, 14 cases only were treated at home, and a separate table in respect of these therefore would be of little value.



## SCARLET FEVER.

| Year. | Cases notified. | Case-rate. | Deaths. | Death-rate. LEEDS. | Death-rate England and Wales. |
|-------|-----------------|------------|---------|--------------------|-------------------------------|
| 1917  | 543             | 1·24       | 7       | 0·02               | 0·02                          |
| 1918  | 570             | 1·33       | 19      | 0·04               | 0·03                          |
| 1919  | 1,340           | 3·11       | 23      | 0·05               | 0·03                          |
| 1920  | 1,363           | 3·04       | 17      | 0·04               | 0·04                          |
| 1921  | 1,526           | 3·28       | 14      | 0·03               | 0·03                          |
| 1922  | 2,722           | 5·83       | 33      | 0·07               | 0·04                          |
| 1923  | 2,134           | 4·54       | 31      | 0·07               | 0·03                          |
| 1924  | 1,256           | 2·66       | 20      | 0·04               | 0·02                          |
| 1925  | 1,166           | 2·47       | 15      | 0·03               | 0·03                          |
| 1926  | 756             | 1·60       | 5       | 0·01               | 0·02                          |
| 1927  | 773             | 1·62       | 6       | 0·01               | 0·01                          |

*Combined Immunization against Scarlet Fever and Diphtheria.*—Preventive inoculations similar to those mentioned under diphtheria, have recently been practised in respect of scarlet fever, but the work has hardly yet emerged from the experimental stage.

Recently a method has been evolved of obtaining combined immunization against diphtheria and scarlet fever. The technique is similar to that of diphtheria immunization being effected by three injections at intervals of seven days of a mixture of diphtheria toxoid-antitoxin and scarlatinal antitoxin. The process claims to produce concurrently immunity to both diseases. It would appear however that unless the prophylactic mixture is exactly balanced (and it is probably not possible at this stage to procure a mixture of tested and guaranteed balance) there is danger of the diphtheria toxoid-antitoxin losing potency and moreover the degree of immunization against scarlet fever of such a mixture is problematical. Some hesitancy in the adoption of combined prophylaxis is therefore justified at this juncture.

**Erysipelas.**—During 1927, 320 cases were notified as compared with 327 in 1926 and there were 18 deaths as compared with 12 in 1926. Of the 320 cases, 127 were treated in hospital.

**Puerperal Fever and Puerperal Pyrexia.**—The figures for the year are as follows :—

| Disease.          | Cases notified. | Case-rate per 1,000 pop. | Deaths. | Death-rate per 1,000 pop. |
|-------------------|-----------------|--------------------------|---------|---------------------------|
| Puerperal Fever.. | 37              | 0·08                     | 14      | 0·03                      |
| Puerperal Pyrexia | 89              | 0·19                     | ..      | ..                        |

Of the 37 cases of puerperal fever 11 (or 29·7 per cent.) occurred in the practices of midwives; 17 (or 45·9 per cent.) in doctors' practices and 9 (or 24·3 per cent.) in institutions. Seventeen cases (45·9 per cent.) were removed to the City Hospital, the remainder being treated at home or in an institution other than the City Hospital.

The cases of puerperal pyrexia were distributed thus :— 24 cases (or 27·0 per cent.) in midwives' practices; 33 cases (or 37·1 per cent.) in doctors' practices, and 32 cases (or 36·0 per cent.) in institutions.

The following table gives a comparison of Puerperal Fever statistics for Leeds during the last 10 years :—

| Year. | Cases notified. | Case-rate per 1,000 pop. | Deaths. | Death-rate per 1,000 pop. |
|-------|-----------------|--------------------------|---------|---------------------------|
| 1918  | 17              | 0·04                     | 6       | 0·01                      |
| 1919  | 26              | 0·06                     | 6       | 0·01                      |
| 1920  | 56              | 0·12                     | 29      | 0·06                      |
| 1921  | 31              | 0·07                     | 8       | 0·02                      |
| 1922  | 35              | 0·07                     | 14      | 0·03                      |
| 1923  | 51              | 0·11                     | 10      | 0·02                      |
| 1924  | 53              | 0·11                     | 9       | 0·02                      |
| 1925  | 52              | 0·11                     | 24      | 0·05                      |
| 1926  | 46              | 0·10                     | 14      | 0·03                      |
| 1927  | 37              | 0·08                     | 14      | 0·03                      |

The Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926, which came into operation on October 1st, 1926, have worked well during the year. The comprehensive notification permitting as it does of more complete information widens usefully the scope of investigation and action in respect of febrile conditions during the puerperium.



**Encephalitis Lethargica.**—There were eight cases notified in the City during the year, equivalent to a case-rate of 0.02. Six deaths occurred from the disease giving a death-rate of 0.01. During 1926 there were 10 new cases notified and 11 deaths were certified as due to the disease.

From 1920 to 1927 (inclusive) 113 cases of encephalitis lethargica were notified in Leeds:—

| 1920. | 1921. | 1922. | 1923. | 1924. | 1925. | 1926. | 1927. |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 8     | 13    | 3     | 10    | 41    | 20    | 10    | 8     |

In August, 1927 an investigation was conducted in respect of the 110 cases which had been notified up to that time since 1920. Of these 60 had died and five could not be traced. The 45 remaining cases were visited and examined and the results classified thus:—

- (A) Apparently cured, *i.e.* free from symptoms, in the case of adults employed or employable and in the case of children able to attend school and derive reasonable benefit therefrom:—26.
- (B) Apparently progressing towards recovery with seemingly favourable prognosis:—5.
- (C) Cases of incomplete recovery now stationary or retrogressing, with a doubtful prognosis and in whom treatment has proved of no avail:—14.

The cases were distributed thus:—

| Age and Sex.                 | No. of cases. | Classified according to after-history. |    |    |
|------------------------------|---------------|----------------------------------------|----|----|
|                              |               | A.                                     | B. | C. |
| Males over 21 years .. ..    | 17            | 11                                     | 4  | 2  |
| Females over 21 years .. ..  | 14            | 10                                     | .. | 4  |
| Males 14-21 years .. ..      | 6             | 1                                      | .. | 5  |
| Females 14-21 years .. ..    | 4             | 1                                      | 1  | 2  |
| Males under 14 years .. ..   | 2             | 2                                      | .. | .. |
| Females under 14 years .. .. | 2             | 1                                      | .. | 1  |

In certain cases the residual physical and mental conditions of encephalitis lethargica are very distressing to parents and others upon whom devolves the onus of after-care. Such cases are not usually suitable for the mental hospital and moreover general hospital treatment, even if available, is of necessity temporary. There is need for a special institution for the Yorkshire area to which cases could be sent for prolonged treatment and re-education.

**Acute Anterior Poliomyelitis.**—During the year there were 17 cases (case-rate 0·04) reported and there were three deaths (death-rate, 0·01). This incidence is in excess of that of the previous year when but two cases only were notified. There was no evidence pointing to the infectivity of the disease.

#### ENTERIC FEVER.

| Year. | Cases notified. | Case-rate. | Deaths. | Death-rate. LEEDS. | Death-rate England and Wales. |
|-------|-----------------|------------|---------|--------------------|-------------------------------|
| 1917  | 37              | 0·08       | 7       | 0·02               | 0·03                          |
| 1918  | 42              | 0·10       | 5       | 0·01               | 0·03                          |
| 1919  | 33              | 0·08       | 8       | 0·02               | 0·02                          |
| 1920  | 29              | 0·06       | 4       | 0·01               | 0·01                          |
| 1921  | 24              | 0·05       | 2       | 0·00               | 0·02                          |
| 1922  | 14              | 0·03       | 7       | 0·01               | 0·01                          |
| 1923  | 9               | 0·02       | 1       | 0·00               | 0·01                          |
| 1924  | 25              | 0·05       | 6       | 0·01               | 0·01                          |
| 1925  | 9               | 0·02       | 3       | 0·01               | 0·01                          |
| 1926  | 9               | 0·02       | 1       | 0·00               | 0·01                          |
| 1927  | 14              | 0·03       | 2       | 0·00               | 0·01                          |

#### CASES OF ENTERIC FEVER MONTH BY MONTH.

| Jan. | Feb. | March | April | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. |
|------|------|-------|-------|------|-------|-------|------|-------|------|------|------|
| 1    | —    | 1     | —     | 1    | 2     | 1     | —    | 4     | —    | 1    | 3    |



**Cerebro-Spinal Meningitis.**—There were five cases notified during the year and 11 deaths from the disease were certified. The death-rate was 0·02.

**Enteric Fever.**—There were 14 cases of this disease notified during the year with a case-rate of 0·03 as compared with nine cases and a case-rate of 0·02 for 1926. There were two deaths the equivalent of a death-rate of 0·004. The cases were all of a sporadic type.

In one case infection was acquired abroad on the French Riviera. There were no special circumstances worthy of record in the other cases.

**Malaria, Dysentery and Trench Fever.**—One case only of malaria was notified during the year. Two deaths were certified as due to this disease.

There were two notifications of dysentery and no deaths.

No case of trench fever was reported.

Trench fever ceases to be notifiable on January 1st, 1928, in pursuance of the Public Health (Infectious Disease) Regulations 1927.

**Ophthalmia Neonatorum.**—There were 86 cases notified during the year under review as compared with 73 last year and 50 in 1925. This increase is probably due in some measure to the fact that the responsibility for notification now devolves upon the medical practitioner in attendance and not upon the midwife (the Public Health (Ophthalmia Neonatorum) Regulations 1926, which came into operation on October 1st, 1926, transferred the onus of notification from the midwife to the doctor). It accords, however with the general increase in the incidence of gonorrhoea mentioned in the report on Venereal Diseases on page 121.

Of the 86 cases notified during 1927, 50 cases were treated at home, and 36 in hospital, viz.:—19 in the Maternity Hospital, one each in St. James' Hospital, St. Mary's Hospital, City Hospital, Seacroft, and a maternity home, and 13 in the General Infirmary. Twenty-three cases, or 26·7 per cent., occurred in the practices of medical practitioners, 48 or 55·8 per cent. in those of midwives, and 15, or 17·4 per cent., in institutions.

In order to reduce the incidence of ophthalmia neonatorum every effort should be made to secure the treatment of gonorrhoea



in pregnant women. In this connection a close liaison between the ante-natal clinics and the Venereal Diseases centre is called for. There is often a reluctance on the part of a pregnant woman to attend the Venereal Diseases centre for treatment; this is readily overcome if the same doctors who take the ante-natal clinics also attend the Venereal Diseases centre. Unfortunately in Leeds this latter arrangement does not obtain. Arrangements have however been made for the holding of special clinics at certain of the Infant Welfare centres where mothers and babies attend and are seen by one of the staff of the Venereal Diseases Department.

#### DAY OF ONSET FROM BIRTH.

| 1927.        | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 10th-15th | 15th-20th | 20th-25th |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----------|-----------|-----------|
| No. of Cases | 3   | 4   | 4   | 4   | 6   | 12  | 11  | 9   | 10  | 4    | 10        | 7         | 2         |

The results of treatment were as follows:—

|                                |    |    |    |
|--------------------------------|----|----|----|
| Recovery apparently perfect    | .. | .. | 75 |
| Recovery not perfect ..        | .. | .. | 2  |
| Sight of both eyes affected .. | .. | .. | 4  |
| Still under treatment          | .. | .. | —  |
| *Died ..                       | .. | .. | 5  |

\*Death was due in four cases to causes other than ophthalmia neonatorum and the fifth case was that of a child whose parents were not residents of Leeds.

**Diarrhœa and Enteritis.**—This important condition of infancy—often spoken of as summer diarrhœa—has a seasonal prevalence, namely, summer and autumn. Its incidence and death-rate vary largely with meteorological conditions, a hot, dry summer and autumn favouring its development.

The 1927 season being the reverse of hot and dry, the expected decline in the prevalence and severity of epidemic diarrhœa took place. The deaths from the disease of children under two years of age totalled 88, as compared with 147 the previous year and the death-rate per thousand births was 11.3, as compared with 18.2 in 1926. This fall in the death-rate was shared by the country as a whole, the rate for England and Wales being 6.3, as against 9.2 the previous year. The figure for Leeds is still much higher than that for England and Wales and notwithstanding the smaller total the discrepancy between the two figures remains about the same.



DIARRHŒA AND ENTERITIS DEATHS UNDER TWO YEARS  
WITH RATES PER 1,000 BIRTHS.

| Year. | Deaths. | Rate per 1,000 Births. |                    |
|-------|---------|------------------------|--------------------|
|       |         | Leeds.                 | England and Wales. |
| 1917  | 171     | 22·6                   | 12·8               |
| 1918  | 146     | 19·8                   | 11·7               |
| 1919  | 140     | 18·5                   | 10·2               |
| 1920  | 140     | 12·5                   | 8·9                |
| 1921  | 184     | 18·1                   | 16·1               |
| 1922  | 92      | 9·9                    | 6·6                |
| 1923  | 118     | 13·6                   | 8·1                |
| 1924  | 103     | 12·0                   | 7·6                |
| 1925  | 149     | 18·2                   | 8·8                |
| 1926  | 147     | 18·2                   | 9·2                |
| 1927  | 88      | 11·3                   | 6·3                |

DEATHS AND METEOROLOGICAL CONDITIONS IN EACH MONTH  
OF THE YEAR.

| 1927.                   | Jan.  | Feb.  | Mar.  | April. | May.  | June. | July. | Aug.  | Sept. | Oct.  | Nov.  | Dec.  | Year. |
|-------------------------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Deaths .. ..            | 5     | 8     | 7     | 4      | 8     | 3     | 1     | 12    | 21    | 13    | 3     | 3     | 88    |
| Barom. (inches) ..      | 29·56 | 29·94 | 29·54 | 29·77  | 29·99 | 29·74 | 29·78 | 29·78 | 29·56 | 29·91 | 29·84 | 29·78 | 29·76 |
| Attached Ther.°F. ..    | 55·79 | 54·06 | 59·08 | 60·39  | 60·58 | 61·49 | 65·25 | 66·09 | 63·48 | 62·42 | 58·20 | 51·60 | 59·96 |
| Dry Bulb .. ..          | 43·02 | 42·56 | 47·57 | 49·67  | 54·46 | 57·40 | 63·63 | 62·35 | 56·85 | 53·12 | 45·71 | 37·08 | 51·27 |
| Wet Bulb .. ..          | 41·12 | 40·58 | 44·88 | 46·47  | 51·10 | 54·05 | 59·92 | 59·09 | 54·13 | 50·73 | 43·71 | 35·81 | 48·60 |
| Humidity .. ..          | 85·40 | 84·31 | 81·74 | 78·78  | 79·02 | 79·68 | 79·38 | 81·73 | 83·25 | 84·37 | 85·20 | 87·23 | 82·48 |
| Mn. of highest reading  | 47·21 | 47·61 | 53·09 | 55·57  | 62·43 | 63·14 | 70·14 | 68·91 | 61·43 | 59·04 | 51·00 | 39·79 | 56·80 |
| „ lowest „              | 37·57 | 36·75 | 40·83 | 41·89  | 44·82 | 48·26 | 54·82 | 55·48 | 50·18 | 46·25 | 40·03 | 32·86 | 44·30 |
| „ daily range ..        | 9·64  | 10·86 | 12·26 | 13·68  | 17·61 | 14·88 | 15·32 | 13·43 | 11·2  | 12·79 | 10·97 | 6·93  | 12·50 |
| Total rainfall (inches) | 3·27  | 1·05  | 2·59  | 1·95   | 1·89  | 2·58  | 4·69  | 6·67  | 3·36  | 2·26  | 2·73  | 2·05  | 35·09 |

The meteorological data are compiled from returns sent us by Mr. Crowther, Curator of the Museum. They are uncorrected readings, made at 10 a.m. and 4 p.m.

Epidemic diarrhoea is largely preventable; climate is not causative but merely a predisposing agent. The chief factors in prevention are enlightened mothercraft, the encouragement of breast-feeding, personal and domestic cleanliness, and a uniformly clean milk supply—the child in Holbeck is as much entitled to clean milk and for that matter to a clean house, as the child in Headingley.

The 88 deaths from diarrhoea and enteritis were of children aged as follows:—

|                 | No. | Per cent. |                | No. | Per cent. |
|-----------------|-----|-----------|----------------|-----|-----------|
| Under one month | 8   | 9·1       | 6-9 months ..  | 13  | 14·8      |
| 1-3 months ..   | 23  | 26·1      | 9-12 months .. | 12  | 13·6      |
| 3-6 months ..   | 23  | 26·1      | 1-2 years ..   | 9   | 10·2      |

#### INFLUENZA.

| Year. | Deaths. | Death-Rate.<br>LEEDS. | Death-Rate<br>England<br>and Wales. |
|-------|---------|-----------------------|-------------------------------------|
| 1917  | 59      | 0·13                  | 0·21                                |
| 1918  | 1,401   | 3·28                  | 3·13                                |
| 1919  | 623     | 1·45                  | 1·22                                |
| 1920  | 170     | 0·38                  | 0·28                                |
| 1921  | 164     | 0·35                  | 0·24                                |
| 1922  | 169     | 0·36                  | 0·56                                |
| 1923  | 122     | 0·26                  | 0·22                                |
| 1924  | 404     | 0·86                  | 0·49                                |
| 1925  | 159     | 0·34                  | 0·33                                |
| 1926  | 100     | 0·21                  | 0·23                                |
| 1927  | 173     | 0·36                  | 0·57                                |

#### AGES AT DEATH FROM INFLUENZA.

| 1927          | 0-1 | 1-2 | 2-5 | 5-15 | 15-25 | 25-45 | 45-65 | 65+ | Total. |
|---------------|-----|-----|-----|------|-------|-------|-------|-----|--------|
| No. of Deaths | 10  | 8   | 3   | 6    | 9     | 29    | 49    | 59  | 173    |



**Influenza.**—The number of deaths from influenza during the year was 173 or 73 more than for 1926 and 18 less than the average for the previous five years. The death-rate was 0·36, as compared with 0·21 for the previous year, and 0·41 the average for the previous five years. Of the deaths 79·2 per cent. occurred in persons over 25 years, 62·4 per cent. in those over 45 and 34·1 per cent. in those over 65. Compared with 1926 there was a slight relative increase in mortality among young persons, but generally speaking the disease proved more fatal to those in the older age groups.

## BRONCHITIS.

| Year. | Deaths. | Death-Rate.<br>LEEDS. | Death-Rate<br>England<br>and Wales. |
|-------|---------|-----------------------|-------------------------------------|
| 1917  | 646     | 1·47                  | 1·25                                |
| 1918  | 653     | 1·53                  | 1·23                                |
| 1919  | 741     | 1·72                  | 1·24                                |
| 1920  | 625     | 1·39                  | 1·01                                |
| 1921  | 556     | 1·19                  | 0·89                                |
| 1922  | 596     | 1·28                  | 1·07                                |
| 1923  | 518     | 1·10                  | 0·85                                |
| 1924  | 643     | 1·36                  | 0·97                                |
| 1925  | 513     | 1·08                  | 0·91                                |
| 1926  | 439     | 0·93                  | 0·77                                |
| 1927  | 351     | 0·73                  |                                     |

## AGES AT DEATH FROM BRONCHITIS.

| 1927          | 0-1 | 1-2 | 2-5 | 5-15 | 15-25 | 25-45 | 45-65 | 65+ | Total. |
|---------------|-----|-----|-----|------|-------|-------|-------|-----|--------|
| No. of Deaths | 20  | 2   | 2   | 2    | 2     | 13    | 101   | 209 | 351    |

**Bronchitis.**—The year 1927 saw a further fall in the death-rate from bronchitis. There were 351 deaths equivalent to a rate of 0.73 as compared with 439 deaths and a rate of 0.93 for the previous year, and an average of 542 deaths with a rate of 1.15 for the previous five years. For the first time on record, the death-rate from bronchitis in Leeds fell below that of the latest available death-rate (1926) for England and Wales for this disease—a matter for congratulation having in mind the rigours of our northern climate and the atmosphere of a great industrial city. There was a marked relative disease, as compared with 1926, in the mortality from bronchitis among young people; as is usual, the greatest toll was taken of those aged over 45 years.

PNEUMONIA (ALL FORMS).

| Year. | Deaths. | Death-Rate.<br>LEEDS. | Death-Rate<br>England<br>and Wales. |
|-------|---------|-----------------------|-------------------------------------|
| 1917  | 565     | 1.29                  | 1.14                                |
| 1918  | 768     | 1.80                  | 1.65                                |
| 1919  | 560     | 1.30                  | 1.06                                |
| 1920  | 622     | 1.39                  | 0.99                                |
| 1921  | 562     | 1.21                  | 0.92                                |
| 1922  | 502     | 1.08                  | 1.07                                |
| 1923  | 440     | 0.94                  | 0.87                                |
| 1924  | 619     | 1.31                  | 1.00                                |
| 1925  | 503     | 1.06                  | 0.95                                |
| 1926  | 484     | 1.02                  | 0.83                                |
| 1927  | 477     | 1.00                  |                                     |

AGES AT DEATH FROM PNEUMONIA.

| 1927             | 0-1 | 1-2 | 2-5 | 5-15 | 15-25 | 25-45 | 45-65 | 65+ | Total. |
|------------------|-----|-----|-----|------|-------|-------|-------|-----|--------|
| No. of<br>Deaths | 99  | 64  | 31  | 20   | 16    | 57    | 117   | 73  | 477    |



**Pneumonia (All forms).**—During the year under review there were 477 deaths (death-rate 1.00) as compared with 484 (death-rate 1.02) for 1926. The death-rate from pneumonia in Leeds remains constantly in excess of that for the country as a whole. The number of deaths of infants under one year of age was exactly the same as for the previous year. The year saw an increase in the mortality in respect of the age-group 45-65 years.

**Cancer.**—There were 649 deaths from cancer in the City during the year, equivalent to a death-rate of 1.36, as compared with 657 deaths in 1926 and a death-rate of 1.39. Of the total deaths 299 or 46.1 per cent. were males and 350 or 53.9 per cent. females.

The preponderance of female deaths is explained by the numerical superiority of females, the more general survival of women to later life, and the special liability of certain female organs to cancerous processes.

The chart opposite shows the number of male and female deaths from cancer of various parts of the body. Malignant disease of the mouth and tongue (buccal cavity), as is usual, overtook many more men than women—a fact not unconnected with pipe smoking and with the incidence of syphilitic leucoplakia.

Cancer of the stomach, liver or pancreas took the largest toll of life both in men and women. Malignant disease of the rectum was also common in both sexes.

There was considerable mortality amongst females from cancer of the uterus and breast. With regard to the latter, the less fertile of the married, appear at a disadvantage.

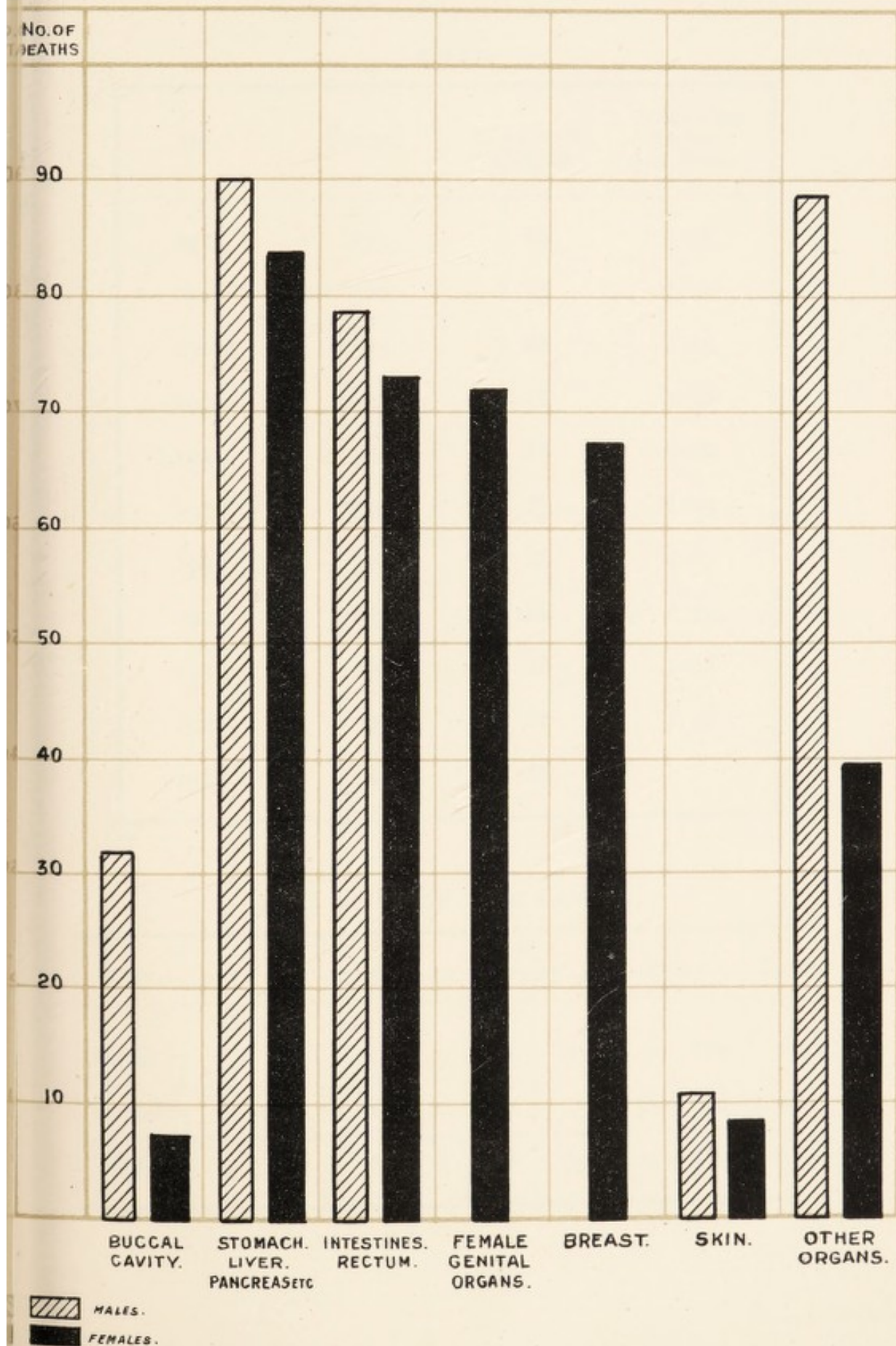
Skin cancer was not common in either sex but such cases as did occur were mostly amongst males. As regards "other organs" men largely predominate.

*Ages at Death.*—In the earlier age-groups death was usually due to sarcoma—a rapidly growing form of malignant disease. In the age-group 25-45 female deaths predominate—accounted for by the growing prevalence at that period of cancer of the breast, uterus and ovary. Between 45 and 65 males and females suffer in like proportion. From the age of 65 upwards female deaths are again in excess, due largely to the more general survival of women to later ages.

*Cancer and Preventive Medicine.*—Cancer is the one disease which stands defiant of public health measures. During the last



CHART SHOWING NUMBER OF DEATHS FROM  
CANCER OF DIFFERENT PARTS OF THE BODY 1927.







## CANCER.

| Year. | Deaths. | Death-Rate.<br>LEEDS. | Death-Rate<br>England<br>and Wales. |
|-------|---------|-----------------------|-------------------------------------|
| 1917  | 535     | 1.22                  | 1.21                                |
| 1918  | 500     | 1.17                  | 1.22                                |
| 1919  | 575     | 1.33                  | 1.15                                |
| 1920  | 492     | 1.10                  | 1.16                                |
| 1921  | 554     | 1.19                  | 1.22                                |
| 1922  | 595     | 1.27                  | 1.23                                |
| 1923  | 574     | 1.22                  | 1.27                                |
| 1924  | 639     | 1.35                  | 1.30                                |
| 1925  | 606     | 1.28                  | 1.34                                |
| 1926  | 657     | 1.39                  | 1.36                                |
| 1927  | 649     | 1.36                  |                                     |

## AGES AT DEATH FROM CANCER.

| 1927.   | 0-1 | 1-2 | 2-5 | 5-15 | 15-25 | 25-45 | 45-65 | 65+ | Total. |
|---------|-----|-----|-----|------|-------|-------|-------|-----|--------|
| Males   | ..  | ..  | ..  | 3    | ..    | 20    | 148   | 128 | 299    |
| Females | ..  | ..  | 2   | ..   | 1     | 35    | 156   | 156 | 350    |
| Total   | ..  | ..  | 2   | 3    | 1     | 55    | 304   | 284 | 649    |



25 years according to statistics the cancer mortality rate has increased from 800 to over 1,300 per million. Improved methods of diagnosis undoubtedly account for some of this increase. There is another consideration however which may suggest an anomaly. Age is a constant predisposing factor in the incidence of cancer. As a result of the activities of the public health service over a number of years there has been an increase in the average span of life so that more people than formerly attain to the age when cancer is especially liable to occur. Preventive effort is moreover handicapped by the obscurity which still surrounds the etiology of cancer. Of recent years, the bacterial theory of cancer causation has returned to favour. It may be that "seed" and "soil" play an important part. One might suggest a certain ubiquity of the cancer virus and indicate as the deciding factor in cancer formation a suitable soil in the shape of abnormal body cells resulting from developmental defect or from more obvious agencies such as chronic irritation. Cancer research goes on—nowhere more assiduously than in the laboratory established specially for the purpose in Leeds under the joint auspices of the Yorkshire Council of the British Empire Cancer Campaign and the University.

Meanwhile what can the public health worker do? He can continue to advise suitable safeguards for the workers in those occupations which are known to predispose to cancer; he can advocate regular medical examination for all over, say 35 years of age, with a view to securing early detection of the disease; finally he can teach that prompt surgical interference is the only hope.

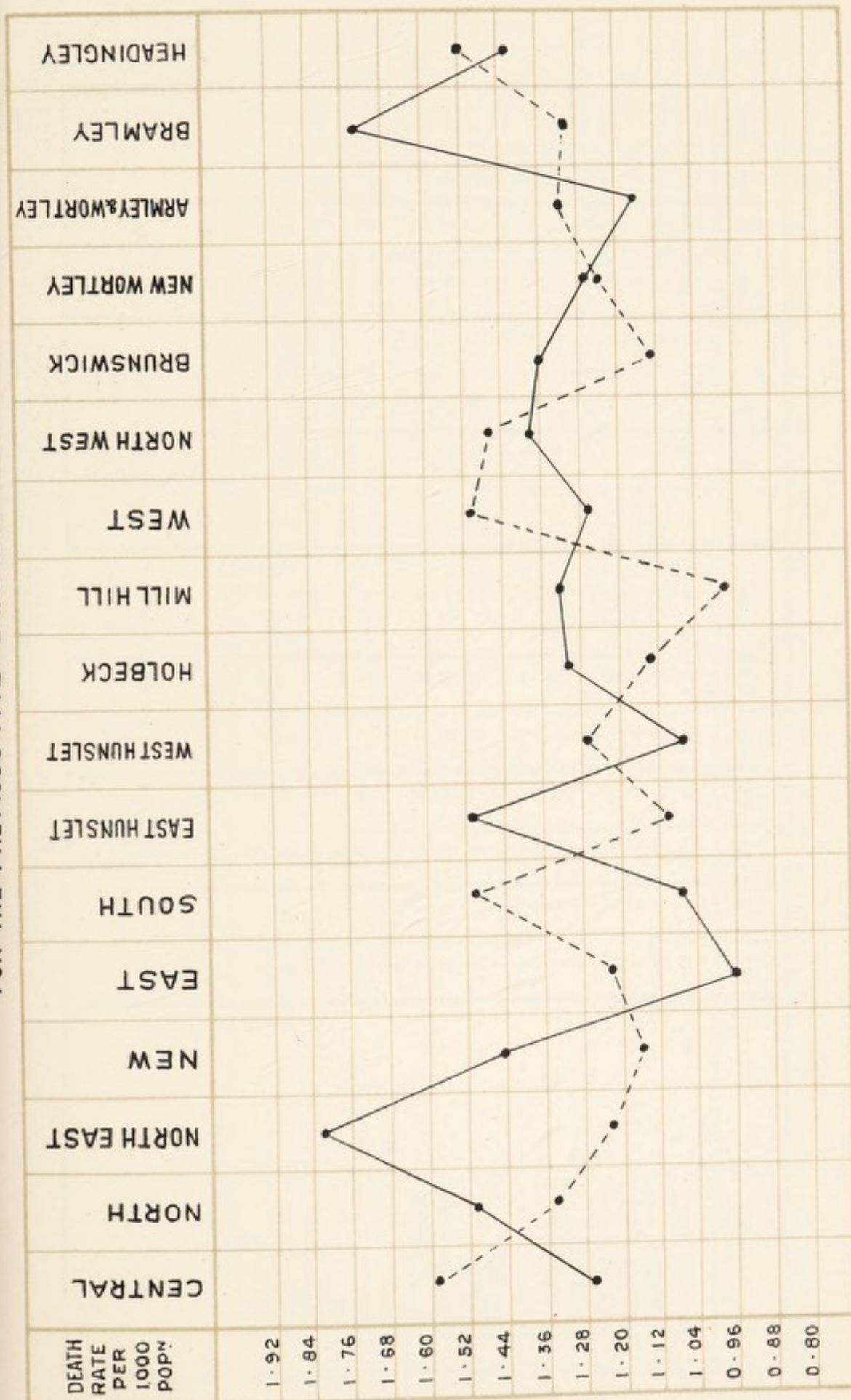
The Yorkshire Council of the British Empire Cancer Campaign has continued to pursue its investigations into the cause of cancer and the physical conditions that seem to have a bearing thereon. It has also devoted a good deal of attention to propaganda work and has held special "Cancer Weeks" in various parts of the County.

The following is an extract from the annual report issued by the Council:—

"Research has already begun in Leeds, and we are now confident that our county will do its full share in the fight against this horrible pestilence.

"The second aspect of our work is concerned with propaganda. The lay public know little of Cancer, and their knowledge is mostly inaccurate. It was felt by all of us that we must enlighten the public, and so do our best to banish fear. By diffusing a knowledge of the subject, we hope to be able to secure the earlier access of the patient to the medical man. The great handicap on the work of the medical

# FOR THE PREVIOUS FIVE YEARS 1922-1926.



1927 —  
 FIVE YEARS  
 AVERAGE 1922-1926 - - -





1927.—DEATHS FROM CANCER IN WARDS CLASSIFIED ACCORDING TO ANATOMICAL SITE OF THE DISEASE.

| Ward.              | Buccal cavity. |    | Pharynx, œsophagus, stomach, liver and annexa. |    | Peritoneum, intestines and rectum. |    | Female genital organs. |    | Breast. |    | Skin. |    | Other or unspecified organs. |    | Totals. |     |
|--------------------|----------------|----|------------------------------------------------|----|------------------------------------|----|------------------------|----|---------|----|-------|----|------------------------------|----|---------|-----|
|                    | M.             | F. | M.                                             | F. | M.                                 | F. | M.                     | F. | M.      | F. | M.    | F. | M.                           | F. | M.      | F.  |
| Central            | 1              | .. | ..                                             | 2  | 4                                  | 4  | 1                      | 1  | ..      | .. | ..    | .. | 3                            | 1  | 8       | 8   |
| North ..           | 4              | 1  | 8                                              | 6  | 7                                  | 7  | 4                      | 4  | 10      | 10 | 2     | 1  | 6                            | 9  | 28      | 38  |
| North-East         | 3              | .. | 10                                             | 5  | 8                                  | 7  | 9                      | 9  | 10      | 10 | ..    | 2  | 10                           | 3  | 31      | 36  |
| New ..             | ..             | .. | 4                                              | .. | 1                                  | 4  | ..                     | .. | 1       | 1  | ..    | 1  | 3                            | .. | 8       | 6   |
| East ..            | 1              | .. | 6                                              | 6  | 4                                  | 3  | 4                      | 4  | 2       | 2  | 1     | 1  | 7                            | 1  | 19      | 16  |
| South ..           | 1              | .. | 2                                              | .. | 3                                  | 2  | 2                      | 2  | 2       | 2  | ..    | .. | 2                            | .. | 8       | 6   |
| East Hunslet       | 2              | 1  | 8                                              | 8  | 7                                  | 5  | 7                      | 7  | 6       | 6  | 2     | 1  | 9                            | 2  | 28      | 30  |
| West Hunslet       | 2              | 2  | 4                                              | 7  | 4                                  | 6  | 5                      | 5  | 3       | 3  | 1     | 1  | 4                            | 1  | 14      | 25  |
| Holbeck            | 3              | .. | 5                                              | 7  | 3                                  | 4  | 3                      | 3  | 2       | 2  | ..    | .. | 6                            | 6  | 17      | 22  |
| Mill Hill          | 1              | .. | 1                                              | 2  | ..                                 | .. | 2                      | 2  | 1       | 1  | ..    | .. | ..                           | .. | 2       | 5   |
| West ..            | 3              | .. | 7                                              | 2  | 3                                  | 1  | 3                      | 3  | 3       | 3  | 2     | 1  | 3                            | 1  | 18      | 10  |
| North-West         | 4              | .. | 6                                              | 5  | 2                                  | 6  | 10                     | 10 | 2       | 2  | 1     | 2  | 6                            | 2  | 19      | 25  |
| Brunswick          | 1              | 1  | 4                                              | 7  | 4                                  | 1  | 3                      | 3  | 3       | 3  | ..    | .. | 6                            | 3  | 15      | 18  |
| New Wortley..      | 3              | 1  | ..                                             | 1  | 5                                  | 3  | 3                      | 3  | 3       | 3  | ..    | .. | 3                            | 1  | 11      | 12  |
| Armley and Wortley | ..             | 1  | 3                                              | 8  | 4                                  | 7  | 6                      | 6  | 7       | 7  | 1     | 1  | 4                            | 2  | 12      | 32  |
| Bramley            | 1              | .. | 7                                              | 9  | 6                                  | 2  | 5                      | 5  | 5       | 5  | 2     | 1  | 2                            | 3  | 18      | 25  |
| Headingley         | 2              | .. | 15                                             | 9  | 12                                 | 11 | 5                      | 5  | 7       | 7  | ..    | .. | 14                           | 4  | 43      | 36  |
| City ..            | 32             | 7  | 90                                             | 84 | 78                                 | 73 | 72                     | 67 | ..      | 67 | 11    | 8  | 88                           | 39 | 299     | 350 |



profession in connection with Cancer, at the present time, is due to the fact that the majority of cases, indeed almost the total number of cases, are seen in an advanced state of the disease. The cancerous growth has extended from the site originally attacked, and remedial operations have to be very extensive. It is certain that Cancer is at first a local disease and becomes generalised only after the lapse of time—sometimes a short time, sometimes a more prolonged time.

"If a cancerous growth is discovered early, and is accessible to the surgeon, its successful removal, and the permanent freedom from a return of the disease, can be assured in a large proportion of cases. We determined that the public should be so instructed as to make it possible for them to receive help at earlier stages in the course of the disease, if unhappily the disease attacked them. Of the success of this campaign of instruction we have received abundant evidence."

#### CANCER DEATH-RATES, ELEVEN LARGE TOWNS, ALSO ENGLAND AND WALES.

|                         | Year<br>1916. | Year<br>1917. | Year<br>1918. | Year<br>1919. | Year<br>1920. | Year<br>1921. | Year<br>1922. | Year<br>1923. | Year<br>1924. | Year<br>1925. | Year<br>1926. |
|-------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| London ..               | 1.24          | 1.35          | 1.33          | 1.25          | 1.25          | 1.33          | 1.33          | 1.39          | 1.42          | 1.44          | 1.46          |
| Birmingham..            | 1.06          | 1.06          | 1.03          | 1.09          | 1.11          | 1.10          | 1.16          | 1.18          | 1.31          | 1.29          | 1.31          |
| Liverpool ..            | 1.11          | 1.08          | 1.10          | 1.03          | 1.07          | 1.10          | 1.06          | 1.13          | 1.13          | 1.21          | 1.18          |
| Manchester ..           | 1.18          | 1.19          | 1.24          | 1.17          | 1.28          | 1.28          | 1.29          | 1.41          | 1.40          | 1.40          | 1.49          |
| Sheffield ..            | 1.08          | 1.03          | 1.06          | 0.97          | 1.08          | 1.17          | 1.18          | 1.19          | 1.26          | 1.33          | 1.19          |
| Leeds ..                | 1.16          | 1.29          | 1.19          | 1.35          | 1.09          | 1.19          | 1.29          | 1.24          | 1.37          | 1.28          | 1.41          |
| Bristol ..              | 1.12          | 1.24          | 1.30          | 1.18          | 1.15          | 1.26          | 1.21          | 1.32          | 1.28          | 1.32          | 1.26          |
| Hull ..                 | 1.11          | 1.26          | 1.17          | 1.15          | 0.97          | 1.21          | 1.21          | 1.04          | 1.29          | 1.20          | 1.46          |
| Bradford ..             | 1.36          | 1.46          | 1.45          | 1.38          | 1.28          | 1.39          | 1.49          | 1.33          | 1.56          | 1.42          | 1.63          |
| Newcastle ..            | 1.00          | 0.97          | 0.87          | 1.13          | 0.94          | 1.10          | 1.08          | 1.16          | 1.24          | 1.32          | 1.19          |
| Nottingham ..           | 1.09          | 1.27          | 1.52          | 1.23          | 1.36          | 1.43          | 1.23          | 1.46          | 1.40          | 1.25          | 1.38          |
| England and<br>Wales .. | 1.17          | 1.21          | 1.22          | 1.15          | 1.16          | 1.22          | 1.23          | 1.27          | 1.30          | 1.34          | 1.36          |

The rates are calculated from figures given in the Registrar General's Annual Reports.

**Anthrax.**—Two cases of this disease were reported during the year and full information concerning them was transmitted to the District Inspector of Factories. In both instances the infection was contracted in Leeds; the patients were males aged respectively 22 years and 39 years, and both were employed in the handling of hides, one as a hide-tumbler and the other as a fellmonger. The patients were successfully treated in the General Infirmary.



# CANCER DEATH RATE.— 1891-1927.

RATES  
PER  
1,000  
POP.

1891 2 3 4 5 6 7 8 9 1900 1 2 3 4 5 6 7 8 9 1910 1 2 3 4 5 6 7 8 9 1920 1 2 3 4 5 6 7

1.70  
1.68  
1.66  
1.64  
1.62  
1.60  
1.58  
1.56  
1.54  
1.52  
1.50  
1.48  
1.46  
1.44  
1.42  
1.40  
1.38  
1.36  
1.34  
1.32  
1.30  
1.28  
1.26  
1.24  
1.22  
1.20  
1.18  
1.16  
1.14  
1.12  
1.10  
1.08  
1.06  
1.04  
1.02  
1.00  
0.98  
0.96  
0.94  
0.92  
0.90  
0.88  
0.86  
0.84  
0.82  
0.80  
0.78  
0.76  
0.74  
0.72  
0.70  
0.68  
0.66  
0.64  
0.62  
0.60  
0.58  
0.56  
0.54  
0.52  
0.50  
0.48  
0.46  
0.44  
0.42  
0.40  
0.38  
0.36  
0.34  
0.32  
0.30

LEEDS

ENGLAND AND WALES.





Faint, illegible text covering the majority of the page, likely bleed-through from the reverse side. The text appears to be organized into several paragraphs, with some lines indented. The handwriting is cursive and difficult to decipher.

## INFECTIOUS DISEASES HOSPITAL.

The City Hospital at Seacroft is capable of accommodating 489 cases of infectious disease (excluding smallpox). The Smallpox Hospital proper with capacity for 180 cases is at Killingbeck (about quarter-mile distant from Seacroft Hospital) and is being used for the treatment of tuberculosis. There is also an emergency smallpox hospital of 20 beds on the Killingbeck estate. The latter sufficed to meet the demands of the desultory smallpox epidemic experienced during 1927, indeed, there were never more than 18 cases of smallpox undergoing treatment at any one time during the year. In the event of a more rapid and extensive outbreak it would be necessary to restore the larger Killingbeck Hospital to its original use.

The following is an extract from the annual report for the year ended April 2nd, 1927, of Dr. A. E. Pearson, Medical Superintendent.

*Admissions.*—Patients admitted numbered 1,635 as against 1,948 of the previous annual period, and an average of 2,376 for the previous five years.

“Thirty-one of the admissions were from outside the City boundaries, 27 of this number having been patients admitted from the Leeds General Infirmary. Eighty-five patients were admitted from this Institution during the annual period. From other Institutions in Leeds 92 cases were received.

“The average length of stay in hospital for 1,657 patients (62,942 patient days), whose treatment was complete, was 38 days.

“The daily average number of patients in the hospitals during the year was 165·7. The numbers of the two preceding years were 214·3 and 232·4 respectively. The highest number in one year was 413·9 in the annual period 1922-3.

*Death-rates.*—Mortality rates are calculated on the number of discharges and deaths. The fatality rate for all cases was 5·8 per cent. In the previous year it was 6·2 per cent., and for the past ten years 5·4 per cent.

*Measles.*—There were 157 cases (treatment complete) of which 15 were fatal (9·6 per cent.).

*Scarlet Fever.*—The number of patients whose treatment was complete (706) was 356 less than that of the previous annual period and 516 less than the average of the previous ten years.

“The death-rate (0·28 per cent.) is the lowest by 0·61 per cent. of any year since the year 1886 when the death-rate was 7·5 per cent.



"The commoner complications incidental to the disease, viz., albuminuria, otitis media, rhinitis, and rheumatism were less by 14.5 per cent. than those of the previous annual period, and by 13.2 per cent. than the average for ten years.

"Of late years a steady decline is very noticeable in the incidence of the usual complications as in the death-rate of the disease. This is probably due to the same cause or causes as are operating in the country generally, but one must claim that to some extent it is due to improved treatment by the use of an antitoxin (hæmolytic streptococcus) bringing a great change for the better in prognosis. A table is hereunder given to shew the influence on cases of the antitoxin.

### ANTI-TOXIN TREATMENT IN SCARLATINA.

| Day of illness administered.          | Serum Given. |      |      |      |      |      |      |      |       |        | Serum not given. |
|---------------------------------------|--------------|------|------|------|------|------|------|------|-------|--------|------------------|
|                                       | 1st          | 2nd  | 3rd  | 4th  | 5th  | 6th  | 7th  | 8th  | Later | Totals |                  |
| Scarlatina Simplex—                   |              |      |      |      |      |      |      |      |       |        |                  |
| No. of cases .. ..                    | 11           | 85   | 95   | 49   | 17   | 2    | 1    | 1    | 4     | 265    | 368              |
| Fatal cases .. ..                     | ..           | ..   | ..   | ..   | ..   | ..   | ..   | ..   | ..    | ..     |                  |
| Fatality % .. ..                      | ..           | ..   | ..   | ..   | ..   | ..   | ..   | ..   | ..    | ..     |                  |
| Septic Scarlet Fever—                 |              |      |      |      |      |      |      |      |       |        |                  |
| No. of cases .. ..                    | ..           | 13   | 30   | 15   | ..   | 3    | 2    | ..   | 3     | 66     | 2                |
| Fatal cases .. ..                     | ..           | ..   | ..   | ..   | ..   | ..   | ..   | ..   | ..    | ..     |                  |
| Fatality % .. ..                      | ..           | ..   | ..   | ..   | ..   | ..   | ..   | ..   | ..    | ..     |                  |
| Average No. of days in hospital .. .. | 42.8         | 45.0 | 43.2 | 44.7 | 35.8 | 37.6 | 40.3 | 26.0 | 47.4  | 46.5   | 40.9             |
| Albuminuria—                          |              |      |      |      |      |      |      |      |       |        |                  |
| No. of cases .. ..                    | ..           | ..   | 1    | ..   | ..   | ..   | ..   | ..   | ..    | 1      | 7                |
| Albuminuria % .. ..                   | ..           | ..   | 0.8  | ..   | ..   | ..   | ..   | ..   | ..    | 0.8    | 1.9              |
| Otitis Media—                         |              |      |      |      |      |      |      |      |       |        |                  |
| No. of cases .. ..                    | 1            | 2    | 5    | 2    | ..   | ..   | ..   | ..   | 2     | 12     | 18               |
| Otitis % .. ..                        | 9            | 2    | 4    | 3.1  | ..   | ..   | ..   | ..   | 28.6  | 3.3    | 4.37             |
| Rhinitis—                             |              |      |      |      |      |      |      |      |       |        |                  |
| No. of cases .. ..                    | 1            | 2    | 5    | 1    | 1    | ..   | 1    | ..   | 2     | 13     | 24               |
| Rhinitis % .. ..                      | 9            | 2    | 4    | 1.6  | 6    | ..   | 33.3 | ..   | 28.6  | 8.4    | 6.5              |
| Severe Cervical Adenitis—             |              |      |      |      |      |      |      |      |       |        |                  |
| No. of cases .. ..                    | ..           | 9    | 4    | 4    | ..   | 1    | 1    | ..   | 3     | 22     | 17               |
| Adenitis % .. ..                      | ..           | 9    | 3.2  | 6.2  | ..   | 20   | 33.3 | ..   | 41    | 12.5   | 4.6              |
| Rheumatism and Endocarditis           |              |      |      |      |      |      |      |      |       |        |                  |
| No. of cases .. ..                    | 1            | 1    | 1    | 1    | ..   | ..   | ..   | ..   | ..    | 4      | 4                |
| Rheumatism % .. ..                    | 9            | 1    | 0.8  | 1.6  | ..   | ..   | ..   | ..   | ..    | 0.24   | 1.7              |

" The cost of hæmolytic streptococcus antitoxin used was £380, but part was employed in the treatment of septic puerperal cases on which the antitoxin seemed to exercise a markedly beneficial influence.

" Thirty-six patients developed cross-infections, of which 10 were measles, 5 whooping-cough, and 21 chickenpox. Of this number 12 were incubating these diseases on admission.

" Nineteen patients (2·7 per cent.) admitted were " Return Cases," *i.e.*, cases directly or indirectly connected with previously discharged patients, of which number eleven (1·5 per cent.) occurred within 21 days, and eight from 23 to 34 days, of the discharge of primary cases.

" *Diphtheria*.—The number of patients whose treatment was complete, was 380 as against 382 of the last annual period and 526 the average for the last 21 years. The deaths numbered 31.

" Diphtheria antitoxic serum was used in 376 patients to the extent of 7,135,000 antitoxic units, costing approximately £588, or about 31/- per patient. The average amount used per patient was about 19,000 units. In four patients the serum was not used for various reasons, and 18 patients had received the serum before admission to hospital.

" Failure to make an early diagnosis of the disease before admission is apparent amongst the patients admitted for treatment, no less than 46 (12·1 per cent.) having been admitted when the illness had reached the seventh day or later. 18 of those who died, were admitted between the fourth and the twenty-eighth day of illness. The efficiency of antitoxic treatment is seriously impaired, if not altogether useless, if its administration is delayed to so late a period in the illness.

" Six patients developed cross-infections, *viz.*, 3 measles, 2 scarlet fever and 1 chickenpox.

" For diagnosis and discharging purposes, 1,374 bacteriological cultures and examinations were made. Swabs from throats of patients and cultures were made in 106 cases before admission to hospital.

" *Laboratory*.—In addition to bacteriological cultures and examinations, before referred to, weekly chemical analyses of specimens of milk supplied to the hospitals were made, the average constituents of which were as under:—

| Fat.<br>% | Non-fatty<br>Solids.<br>% | Total<br>Solids.<br>% | Specific<br>Gravity<br>at 60° F. |
|-----------|---------------------------|-----------------------|----------------------------------|
| 3·2       | 8·4                       | 11·7                  | 1030·7                           |

" *Poultry Farming* (Killingbeck Smallpox Hospital Farm).—The following were received for use in the hospitals:—Eggs 9,743; chickens 29; fowls 9; geese 22. The cost of food for poultry was £50 3s. 5d. and produce value £107 13s. 2d."



*Expenditure.*—The expenditure was :—

|                          | £      | s. | d. | £              | s.       | d.       |
|--------------------------|--------|----|----|----------------|----------|----------|
| On revenue account—      |        |    |    |                |          |          |
| Seacroft Hospitals ..    | 41,242 | 14 | 11 |                |          |          |
| Less Income .. ..        | 5,241  | 6  | 5  |                |          |          |
|                          |        |    |    | 36,001         | 8        | 6        |
| On capital account .. .. |        |    |    | 15,966         | 0        | 0        |
|                          |        |    |    | <u>£51,967</u> | <u>8</u> | <u>6</u> |

### AMBULANCE WORK AND DISINFECTION.

**Ambulance Work.**—During the year under review 2,491 cases were removed by the ambulances to the City Hospital, Killingbeck Sanatorium, and other hospitals and lying-in institutions. In addition 99 smallpox contacts were conveyed to the isolation cottages at the City Hospital. In addition also, 13 cases were removed to Sherburn Smallpox Hospital on behalf of the Wakefield and District Smallpox Isolation Hospital Committee. Over and above these, 124 other journeys were made for returning patients home on discharge from hospital and like purposes.

The following are details of the cases removed by the ambulances :—

|                        |                     |
|------------------------|---------------------|
| Smallpox .. .. .       | 59                  |
| Diphtheria .. .. .     | 464                 |
| Scarlet Fever .. .. .  | 738                 |
| Measles .. .. .        | 123                 |
| Typhoid Fever .. .. .  | 26                  |
| Tuberculosis .. .. .   | 192                 |
| Other Diseases .. .. . | 316                 |
| Maternity .. .. .      | 573                 |
| <b>TOTAL .. .. .</b>   | <u><u>2,491</u></u> |

The total mileage run by the ambulances was 26,863 miles—an increase of 3,979 miles on the previous year.

During the year a new Daimler ambulance was purchased and put into commission on April 23rd. It is performing well.

**Disinfection.**—The following work was done by the Disinfecting Staff :—

|                                         |    |    |    |    |        |
|-----------------------------------------|----|----|----|----|--------|
| Houses disinfected                      | .. | .. | .. | .. | 2,338  |
| Rooms disinfected                       | .. | .. | .. | .. | 5,996  |
| Beds and mattresses disinfected         | .. | .. | .. | .. | 2,910  |
| Articles of bed clothing disinfected    | .. | .. | .. | .. | 18,931 |
| Articles of wearing apparel disinfected | .. | .. | .. | .. | 26,264 |
| Other articles disinfected              | .. | .. | .. | .. | 5,060  |

Disinfecting baths were provided and disinfection of clothing carried out at one or other of the disinfecting stations in respect of 326 infectious diseases contacts.

The total mileage run by the three bedding vans was 19,311.

On December 5th those portions of the Dock Street premises which had served as an ambulance depot, were handed over to the Cleansing Department and the Depot was transferred to more commodious premises at the Beckett Street Disinfecting Station.

**Verminous Houses and Persons.**—The number of verminous persons dealt with at the cleansing station was 199, while 130 rooms in 44 houses, and 3,720 articles of bedding and clothing were disinfected; 13 notices were served during the year under Sections 45 and 46 of the Public Health Act, 1925.

WORK DONE IN THE DEPARTMENT OF PATHOLOGY AND  
BACTERIOLOGY OF THE UNIVERSITY OF LEEDS IN CONNECTION  
WITH THE V.D. REGULATIONS.

| NATURE OF TEST.               |    |    |    |    | NUMBER OF TESTS. |
|-------------------------------|----|----|----|----|------------------|
| For detection of spirochetes— |    |    |    |    |                  |
| for treatment centre          | .. | .. | .. | .. | 38               |
| for practitioners             | .. | .. | .. | .. | ..               |
| for institutions              | .. | .. | .. | .. | ..               |
| For detection of gonococci—   |    |    |    |    |                  |
| for treatment centre          | .. | .. | .. | .. | 1,552            |
| for practitioners             | .. | .. | .. | .. | 368              |
| for institutions              | .. | .. | .. | .. | 238              |
| For Wassermann reaction—      |    |    |    |    |                  |
| for treatment centre          | .. | .. | .. | .. | 3,015            |
| for practitioners             | .. | .. | .. | .. | 278              |
| for institutions              | .. | .. | .. | .. | 2,305            |
| Other examinations—           |    |    |    |    |                  |
| for treatment centre          | .. | .. | .. | .. | 634              |
| for practitioners             | .. | .. | .. | .. | ..               |
| for institutions              | .. | .. | .. | .. | ..               |
| TOTAL                         |    |    |    |    | 8,428            |



### BACTERIOLOGICAL WORK.

The following is a complete summary of the work done for the Health Department by the Department of Pathology and Bacteriology in the Leeds University Medical School, under the supervision of Professor James W. McLeod, the City Bacteriologist.

#### GENERAL.

| Nature of pathological or bacteriological investigation.   | Number of specimens. |
|------------------------------------------------------------|----------------------|
| Diphtheria—                                                |                      |
| Swabs for Klebs Loeffler bacillus .. .. .                  | 1,463                |
| Tuberculosis—                                              |                      |
| Sputum for tubercle bacillus .. .. .                       | 1,347                |
| Cerebro Spinal Fluid for tubercle bacillus .. .. .         | 2                    |
| Urine for tubercle bacillus .. .. .                        | 6                    |
| Pus and other Fluids for tubercle bacillus .. .. .         | 13                   |
| Typhoid—                                                   |                      |
| Fæces for Typhoid group of organisms .. .. .               | 8                    |
| Urine for Typhoid group of organisms .. .. .               | 4                    |
| Agglutination (Widal) Test for typhoid group .. .. .       | 10                   |
| Dysentery—                                                 |                      |
| Fæces for dysentery bacillus .. .. .                       | 1                    |
| Other—                                                     |                      |
| Pus and Fluids for organisms .. .. .                       | 9                    |
| Cerebro Spinal Fluid for organisms .. .. .                 | 4                    |
| Urine for organisms .. .. .                                | 6                    |
| Guinea Pig Inoculations—                                   |                      |
| Fluids for culture and guinea pig inoculation .. .. .      | 6                    |
| Guinea pig inoculations for diagnostic purposes.. .. .     | 59                   |
| Food Investigations—                                       |                      |
| Milk for bacterial count .. .. .                           | 3                    |
| Dessicated milk examinations .. .. .                       | 1                    |
| Potted meat for organisms .. .. .                          | 1                    |
| Polony for organisms .. .. .                               | 1                    |
| Water Investigations—                                      |                      |
| Water bacteriological examinations .. .. .                 | 55                   |
| Water bacterial count .. .. .                              | 10                   |
| Other—                                                     |                      |
| Hair for ringworm .. .. .                                  | 7                    |
| Urine for pus .. .. .                                      | 1                    |
| Blood for count .. .. .                                    | 1                    |
| Intestinal worm identification .. .. .                     | 1                    |
| Histology, examination of sections of cows' udders .. .. . | 2                    |
| TOTAL .. .. .                                              | 3,021                |

## Venereal Diseases.

There were 34 deaths certified during the year as due to syphilis which is equal to a death-rate of 0.07 per thousand of the population. Of these, 12 were children under one year of age, eight males and four females; one male between 1 and 2 years; one male between 2 and 5; one male and two females between 15 and 25; one male and three females between 25 and 45; seven males and one female between 45 and 65; and four males and one female over 65. The death-rate for 1927 shows a decrease of 0.04, or 36.4 per cent. as compared with the rate for the previous year.

*Work of the Treatment Centre.*—The total number of new cases registered at the Centre at the Leeds General Infirmary from Leeds and the contributory areas during the year was 1,488. There were increases in gonorrhœa, male 94 or 18.7 per cent., female 23 or 34.8 per cent., other diseases not venereal, female 11 or 11.2 per cent., and decreases in syphilis, male 80 or 23.9 per cent., females 28 or 14.3 per cent., other diseases not venereal, male 102 or 27.5 per cent. making a total decrease of 82 as compared with the figure for the previous year.

Turning to the Leeds cases, the total number of new cases registered was 1,179 comprising 193 males and 115 females suffering from syphilis, 489 males and 69 females suffering from gonorrhœa, and 221 males and 92 females suffering from other diseases not venereal. These figures represent a decrease in the cases of syphilis of 59 males and 36 females, gonorrhœa an increase of 60 males and 19 females, and a decrease of 80 males and an increase of 13 females suffering from other diseases not venereal. The total attendances of all Leeds cases was 55,328 or an increase of 4,026 over the figure for the previous year.

### LEEDS GENERAL INFIRMARY (LOCAL TREATMENT CENTRE).

|                                               |       |
|-----------------------------------------------|-------|
| Cases on the register on January 1st, 1927 .. | 1,928 |
| Old cases re-admitted .. .. .                 | 6     |
| New cases admitted .. .. .                    | 1,488 |
| Cases ceased to attend .. .. .                | 440   |
| Transferred to other centres .. ..            | 124   |
| Discharged on completion of treatment .. ..   | 897   |
| Cases on the register on January 1st, 1928 .. | 1,961 |



PERSONS TREATED AT THE GENERAL INFIRMARY, LEEDS.  
(LOCAL TREATMENT CENTRE).

|                                               |             |    |    | Year 1926. |     | Year 1927. |     | Increase or decrease. |      |
|-----------------------------------------------|-------------|----|----|------------|-----|------------|-----|-----------------------|------|
|                                               |             |    |    | M.         | F.  | M.         | F.  | M.                    | F.   |
| Syphilis ..                                   | first cases | .. | .. | 335        | 196 | 255        | 168 | - 80                  | - 28 |
| Soft chancre                                  | ..          | .. | .. | ..         | ..  | ..         | ..  | ..                    | ..   |
| Gonorrhœa                                     | ..          | .. | .. | 504        | 66  | 598        | 89  | + 94                  | + 23 |
| Other diseases                                | ..          | .. | .. | 371        | 98  | 269        | 109 | - 102                 | + 11 |
| not Venereal                                  | ..          | .. | .. | 371        | 98  | 269        | 109 | - 102                 | + 11 |
| Total                                         | ..          | .. | .. | 1,210      | 360 | 1,122      | 366 | - 88                  | + 6  |
| Total attendances of all cases                |             |    |    | 60,259     |     | 65,061     |     | + 4,802               |      |
| Aggregate No. of In-patient days .. .. .      |             |    |    | 105        |     | 93         |     | - 12                  |      |
| No. of doses of Salvarsan substitutes .. .. . |             |    |    | 11,629     |     | 13,736     |     | + 2,107               |      |
| Pathological specimens examined :—            |             |    |    |            |     |            |     |                       |      |
| Spirochetes .. .. .                           |             |    |    | 58         |     | 43         |     | - 15                  |      |
| Gonococci .. .. .                             |             |    |    | 2,154      |     | 2,519      |     | + 365                 |      |
| Other organisms .. .. .                       |             |    |    | 16         |     | 7          |     | - 9                   |      |
| Blood—Wassermann reaction .. .. .             |             |    |    | 3,992      |     | 3,808      |     | - 184                 |      |

LEEDS PATIENTS

|                                                  | Year 1926. |     | Year 1927. |     | Increase or Decrease. |      |
|--------------------------------------------------|------------|-----|------------|-----|-----------------------|------|
|                                                  | M.         | F.  | M.         | F.  | M.                    | F.   |
| Syphilis .. .. first cases                       | 252        | 151 | 193        | 115 | - 59                  | - 36 |
| Soft chancre .. ..                               | ..         | ..  | ..         | ..  | ..                    | ..   |
| Gonorrhœa .. ..                                  | 429        | 50  | 489        | 69  | + 60                  | + 19 |
| Other diseases,<br>not Venereal .. ..            | 301        | 79  | 221        | 92  | - 80                  | + 13 |
| Total .. ..                                      | 982        | 280 | 903        | 276 | - 79                  | - 4  |
| Total attendances of all cases                   | 51,302     |     | 55,328     |     | + 4,026               |      |
| Aggregate No. of In-patient<br>days .. ..        | 105        |     | 50         |     | - 55                  |      |
| No. of doses of Salvarsan sub-<br>stitutes .. .. | 9,047      |     | 10,441     |     | + 1,394               |      |
| Pathological specimens examined :—               |            |     |            |     |                       |      |
| Spirochetes .. ..                                | 49         |     | 38         |     | - 11                  |      |
| Gonococci .. ..                                  | 1,876      |     | 2,186      |     | + 310                 |      |
| Other organisms .. ..                            | ..         |     | ..         |     | + —                   |      |
| Blood—Wassermann re-<br>action .. ..             | 3,159      |     | 3,015      |     | - 144                 |      |



The increase in the number of cases attending the Centre for gonorrhœa is part of a general increase which has been observed all over the Country. Why there should be this increase it is difficult to say, except that it follows the experience of the past which has been that venereal disease, like many other infectious diseases, seems to come in waves. At the end of the war, the prevalence reached a peak after which there was a rapid fall until 1924, since which time the tendency has been in an upward direction. I have already referred to the increase of ophthalmia neonatorum on page 104, which is undoubtedly part and parcel of the increased prevalence of gonorrhœa in women. Of the total cases attending the centre for treatment during the year, 440 or 12·9 per cent., gave up attending before treatment was complete. This is 37 less than for the previous year and includes 304 males and 136 females, 62·0 per cent. of them suffering from syphilis.

*Institutions.*—The number of new cases treated as in-patients at the Leeds Maternity Hospital increased from 64 in 1926 to 96 whilst the total cases treated rose from 65 to 99, namely 35 syphilis, 62 gonorrhœa and 2 syphilis and gonorrhœa. The in-patient days rose correspondingly from 1,270 to 1,623. The number of cases attending for treatment at the Out-patient Department for the first time was 41 (syphilis 21, gonorrhœa 20), a decrease of 45 over the figure for the previous year.

At the Leeds General Infirmary the in-patient days decreased from 105 in 1926 to 93 in 1927.

At the Hope Hospital, the chief function of which is to deal with women and girls of the rescue class suffering from venereal diseases, the number of cases treated was 62 as against 58 for the previous year, whilst the number of new admissions decreased from 50 to 43. The in-patient days increased from 5,396 to 6,060. It should be pointed out, however, that these figures do not include babies admitted with their mothers or born whilst their mothers were in residence.

On behalf of the Health Committee I should like to acknowledge our indebtedness to the Voluntary Committee for the good service it has rendered during the year and express our thanks for the same.

Further particulars of the cases admitted to and treated in the Maternity and Hope Hospitals are given on page 124.

*Supply of Salvarsan Substitutes.*—The number of medical practitioners in the area qualified to receive free supplies of salvarsan substitutes up to the end of the year was 51. The amount of salvarsan substitutes distributed to practitioners was 1,604 doses, an increase of 318 over the figure for 1926.



*Pathological Work.*—The extent to which practitioners have availed themselves of the facilities for pathological examinations provided by the Council is shown on page 119.

MATERNITY HOSPITAL, 42, HYDE TERRACE.

|                              | Cases in residence on Jan. 1st, 1927. | Cases admitted. | Cases discharged. | Cases in residence on Dec. 31st, 1927. |
|------------------------------|---------------------------------------|-----------------|-------------------|----------------------------------------|
| Syphilis .. ..               | ..                                    | 35              | 34                | 1                                      |
| Gonorrhœa .. ..              | 3                                     | 59              | 60                | 2                                      |
| Syphilis and Gonorrhœa .. .. | ..                                    | 2               | 2                 | ..                                     |
| Other disease .. ..          | ..                                    | ..              | ..                | ..                                     |
| Total .. ..                  | 3                                     | 96              | 96                | 3                                      |

Total days in residence .. .. 1623  
No. of doses of Salvarsan substitute .. 352

**Pathological specimens examined :—**

Spirochetes .. .. —  
Gonococci .. .. 3  
Other organisms .. .. —  
Blood—Wassermann reaction.. .. 286

In addition to the above the following attended for the first time and were treated as out-patients, namely, syphilis, 21; and gonorrhœa, 20.

HOPE HOSPITAL, 126, CHAPELTOWN ROAD.

|                              | Cases in residence on Jan. 1st, 1927. | Cases admitted. | Cases discharged. | Cases in residence on Dec. 31st, 1927. |
|------------------------------|---------------------------------------|-----------------|-------------------|----------------------------------------|
| Syphilis .. ..               | 9(+3)                                 | 18(+13)         | 18(+11)           | 9(+5)                                  |
| Gonorrhœa .. ..              | 9(+3)                                 | 25(+7)          | 24(+7)            | 10(+3)                                 |
| Syphilis and Gonorrhœa .. .. | 1                                     | ..              | 1                 | ..                                     |
| Other disease .. ..          | ..                                    | ..              | ..                | ..                                     |
| Total .. ..                  | 19(+6)                                | 43(+20)         | 43(+18)           | 19(+8)                                 |

Total days in residence .. .. 6,060(+2,587)  
No. of doses of Salvarsan substitute .. 280

**Pathological specimens examined :—**

Spirochetes .. .. —  
Gonococci .. .. 72  
Other organisms .. .. 1  
Blood—Wassermann reaction.. .. 59

Of the 43 women admitted, 20 had babies shown in the above table in brackets.

## Tuberculosis.

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The total number of names on the tuberculosis register on December 31st, 1927 was 8,337 as compared with 8,288 at the corresponding period of the previous year, an increase of 49. This represents the smallest increase in any one year recorded for a considerable number of years. The reason for the decrease was two-fold, first, the drop in the number of notifications, and secondly the number of cases written off as being cured or having the diagnosis cancelled. The year was unfavourable for pulmonary tuberculosis as it was for all diseases affecting the respiratory system. There was a very considerable shrinkage both in the incidence and in the death-rate. Considering the climatic conditions which prevailed practically throughout the whole year, this is somewhat surprising, as one would have naturally assumed that with the high rainfall and the low temperature the tendency would have been towards an increase rather than a decrease of both the case and mortality rates. The real explanation is probably that the decline in the number of new cases and the mortality was a natural corollary to the decreased prevalence of such diseases as pneumonia and bronchitis which very frequently are precursors of tuberculosis.

**Statistics.**—During the year 811 cases of pulmonary and 155 of non-pulmonary tuberculosis were notified, making a total of 966 cases. Of these, 539 were males and 427 females. Compared with the previous year this is a decrease of 488 in the number of notifications of pulmonary tuberculosis and six in the number of non-pulmonary, and compared with the average of the previous five years a decrease of 396 in pulmonary tuberculosis and 17 in non-pulmonary. Of the cases notified during 1927, 844 were by medical practitioners and 122 came from institutions.

The number of cases of pulmonary tuberculosis not heard of until the time of death was 37, a decrease of 16 on the figure for the previous year. Of non-pulmonary cases, the number unnotified was 56 or two less than in 1926. Taking both types together, the



number unnotified at the time of death was 93, or 18 less than in 1926. The particulars set out in the table on page 134 indicate clearly the extent to which medical practitioners fail to recognise the statutory obligation imposed upon them with respect to notification, as many as 38.2 per cent. of the total deaths from tuberculosis registered during the year being notified in the same year that death occurred. Last year the figure was 35.2 per cent. I have in previous reports called attention to the very unsatisfactory position with regard to notification. That 93 cases should be unnotified is a grave reflection on the medical practitioners of the City, and I should like to repeat the warning that I have given in previous years that if practitioners continue to offend in this respect, as some of them have been doing there will be nothing for it but to let the Law take its course. To notify a case after a definite diagnosis has been arrived at is surely an easy matter, even when there is doubt as to the exact diagnosis that doubt can be speedily removed by referring the case to the Chief Clinical Tuberculosis Officer. I have no doubt at all that the present register of non-pulmonary cases is inaccurate and does not represent the true state of affairs as far as this type of the disease is concerned in the City. Cases of bone and joint disease pass from the general practitioner into a institution and through that institution to another institution or perhaps to their own homes without ever being notified to this Department. The result is that nothing is known of them until they die or have to invoke the assistance of the Local Authority in obtaining special treatment in an institution outside the City or special surgical appliances. It is necessary to remind medical practitioners that the Tuberculosis Regulations place upon every medical practitioner the duty of notifying any case of tuberculosis which may occur in his practice forthwith to the medical officer of health; failure to do so renders the doctor liable to a penalty.

An analysis of the notifications in age groups will be found in the table on page 127.

Of the total cases of pulmonary tuberculosis notified during the year 83.0 per cent. were persons over 15 years of age, whereas in non-pulmonary 56.8 per cent. were under 15 years. A decade ago the percentage of the total cases of pulmonary disease notified under 15 years of age was 15.4, in 1926 it was 19.9 and during the year 1927 it was 17.0. This would seem to suggest that there is a change in the age distribution of the pulmonary type of the disease. The tendency is for it to invade the younger age groups and the old theory that infants are immune from pulmonary tuberculosis no longer holds good, indeed the evidence that the infection is not



The following tables show the number of notifications of tuberculosis received during the year.

## PULMONARY.

| Ages.      | -1 | 1-5 | 5-15 | 15-25 | 25-35 | 35-45 | 45-55 | 55-65 | 65+ | Total. |
|------------|----|-----|------|-------|-------|-------|-------|-------|-----|--------|
| Males ..   | .. | 12  | 72   | 87    | 77    | 69    | 77    | 40    | 17  | 451    |
| Females .. | .. | 4   | 50   | 104   | 84    | 66    | 27    | 21    | 4   | 360    |
| Totals ..  | .. | 16  | 122  | 191   | 161   | 135   | 104   | 61    | 21  | 811    |

## NON-PULMONARY.

| Ages.      | -1 | 1-5 | 5-15 | 15-25 | 25-35 | 35-45 | 45-55 | 55-65 | 65+ | Total. |
|------------|----|-----|------|-------|-------|-------|-------|-------|-----|--------|
| Males ..   | 3  | 17  | 34   | 15    | 11    | 3     | 3     | 1     | 1   | 88     |
| Females .. | 1  | 15  | 18   | 16    | 7     | 5     | 1     | 4     | ..  | 67     |
| Totals ..  | 4  | 32  | 52   | 31    | 18    | 8     | 4     | 5     | 1   | 155    |

## TUBERCULOSIS.

| YEAR. | DEATHS.                 |             |                             |             |                         |             | NOTIFICATIONS.          |            |                             |            |                         |            |
|-------|-------------------------|-------------|-----------------------------|-------------|-------------------------|-------------|-------------------------|------------|-----------------------------|------------|-------------------------|------------|
|       | Pulmonary tuberculosis. |             | Non-pulmonary tuberculosis. |             | All forms tuberculosis. |             | Pulmonary tuberculosis. |            | Non-pulmonary tuberculosis. |            | All forms tuberculosis. |            |
|       | Deaths.                 | Death-rate. | Deaths.                     | Death-rate. | Deaths.                 | Death-rate. | Cases.                  | Case-rate. | Cases.                      | Case-rate. | Cases.                  | Case-rate. |
| 1917  | 674                     | 1.54        | 280                         | 0.64        | 954                     | 2.18        | 1,081                   | 2.47       | 336                         | 0.77       | 1,417                   | 3.24       |
| 1918  | 705                     | 1.65        | 257                         | 0.60        | 962                     | 2.25        | 1,238                   | 2.90       | 241                         | 0.56       | 1,479                   | 3.46       |
| 1919  | 542                     | 1.26        | 177                         | 0.41        | 719                     | 1.67        | 1,076                   | 2.50       | 208                         | 0.48       | 1,284                   | 2.98       |
| 1920  | 552                     | 1.23        | 146                         | 0.33        | 698                     | 1.56        | 962                     | 2.14       | 209                         | 0.47       | 1,171                   | 2.61       |
| 1921  | 519                     | 1.11        | 122                         | 0.26        | 641                     | 1.37        | 867                     | 1.86       | 234                         | 0.50       | 1,101                   | 2.36       |
| 1922  | 533                     | 1.14        | 120                         | 0.26        | 653                     | 1.40        | 824                     | 1.77       | 172                         | 0.37       | 996                     | 2.14       |
| 1923  | 515                     | 1.10        | 122                         | 0.26        | 637                     | 1.36        | 1,002                   | 2.13       | 197                         | 0.42       | 1,199                   | 2.55       |
| 1924  | 513                     | 1.09        | 144                         | 0.31        | 657                     | 1.40        | 1,191                   | 2.53       | 180                         | 0.38       | 1,371                   | 2.91       |
| 1925  | 511                     | 1.08        | 88                          | 0.19        | 599                     | 1.27        | 1,720                   | 3.64       | 140                         | 0.32       | 1,860                   | 3.96       |
| 1926  | 477                     | 1.01        | 108                         | 0.23        | 585                     | 1.24        | 1,299                   | 2.74       | 161                         | 0.34       | 1,460                   | 3.08       |
| 1927  | 457                     | 0.96        | 101                         | 0.21        | 558                     | 1.17        | 811                     | 1.70       | 155                         | 0.32       | 966                     | 2.02       |



uncommon even amongst very young children is growing. Much of it is undoubtedly due to contact with infected adults either belonging to the same family or living in the same house, though some of it is traceable to the drinking of infected milk.

The total deaths from tuberculosis of all types during the year numbered 558, of which 335 were males and 223 females. Last year the total number of deaths from tuberculosis was 585, comprising 351 males and 234 females. Pulmonary tuberculosis accounted for 457, or 81.9 per cent. of the total deaths from tuberculosis and non-pulmonary 101, or 18.1 per cent. The death-rate from pulmonary tuberculosis was 0.96 per thousand of the population and from non-pulmonary 0.21, making a total death-rate of all forms of the disease of 1.17 or a decrease of 0.05 in the pulmonary and 0.02 in the non-pulmonary or on the total figure a decrease of 0.07. Compared with the average rates for the previous five years, there was a decrease of 0.16 in the total death-rate and 0.12 and 0.04 in the pulmonary and non-pulmonary rates respectively. The death-rate for Leeds for pulmonary tuberculosis does not compare favourably with that for England and Wales. In 1926 the latter was 0.77 (the figure for 1927 is not yet available) or 19.8 per cent. less than the Leeds death-rate for 1927. It will also be observed from a glance at the table on page 30 that amongst the 12 large towns, Leeds takes sixth place in order of merit, the towns with lower rates being London, Birmingham, Sheffield, Bradford and Nottingham.

On referring to the table on page 127 it will be noticed that the year 1927 is the fifth successive year in which a decrease in the death-rate from pulmonary tuberculosis has to be recorded. This is an achievement on which the City is to be congratulated though there is still a long way to go before the Leeds death-rate approximates to that of England and Wales.

The wards with the highest death-rates were East, South, West, Holbeck and East Hunslet whilst those with the lowest were Headingley, Bramley, Mill Hill, North West and Armley and Wortley. I mention this because the wards with the highest death-rates are precisely those which are most congested and possess the greatest amount of slum property. That there is a very close relationship between poverty and tuberculosis has long been recognised, but poverty, by itself, is not an inevitable cause,



whereas when poverty is accompanied by overcrowding and insanitary conditions tuberculosis becomes almost certain. The obvious solution to the problem therefore lies in improving the conditions under which the poorer classes of the community live, by which I mean giving them better houses, more sunshine and fresh air, better food and raising the standard of life generally. Without some efforts in this direction the expenditure on sanatoria and medical treatment is only of limited value. One may palliate but hardly ever cure and to prevent under such conditions is almost impossible.

The tables on pages 131 and 132 give the analysis of the deaths in the various wards and age groups.

The table on page 135 is designed to show the occupation of persons notified during the year as suffering from tuberculosis of all forms and registered as dying from the disease. The only observation I have to make on the table is with regard to the relatively high number of children of school age and infants notified as suffering from the disease in one or other of its forms.

**Factory-in-the-Field.**—The work of the Tuberculous Ex-Service Men's Society at the "Factory-in-the-Field" must be well known throughout the City and the news of its having to go into voluntary liquidation must have caused universal regret.

The Society came into being at the end of the War with the object of finding employment for men who had contracted tuberculosis on active service and were not able to return to their ordinary avocations. The venture was financed partly by the pensioners themselves and partly by grants from various bodies, such as the British Red Cross Society and the British Legion interested in the welfare of pensioners, and in 1925 it looked as though it was established on a sound and permanent basis. The labour troubles arising out of the general strike and the coal dispute in 1926 brought about a change in its fortunes. The falling off in trade and the increase in price of raw material which followed tried its resources very severely. About the same time it moved into new premises which had to be bought at a figure higher than the Society was capable of bearing. As a result financial embarrassment ensued which ended as already stated in the Society having to go into voluntary liquidation.

On hearing of the Society's difficulties the Health Committee immediately entered into negotiations with the liquidator for taking



over the Factory together with the buildings, plant and stock. These negotiations were successful and the Corporation entered into possession at the end of October, since which time the Factory has been run as an adjunct of the Tuberculosis Scheme.

In taking over the Factory the Committee had in view the need for facilities in the City for providing men suffering from tuberculosis—not only war pensioners but civilians as well—with suitable employment under the most favourable conditions. It is hoped to improve the accommodation at the Factory and reorganize the whole of the work. To this end a special scheme was considered and adopted by the Committee towards the end of the year. This scheme provides for improvements to the buildings, better sanitary accommodation, facilities for dining and recreation, etc. It also makes provision for the employment of women workers as well as men, though it may be some time yet before this part of the scheme can be put into actual operation. It is too much to expect the Factory to be a financial success even under the most favourable conditions, seeing that 70 per cent. of the employees are disabled men, but it is confidently anticipated that the loss will not be more than—indeed will show a considerable saving on—the amount which would have been paid out to the employees had they been in receipt of poor law relief or unemployment pay. The most valuable effect, however, which the scheme will have, but one which cannot be expressed in terms of money, will be that it will afford an opportunity to those men and women who have been unfortunate enough to be crippled by the disease, and thereby have lost their places in the labour market, to reinstate themselves and become once more independent and useful citizens.

Being of the nature of "After Care Work" money expended on such a scheme is not eligible for grant from the Treasury. Whatever deficit there may be in the working of the Factory will therefore have to be met out of public funds. I am sure, however, that the citizens of Leeds will not grudge the comparatively small amount which they will be asked to pay to keep the Factory running and to provide remunerative employment for those of their fellows who, through no fault of their own, have been deprived of their livelihood.

## PULMONARY TUBERCULOSIS.

## AGES AT DEATH.

| 1927.                            | -5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-45 | 45-65 | 65+ | Total. |
|----------------------------------|----|------|-------|-------|-------|-------|-------|-----|--------|
| Males ..                         | 11 | 2    | 1     | 12    | 25    | 108   | 112   | 12  | 283    |
| Females                          | 1  | 4    | 8     | 28    | 28    | 65    | 34    | 6   | 174    |
| TOTALS                           | 12 | 6    | 9     | 40    | 53    | 173   | 146   | 18  | 457    |
| Average<br>10 years<br>1917-1926 | 21 | 11   | 18    | 57    | 61    | 226   | 137   | 23  | 554    |

## NON-PULMONARY TUBERCULOSIS. DEATHS.

| 1927.      | Tubercular<br>meningitis. | Abdomin-<br>al. | Bones and<br>Joints. | Other<br>tuber-<br>culosis. | Total. |
|------------|---------------------------|-----------------|----------------------|-----------------------------|--------|
| Males ..   | 19                        | 9               | 4                    | 20                          | 52     |
| Females .. | 19                        | 6               | 6                    | 18                          | 49     |
| Totals ..  | 38                        | 15              | 10                   | 38                          | 101    |

## AGES AT DEATH.

| 1927.                            | -5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-45 | 45-65 | 65+ | Total. |
|----------------------------------|----|------|-------|-------|-------|-------|-------|-----|--------|
| Males ..                         | 24 | 4    | 3     | 6     | 3     | 5     | 4     | 3   | 52     |
| Females                          | 21 | 6    | 2     | 3     | 4     | 5     | 6     | 2   | 49     |
| Totals ..                        | 45 | 10   | 5     | 9     | 7     | 10    | 10    | 5   | 101    |
| Average<br>10 years<br>1917-1926 | 64 | 21   | 14    | 15    | 8     | 17    | 13    | 4   | 156    |



## TUBERCULOSIS—DEATHS AND RATES IN WARDS.

| MUNICIPAL WARD.    | Pulmonary Tuberculosis. |             | Non-Pulmonary Tuberculosis. |             | All Forms Tuberculosis. |             |
|--------------------|-------------------------|-------------|-----------------------------|-------------|-------------------------|-------------|
|                    | Deaths.                 | Death-rate. | Deaths.                     | Death-rate. | Deaths.                 | Death-rate. |
| Central .. ..      | 12                      | 0·94        | 4                           | 0·31        | 16                      | 1·26        |
| North .. ..        | 38                      | 0·87        | 7                           | 0·16        | 45                      | 1·02        |
| North-East .. ..   | 43                      | 1·16        | 7                           | 0·19        | 50                      | 1·35        |
| New Ward*          | 10                      | 1·03        | 2                           | 0·21        | 12                      | 1·24        |
| East .. ..         | 52                      | 1·43        | 13                          | 0·36        | 65                      | 1·78        |
| South .. ..        | 18                      | 1·38        | 2                           | 0·15        | 20                      | 1·53        |
| East Hunslett†     | 46                      | 1·20        | 6                           | 0·16        | 52                      | 1·36        |
| West Hunslet ..    | 31                      | 0·84        | 11                          | 0·30        | 42                      | 1·14        |
| Holbeck .. ..      | 36                      | 1·20        | 7                           | 0·23        | 43                      | 1·44        |
| Mill Hill .. ..    | 3                       | 0·56        | ..                          | ..          | 3                       | 0·56        |
| West .. ..         | 27                      | 1·21        | 2                           | 0·09        | 29                      | 1·30        |
| North-West .. ..   | 20                      | 0·63        | 13                          | 0·41        | 33                      | 1·03        |
| Brunswick .. ..    | 27                      | 1·12        | 3                           | 0·12        | 30                      | 1·24        |
| New Wortley ..     | 19                      | 1·05        | 7                           | 0·39        | 26                      | 1·43        |
| Armley and Wortley | 30                      | 0·79        | 7                           | 0·19        | 37                      | 0·98        |
| Bramley .. ..      | 14                      | 0·56        | ..                          | ..          | 14                      | 0·56        |
| Headingley‡        | 31                      | 0·56        | 10                          | 0·18        | 41                      | 0·74        |
| City .. ..         | 457                     | 0·96        | 101                         | 0·21        | 558                     | 1·17        |

\*Roundhay, Seacroft, Shadwell, and Crossgates. †Including Middleton.

‡Including portion of Adel added to Leeds, April 1st, 1926.

# TUBERCULOSIS DEATH RATE. - 1890 - 1927.

RATES  
PER  
1000  
POP.

2.60  
2.76  
2.72  
2.68  
2.64  
2.60  
2.56  
2.52  
2.48  
2.44  
2.40  
2.36  
2.32  
2.28  
2.24  
2.20  
2.16  
2.12  
2.08  
2.04  
2.00  
1.96  
1.92  
1.88  
1.84  
1.80  
1.76  
1.72  
1.68  
1.64  
1.60  
1.56  
1.52  
1.48  
1.44  
1.40  
1.36  
1.32  
1.28  
1.24  
1.20  
1.16  
1.12  
1.08  
1.04  
1.00  
0.96  
0.92  
0.88  
0.84  
0.80  
0.76  
0.72  
0.68  
0.64  
0.60  
0.56  
0.52  
0.48  
0.44  
0.40  
0.36  
0.32  
0.28  
0.24  
0.20  
0.16  
0.12  
0.08  
0.04  
0.00

1890 1 2 3 4 5 6 7 8 9 1900 1 2 3 4 5 6 7 8 9 1910 1 2 3 4 5 6 7 8 9 1920 1 2 3 4 5 6 7

All Forms

Pulmonary

Non Pulmonary

LEEDS ——— BLACK.  
ENGLAND & WALES — RED.





The housing conditions of 934 of the 966 cases of tuberculosis (all forms) notified, are shown in the table subtended :—

| Rooms in house. | Through house. | Percentage of total throughs. | Back-to-back house. | Percentage of total back-to-back. | Percentage of total cases. |
|-----------------|----------------|-------------------------------|---------------------|-----------------------------------|----------------------------|
| 1 room .. ..    | 9              | 3.2                           | 7                   | 1.1                               | 1.7                        |
| 2 rooms .. ..   | 9              | 3.2                           | 127                 | 19.4                              | 14.6                       |
| 3 rooms .. ..   | 26             | 9.3                           | 281                 | 43.0                              | 32.9                       |
| 4 rooms .. ..   | 71             | 25.4                          | 185                 | 28.3                              | 27.4                       |
| 5 rooms .. ..   | 84             | 30.0                          | 35                  | 5.3                               | 12.7                       |
| 6 rooms .. ..   | 43             | 15.3                          | 18                  | 2.8                               | 6.5                        |
| 7 or more rooms | 38             | 13.6                          | 1                   | 0.1                               | 4.2                        |
| Total ..        | 280            | 100.0                         | 654                 | 100.0                             | 100.0                      |

In addition to the 280 through houses and 654 back-to-back houses, there were 29 cases notified from common lodging houses, etc., and three that could not be traced, making a total of 966 cases of all forms of tuberculosis notified during the year.

The sub-joined table indicates the type of house occupied by 202 persons who were notified during 1927 as suffering from tuberculosis of all forms and who died during the year :—

| Rooms in house. | Through house. | Percentage of total throughs. | Back-to-back house. | Percentage of total back-to-back. | Percentage of total deaths. |
|-----------------|----------------|-------------------------------|---------------------|-----------------------------------|-----------------------------|
| 1 room .. ..    | ..             | ..                            | ..                  | ..                                | ..                          |
| 2 rooms .. ..   | 3              | 5.5                           | 1                   | 0.7                               | 2.0                         |
| 3 rooms .. ..   | 5              | 9.3                           | 26                  | 17.6                              | 15.4                        |
| 4 rooms .. ..   | 17             | 31.5                          | 63                  | 42.5                              | 39.6                        |
| 5 rooms .. ..   | 18             | 33.3                          | 41                  | 27.7                              | 29.2                        |
| 6 rooms .. ..   | 5              | 9.3                           | 12                  | 8.1                               | 8.4                         |
| 7 or more rooms | 6              | 11.1                          | 5                   | 3.4                               | 5.4                         |
| Total ..        | 54             | 100.0                         | 148                 | 100.0                             | 100.0                       |

In addition to 54 through houses and 148 back-to-back houses, there were 11 deaths in which the home address was given as common lodging houses, etc.



DEATHS FROM ALL FORMS OF TUBERCULOSIS IN 1927 WITH YEAR  
OF NOTIFICATION.

| Year of Notification. |    |    | No. dying in 1927. | Percentage of total deaths. |
|-----------------------|----|----|--------------------|-----------------------------|
| 1911                  | .. | .. | 1                  | 0·2                         |
| 1912                  | .. | .. | 1                  | 0·2                         |
| 1913                  | .. | .. | 2                  | 0·4                         |
| 1914                  | .. | .. | 6                  | 1·1                         |
| 1915                  | .. | .. | 3                  | 0·5                         |
| 1916                  | .. | .. | 3                  | 0·5                         |
| 1917                  | .. | .. | 4                  | 0·7                         |
| 1918                  | .. | .. | 1                  | 0·2                         |
| 1919                  | .. | .. | 13                 | 2·3                         |
| 1920                  | .. | .. | 6                  | 1·1                         |
| 1921                  | .. | .. | 5                  | 0·9                         |
| 1922                  | .. | .. | 6                  | 1·1                         |
| 1923                  | .. | .. | 13                 | 2·3                         |
| 1924                  | .. | .. | 30                 | 5·4                         |
| 1925                  | .. | .. | 56                 | 10·0                        |
| 1926                  | .. | .. | 88                 | 15·8                        |
| 1927                  | .. | .. | 213                | 38·2                        |
| Not notified          | .. |    | 93                 | 16·7                        |
| Died outside City     |    |    | 14                 | 2·5                         |
| Total                 | .. |    | 558                | 100·0                       |

NOTIFICATIONS AND DEATHS FROM ALL FORMS OF TUBERCULOSIS  
OCCURRING IN 1927 CLASSIFIED ACCORDING TO OCCUPATION.

| Occupation.              | Notifications. |                                    | Deaths. |                             |
|--------------------------|----------------|------------------------------------|---------|-----------------------------|
|                          | Number.        | Percentage of total Notifications. | Number. | Percentage of total deaths. |
| Textile Workers ..       | 165            | 17·1                               | 93      | 16·7                        |
| Leather „ ..             | 27             | 2·8                                | 26      | 4·7                         |
| Metal „ ..               | 80             | 8·3                                | 55      | 9·8                         |
| Coal „ ..                | 28             | 2·9                                | 16      | 2·9                         |
| Stone „ ..               | 25             | 2·6                                | 11      | 2·0                         |
| Wood „ ..                | 11             | 1·1                                | 6       | 1·1                         |
| Other dusty Trades ..    | 27             | 2·8                                | 26      | 4·7                         |
| Printers .. ..           | 19             | 2·0                                | 8       | 1·4                         |
| Clerks, Typists, etc. .. | 51             | 5·3                                | 24      | 4·3                         |
| House Workers ..         | 148            | 15·3                               | 80      | 14·3                        |
| Nurses .. ..             | 3              | 0·3                                | 2       | 0·3                         |
| Food Trades, etc. ..     | 27             | 2·8                                | 20      | 3·6                         |
| Labourers .. ..          | 39             | 4·0                                | 28      | 5·0                         |
| Out-door Worker ..       | 39             | 4·0                                | 20      | 3·6                         |
| Various .. ..            | 55             | 5·7                                | 46      | 8·2                         |
| School Age .. ..         | 169            | 17·5                               | 30      | 5·4                         |
| Infants .. ..            | 52             | 5·4                                | 57      | 10·2                        |
| No Occupation ..         | 1              | 0·1                                | 10      | 1·8                         |
| No Trace .. ..           | ..             | ..                                 | ..      | ..                          |
| Total ..                 | 966            | 100·0                              | 558     | 100·0                       |



## REPORT ON THE WORK OF THE TUBERCULOSIS DISPENSARY AND SANATORIA

BY

NORMAN TATTERSALL, M.D., B.S., Chief Clinical Tuberculosis Officer.

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**Central Tuberculosis Dispensary.**—The tables given in detail on pages 143 and 144 summarise the diagnostic work of the Dispensary during the past twelve months. Every effort has been made to establish accuracy in diagnosis as the foremost function of the dispensary. Repeated physical examinations, with X-Ray and sputum examinations are carried out in every doubtful case. The result has been considerably to reduce the ratio of positive diagnoses of tuberculosis to the total cases referred.

In 1926 the number of new cases (including contacts) found within one month of their first examination to be suffering from Tuberculosis was approximately 60 per cent. in 1927 this figure has been reduced to 47 per cent. This is still rather a higher percentage than that of the country generally, but is almost exactly the average figure of the large industrial centres.

More thorough examination of sputum has diminished the disproportion between sputum positive and sputum negative cases. In 1926 only 21 per cent. of the new definite cases were confirmed bacteriologically; this figure for 1927 has been increased to 39 per cent.

If patients would be more careful in the collection of sputum specimens this figure might be raised still further.

By referring all cases not requiring special treatment to their own doctors the congestion of the clinics has been appreciably reduced, and, although the number of attendances at the clinics is lower, the number of complete physical examinations of patients has been increased by nearly 20 per cent.

As all the X-Ray examinations are now done at the dispensary the output of work by the medical staff has been very considerably increased.

At the same time the increase of clinical examinations adds to the opportunity for personal talks to patients by which means their co-operation in matters of treatment and personal hygiene can best be achieved.



It is still a matter for regret that so many of the sputum positive cases are in a fairly advanced stage of the disease when first referred to the dispensary. Careful enquiry from patients reveals the fact that in the large majority of cases the fault lies with the patient himself and not with his medical adviser. It would appear that either the dread of finding his suspicions correct or fear of losing work under the present difficult economic conditions frequently deters the patient from seeking medical advice until the disease has assumed serious dimensions. Of the 216 sputum positive cases (including contacts) diagnosed during the year, only 15 were in group 1 of the Ministry of Health's classification, 153 in group 2 and 48 in group 3.

The total number of sputum positive cases on the Dispensary Register at the end of the year was 908.

There still remains a very large number of sputum negative cases of previous years on the register who have not attended the dispensary for years and whose actual condition cannot be ascertained. They feel well—in many cases are at work—but will not keep appointments for re-examination. Hence they are retained on the register as actual cases from year to year when otherwise some or all of them might be removed. These cases are gradually being overhauled but until their present condition can be ascertained the proportion of sputum negative to sputum positive cases on the register will remain unduly high.

The harmonious relations between the dispensary and the general practitioners of the City have been fully maintained, and the number of personal consultations called for has risen considerably in recent months. Co-operation with the School Medical department as outlined in the last annual report has also been continuous and effective.

In last year's report mention was made of three new departments which, it was hoped, would commence their activities during 1927. Two of these, the X-Ray and the Artificial Sunlight have been equipped and brought into active operation during the year, and the Dental department will be completed early in 1928.

*X-Ray Work.*—The apparatus was installed in July and since that time all the work in this department has been carried out by the Medical Staff of the dispensary. The type of plant chosen has proved extremely satisfactory in operation, and radiograms of a



high degree of excellence are taken in almost every case. Up to the end of the year 419 films had been taken. The work has increased steadily each month so that in a full year some 1,200 to 1,500 radiograms will be taken; yet the cost of the department will be less than was previously expended on one third of that number done by an outside practitioner.

The experience gained from a careful reading of the X-Ray appearances and their correlation with clinical findings is of the greatest value in accurate diagnosis. An X-Ray photograph can be regarded only as one part of the complete examination, but as such it is of great value. It can be said with certainty that a case which presents a totally negative X-Ray finding very rarely proves by any other method of examination to be one of Tuberculosis. In differential diagnosis from other chest conditions it is also of great service, and examples of conditions in which it has been the determining factor in diagnosis in recent months include New Growth, Aneurysm, Abscess of lung, Hydatid Cyst, Silicosis, etc.

A number of cases of Bronchiectasis have been investigated by intro-tracheal injections of Lipiodol combined with X-Rays, not only with the production of very interesting films but also with material assistance in differential diagnosis.

*Artificial Sunlight Therapy.*—This department was opened in October, 1927. Up to the end of the year 931 attendances had been made for treatment, and this figure has grown till at the time of writing it is averaging over 650 attendances a month. The equipment consists of two long-flame carbon-arc lamps for general irradiation, and a Kromayer lamp for local treatment. There is also a shower bath which no doubt produces a further effect as a general stimulant after treatment. The conduct of this department has been largely in the hands of Dr. MacLennan.

It is too early to dogmatise as to results, but her general impressions are that Ultra Violet Light is beneficial in certain cases. The effects are rather difficult to gauge as those treated have been entirely out-patients.

Enlarged glands of the neck with unbroken skin have responded well. In most cases the swelling subsides gradually and no aspiration is needed. Where ulceration is present healing takes place more quickly than it does without this form of treatment.



Only three cases of abdominal tuberculosis have been treated, one improved but the other two did not.

Lesions of the bones and joints on the whole are responding well to general treatment. No special local treatment has been given. The usual surgical treatment by splinting, etc., is maintained, and the lesions are covered up at first while the patients' bodies are exposed to Light. Sinus cases of long standing have not responded well either to local radiation, or to general treatment.

Cases of Lupus treated by the Kromayer lamp show a certain degree of re-action, but improvement is slow whilst cases of Scrofuloderma of long standing, following suppuration of glands, have so far failed entirely to respond.

No definite cases of Pulmonary Tuberculosis have been treated, but several cases of hilus disease are attending. They do not appear, however, to derive as much benefit from "light" as from open-air treatment; probably home conditions are responsible for this result.

One case of asthma in a child has done remarkably well, but several cases with bronchitic signs show no improvement.

On the whole definite improvement has followed the use of Ultra Violet Light in surgical cases, particularly in glandular, and bone and joint disease, and it would appear to be a valuable aid to cure in these cases.

*Surgical Tuberculosis.*—The number of cases of surgical tuberculosis referred to the dispensary has been practically the same as last year and is still low. It is satisfactory to be able to report, however, that an increased number of such cases which had been referred to the General Infirmary have been sent at once to the Dispensary for treatment. The institutional accommodation for such cases is still sadly deficient and it is to be hoped that the proposed new hospital at Elmet Hall will be pressed forward to meet this urgent need.

During 1927 three cases of surgical Tuberculosis were sent to the Marguerite Home, Thorparch and four to Lord Mayor Treloar's Hospital at Alton, in addition to 40 cases admitted to Killingbeck, and 17 cases of a mild type—mostly glands, to "The Hollies."

The total number of cases treated at the Marguerite Home was 25, at Lord Mayor Treloar's Hospital 10, at Killingbeck 48, and at "The Hollies" 17.



*Contacts.*—The total number of contacts examined has been increased by about 10 per cent. but is still too low. It is very disappointing to note how many contacts refuse to come for examination, merely stating that they will come if they feel ill. The number of contacts examined does, however, represent a substantial increase on the previous year when looked at in relation to the number of new positive cases.

In 1926 the number of new contacts examined per 100 new cases of Tuberculosis entered on the notification register was 25. In 1927 this figure was raised to approximately 40.

There were 444 new contact cases examined together with 172 old cases of previous years, making a total of 616. The total number of examinations of contacts was 1,050.

Of the new contact cases 90 (or 20.3 per cent.) were found to have definite signs of tuberculosis, 107 (24.1 per cent.) were indefinite and 247 (55.6 per cent.) were negative. Of the contact cases definitely diagnosed 57.7 per cent. were adults.

*Mortality of Children in Tuberculous Households.*—The investigation into the mortality of children born into homes where there are cases of tuberculosis is still proceeding. The Nurse visitors make out a card for every child born into a house where there is a notified case of tuberculosis.

Details are also entered on the cards of the persons affected in each household, their relationship to the child and the degree of intimacy of contact, for example whether the child occupies the same bed or bedroom as the infected person. Many of the children have been examined at the Dispensary as contacts, but where this has not been done reliance has to be placed on the statements of the relatives and the observation of the Nurse visitor as to whether the child is well or ailing.

A preliminary survey has just been completed of the children born in 1925. For obvious reasons these have been grouped separately according to whether the notified case in the household was sputum positive or negative. In a large number of the sputum negative cases there may be reason to doubt the accuracy of the diagnosis and therefore the statistics dealing with this group are of far less value than those where there has been contact with sputum positive cases. Calmette states that 25 to 30 per cent.

of children born into tuberculous surroundings in France die of conditions "presumed tuberculous" in the first year of life.

The preliminary survey of the 1925 group in Leeds reveals the following information at the expiry of an average of  $2\frac{1}{2}$  years from the date of birth

|                                                   |    |           |
|---------------------------------------------------|----|-----------|
| A. Children born into contact with T.B. + cases   | .. | 28        |
| Less "lost sight of" (5) and Accidental death (1) |    | 6         |
| Total traced ..                                   | .. | <u>22</u> |

Present state of the 22 cases:—

|                            |           |
|----------------------------|-----------|
| Dead .. .. .               | 4         |
| Ill with Tuberculosis .. . | 1         |
| Delicate .. .              | 3         |
| Alive and well .. .        | 14        |
|                            | <u>22</u> |

The four deaths were certified as due to Convulsions (2) Diarrhoea and Sickness (1), Tuberculosis (1). All four deaths were under one year, representing a mortality of 18.0 per cent.

|                                                          |           |
|----------------------------------------------------------|-----------|
| B. Children born into contact with notified T.B. - cases | 85        |
| Less "lost sight of" (5) and Accidental deaths (2)       | 7         |
| Total traced ..                                          | <u>78</u> |

Present state of the 78 cases:—

|                                    |           |
|------------------------------------|-----------|
| Died .. .                          | 2         |
| Notified Tuberculous (glands) .. . | 1         |
| Delicate .. .                      | 13        |
| Alive and well .. .                | 62        |
|                                    | <u>78</u> |

Both deaths were certified as due to "Marasmus"—one under one year, and the other at  $2\frac{1}{2}$  years. This represents a mortality of 1.28 per cent. under one year and 2.56 per cent. under three years.

It would be unwise to draw any very definite conclusions from these figures especially in the absence of any post-mortem evidence as to the cause of death. It is impossible for instance to assess to what extent the poverty and distress in the homes of the sputum positive cases may have contributed to the higher mortality; also at least one of the four deaths in this group—a



case of diarrhoea and sickness at the age of two months—was probably non-tuberculous. The marked difference in the death-rate, however, in the two groups is very striking, and, as further figures become available in the next two years, the whole should prove a valuable contribution to our knowledge on a subject which has so far not been thoroughly investigated in this country.

*Domiciliary Work.*—The Medical staff made 594 visits to patients in their own homes for examination, consultation, or special treatment. During the year a re-arrangement of the districts served by the nurse visitors was made owing to one nurse being detailed for work in the Artificial Sunlight department. A system of reports has also been devised by which information coming to their knowledge about any patient, or suggestions for help to individual cases can be readily brought to the notice of the Tuberculosis Officer.

The Nurse visitors made a total of 24,216 visits of which 1,039 were for environmental reports, 1,424 to contacts, 19,175 re-visits to civilians, 2,310 re-visits to ex-service men and 268 visits to houses where deaths had occurred.

It is a pleasure again to place on record an appreciation of the valuable services of the nurse visitors.

*Minor Surgical Operations.*—Special treatment was given as follows :—

Artificial Pneumothorax refills 20, Splints and Plasters applied 27, Aspirations of Abscesses and Glands 98, other attendances for dressings, fomentations, and sundry tests and injections 773, making a total of 918.

*Clerical.*—The routine office work has been slightly increased in consequence of the effort to effect still closer co-operation with practitioners regarding the progress and treatment of their patients, and particularly of panel patients when National Health Insurance Form G.P. 36 has been completed. In this connection 4,909 reports have been sent to doctors.

In accordance with the policy of close co-operation with the School Medical Service 1,728 reports have been rendered to the Education Department on children of school age.

Communications to patients making appointments and for other purposes numbered 13,584 ; letters to Institutions, etc. 1,109 ; forms and letters to the Ministry of Pensions, etc., 857.





## PATIENTS (EXCLUDING CONTACTS) EXAMINED AT CENTRAL TUBERCULOSIS DISPENSARY

FROM JANUARY 2nd, 1927 TO DECEMBER 31st, 1927.

## PULMONARY TUBERCULOSIS.

|                   | New cases examined. |     |     | Number bacteriologically positive. |    |    | Number clinically positive, but not T.B. +. |    |    | Number found to be indefinite or negative. |     |    | Number admitted to Sanatoria. |    |    |
|-------------------|---------------------|-----|-----|------------------------------------|----|----|---------------------------------------------|----|----|--------------------------------------------|-----|----|-------------------------------|----|----|
|                   | M.                  | F.  | B.  | M.                                 | F. | B. | M.                                          | F. | B. | M.                                         | F.  | B. | M.                            | F. | B. |
| Insured .. ..     | 383                 | 212 | ..  | ..                                 | .. | .. | 109                                         | 42 | .. | ..                                         | 131 | 87 | ..                            | .. | .. |
| Non-insured .. .. | 59                  | 113 | 112 | 65                                 | 17 | 34 | 1                                           | 2  | 13 | 38                                         | 40  | 16 | 26                            | 52 | 39 |

## OTHER FORMS OF TUBERCULOSIS.

|                   | New patients. |    |    | Glands. |    |    | Bones and joints. |    |    | Abdominal. |    |    | Others. |    |    | Number admitted to Sanatoria. |    |    |
|-------------------|---------------|----|----|---------|----|----|-------------------|----|----|------------|----|----|---------|----|----|-------------------------------|----|----|
|                   | M.            | F. | B. | M.      | F. | B. | M.                | F. | B. | M.         | F. | B. | M.      | F. | B. | M.                            | F. | B. |
| Insured .. ..     | 17            | 10 | .. | ..      | .. | .. | 6                 | 5  | .. | 4          | 4  | .. | 4       | 1  | .. | 2                             | 5  | .. |
| Non-Insured .. .. | 5             | 10 | 21 | 14      | 2  | 3  | 2                 | 3  | 2  | 1          | 3  | .. | ..      | 1  | 3  | 2                             | 3  | 9  |

Total attendances at Central Tuberculosis Dispensary for—

(a) Light treatment .. ..

(b) Other special treatments .. ..

(c) Ordinary clinics :

Males .. ..

Females .. ..

6,514

6,765

15,128

Total Number of Clinical Examinations

(included in attendances) .. ..

Number of cases making the clinical attendances

(excluding Light and Special treatments) .. ..

7,675

3,484

A good deal of additional work has had to be undertaken by the Staff in connection with the preparation of the statistical tables required by the Ministry of Health.

**Institutions.**—The total accommodation at all the institutions provided by the Corporation for the treatment of tuberculosis of all forms on December 31st, 1927, was :—

|                       | Males. | Females. | Children. | Total. |
|-----------------------|--------|----------|-----------|--------|
| " The Hollies " .. .. | ..     | ..       | 40        | 40     |
| Killingbeck .. ..     | 88     | 78       | 54        | 220    |
| Gateforth .. ..       | 50     | ..       | ..        | 50     |

**" The Hollies " Sanatorium School.**—The accommodation at this institution has been kept fully occupied throughout the year, with the exception of a short period when admissions were held up owing to an outbreak of diphtheria.

The type of case admitted is mainly the child with a tuberculous home environment who has sufficient evidence to justify a diagnosis of tuberculosis, but who is not so ill as to require continuous nursing. A few cases are admitted for observation but the majority are diagnosed prior to admission.

All admissions and discharges are under the control of the Chief Clinical Tuberculosis Officer. The health of the children is in the care of the nursing staff and the institution is visited twice a week by a medical officer from the dispensary. Every child is regularly examined during the course of treatment.

Cases not making satisfactory progress, or for whom no satisfactory arrangements can be made for their return to improved home conditions, are kept for as long as six or twelve months, but the average length of stay during 1927 was approximately 81 days.

There are two teachers, each having a class of 20 children, one taking children up to eight years of age, and the other children from 8 to 12. Two classes are held—in separate rooms—and whenever the weather is fine they are held out-of-doors in different parts of the grounds. The school session is four hours daily and a record is kept of all hours spent out-of-doors.



**"The Hollies" Sanatorium School.**  
**PULMONARY TUBERCULOSIS FOR PERIOD ENDED**  
**31st DECEMBER, 1927.**

|                           | Males.  |        | Females. |        | Total. |
|---------------------------|---------|--------|----------|--------|--------|
|                           | Under 5 | Over 5 | Under 5  | Over 5 |        |
| Remaining Jan. 1st, 1927  | ..      | 18     | ..       | 22     | 40     |
| Admitted .. .. .          | 5       | 46     | 2        | 60     | 113    |
| Discharged .. .. .        | 3       | 54     | 1        | 66     | 124    |
| Died .. .. .              | ..      | ..     | ..       | ..     | ..     |
| Remaining Dec. 31st, 1927 | 2       | 10     | 1        | 16     | 29     |

Average length of stay, 81.6 days.

ANALYSIS OF CASES DISCHARGED.

|                                        | Males.  |        | Females. |        | Total. |
|----------------------------------------|---------|--------|----------|--------|--------|
|                                        | Under 5 | Over 5 | Under 5  | Over 5 |        |
| Disease arrested .. ..                 | 2       | 31     | ..       | 32     | 65     |
| „ improved .. .. .                     | ..      | 13     | 1        | 20     | 34     |
| „ not improved .. ..                   | ..      | ..     | ..       | 5      | 5      |
| Observation and negative cases .. .. . | 1       | 10     | ..       | 9      | 20     |
| TOTALS .. .. .                         | 3       | 54     | 1        | 66     | 124    |

NON-PULMONARY TUBERCULOSIS FOR PERIOD ENDED  
31st DECEMBER, 1927.

|                           | Males.  |        | Females. |        | Total. |
|---------------------------|---------|--------|----------|--------|--------|
|                           | Under 5 | Over 5 | Under 5  | Over 5 |        |
| Remaining Jan. 1st, 1927  | ..      | ..     | ..       | ..     | ..     |
| Admitted .. .. .          | ..      | 11     | ..       | 6      | 17     |
| Discharged .. .. .        | ..      | 8      | ..       | 5      | 13     |
| Died .. .. .              | ..      | ..     | ..       | ..     | ..     |
| Remaining Dec. 31st, 1927 | ..      | 3      | ..       | 1      | 4      |

Average length of stay 76.8 days.

ANALYSIS OF CASES DISCHARGED.

|                                        | Males.  |        | Females. |        | Total. |
|----------------------------------------|---------|--------|----------|--------|--------|
|                                        | Under 5 | Over 5 | Under 5  | Over 5 |        |
| Disease arrested .. ..                 | ..      | 8      | ..       | 5      | 13     |
| „ improved .. .. .                     | ..      | ..     | ..       | ..     | ..     |
| „ not improved .. ..                   | ..      | ..     | ..       | ..     | ..     |
| Observation and negative cases .. .. . | ..      | ..     | ..       | ..     | ..     |
| TOTALS .. .. .                         | ..      | 8      | ..       | 5      | 13     |

The surroundings of the hospital enable much of the time spent out-of-doors to be devoted to nature study, and in addition, much of the hand-work, as well as physical exercises, games, and practical arithmetic, are done out of doors when the weather permits.

The garden plot which was taken over last year has been entirely dug up and planted by the children, a form of exercise which they much enjoy, as well as being one of practical interest.

The teachers are satisfied that the progress made by the children is rapid when compared with what would be achieved at an ordinary school, and this is no doubt largely due to the small classes, giving facilities for more individual attention, as well as the stimulus of ideal surroundings, good food, and regular hours.

Co-operation with the education authorities is established by notifying them of the admission and discharge of all cases, and intimating the fitness of the child for ordinary school upon completion of institutional treatment.

Every case is followed up by periodical attendance at the tuberculosis dispensary, the child either attending fortnightly for treatment, or reporting by appointment for examination every three or six months.

The number of children admitted to the school register was 118 (boys 55 and girls 63).

The number of school sessions was morning 255, afternoon 254, total 509.

The total number of attendances was 17,935, and the average attendance per session was 35.

The average number on the school register was 40.

**Killingbeck Sanatorium.**—The institution has been kept fully occupied during the year, and, as the waiting list has never been a long one, it has been possible to admit all cases, especially urgent ones, with the minimum delay.

It has also been possible to prolong the stay of patients in need of extended treatment without causing undue pressure on the waiting list. Thus 41 patients spent from six to twelve months in the hospital as compared with 15 in 1926.

The scheme of graduated occupational therapy was brought into operation early in the year and is now working smoothly. Apart from its direct therapeutic value it is certainly leading to



**Killingbeck Sanatorium.**  
**PULMONARY TUBERCULOSIS FOR YEAR ENDED**  
**31st DECEMBER, 1927.**

|                           | Males.   |         | Females. |         | Total. |
|---------------------------|----------|---------|----------|---------|--------|
|                           | Under 15 | Over 15 | Under 15 | Over 15 |        |
| Remaining Jan. 1st, 1927  | 21       | 82      | 15       | 67      | 185    |
| Admitted .. .. .          | 87       | 328     | 53       | 243     | 711    |
| Discharged .. .. .        | 79       | 284     | 51       | 228     | 642    |
| Died .. .. .              | 1        | 47      | 1        | 25      | 74     |
| Remaining Dec. 31st, 1927 | 28       | 79      | 16       | 57      | 180    |

Average length of stay, 94 days.

**ANALYSIS OF CASES DISCHARGED.**

|                                        | Males.   |         | Females. |         | Total. |
|----------------------------------------|----------|---------|----------|---------|--------|
|                                        | Under 15 | Over 15 | Under 15 | Over 15 |        |
| Disease quiescent .. ..                | 66       | 104     | 40       | 87      | 297    |
| „ improved .. ..                       | 8        | 121     | 8        | 81      | 218    |
| „ not improved .. ..                   | 4        | 55      | 2        | 59      | 120    |
| Observation and Negative cases .. .. . | 1        | 4       | 1        | 1       | 7      |
| TOTALS .. .. .                         | 79       | 284     | 51       | 228     | 642    |

|                                                                                                              | ADULTS. |          | Total. |
|--------------------------------------------------------------------------------------------------------------|---------|----------|--------|
|                                                                                                              | Males.  | Females. |        |
| Restoration of working capacity—<br>(of Quiescent and Improved cases only)<br>100 per cent. approximately .. | 72      | 49       | 121    |
| 80 „ .. ..                                                                                                   | 48      | 35       | 83     |
| 60 „ .. ..                                                                                                   | 61      | 45       | 106    |
| 40 „ .. ..                                                                                                   | 39      | 20       | 59     |
| 20 „ .. ..                                                                                                   | 5       | 19       | 24     |
| 10 „ .. ..                                                                                                   | ..      | ..       | ..     |
| TOTALS .. .. .                                                                                               | 225     | 168      | 393    |

### Killingbeck Sanatorium.

#### NON-PULMONARY TUBERCULOSIS FOR YEAR ENDED 31st DECEMBER, 1927.

|                           | Males.   |         | Females. |         | Total. |
|---------------------------|----------|---------|----------|---------|--------|
|                           | Under 15 | Over 15 | Under 15 | Over 15 |        |
| Remaining Jan. 1st, 1927  | 5        | 1       | ..       | 2       | 8      |
| Admitted .. .. .          | 15       | 6       | 7        | 12      | 40     |
| Discharged .. .. .        | 15       | 5       | 3        | 9       | 32     |
| Died .. .. .              | ..       | 1       | ..       | ..      | 1      |
| Remaining Dec. 31st, 1927 | 5        | 1       | 4        | 5       | 15     |

Average length of stay, 100 days.

#### ANALYSIS OF CASES DISCHARGED.

|                                        | Males.   |         | Females. |         | Total. |
|----------------------------------------|----------|---------|----------|---------|--------|
|                                        | Under 15 | Over 15 | Under 15 | Over 15 |        |
| Disease quiescent .. ..                | 6        | 2       | 1        | ..      | 9      |
| „ improved .. ..                       | 6        | 1       | 2        | 4       | 13     |
| „ not improved .. ..                   | 2        | 2       | ..       | 5       | 9      |
| Observation and Negative cases .. .. . | 1        | ..      | ..       | ..      | 1      |
| TOTALS .. ..                           | 15       | 5       | 3        | 9       | 32     |

|                                                                                                              | ADULTS. |          | Total. |
|--------------------------------------------------------------------------------------------------------------|---------|----------|--------|
|                                                                                                              | Males.  | Females. |        |
| Restoration of working capacity—<br>(of Quiescent and Improved cases only)<br>100 per cent. approximately .. | ..      | ..       | ..     |
| 80 „ „ ..                                                                                                    | 2       | ..       | 2      |
| 60 „ „ ..                                                                                                    | ..      | 3        | 3      |
| 40 „ „ ..                                                                                                    | 1       | 1        | 2      |
| 20 „ „ ..                                                                                                    | ..      | ..       | ..     |
| 10 „ „ ..                                                                                                    | ..      | ..       | ..     |
| TOTALS .. ..                                                                                                 | 3       | 4        | 7      |



an increased appreciation among the patients of the importance of graduated rest and exercise, and a better application of these essential principles to their mode of life on returning home. The new recreation huts are nearing completion and will be available early in the new year.

The Medical Superintendent Dr. W. A. Todd writes :—

During the year ended December 31st, 1927, the total number of cases treated in the Institution was 944, comprising 417 males, 324 females and 203 children as compared with 1,030, comprising 439 males, 359 females and 232 children for the previous year. All types of the disease were admitted but pulmonary cases predominated, there being 896 of this type, against 48 non-pulmonary. The accommodation remains the same, viz. : 220 beds allocated as follows :—88 males, 78 females and 54 children.

The conduct of the patients continues to be satisfactory. The schoolroom for the children patients continues to be of great advantage both from a mental and physical point of view.

It is hoped next year to have a Dental Room with a visiting Dentist.

I am sure this will be of great advantage to the patients and a useful aid to recovery.

The Head Teacher's report is appended.

*School Report.*—The total number of children on roll was 172, varying in age from 3 to 15 years. The total number of attendances was 14,720, the school being open 461 times. Mr. P. H. Heap, an inspector of the Leeds Education Committee visited the school and expressed his satisfaction with the work of the school. The discipline of the children has been good and the training afforded by the school beneficial in every way.

**Gateforth Sanatorium.**—Dr. H. M. Holt retired from the office of Medical Superintendent of this institution during the year and his place has been taken by Dr. H. E. Reburn.

A system of graduated occupational therapy has also been introduced at Gateforth but on rather more advanced lines than at Killingbeck to suit the more fit type of case admitted.

As far as possible cases are transferred from Killingbeck to Gateforth to complete their treatment but difficulty is still experienced in keeping the beds fully occupied, mainly because patients are not prepared to devote the time to treatment which their condition demands.

Improved facilities for recreation are to be provided in the coming year and it is also desirable that more ground should be available for the further development of the activities of the institution.



The Medical Superintendent, Dr. H. E. Reburn, writes :—

The treatment at Gateforth is designed to place patients in a fit condition to return to their ordinary work.

Patients transferred from Killingbeck Sanatorium have usually completed the first stage of their treatment, viz. : rest, and are able to start exercise or work immediately, but in the case of new patients treatment commences at the beginning. After a period in bed patients are allowed up one or two hours a day and this is increased slowly till they are up all day. Walking exercise is then ordered commencing with a quarter of a mile a day and increasing gradually at intervals of one or two weeks to eight miles a day. When patients can walk this distance without abnormal rise of temperature or pulse and without any undesirable symptoms occurring, they are started on work.

There are six grades of work. The first is carrying 10 lbs. weight, watering plants or light weeding and the last is heavy digging, pick axe and wheelbarrow work such as is done by a navvy. The work of the intermediate grades is arranged so that each grade is a little heavier than the one preceding it.

At all stages patients rest on their beds at certain times during the day and they are carefully watched so that there is no risk of them injuring themselves by getting unduly tired. On the last grade there is no rest hour and patients do heavy work for over five hours a day. Should a patient become ill he is sent to bed immediately and remains in bed till his temperature is quite normal. He then commences exercise or work at a stage a little easier than that on which he broke down.

This system of rest followed by graduated exercise and work provides the best treatment for chronic pulmonary tuberculosis, by training the body to cope with the disease. In addition it results in the patient leaving the sanatorium, not a cripple unable to work, but an individual trained to work in spite of a serious disease and in many cases fit to resume his ordinary work.

The chief work done by the patients is gardening. There are so many different things to be done in a garden that this work is excellent for purposes of grading. Also the patients gain knowledge that may be useful to them afterwards.

A few patients help with the poultry. Much work has been done in moving the poultry to fresh ground, erecting new houses and fencing the new runs. It is hoped to have a first-class poultry farm in the near future, but more land is needed to develop this properly. It will then be possible to instruct patients in this branch of farming. Whilst all cannot become poultry farmers many should be able to add to their incomes by keeping a few hens in the back yard, so that the knowledge gained here should prove useful.

The land on which the poultry runs have been for the last few years, has been ploughed up and sown with potatoes. All this work has been done by the patients.



**Gateforth Sanatorium.**  
**PULMONARY TUBERCULOSIS FOR YEAR ENDED**  
**31st DECEMBER, 1927.**

|                           | Males.   |         | Females. |         | Total. |
|---------------------------|----------|---------|----------|---------|--------|
|                           | Under 15 | Over 15 | Under 15 | Over 15 |        |
| Remaining Jan. 1st, 1927  | ..       | 36      | ..       | ..      | 36     |
| Admitted .. .. .          | ..       | 143     | ..       | ..      | 143    |
| Discharged .. .. .        | ..       | 138     | ..       | ..      | 138    |
| Died .. .. .              | ..       | ..      | ..       | ..      | ..     |
| Remaining Dec. 31st, 1927 | ..       | 41      | ..       | ..      | 41     |

Average length of stay, 114 days.

ANALYSIS OF CASES DISCHARGED.

|                                        | Males.   |         | Females. |         | Total. |
|----------------------------------------|----------|---------|----------|---------|--------|
|                                        | Under 15 | Over 15 | Under 15 | Over 15 |        |
| Disease arrested .. ..                 | ..       | 29      | ..       | ..      | 29     |
| „ improved .. ..                       | ..       | 77      | ..       | ..      | 77     |
| „ not improved .. ..                   | ..       | 30      | ..       | ..      | 30     |
| Observation and Negative cases .. .. . | ..       | 2       | ..       | ..      | 2      |
| TOTALS .. .. .                         | ..       | 138     | ..       | ..      | 138    |

| Restoration of working capacity—<br>(of Quiescent and Improved cases only) |  |  |  | Males. | Females. | Total. |
|----------------------------------------------------------------------------|--|--|--|--------|----------|--------|
| 100 per cent. approximately ..                                             |  |  |  | 8      | ..       | 8      |
| 80 .. .. .                                                                 |  |  |  | 64     | ..       | 64     |
| 60 .. .. .                                                                 |  |  |  | 31     | ..       | 31     |
| 40 .. .. .                                                                 |  |  |  | 3      | ..       | 3      |
| 20 .. .. .                                                                 |  |  |  | ..     | ..       | ..     |
| 10 .. .. .                                                                 |  |  |  | ..     | ..       | ..     |
| TOTALS .. .. .                                                             |  |  |  | 106    | ..       | 106    |

Pig-keeping and breeding which provided a large amount of interesting work has had to be given up *pro tem* as the farmyard and styes have been taken over by a farmer.

There are also facilities for joinering and blacksmith work.

*Recreation.*—As in the case of exercise and work, the recreation of the patients is graded. Thus a patient must be walking four miles a day before he can play a standing up game such as billiards and he must be working before he can play an outdoor game such as croquet. More provision should be made for recreation both indoor and outdoor. A wireless set has been installed and is much appreciated by the patients and the staff.

*The Building.*—Whilst on the whole the building makes a good sanatorium there is room for improvement.

The dining room is rather small for 50 patients and it is situated a long way from the kitchen besides being on a different level. A new dining room would be a great improvement and might be built opposite the kitchen on the site where the engine room now is.

*Shelters.*—There is accommodation for 12 patients in shelters. It is hard to see what advantage they possess. The air in a shelter is no better than the air in a well ventilated room. Shelters have one great disadvantage, viz., patients have to go outside to reach a lavatory—an unpleasant experience on a cold wet night. A block of cubicles complete with proper sanitary arrangements is a much better system.

**Care Work.**—The Care Committee has again rendered most valuable assistance to the scheme as a whole, especially in the investigation of the domestic and economic difficulties of patients.

This Committee has access to the reports on home conditions, etc. which are made by the nurse-visitors, and, as the secretary is on the dispensary staff, with an office in the same building she is able to obtain an immediate opinion as to the medical urgency or otherwise of cases applying for help in various forms.

The administration of the Government Grant for the supply of extra nourishment forms a large part of the Committee's work. Arranging convalescent treatment for children and adults living in infected surroundings, exposed to much risk of infection but as yet showing no definite signs of disease, is another useful service carried out by the Care Committee on the recommendation of the Dispensary medical officers.

Patients are also helped with clothing, bedding, sick-room appliances, home helps, etc.



In some cases where the mother of a family has refused to accept Sanatorium treatment owing to the difficulty of leaving her children, the Care Committee has been able (through its close touch with other organisations and homes) to obtain such suitable accommodation for the children as to allow of the mother taking prolonged institutional treatment, with immense benefit both to parent and children.

The activities of the Care Committee might be most usefully extended by further work on the problem of the removal of children from infected surroundings on the lines of the Grancher System. This system has been most successful in France, and should be peculiarly applicable to a city such as Leeds where so much of the housing accommodation is bad. It consists briefly in the finding of healthy homes, preferably in the country, where children from infected families may be brought up under good conditions. A small payment is usually made but in other cases permanent adoption of the child may be arranged. The results as regards the health of the children and the marked reduction of tuberculosis incidence amongst them have been so striking in France as to warrant its serious consideration in this country.

Special thanks are due to those voluntary workers on the Care Committee who week by week attend its meetings and take such an active interest in its work.

The following extracts from the Annual Report of the Care Committee explain in further detail the excellent work which is being carried out :—

| " Summary of help given during 1927—                                                                                                                                                                                                         |       | Cases. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|
| Patients granted milk and eggs during the year ..                                                                                                                                                                                            | 401   |        |
| Grants of money for various purposes made ..                                                                                                                                                                                                 | 50    |        |
| Patients sent away for convalescent treatment ..                                                                                                                                                                                             | 123   |        |
| Gifts of warm clothing made to patients .. ..                                                                                                                                                                                                | 91    |        |
| Beds, with necessary bed-clothing provided ..                                                                                                                                                                                                | 14    |        |
| Patients helped with Surgical Appliances and various Sick Room Requisites .. .. .                                                                                                                                                            | 24    |        |
| Patients helped by means of notes to the appropriate authorities for help in the way of clothing, financial assistance. This number includes 50 ex-Servicemen, who were helped by the United Services Fund and the British Red Cross Society | 449   |        |
| TOTAL .. .. .                                                                                                                                                                                                                                | 1,152 |        |



" *British Red Cross Society*.—Twelve ex-Servicemen have been helped by this Fund, both by grants in money and in clothing. The sum of £68 16s. 2d. has been administered by this Committee in this connection.

" *United Services Fund*.—Thirty-eight ex-Servicemen have been helped by this Fund. Of this number, nine men were sent for convalescent treatment to the Fund's Home at Bournemouth, for a period varying from four to five weeks. The sum of £9 17s. 6d. was administered in special cases, and the remainder were helped by means of grants in groceries and clothing.

" Interviews and visits by the Secretary during the year numbered 1,714, and 88 external Committees were attended. The Case Committee met 49 times and 466 milk coupons were issued for periods of three months each.

" The work of the Case Committee has gone on quietly and normally during the past year, its scope enlarging as it becomes more widely known. The claims made upon it are very varied. In many cases the patient's mental and physical condition is so impoverished that the appeal is almost an inarticulate one. Clothing, money and work are all needed, but above all, systematic and thoughtful survey of the possibilities is what is required. A great deal of work is done without any visible result, but we are encouraged by the measure of success attained to persevere in our efforts.

" To find work for a partially fit, unskilled male patient is always a difficult matter, but, even where this has been possible, the practically ever present difficulty of making him presentable still remains. We have been useful in providing clothes in one or two such cases, without which the man's chances would have been seriously handicapped, and we venture to think that anyone who has cast-off garments to dispose of could not put them to a better use.

" Other instances of similar help are (1) the provision of tools for a skilled workman who had the promise of immediate work, but no tools, and (2) the loan of the deposit money for a house to a family who for two years had been struggling to remove to more suitable quarters.

" Mothers of families—the last to appeal for themselves—often need warm clothing to assist in their treatment. Families of small children are frequently in need. The bulk of the work connected with the distribution of clothing is in respect of those who are sent to Sanatorium.

" For those patients who remain at home, extra food is often required. The grant of the Ministry of Health, based on a percentage of the population is available for Leeds, and milk and eggs are supplied to patients on the recommendation of the Medical Officers. These are granted for periods of three months, subject to renewal. A return of cases receiving grants of extra nourishment is made to the Sub-Health



Tuberculosis Committee monthly. Apart from the above grant additional food is supplied in special cases when the need arises. The cost in these cases is borne by voluntary funds, and not by the Corporation.

"A very important part of the Care Work is the provision of Convalescence for patients on the recommendation of the Medical Officer. Many, in fact most, of our patients cannot return to work after illness without a change of air, and sometimes a prolonged period is necessary to restore health. In many cases adequate convalescence is the surest means of building up a strong resistance against the onset of disease.

"The convalescence of children is referred to the Children's Convalescent and Summer Holiday Fund, who make all arrangements and obtain such payments as the parents or others interested can make towards the cost. Any deficit there may be is borne by the Case Committee and where the parents cannot afford to make any payment, the full cost is paid by the Care Committee.

"Effective work demands co-operation with other workers, and we should like to record our thanks for the help which we have received from the following :—The Children's Convalescent and Summer Holiday Fund, The United Services Fund, The Education Authority, The National Society for the Prevention of Cruelty to Children, The Leeds Adult Convalescent Society, The Emergency Help Fund, and the War Pensions Committee.

"With reference to the ever important work of Propaganda, valuable assistance has been given by several ladies of this Committee, who have spoken on practical and theoretical hygiene in connection with Care Work at various Women's Guilds and Mothers' Meetings."

## Maternity and Child Welfare.

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One of the brightest spots in the work of the Public Health Department during 1927 was that concerned with the welfare of the City's mothers and their infants as the statistics given below show. There was a further decline in the infant mortality rate and concomitant with that one may assume there was a corresponding shrinkage in the amount of infant damage. It is not at present possible to estimate the latter; there are no dependable data on which to base an opinion but as death and damage usually bear a very distinct relation to one another one is justified in concluding that the number of children temporarily or permanently damaged was at least equal to the number whose lives were saved (it was probably three or four times as many).

The reason for the gratifying decline in the infant death-rate was probably the absence of any serious epidemic of disease affecting children in this early age period such as epidemic diarrhoea or whooping cough, both of which are peculiarly fatal to infants under one year, as well as to the efforts made by the maternity and child welfare service through the Babies' Welcomes to educate mothers in the rearing of their children.

Whilst one rejoices at the continued fall in the infant death-rate, when one turns to the maternal death-rate there is not the same reason for satisfaction. Here in Leeds, in common with the rest of the country, the wastage of mother life is on a scale which reflects little credit either on the profession of medicine or the local health services. Twenty years ago out of every thousand births 4.54 mothers lost their lives. During the last five years the average rate per thousand births was 4.59, whilst in 1927, the year under review the rate was 4.88. It will therefore be seen that no progress has been made.

Whilst deploring this failure to reduce the maternal mortality rate I cannot help feeling that both in the press and on the platform there has been a tendency to exaggerate both its significance and



its extent. So much has been made of it in some quarters that the public have been somewhat misled as to the true facts of the case and the extent to which it is possible to provide a remedy. It cannot be too clearly stated that a considerable proportion of the maternal deaths are unavoidable even under the most favourable circumstances. In many, the actual cause of death is unknown or so obscure as to be unrecognizable even to the trained intelligence, whilst in others the circumstances leading up to death were such as could not be foreseen and therefore could not be prevented. Even puerperal sepsis, one of the most important causal factors in maternal mortality, may occur in a case to the management of which not the slightest exception could be taken, whilst other cases equally well managed may succumb to such an abnormality as ante-partum hæmorrhage, a condition which even when diagnosed in time is not always capable of successful treatment.

I am well aware that much of the loss of mother life is avoidable. It is due to lack of ante-natal care, wilful interference on the part of the mother herself or of some other person, or careless midwifery, and I am hopeful that with a more universal recognition by the public of the value of ante-natal hygiene and the need for skilled attention and nursing during and after confinement will have the effect of removing or at least reducing to a minimum these avoidable deaths.

There are those who try to apportion blame for the disasters which occur in connection with child-bearing as between midwife and doctor. This is perfectly useless and leads us nowhere. What is required to-day is a closer and sympathetic co-operation between the doctor and the midwife. The public should recognise that the latter holds a very honourable position in the community and carries on a work no less important than that of the doctor. Midwifery, whether looked upon as part of medical science or not, is of itself a profession, and that being so the midwife should be accorded her professional status and should be remunerated at a rate commensurate with the importance of her work. At the present time she is grossly underpaid. She works hard, makes great personal sacrifices, runs innumerable risks, has to observe many exacting and in some cases irksome regulations, and for all that is paid a miserable pittance barely sufficient in many cases to maintain herself in decency and comfort (*vide* page 168).



I have already advanced the opinion that one of the ways to reduce the maternal death-rate is to secure skilled attention for every pregnant woman during her expectant period as well as the actual confinement. Such attention can only be obtained if the public are willing to pay for it, and only those women can give it who are well educated and have devoted themselves to the study of obstetrics for the period necessary to make them competent midwives.

If the poorer classes find it impossible to pay the fee demanded for this skilled attention a way must be found of providing the service at a rate which comes within their means. This end can best be achieved by the Local Authority subsidizing all the midwives practising in their area, or better still by taking over the whole midwifery service and paying the midwives a fixed salary with an additional sum in the shape of a bonus for every case over a stated number. Such a scheme would have the advantage of securing an adequate remuneration to the midwives and eliminating the ill-trained and incompetent woman.

**Statistics.**—The number of children under one year of age who died during 1927 was 629 (males 374 and females 255). The infant mortality rate was 81 or 12 less than the rate (93) for last year. This is the lowest rate ever recorded in the City's history and is an achievement on which the City is to be congratulated. Compared with the average of the previous five years (96) the rate for 1927 represents a reduction of 15.6 per cent. and with the average for the decade of 25.0 per cent. As far as the infant mortality rate is concerned Leeds compared very favourably in 1927 with the other large towns in England and Wales, the only towns with lower rates being London, Birmingham and Bristol. It is many years since Leeds occupied such an honourable position amongst her sister towns, and one can only hope that she will be able to maintain it or even improve upon it. The rate for England and Wales was 69 which is 14.8 per cent. lower than the Leeds rate, which means that Leeds has still some way to go before it achieves the ideal.

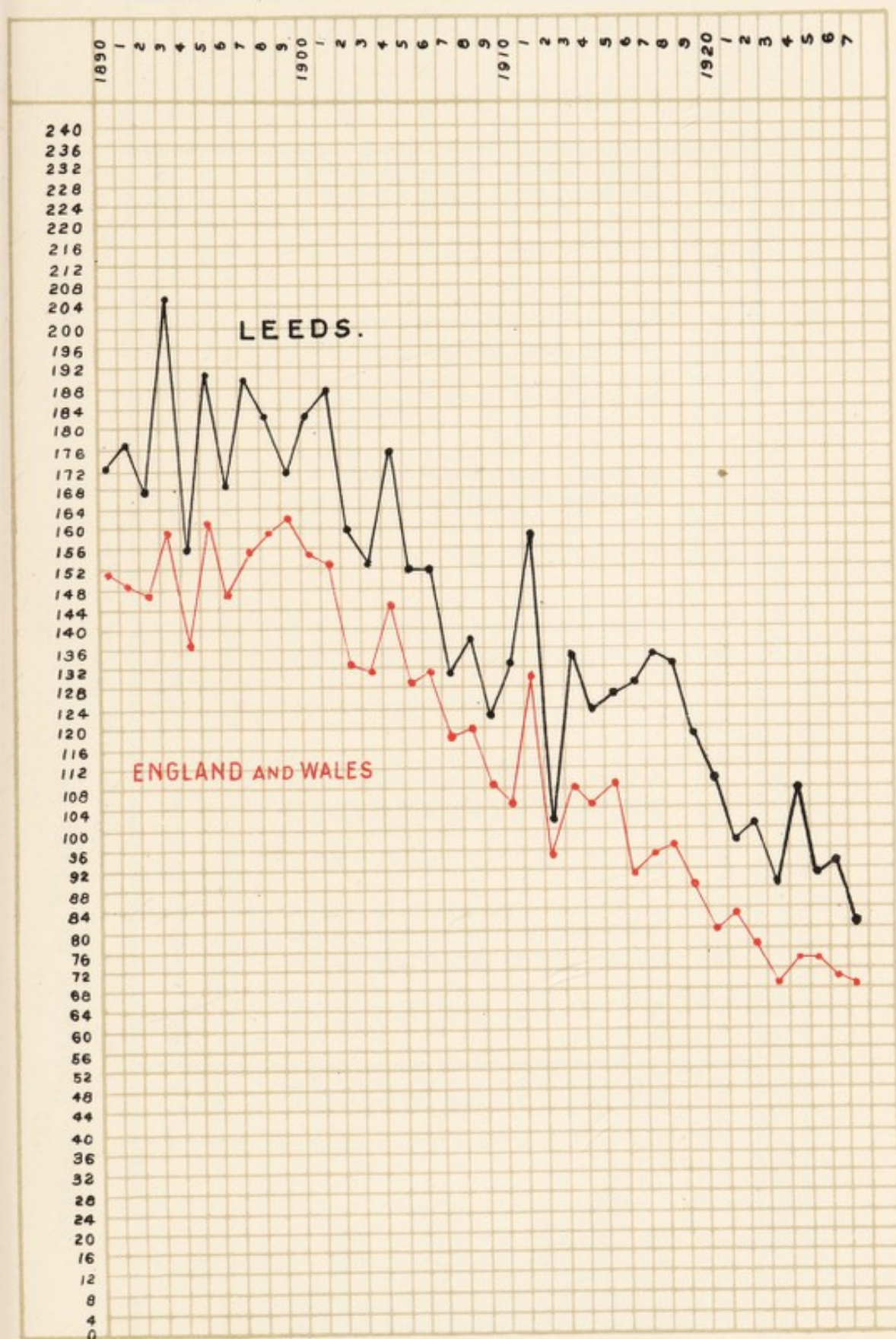
*Causes of Infant Death.*—The main causes contributing to the infantile death-rate in order of numerical importance were premature birth (146), pneumonia (99), diarrhoea and enteritis (79), congenital malformations (35), atrophy, debility and marasmus (32) and convulsions (30).



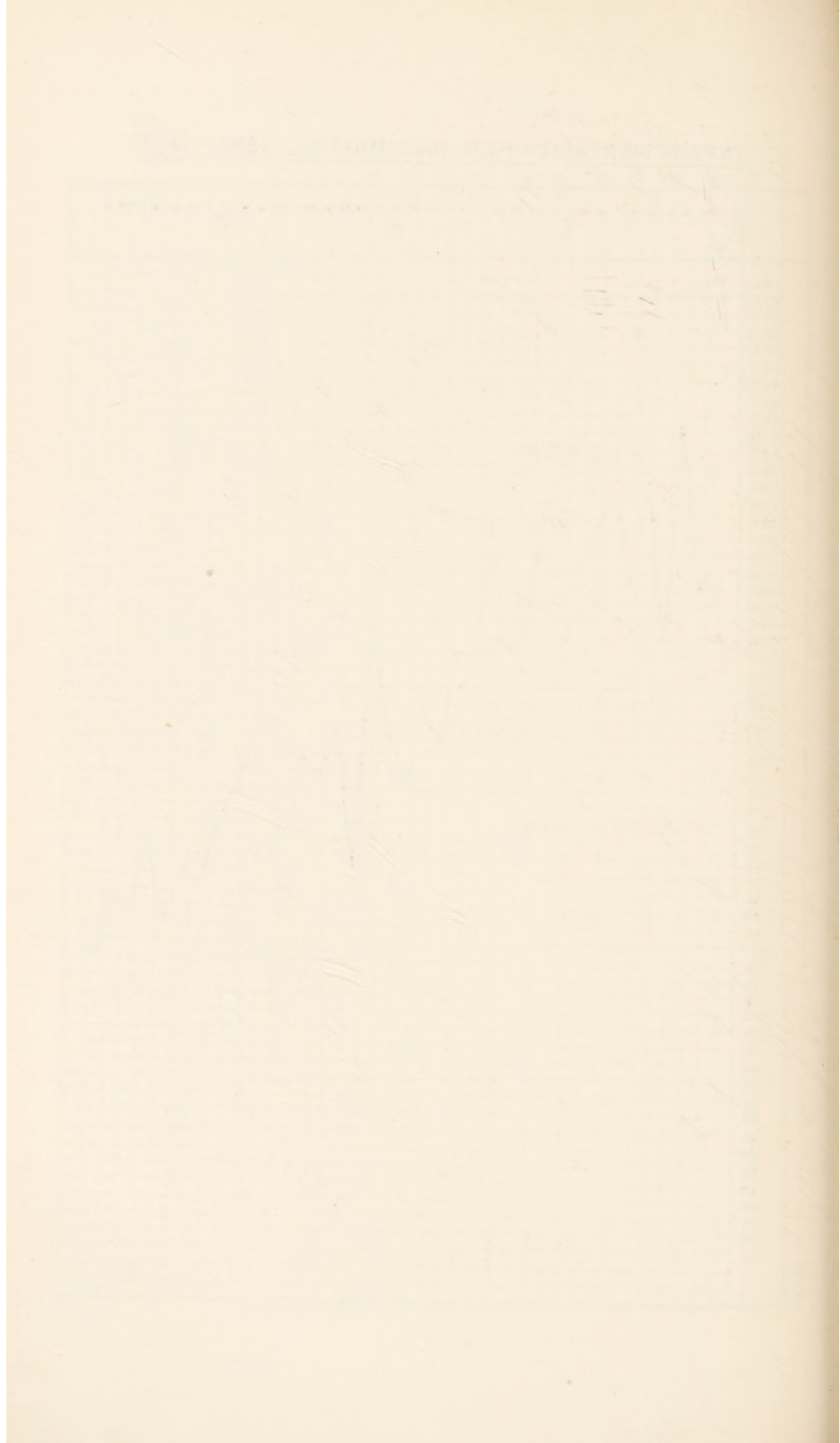
INFANTILE MORTALITY DURING THE ELEVEN YEARS 1917-1927 AT DIFFERENT PERIODS OF  
THE FIRST YEAR OF LIFE.

| Year. | Births<br>in<br>year. | Under one week. |       | Under one month. |       | One and under<br>three months. |       | Three and under<br>six months. |       | Six and under<br>nine months. |       | Nine and under<br>twelve months. |       | Under one year. |       |
|-------|-----------------------|-----------------|-------|------------------|-------|--------------------------------|-------|--------------------------------|-------|-------------------------------|-------|----------------------------------|-------|-----------------|-------|
|       |                       | Deaths.         | Rate. | Deaths.          | Rate. | Deaths.                        | Rate. | Deaths.                        | Rate. | Deaths.                       | Rate. | Deaths.                          | Rate. | Deaths.         | Rate. |
| 1917  | ..                    | 179             | 23.6  | 318              | 42.0  | 185                            | 24.4  | 213                            | 28.1  | 159                           | 21.0  | 148                              | 19.5  | 1,023           | 135   |
| 1918  | ..                    | 189             | 25.6  | 316              | 42.7  | 154                            | 20.8  | 199                            | 26.9  | 175                           | 23.7  | 140                              | 18.9  | 984             | 133   |
| 1919  | ..                    | 230             | 30.4  | 373              | 49.3  | 147                            | 19.4  | 156                            | 20.6  | 125                           | 16.5  | 98                               | 13.0  | 899             | 119   |
| 1920  | ..                    | 304             | 27.1  | 520              | 46.3  | 260                            | 23.2  | 191                            | 17.0  | 146                           | 13.0  | 115                              | 10.2  | 1,232           | 110   |
| 1921  | ..                    | 249             | 24.5  | 419              | 41.3  | 184                            | 18.1  | 180                            | 17.7  | 116                           | 11.4  | 98                               | 9.7   | 997             | 98    |
| 1922  | ..                    | 206             | 22.2  | 401              | 43.3  | 159                            | 17.2  | 125                            | 13.5  | 127                           | 13.7  | 123                              | 13.3  | 935             | 101   |
| 1923  | ..                    | 204             | 23.5  | 363              | 41.8  | 110                            | 12.7  | 125                            | 14.4  | 92                            | 10.6  | 83                               | 9.6   | 773             | 89    |
| 1924  | ..                    | 185             | 21.6  | 331              | 38.7  | 156                            | 18.2  | 155                            | 18.1  | 150                           | 17.5  | 129                              | 15.1  | 921             | 108   |
| 1925  | ..                    | 184             | 22.5  | 309              | 37.8  | 141                            | 17.2  | 119                            | 14.5  | 88                            | 10.8  | 91                               | 11.1  | 748             | 91    |
| 1926  | ..                    | 187             | 23.2  | 312              | 38.7  | 134                            | 16.6  | 118                            | 14.6  | 96                            | 11.9  | 88                               | 10.9  | 748             | 93    |
| 1927  | ..                    | 170             | 21.8  | 274              | 35.2  | 103                            | 13.2  | 87                             | 11.2  | 84                            | 10.8  | 81                               | 10.4  | 629             | 81    |

# INFANT MORTALITY PER 1000 BIRTHS, 1890 - 1927.







INFANTILE MORTALITY IN WARDS AT DIFFERENT PERIODS OF THE FIRST YEAR OF LIFE,  
CALENDAR YEAR, 1927.

| WARD.               | Births<br>in<br>year. | Under one week. |       | Under one month. |       | One and under<br>three months. |       | Three and under<br>six months. |       | Six and under<br>nine months. |       | Nine and under<br>twelve months. |       | Under one year. |       |
|---------------------|-----------------------|-----------------|-------|------------------|-------|--------------------------------|-------|--------------------------------|-------|-------------------------------|-------|----------------------------------|-------|-----------------|-------|
|                     |                       | Deaths.         | Rate. | Deaths.          | Rate. | Deaths.                        | Rate. | Deaths.                        | Rate. | Deaths.                       | Rate. | Deaths.                          | Rate. | Deaths.         | Rate. |
| Central ..          | 207                   | 2               | 9.7   | 7                | 33.8  | 6                              | 29.0  | 4                              | 19.3  | 1                             | 4.8   | ..                               | ..    | 18              | 87    |
| North ..            | 636                   | 10              | 15.7  | 19               | 29.9  | 7                              | 11.0  | 7                              | 11.0  | 4                             | 6.3   | 5                                | 7.9   | 42              | 66    |
| North-East ..       | 629                   | 15              | 23.8  | 26               | 41.3  | 9                              | 14.3  | 11                             | 17.5  | 12                            | 19.1  | 7                                | 11.1  | 65              | 103   |
| * New Ward ..       | 181                   | 1               | 5.5   | 2                | 11.0  | 2                              | 11.0  | 3                              | 16.6  | 1                             | 5.5   | 3                                | 16.6  | 11              | 61    |
| East ..             | 794                   | 16              | 20.2  | 27               | 34.0  | 11                             | 13.9  | 9                              | 11.3  | 13                            | 16.4  | 12                               | 15.1  | 72              | 91    |
| South ..            | 291                   | 11              | 37.8  | 16               | 55.0  | 5                              | 17.2  | 2                              | 6.9   | 4                             | 13.7  | 2                                | 6.9   | 29              | 100   |
| † East Hunslet ..   | 745                   | 19              | 25.5  | 30               | 40.3  | 9                              | 12.1  | 7                              | 9.4   | 7                             | 9.4   | 10                               | 13.4  | 63              | 85    |
| West Hunslet ..     | 522                   | 6               | 11.5  | 11               | 21.1  | 6                              | 11.5  | 5                              | 9.6   | 7                             | 13.4  | 10                               | 19.2  | 39              | 75    |
| Holbeck ..          | 488                   | 14              | 28.7  | 21               | 43.0  | 6                              | 12.3  | 10                             | 20.5  | 4                             | 8.2   | 9                                | 18.4  | 50              | 102   |
| Mill Hill ..        | 77                    | ..              | ..    | 2                | 26.0  | 1                              | 13.0  | 1                              | 13.0  | 2                             | 26.0  | ..                               | ..    | 6               | 78    |
| West ..             | 410                   | 10              | 24.4  | 18               | 43.9  | 10                             | 24.4  | 6                              | 14.6  | 2                             | 4.9   | 6                                | 14.6  | 42              | 102   |
| North-West ..       | 475                   | 15              | 31.6  | 22               | 46.3  | 6                              | 12.6  | 4                              | 8.4   | 3                             | 6.3   | 1                                | 2.1   | 36              | 76    |
| Brunswick ..        | 361                   | 4               | 11.1  | 7                | 19.4  | 9                              | 24.9  | 4                              | 11.1  | 8                             | 22.2  | 7                                | 19.4  | 35              | 97    |
| New Wortley ..      | 346                   | 6               | 17.0  | 9                | 26.0  | 7                              | 20.2  | 5                              | 14.5  | 5                             | 14.5  | 3                                | 8.7   | 29              | 84    |
| Armley & Wortley .. | 543                   | 9               | 16.6  | 16               | 29.5  | 3                              | 5.5   | 1                              | 1.8   | 2                             | 3.7   | 3                                | 5.5   | 25              | 46    |
| Bramley ..          | 355                   | 8               | 22.5  | 13               | 36.6  | 4                              | 11.3  | 2                              | 5.6   | 3                             | 8.5   | 1                                | 2.8   | 23              | 65    |
| † Headingley ..     | 730                   | 24              | 32.9  | 28               | 38.4  | 2                              | 2.7   | 6                              | 8.2   | 6                             | 8.2   | 2                                | 2.7   | 44              | 60    |
| CITY ..             | 7,790                 | 170             | 21.8  | 274              | 35.2  | 103                            | 13.2  | 87                             | 11.2  | 84                            | 10.8  | 81                               | 10.4  | 629             | 81    |

\* Roundhay, Seacroft, Shadwell and Crossgates.

† Including Middleton.

‡ Including portion of Adel added to Leeds, April 1st, 1926.



On examining the list of causes of death given on page 166 it will be noticed that 147, or 23.4 per cent., of the total deaths of children under one year were due to such diseases as bronchitis, pneumonia, whooping cough and influenza. Last year the number dying from this group of diseases was 189, or 25.3 per cent. of the total deaths under one. These figures show that despite the cold and wet weather which prevailed during the greater part of the year there was a welcome reduction in the number of deaths from these preventable diseases. If parents would remember that over-clothing and a close atmosphere are the main contributory causes of respiratory diseases in children and that a cool skin and abundant fresh air are the surest means of preventing these diseases they could do much to reduce the wastage of young life from these causes.

Another important cause of infant mortality is prematurity. During 1927 prematurity was responsible for 146, or 23.2 per cent. of the total deaths of children under one as compared with 149, or 19.9 per cent., for the previous year. Although there were three deaths fewer from this cause in 1927 than in the previous year the actual percentage of deaths from prematurity rose from 19.9 in 1926 to 23.2 in 1927. In other words there was a relatively higher death-rate from prematurity last year as compared with the previous year. Prematurity is an elusive condition due to many factors, some known, most of them purely speculative, but there seems to be no doubt that a considerable reduction could be effected in the death-rate from this cause if mothers would avail themselves more generally of the ante-natal centres.

The deaths from diarrhoea and enteritis in children under one year of age numbered 79 as against 122 for the year 1926. This is one of the lowest figures ever recorded in the City and the decline in the incidence of the disease is probably accounted for by the cold Summer and the absence of those conditions which are generally looked upon as being favourable to the development of the disease. No doubt the improvement in the milk supply had also something to do with it, as well as the tendency, fostered by the infant welfare centres, of many mothers to nurse their own babies.

It might be noted amongst the causes of infant death that a disease which showed an increase was measles. This disease



was prevalent in epidemic form during the greater part of the year. It has already been dealt with in the section dealing with infectious disease on page 95.

*Death-rate in quarters.*—The infant mortality rate for the four quarters of the year is given in the accompanying table.

|            | I.  | II. | III. | IV. | Year. |
|------------|-----|-----|------|-----|-------|
| 1917 .. .. | 121 | 122 | 152  | 151 | 135   |
| 1918 .. .. | 162 | 101 | 114  | 155 | 133   |
| 1919 .. .. | 173 | 102 | 123  | 96  | 119   |
| 1920 .. .. | 139 | 95  | 88   | 112 | 110   |
| 1921 . . . | 108 | 78  | 101  | 108 | 98    |
| 1922 .. .. | 119 | 106 | 77   | 101 | 101   |
| 1923 .. .. | 114 | 74  | 86   | 82  | 89    |
| 1924 .. .. | 171 | 83  | 68   | 109 | 108   |
| 1925 .. .. | 84  | 62  | 100  | 126 | 91    |
| 1926 .. .. | 120 | 78  | 75   | 100 | 93    |
| 1927 .. .. | 104 | 70  | 66   | 83  | 81    |

The quarter with the highest death-rate was the first followed by the fourth whilst the figures for the second and the third were comparatively low. The reason for the high rate in the first quarter was the prevalence of respiratory infections and measles.

*Deaths in Age Groups.*—Of the total (629) infant deaths 170, or 27.0 per cent., took place in the first week of life, 274, or 43.6 per cent., in the first month, 103, or 16.4 per cent., between one and three months, 87, or 13.8 per cent., between three and six months, 84, or 13.3 per cent., between six and nine months, and 81, or 12.9 per cent. between nine and twelve months.

The percentage changes in the infant death-rate per 1,000 births in 1927 as compared with the average of the previous ten years are as follows :—

|                            |       |                         |       |
|----------------------------|-------|-------------------------|-------|
| Under 1 week, decrease     | 10.7% | 3-6 months, decrease .. | 38.5% |
| Under 1 month ..           | 16.8% | 6-9 .. ..               | 26.5% |
| 1-3 months ..              | 29.8% | 9-12 .. ..              | 18.8% |
| Whole year decrease, 24.3% |       |                         |       |



PERCENTAGE CHANGES (5 YEAR PERIODS, ALSO YEARS 1925, 1926 AND 1927) IN THE INFANT DEATH-RATE  
PER 1,000 BIRTHS AS COMPARED WITH THE AVERAGE OF THE FIVE YEARS 1905-1909.

| Five<br>year<br>period. | Under one<br>week |                                                                                     | Under one<br>month. |                                                                                     | One and under<br>three months. |                                                                                     | Three and under<br>six months. |                                                                                     | Six and under<br>nine months. |                                                                                     | Nine and under<br>12 months. |                                                                                     | Under one<br>year. |                                                                                     |
|-------------------------|-------------------|-------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|
|                         | Rate.             | Percentage<br>increase<br>or<br>decrease<br>over<br>5 years<br>period<br>1905-1909. | Rate.               | Percentage<br>increase<br>or<br>decrease<br>over<br>5 years<br>period<br>1905-1909. | Rate.                          | Percentage<br>increase<br>or<br>decrease<br>over<br>5 years<br>period<br>1905-1909. | Rate.                          | Percentage<br>increase<br>or<br>decrease<br>over<br>5 years<br>period<br>1905-1909. | Rate.                         | Percentage<br>increase<br>or<br>decrease<br>over<br>5 years<br>period<br>1905-1909. | Rate.                        | Percentage<br>increase<br>or<br>decrease<br>over<br>5 years<br>period<br>1905-1909. | Rate.              | Percentage<br>increase<br>or<br>decrease<br>over<br>5 years<br>period<br>1905-1909. |
| 1905<br>to<br>1909      | 26.2              | —                                                                                   | 44.3                | —                                                                                   | 25.5                           | —                                                                                   | 28.0                           | —                                                                                   | 23.0                          | —                                                                                   | 18.6                         | —                                                                                   | 139                | —                                                                                   |
| 1910<br>to<br>1914      | 26.6              | +1.5%                                                                               | 44.1                | -0.5%                                                                               | 24.7                           | -3.1%                                                                               | 23.9                           | -14.6%                                                                              | 20.1                          | -12.6%                                                                              | 18.0                         | -3.2%                                                                               | 131                | -5.8%                                                                               |
| 1915<br>to<br>1919      | 26.4              | +0.8%                                                                               | 44.4                | +0.2%                                                                               | 21.5                           | -15.7%                                                                              | 25.0                           | -10.7%                                                                              | 19.7                          | -14.3%                                                                              | 17.9                         | -3.8%                                                                               | 129                | -7.2%                                                                               |
| 1920<br>to<br>1924      | 23.8              | -9.2%                                                                               | 42.3                | -4.5%                                                                               | 17.9                           | -29.8%                                                                              | 16.1                           | -42.5%                                                                              | 13.2                          | -42.6%                                                                              | 11.6                         | -37.6%                                                                              | 101                | -27.3%                                                                              |
| Year<br>1925            | 22.5              | -14.1%                                                                              | 37.8                | -14.7%                                                                              | 17.2                           | -32.5%                                                                              | 14.5                           | -48.2%                                                                              | 10.8                          | -53.0%                                                                              | 11.1                         | -40.3%                                                                              | 91                 | -34.5%                                                                              |
| Year<br>1926            | 23.2              | -11.5%                                                                              | 38.7                | -12.6%                                                                              | 16.6                           | -34.9%                                                                              | 14.6                           | -47.9%                                                                              | 11.9                          | -48.3%                                                                              | 10.9                         | -41.4%                                                                              | 93                 | -33.1%                                                                              |
| Year<br>1927            | 21.8              | -16.8%                                                                              | 35.2                | -20.5%                                                                              | 13.2                           | -48.2%                                                                              | 11.2                           | -60.0%                                                                              | 10.8                          | -53.0%                                                                              | 10.4                         | -44.1%                                                                              | 81                 | -41.7%                                                                              |

BIRTHS AND DEATHS UNDER ONE YEAR WITH RATES.—CALENDAR YEAR 1927.

| WARD.            | TOTAL<br>BIRNUS<br>(nett). | Birthrate<br>per 1,000<br>population. | No. of<br>legitimate<br>births. | No. of<br>illegitimate<br>births. | Total<br>deaths<br>under<br>one year<br>(nett). | Death rate<br>per<br>1,000 births. | No. of<br>legitimate<br>deaths<br>under<br>one year. | Legitimate<br>death rate<br>per 1,000<br>legitimate<br>births. | No. of<br>illegitimate<br>deaths<br>under<br>one year. | Illegitimate<br>death rate<br>per 1,000<br>illegitimate<br>births. |
|------------------|----------------------------|---------------------------------------|---------------------------------|-----------------------------------|-------------------------------------------------|------------------------------------|------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------|
| Central          | 207                        | 16.24                                 | 200                             | 7                                 | 18                                              | 87                                 | 16                                                   | 80                                                             | 2                                                      | 286                                                                |
| North            | 636                        | 14.48                                 | 612                             | 24                                | 42                                              | 66                                 | 37                                                   | 60                                                             | 5                                                      | 208                                                                |
| North-East       | 629                        | 17.01                                 | 598                             | 31                                | 65                                              | 103                                | 59                                                   | 99                                                             | 6                                                      | 194                                                                |
| *New Ward        | 181                        | 18.64                                 | 179                             | 2                                 | 11                                              | 61                                 | 11                                                   | 61                                                             | ..                                                     | ..                                                                 |
| East             | 794                        | 21.80                                 | 762                             | 32                                | 72                                              | 91                                 | 68                                                   | 89                                                             | 4                                                      | 125                                                                |
| South            | 291                        | 22.27                                 | 270                             | 21                                | 29                                              | 100                                | 23                                                   | 85                                                             | 6                                                      | 286                                                                |
| †East Hunslet    | 745                        | 19.46                                 | 713                             | 32                                | 63                                              | 85                                 | 58                                                   | 81                                                             | 5                                                      | 156                                                                |
| West Hunslet     | 522                        | 14.20                                 | 501                             | 21                                | 39                                              | 75                                 | 36                                                   | 72                                                             | 3                                                      | 143                                                                |
| Holbeck          | 488                        | 16.29                                 | 471                             | 17                                | 50                                              | 102                                | 46                                                   | 98                                                             | 4                                                      | 235                                                                |
| Mill Hill        | 77                         | 14.47                                 | 70                              | 7                                 | 6                                               | 78                                 | 6                                                    | 86                                                             | ..                                                     | ..                                                                 |
| West             | 410                        | 18.41                                 | 378                             | 32                                | 42                                              | 102                                | 39                                                   | 103                                                            | 3                                                      | 94                                                                 |
| North-West       | 475                        | 14.85                                 | 440                             | 35                                | 36                                              | 76                                 | 32                                                   | 73                                                             | 4                                                      | 114                                                                |
| Brunswick        | 361                        | 14.91                                 | 323                             | 38                                | 35                                              | 97                                 | 29                                                   | 90                                                             | 6                                                      | 158                                                                |
| New Wortley      | 346                        | 19.05                                 | 326                             | 20                                | 29                                              | 84                                 | 28                                                   | 86                                                             | 1                                                      | 50                                                                 |
| Armley & Wortley | 543                        | 14.35                                 | 521                             | 22                                | 25                                              | 46                                 | 21                                                   | 40                                                             | 4                                                      | 182                                                                |
| Bramley          | 355                        | 14.26                                 | 349                             | 6                                 | 23                                              | 65                                 | 22                                                   | 63                                                             | 1                                                      | 167                                                                |
| †Headingley      | 730                        | 13.26                                 | 706                             | 24                                | 44                                              | 60                                 | 41                                                   | 58                                                             | 3                                                      | 125                                                                |
| CITY             | 7,790                      | 16.31                                 | 7,419                           | 371                               | 629                                             | 81                                 | 572                                                  | 77                                                             | 57                                                     | 154                                                                |

\* Roundhay, Seacroft, Shadwell and Crossgates. † Including Middleton. ‡ Including portion of Adel added to Leeds April 1st, 1926.



It is interesting to note the changes which have taken place at the various age periods of infancy since the quinquennium 1905-1909. These are set out in the special table on page 164. The quinquennial average has been taken in order to make a better comparison.

#### DEATHS FROM STATED CAUSES UNDER ONE YEAR OF AGE.

| Causes of death.                           | Year 1926. | Year 1927. | Increase or decrease. | Percentage of total deaths under one. |
|--------------------------------------------|------------|------------|-----------------------|---------------------------------------|
| Smallpox .. ..                             | ..         | ..         | ..                    | ..                                    |
| Chickenpox .. ..                           | ..         | ..         | ..                    | ..                                    |
| Measles .. ..                              | 1          | 21         | +20                   | 3.3                                   |
| Scarlet Fever .. ..                        | 1          | ..         | - 1                   | ..                                    |
| Whooping Cough .. ..                       | 43         | 18         | -25                   | 2.9                                   |
| Diphtheria .. ..                           | ..         | ..         | ..                    | ..                                    |
| Influenza .. ..                            | 8          | 10         | + 2                   | 1.6                                   |
| Erysipelas .. ..                           | 1          | 2          | + 1                   | 0.3                                   |
| Tuberculous Diseases .. ..                 | 12         | 10         | - 2                   | 1.6                                   |
| Meningitis .. ..                           | 11         | 3          | - 8                   | 0.5                                   |
| Convulsions .. ..                          | 38         | 30         | - 8                   | 4.8                                   |
| Bronchitis .. ..                           | 39         | 20         | -19                   | 3.2                                   |
| Pneumonia (all forms) .. ..                | 99         | 99         | - +                   | 15.7                                  |
| Other diseases of Respiratory Organs .. .. | 3          | 3          | - +                   | 0.5                                   |
| Diarrhœa and Enteritis .. ..               | 122        | 79         | -43                   | 12.6                                  |
| Gastritis .. ..                            | 2          | 1          | - 1                   | 0.2                                   |
| Syphilis .. ..                             | 38         | 12         | -26                   | 1.9                                   |
| Rickets .. ..                              | 7          | 3          | - 4                   | 0.5                                   |
| Suffocation, including overlying .. ..     | 8          | 13         | + 5                   | 2.1                                   |
| Injury at birth .. ..                      | 19         | 17         | - 2                   | 2.7                                   |
| Atelectasis .. ..                          | 19         | 19         | - +                   | 3.0                                   |
| Congenital Malformations .. ..             | 47         | 35         | -12                   | 5.6                                   |
| Premature birth .. ..                      | 149        | 146        | - 3                   | 23.2                                  |
| Atrophy, Debility, and Marasmus .. ..      | 51         | 32         | -19                   | 5.1                                   |
| Other Causes .. ..                         | 30         | 56         | +26                   | 8.9                                   |
| Totals .. ..                               | 748        | 629        | -119                  | 100                                   |

*Neo-natal Death-rate.*—The number of deaths of infants occurring in the first month of life was 274, or 38 less than for the year 1926 and the corresponding rate was 35.2 as against 38.7.

Nearly one half, to be correct 43.6 per cent. of the total deaths under one year occurred in the first month of life, and of the deaths in the first month 62.0 per cent. occurred in the first week and 79.9 per cent. in the first two weeks.

Progress in the reduction of the neo-natal death-rate is slow for reasons precisely similar to those which keep up the maternal mortality rate, namely, lack of proper ante-natal supervision. Children who die in the first month of life die as a rule from causes which have operated during pregnancy and which could only have been avoided had they been detected during the period of intra-uterine development. This only emphasizes the need for impressing on the mothers of the community and the public at large the need for more efficient pre-natal supervision and for redoubling our efforts to secure that supervision for every pregnant woman.

*Illegitimate Death-rate.*—Of the 371 illegitimate births 57, or 15.4 per cent., died before reaching the age of one year which is equal to an infantile death-rate of 154. This is a decrease of 51 per thousand as compared with the rate for 1926 which was 205.



# MATERNITY AND CHILD WELFARE SERVICES INCLUDING SUPERVISION OF MIDWIVES,

BY

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**Number of Midwives.**—The number of midwives on the register at December 31st, 1926, was 105. Forty-three new names were added during the year, 35 names were removed, leaving a total on the register at December 31st, 1927, of 113. Of the total, 48 were attached to institutions. The actual number who practised in the area during the year was 111, of whom 101 (or 91 per cent.) were trained and 10 (or 9 per cent.) untrained. The number of births attended by midwives was 3,447 (or 42·7 per cent.) of the total births registered.

The following table gives an analysis of the cases attended by midwives:—

| TRAINED.                      |                                  |                           | UNTRAINED.                    |                                  |
|-------------------------------|----------------------------------|---------------------------|-------------------------------|----------------------------------|
| 101 midwives.                 |                                  |                           | 10 midwives.                  |                                  |
| Total cases attended .. 3,143 |                                  |                           | Total cases attended .. 304   |                                  |
| Average per midwife 31 cases. |                                  |                           | Average per midwife 30 cases. |                                  |
| No. of Cases.                 | Practising on their own account. | Attached to institutions. | No. of Cases.                 | Practising on their own account. |
| Over 200                      | 1                                | —                         | Over 200                      | —                                |
| „ 150                         | 1                                | 2                         | „ 150                         | —                                |
| „ 100                         | 3                                | 1                         | „ 100                         | —                                |
| „ 75                          | 4                                | 1                         | „ 75                          | 1                                |
| „ 50                          | 7                                | 2                         | „ 50                          | 2                                |
| „ 25                          | 4                                | 9                         | „ 25                          | 3                                |
| „ 10                          | 11                               | 9                         | „ 10                          | 2                                |
| „ 5                           | 13                               | 5                         | „ 5                           | 1                                |
| Under 5                       | 17                               | 11                        | Under 5                       | 1                                |

Twenty-two trained midwives (8 attached to institutions) and three not trained, took no cases during the year.

As will be seen by the above table, less than half the independent midwives in Leeds made a satisfactory livelihood during the year, even assuming that each midwife was paid adequately for every case she attended. This, combined with the fact that midwifery is very trying, exacting and difficult work, makes a suitable woman hesitate before she enters this profession as it is organized at the present time.

*Inspection of Midwives.*—The inspection of midwives' bags, books and appliances was carried out regularly during the year, the total number of such inspections made being 178. In addition to these inspections, the inspector of midwives made 58 enquiries into maternal deaths and paid 129 other visits. Fifty-six midwives attended at the office for advice in regard to their work or to be interviewed in connection with breaches of the rules of the Central Midwives Board. Sixteen midwives were reported to the Assistant Medical Officer of Health for Maternity and Child Welfare for offences against the rules of the Central Midwives Board and were interviewed by her. One of these 16 midwives was also interviewed by the Medical Officer of Health. She was then summoned to appear before the Maternity and Child Welfare Committee and was censured.

*Advising Medical Help.*—Notifications of having advised medical assistance were received in 1,137 cases which may be classified as follows :—

|                                       |    |    |    |     |
|---------------------------------------|----|----|----|-----|
| Illness during pregnancy, or abortion | .. | .. | .. | 35  |
| Malpresentation                       | .. | .. | .. | 62  |
| Delayed or obstructed labour          | .. | .. | .. | 215 |
| Ruptured perineum..                   | .. | .. | .. | 209 |
| Retained membrane or placenta         | .. | .. | .. | 36  |
| Hæmorrhage                            | .. | .. | .. | 41  |
| Convulsions, eclampsia                | .. | .. | .. | 6   |
| Puerperal rise of temperature         | .. | .. | .. | 50  |
| Illness of mother during puerperium   | .. | .. | .. | 72  |
| Illness of child                      | .. | .. | .. | 196 |
| Infants—discharging eyes              | .. | .. | .. | 84  |
| Artificial feeding                    | .. | .. | .. | 25  |
| Death of infant under ten days        | .. | .. | .. | 14  |
| Still-births                          | .. | .. | .. | 64  |
| Suspected infectious disease          | .. | .. | .. | 21  |
| Maternal deaths                       | .. | .. | .. | 7   |

*Midwives' Emergencies.*—During the year 477 claims were made by medical practitioners in the City for attendance on emergencies of labour under Section 14 of the Midwives Act, 1918. Of these 11 were paid direct by the parent whilst the remainder, 466, were met in whole or in part by the Local Authority at a total cost of £489 12s. 6d. of which only about one-fourth was recovered.



*Accouchement Sets.*—During the year 134 Accouchement Sets were sold to the mothers through the Welcomes, Midwives, and Maternity Homes.

*Puerperal Fever Cases.*—All cases of high temperature were investigated by the Inspector of Midwives. Where the case was diagnosed as one of puerperal fever, the midwife was taken off the case, and, if the patient was not removed to the City Isolation Hospital or to another institution, arrangements were made for the district nurses to take over the nursing of the case.

Disinfection of the midwife's person, clothing and maternity bag was carried out under the personal supervision of the Inspector of Midwives. The number of cases of puerperal infection referred to the district nurses for nursing care was 20. The object of this provision was to free the midwife from her obligation to continue her attendance on the case for the specific period of 10 days after the birth of the child, thus preventing the spread of infection to other cases and securing the midwife against loss of practice. The total number of visits paid for this purpose was 35 and the total number of midwives disinfected 42. In addition 187 investigations into puerperal rises of temperature were made and 33 visits were paid to cases of an infectious nature other than puerperal fever.

*Pemphigus Neonatorum.*—All cases of infants who were reported by the midwives to be suffering from blebs or blisters were investigated and if the case was found to be one of pemphigus neonatorum, the district nurses were asked to take over the nursing. The midwife then ceased her attendance on the patient, and her person, instruments and bag were disinfected under the personal supervision of the Inspector of Midwives. The number of cases of this kind investigated was 56, 29 of which the district nurses were asked to attend, seven were removed to the Maternity Hospital, two to St. James' Hospital, and one occurred in a nursing home. Five cases died during the year, but there was no serious epidemic of pemphigus neonatorum in the practices of midwives during the year.

*Ophthalmia Neonatorum.*—The carrying out of the treatment in a case of ophthalmia neonatorum in the practice of a midwife which was not transferred to hospital was passed over to the district nurses, the midwife continuing to attend the mother. A health visitor also called at the home periodically to watch the progress of the disease and to see that all possible assistance was given



to ensure complete recovery. Eighty-five visits were paid to cases of ophthalmia neonatorum by the health visitors and 23 cases were attended by the district nurses.

*Employment of, or subsidy to, practising midwives, by the Local Authority.*—There are no midwives actually employed by the Health Department nor was any subsidy given to any practising midwife in the area during the year. There is, however, an agreement between the Corporation and the Leeds Maternity Hospital dated December 31st, 1924, which contains the following provision with regard to the establishment and maintenance of district midwives :—

“ On being requested so to do by the Corporation, the Board shall  
 “ establish and maintain additional District Midwifery Branches in such  
 “ places in the City as the Corporation may direct on the lines of the  
 “ Branches already established and shall appoint midwives thereto and  
 “ such midwives and the midwives in the Branches already established  
 “ shall work in close co-operation with the Maternity and Child Welfare  
 “ Staff of the Corporation and shall in particular make full use of and  
 “ recommend their patients to attend consultations at the Ante-Natal  
 “ Centres established by or in co-operation with the Corporation in the  
 “ said City of Leeds. In the event of the total expenses incurred in con-  
 “ nection with the provision of the several District Midwife Branches  
 “ exceeding the total receipts in respect thereof from all sources other than  
 “ voluntary contributions, the Corporation shall make good the deficiency  
 “ thereby arising as certified by Auditors to be approved by the Corpora-  
 “ tion and as shown in the published accounts of the Board and accounts  
 “ under this head shall be rendered on or before the first day of March  
 “ in each year and payment shall be made by the Corporation within two  
 “ months after the receipt therefore.”

With regard to the payment by the Corporation of the deficiency between the expenditure on the branches and the receipts therefrom, although voluntary contributions are excluded from receipts, yet the latter must include one-fifth of the income from pupils' fees in respect of the proportion of the training which pupils receive at the branches.

There are five branches in different areas of the City, viz. :—

|                 |    |                         |
|-----------------|----|-------------------------|
| West Ward ..    | .. | 25, West Street.        |
| New Wortley ..  | .. | 36, Bruce Street.       |
| East Hunslet .. | .. | 1, Highgate Street.     |
| North East ..   | .. | 65, Burmantofts Street. |
| North West ..   | .. | 10, Crowther Street.    |



Each branch is staffed by one midwife and one or two trainees (unpaid). The midwife receives a fixed salary, varying from £6 18s. to £8 10s. per month according to length of service. In addition, where she conducts more than 120 cases per annum she receives a bonus of 2/- per case above that number. Board, residence and laundry are found.

During the year under consideration only two midwives (Hunslet and Burmantofts) conducted sufficient deliveries to entitle them to this bonus.

*Compensation to Midwives for loss of Work.*—A midwife can claim compensation to the amount of half her fee if she loses one of her cases because she is in attendance on a septic case. The number of these claims paid during the year was two.

It was also decided towards the end of the year that a midwife could claim compensation for the loss of a case which she had sent to an Ante-Natal Clinic and which, owing to some abnormality, had to be sent into hospital for confinement.

The question was also raised as to whether the fee should be paid by the Council to a midwife who had been in attendance on a patient too poor to pay the fee herself. It was decided, however, to ask the midwives to encourage such cases to enter one of the institutions for their confinement or to refer them to the maternity hospital midwives who, after proper investigation, attend such cases free of charge.

*Revision Course.*—Owing to the very poor attendance by the midwives at the Revision Course organized by the Leeds Maternity Hospital in 1926, it was decided not to hold one during 1927.

When the importance of ante-natal work was urged upon the midwives at one of their meetings, many of them complained that they did not feel competent to undertake such work. Arrangements were therefore made towards the end of the year for them to attend the ante-natal centres, one or two at a time, in order that the doctor in attendance at these clinics could teach them what is required from them in the way of ante-natal work. It is hoped in this way to make them more proficient in one of the most important branches of their work.

*Handywomen.*—In addition to visits paid to midwives 43 visits were paid to handywomen and 13 handywomen were disinfected.

*Home Helps.*—At the present time there is no provision made for home helps in connection with the Maternity and Child Welfare Scheme.

**Stillbirths.**—The number of stillbirths, like the number of maternal deaths, does not vary to any extent from year to year. For the decade, 1917-1926, they have averaged 4·3 per cent. of the total births. The number notified during 1927 was 367, or 4·6 per cent., of the total births notified which is a decrease of 13 on the figure for last year which was 380, or 4·6 per cent.

The following table shows the comparison between live births and still-births for the last eleven years:—

BIRTH NOTIFIED (LIVE AND STILL).

| Year. | Live births notified. | Still-births notified. | Total births notified live and still. | Percentage of still-births to total births. |
|-------|-----------------------|------------------------|---------------------------------------|---------------------------------------------|
| 1917  | 7,017                 | 328                    | 7,345                                 | 4·5                                         |
| 1918  | 6,892                 | 287                    | 7,179                                 | 4·0                                         |
| 1919  | 7,684                 | 340                    | 8,024                                 | 4·2                                         |
| 1920  | 10,749                | 461                    | 11,210                                | 4·1                                         |
| 1921  | 9,462                 | 466                    | 9,928                                 | 4·7                                         |
| 1922  | 8,658                 | 418                    | 9,076                                 | 4·6                                         |
| 1923  | 8,264                 | 379                    | 8,643                                 | 4·4                                         |
| 1924  | 8,105                 | 348                    | 8,453                                 | 4·1                                         |
| 1925  | 8,034                 | 334                    | 8,368                                 | 4·0                                         |
| 1926  | 7,828                 | 380                    | 8,208                                 | 4·6                                         |
| 1927  | 7,582                 | 367                    | 7,949                                 | 4·6                                         |

Notification of Births Act came into force in Leeds 1st January, 1914.

Of the 367 stillbirths notified 70, or 19·1 per cent. were by midwives and the remainder 297, or 80·9 per cent., by medical practitioners or institutions. Each stillbirth is investigated and the mother is visited again in six months time. If she is found to be again pregnant she is urged to attend her own doctor or the ante-natal clinic for ante-natal supervision. Mothers, who give a history of previous miscarriages or stillbirths, are asked to attend



their own doctor or an ante-natal clinic as soon as they are able for special investigation.

Again it is interesting to note that over half the number (58.0 per cent.) of stillbirths investigated (324) during the year occurred in families having one child or none. The liability of stillbirths to occur in a first pregnancy is probably due to the fact that the mother is inexperienced in childbirth and therefore more accidents are liable to happen to the child during birth.

**Ante-Natal Work.**—The total number of expectant mothers attending the 15 ante-natal centres during the year was 1,775 which represents an increase of 117 over the figure for the previous year. Of these 1,373 were new and attended for the first time. The total attendances was 6,420 as compared with 7,130 for the previous year, a decrease of 710.

Expectant mothers attending the ante-natal clinics are examined by the medical officer in charge of the clinic. If any abnormality is found, they are referred to their own doctor or to the Maternity Hospital. Instruction is given on personal hygiene, the care of the breasts, and the management and importance of breast feeding.

Sterilized maternity outfits are sold at cost price and during the last three months of pregnancy milk can be obtained by these mothers from the Welcomes. It has not been found practicable, however, to provide dinners.

The number of expectant mothers attending Armley ante-natal clinic had for some time been more than the doctor could deal with efficiently in the time at her disposal. Towards the end of the year arrangements were therefore made for a second ante-natal session to take place at this Welcome every Friday morning.

It was felt too, that in a growing area like Middleton an ante-natal clinic in addition to the infant clinic was required. Arrangements for such a clinic have therefore been made. It will be held every Wednesday morning.

More extensive ante-natal care would be a very great help in reducing the number of stillbirths, the maternal mortality rate, and the neo-natal death-rate. It is a very unfortunate fact, however, that the value of ante-natal care is not yet fully appreciated by the expectant mother. She still feels that it is a waste of time attending her doctor, midwife, or ante-natal clinic for ante-natal examination and very often does not even trouble to book her



Particulars of the work of the ante-natal clinics are set out in the following table:—

#### EXPECTANT MOTHERS ON REGISTER.

| Welfare.        | No. on register at beginning of year. | Registered during year. | Live Births. |            | On register end of year. | Total attendance of expectant mothers. |
|-----------------|---------------------------------------|-------------------------|--------------|------------|--------------------------|----------------------------------------|
|                 |                                       |                         | Full Term.   | Premature. |                          |                                        |
| Ellerby .. ..   | 42                                    | 136                     | 107          | 3          | 46                       | 666                                    |
| West Street ..  | 25                                    | 64                      | 59           | 4          | 17                       | 314                                    |
| Burmantofts ..  | 26                                    | 63                      | 51           | 2          | 22                       | 459                                    |
| Hunslet .. ..   | 31                                    | 104                     | 99           | 5          | 25                       | 443                                    |
| University ..   | 15                                    | 61                      | 42           | 2          | 22                       | 365                                    |
| Woodhouse ..    | 50                                    | 114                     | 95           | 1          | 40                       | 508                                    |
| Holbeck .. ..   | 45                                    | 182                     | 155          | 4          | 43                       | 690                                    |
| Armley .. ..    | 49                                    | 157                     | 147          | 1          | 46                       | 973                                    |
| Chapelton ..    | 26                                    | 96                      | 75           | ..         | 22                       | 371                                    |
| St. Nicholas .. | 20                                    | 105                     | 79           | 2          | 35                       | 337                                    |
| Bramley .. ..   | 14                                    | 49                      | 38           | ..         | 16                       | 344                                    |
| New Wortley ..  | 22                                    | 76                      | 68           | 1          | 21                       | 353                                    |
| Middleton ..    | 5                                     | 35                      | 24           | 1          | 11                       | 130                                    |
| West Hunslet .. | 22                                    | 91                      | 82           | 3          | 22                       | 350                                    |
| Burley .. ..    | 10                                    | 40                      | 38           | ..         | 9                        | 112                                    |
| Totals .. ..    | 402                                   | 1,373                   | 1,159        | 29         | 397                      | 6,415                                  |

Of the 1,775 mothers on the register 29 miscarried and 45 had still births.

In addition to the above 5 expectant mothers attended at Crossgates Centre where no ante-natal clinic is held, making a total of 6,420 attendances.

doctor or midwife until late on in her pregnancy. The midwives say, too, that they often lose their patients by insisting on ante-natal supervision. It will be seen therefore that there is still a great deal of propaganda work required amongst the population as a whole as it is not only the mothers who need to be converted to the value of ante-natal care but the fathers also.

The health visitors and clinic nurses both at the Centres and in their visiting try to impress upon every mother the importance of ante-natal supervision. There are, however, two types of mothers who present a most difficult problem:—

1. The mother with her first pregnancy.
2. The mother who is pregnant and already has a large family of children.

In the first type, namely, the mother with her first pregnancy, the health visitor often has no knowledge of the pregnancy until



she receives the notification of the birth, still-birth, maternal death, or neo-natal death as the case may be. This is due to the fact that the health visitor does not visit a house unless there are children in that house or unless she hears of the pregnancy from a neighbour. The health visitor, therefore, has very little opportunity of urging the need of ante-natal care upon this type of mother. The second type, namely, the mother with a large number of children, is often unable to attend for ante-natal treatment because she has neither the time nor the energy to do so. Both these types of mother should be having very careful ante-natal supervision but it is difficult to suggest how this is to be accomplished unless by notification of pregnancy which at the present is not a practical proposition.

**Natal Work.**—Of the total births in the City 1,991, or 24·7 per cent., took place in institutions or nursing homes. It is now becoming more the custom for a woman to enter an institution for her confinement. This is a custom to be encouraged especially amongst the very poor mothers. A woman who has her confinement at home does not have the same amount of rest or freedom from domestic worries and anxieties as a woman who enters an institution during that period. In fact she rather tends when at home to continue to supervise the household affairs and very often begins to get up much sooner than she normally should. The regular feeding of the baby is more easily taught in an institution than in a patient's own home. Then again, if any emergency should arise during the confinement, there is everything to hand in an institution to deal with it ; whereas in a back-to-back house where the rooms are small, the light bad, and where there are no means of carrying out efficient aseptic methods, the smallest abnormality becomes a very serious menace to the life of the patient.

X The Leeds Maternity Hospital has embarked upon a scheme to increase the number of available beds to 100 and the new wards are actually in process of being built.

The accommodation provided by the Corporation at St. James' Hospital and St. Mary's Infirmary has been well taken advantage of during the year. This is particularly so at St. Mary's Infirmary where the number of beds is very inadequate to meet the demand. It is therefore hoped that the accommodation provided by the Corporation in this hospital will soon be increased from three to six beds.

**SCHEME FOR UTILISATION OF MATERNITY BEDS IN POOR LAW INFIRMARIES.  
REPORT FOR YEARS 1925, 1926 AND 1927.**

|                                                               | ST. JAMES' HOSPITAL.  |                      |                       | BRAMLEY UNION INFIRMARY. |                       |                      |
|---------------------------------------------------------------|-----------------------|----------------------|-----------------------|--------------------------|-----------------------|----------------------|
|                                                               | 1925.                 | 1926.                | 1927.                 | 1925.                    | 1926.                 | 1927.                |
| Number of Beds reserved ..                                    | 3                     | 3                    | 3                     | 3                        | 3                     | 3                    |
| Total Number of Cases for which accommodation is available .. | 78                    | 78                   | 78                    | 78                       | 78                    | 78                   |
| Number of Cases treated—                                      |                       |                      |                       |                          |                       |                      |
| (a) Normal ..                                                 | 21                    | 19                   | 34                    | 47                       | 73                    | 70                   |
| (b) Abnormal ..                                               | 1                     | 1                    | 10                    | 13                       | 25                    | 38                   |
| (c) Not delivered ..                                          | 2                     | 1                    | 1                     | 2                        | 2                     | 4*                   |
| TOTAL ..                                                      | 24                    | 21                   | 45                    | 62                       | 100                   | 112                  |
| Number of Births—                                             |                       |                      |                       |                          |                       |                      |
| (a) Full term ..                                              | 22                    | 19                   | 41                    | 56                       | 95                    | 98                   |
| (b) Premature ..                                              | ..                    | ..                   | ..                    | ..                       | 2                     | 4                    |
| (c) Stillborn ..                                              | ..                    | 1                    | 2                     | 4                        | 1                     | 6                    |
| (d) Miscarriage ..                                            | ..                    | ..                   | 1                     | ..                       | ..                    | ..                   |
| TOTAL ..                                                      | 22                    | 20                   | 44                    | 60                       | 98                    | 108                  |
| Average length of stay (in days) ..                           | 16.3                  | 14.9                 | 16.3                  | 13.8                     | 13.8                  | 13.7                 |
| Total Cost per case ..                                        | £4 15s. 6d.           | £4 9s. 1½d.          | £4 17s. 7½d.          | £5 6s. 8½d.              | £5 9s. 3½d.           | £5 11s. 8½d.         |
| Cost per case per week ..                                     | £2 1s. 0d.            | £2 2s. 0d.           | £2 2s. 0d.            | £2 14s. 2½d.             | £2 15s. 6½d.          | £2 16s. 9½d.         |
| Gross Cost to Corporation ..                                  | £114 12s. 0d.         | £93 12s. 0d.         | £219 12s. 0d.         | £330 15s. 0d.            | £546 11s. 0d.         | £625 10s. 0d.        |
| Total nett cost to Corporation                                | 1925 .. £321 13s. 0d. | 1926 .. £341 4s. 6d. | 1927 .. £315 18s. 6d. | 1925 .. £161 0s. 0d.     | 1926 .. £293 18s. 6d. | 1927 .. £529 3s. 6d. |
| Do. do.                                                       | 1925 .. £321 13s. 0d. | 1926 .. £341 4s. 6d. | 1927 .. £315 18s. 6d. | 1925 .. £161 0s. 0d.     | 1926 .. £293 18s. 6d. | 1927 .. £529 3s. 6d. |
| Do. do.                                                       | 1925 .. £321 13s. 0d. | 1926 .. £341 4s. 6d. | 1927 .. £315 18s. 6d. | 1925 .. £161 0s. 0d.     | 1926 .. £293 18s. 6d. | 1927 .. £529 3s. 6d. |

\* Includes 1 baby born before arrival.



**Maternity Homes.**—The number of registered maternity homes in the City, excluding all institutions and lying-in homes carried on by medical men, on December 31st, 1927, was 22.

The following table gives particulars as to the registration of maternity homes during the year :—

|                                                                    |   |
|--------------------------------------------------------------------|---|
| No. of applications for registration .. .. .                       | 6 |
| No. of homes registered .. .. .                                    | 5 |
| No. of Orders made refusing or cancelling registration             | 1 |
| No. of appeals against such Orders .. .. .                         | — |
| No. of cases in which such Orders have been :                      |   |
| (a) Confirmed on appeal .. .. .                                    | — |
| (b) Disallowed .. .. .                                             | — |
| No. of applications for exemption from registration                | 1 |
| No. of cases in which exemption has been :                         |   |
| (a) Granted .. .. .                                                | 1 |
| (b) Withdrawn .. .. .                                              | — |
| (c) Refused .. .. .                                                | — |
| No. of cases in which registration voluntarily surrendered .. .. . | 1 |

All registered homes were visited regularly and inspected, the number of visits paid for this purpose being 38.

An analysis of the births registered as occurring in the various lying-in institution in the City is given in the following table :—

| Institution.                         | No. of births. | Percentage of total registered. |
|--------------------------------------|----------------|---------------------------------|
| Leeds Maternity Hospital .. .. .     | 1,250          | 15·48                           |
| St. Faith's Home .. .. .             | 63             | 0·78                            |
| Leeds Township Infirmary .. .. .     | 268            | 3·32                            |
| Bramley Township Infirmary .. .. .   | 113            | 1·40                            |
| Hope Hospital .. .. .                | 13             | 0·16                            |
| Leeds General Infirmary .. .. .      | 7              | 0·09                            |
| Women and Children's Hospital.. .. . | 9              | 0·11                            |
| Private Nursing Homes .. .. .        | 268            | 3·32                            |
| Total .. .. .                        | 1,991          | 24·66                           |

*Illegitimate Births in Institutions.*—Of the 1,991 births which took place in institutions 319, 16·0 per cent. were illegitimate. This is a decrease of 62 on the figure for last year.

*Ambulance Service.*—For the number of cases removed to the various lying-in institutions by the special ambulance provided and maintained for the purpose, see page 118. It should be understood by doctors, midwives and the public generally that the ambulance is available night or day for the removal of maternity cases to any of the public lying-in institutions.

**Maternal Mortality.**—During the year 38 mothers lost their lives in childbirth. Last year the number was 41 so that there was a decrease of three. The rate of mortality was 4·88 per thousand births. Of the 38, seven, or 18·4 per cent., were in the practices of midwives, 18, or 47·4 per cent., in the practices of doctors, and 12, or 31·6 per cent. in institutions. In one case an inquest was held.

The following table gives particulars of the maternal death rate in Leeds for the last 16 years (since 1911):—

MATERNAL MORTALITY.

| Year.   | No. of deaths. | Death-rate per 1,000 births from |               |                   |
|---------|----------------|----------------------------------|---------------|-------------------|
|         |                | Sepsis.                          | Other causes. | Total childbirth. |
| 1911 .. | 42             | 1·51                             | 2·46          | 3·97              |
| 1912 .. | 41             | 1·15                             | 2·78          | 3·93              |
| 1913 .. | 61             | 2·74                             | 3·02          | 5·76              |
| 1914 .. | 62             | 3·16                             | 2·61          | 5·77              |
| 1915 .. | 41             | 1·62                             | 2·53          | 4·15              |
| 1916 .. | 39             | 1·48                             | 2·65          | 4·13              |
| 1917 .. | 22             | 1·06                             | 1·85          | 2·91              |
| 1918 .. | 21             | 0·95                             | 1·89          | 2·84              |
| 1919 .. | 36             | 1·72                             | 3·04          | 4·76              |
| 1920 .. | 58             | 3·03                             | 2·14          | 5·17              |
| 1921 .. | 38             | 1·28                             | 2·46          | 3·74              |
| 1922 .. | 33             | 1·84                             | 1·73          | 3·57              |
| 1923 .. | 49             | 2·07                             | 3·57          | 5·64              |
| 1924 .. | 34             | 1·28                             | 2·69          | 3·97              |
| 1925 .. | 40             | 3·18                             | 1·71          | 4·89              |
| 1926 .. | 36             | 1·74                             | 2·73          | 4·47              |

From Registrar-General's Annual Reports.



The chief causes of maternal death were puerperal sepsis (14 cases), puerperal eclampsia (4 cases), ante-partum and post-partum hæmorrhage (9 cases), pulmonary embolism (6 cases), obstructed labour (1 case), ectopic gestation (1 case), heart failure from various causes (3 cases).

Every maternal death is investigated by the inspector of midwives. Records are made by her as to the previous history of the deceased, the history of the pregnancy and confinement, and the particulars of the fatal illness. This last information is obtained from the midwife in attendance on the case or from the relatives of the deceased.

**Specialist Service.**—Facilities are provided by the Local Authority whereby medical practitioners may call in the help of an expert where they find a maternity case to be doubtful or difficult. The number of claims received from consultants for services rendered in connection with this scheme was 15 and the total nett cost to the Corporation was £38 12s. The total is small and suggests that either medical practitioners are ignorant of the existence of the scheme or they fail to appreciate its advantages to themselves and their patients.

**Post Natal Work.**—The number of births notified during the year exclusive of stillbirths was 7,582, or 93·9 per cent., of the total births registered.

**Home Visiting.**—First visits were paid by the health visitors to 7,936 infants. The number of re-visits to children up to 5 years was 53,543 which together with first visits makes a total of 61,479 visits for the year. These figures represent a decrease of 299 in first visits and an increase of 1,357 re-visits or an increase in the total visits of 1,058.

The staff of health visitors number the same as in the previous year, namely 21. In addition to paying the routine visits to children from birth to five years mentioned above they also pay visits in connection with the following :—

1. Stillbirths which they investigated and re-visited the mother in six months time to urge her to attend an ante-natal clinic if again pregnant.
2. Ophthalmia Neonatorum, the progress of which they reported to the office.



3. Measles, whooping cough and pneumonia in children under five reported to the Department if more adequate nursing was required.
4. Expectant mothers to watch progress and give advice.
5. Medical aid claims.
6. Deaths of children under five to investigate cause of death.
7. Cases of sickness in children under five notified to this Department by the Leeds General Infirmary and Public Dispensary.

It will be plain from the above description that the amount of visiting required of each health visitor is very extensive and, as there are only 21 health visitors, it is quite impossible to cover the field in anything like a complete and absolutely satisfactory manner. Where the scheme of visiting fails is in the routine visits to children between the age of one and five, many of whom are missed. As there is still a great deal of rickets to be seen in Leeds, it is just the children between these ages who need most careful supervision in order that the disease may be detected at an early stage and advice given with regard to diet, etc.

The records of the Babies' Welcome Association also show that, although babies are brought to the clinics fairly regularly until they attain their first birthday, there is a tendency for the attendances to fall off after this age.

To remedy this defect in the scheme, it is proposed to re-organize the work of the health visitors and clinic nurses. At the present time there are fourteen clinic nurses who spend only a small proportion of their time in visiting. The rest of their work consists of making preparations for the various clinics at the Welcomes, carrying out special treatment ordered by the doctors, and massage. It is therefore proposed to relieve these nurses of some of their duties at the Welcomes, especially massage, and to make each nurse responsible for visiting the homes in a small district immediately round her Welcome. This will relieve the health visitor of part of her district and allow of these children from two to five years being visited more frequently. To give full effect to this proposal will necessitate the provision of additional office accommodation as the rooms at present in use by the health visitors are already overcrowded and incapable of enlargement.



A complete summary of the work of the health visiting staff is appended :—

|                                         | VISITS. |
|-----------------------------------------|---------|
| Notified births including re-visits ..  | 61,479  |
| Still-births and deaths under one month |         |
| including re-visits .. .. .             | 987     |
| Ophthalmia neonatorum .. ..             | 85      |
| Measles .. .. .                         | 14,869  |
| Whooping Cough .. .. .                  | 1,051   |
| Pneumonia .. .. .                       | 2,080   |
| Medical aid claims .. .. .              | 502     |
| Other cases .. .. .                     | 1,317   |
| Expectant mothers .. .. .               | 639     |
| Ill children notified from the Leeds    |         |
| General Infirmary and Public            |         |
| Dispensary .. .. .                      | 2,098   |
| Total visits for the year               | 85,107  |

**Infant Welfare Centres (" Welcomes ").**—There are 18 infant welfare centres situated in different parts of Leeds. The premises in which they are situated are rented for the purpose by the Leeds Babies' Welcome Association. During the year suitable premises were found for a Central Welcome. These premises consist of two wooden bungalows situated in Calverley Street, near the Town Hall, and although not ideal ought to prove extremely useful when the necessary structural alterations have been completed. It is proposed to use this Central Welcome for special clinics such as dental, orthopædic and artificial sunlight.

New premises were also found for the Chapeltown Welcome to take the place of those now in use in Back Barrack Street which are small and unsuitable. The new building is situated in Barrack Road and consists of one large and three small rooms on the ground floor and three small rooms on the first floor. Here again, considerable improvements will have to be effected before the premises can be put into commission.

The building of new premises for the Armley Welcome was begun towards the end of the year and it is hoped that these will be ready for occupation by the middle of the current year.

The number of new babies under one year of age admitted to the Welcomes during 1927 was 3,919 as compared with 4,326 for



the previous year, a decrease of 407. Of these 1,401, or 35·7 per cent., were under one month and 3,062, or 78·1 per cent., under three months. Only 537 were between 1 and 2 years whilst between 2 and 5 years the number admitted was 723. Although a fair percentage of babies under one year of age regularly attended the Welcomes there was a tendency for children above this age to fall away in their attendance. The mothers do not seem to realize that it is just as important to bring a "toddler" to the Welcome as it is to bring an infant. The children in Leeds appear peculiarly susceptible to rickets. Whether this is due to the amount of smoke over the City blocking out the sunlight or to the indifferent housing conditions in certain districts, or to other causes, it is difficult to determine, but it makes it imperative that the children from one to five should be under constant supervision. As the mothers do not seem able to bring their older children to the Welcomes it is hoped that by increasing the visiting of the homes by the health visitors to do something to reduce the incidence of the disease.

Of the total children born during the year 50·3 per cent. attended one or other of the Welcomes as against 53·6 for last year. The total attendances of all babies at all the Welcomes during the year was 114,656, which included attendances at the morning treatment clinics. The average attendance of each child on the register was 8.

A list of the Welcomes and the wards in which they are situated together with the times when the clinics are held is given on page 185.

**Infant Consultations.**—The number of infant consultations at six of the Welcomes is three per week, at eight, two, and at four, one; in addition special sessions for massage and treatment of minor ailments are held at 14 Welcomes, whilst at Holbeck Welcome clinics for the treatment of mothers and babies by artificial sunlight are held almost daily.

There are 14 clinic nurses, each being in charge of one or more Welcomes. A clinic nurse makes all arrangements for the holding of the various clinics at the Welcome or Welcomes of which she has charge. She also undertakes the treatment of any minor ailments which may be required as well as a certain amount of massage. She, or a voluntary worker, also holds classes at which the mothers are taught how to make garments for their children.

Every infant clinic is attended by a medical officer, health visitor, a clerk-dispenser, and several voluntary workers in addition



to the clinic nurse. Arrangements are also made for a milk secretary to attend certain of the Welcomes once a week in order to interview mothers who are unable to buy their milk at full price.

The medical officer endeavours to see every baby once a month and advises the mother with regard to its care and feeding. The health visitor weighs each baby whilst a voluntary worker charts the weight. Voluntary workers register new babies and mark the attendance registers. The clinic nurse attends the doctor and talks to the mothers on various subjects.

There are seven whole-time clerk-dispensers attached to the Department. They are responsible for handing out the dried milk, cod liver oil, virol, and a small quantity of drugs at the Welcomes, also for the keeping of stocks and records.

During the year there were several changes in the medical staff, particulars of which are noted on page 208.

An opportunity was taken during these changes of reorganizing the work of the medical officers so as to make it possible for the same doctor to attend all the infant and ante-natal clinics held at one Welcome.

The medical staff of the Maternity and Child Welfare Department at the end of the year consisted of five whole-time and five part-time medical officers. Of the five part-time medical officers, one conducted three sessions, two, two sessions, and two, one session per week at the Welcomes.

An effort was made by the medical officers to give short talks to the mothers during clinics. Some of the subjects chosen were:—

- |                                      |                         |
|--------------------------------------|-------------------------|
| (1) Weaning.                         | (4) Diet after Weaning. |
| (2) Clothing infants and "toddlers." | (5) Ante-natal care.    |
| (3) Breast Feeding.                  | (6) Measles, etc.       |

It is very difficult to make these talks thoroughly successful. It is impossible for a doctor to talk above the crying of the babies and, although arrangements are made for the babies and "toddlers" to be looked after in another room, the mothers object to being parted from them even for such a short time as 10 minutes. When they are persuaded to do so their attention is divided between listening to the lecturer and wondering what is happening to their children in the adjoining room.

Details of the work at the various Welcomes will be found in the tables on pages 186, 187 and 188.



The following is a list of the Clinics —

| WARD.       | ADDRESSES.                                                                     | DAYS.  | TIMES.    |
|-------------|--------------------------------------------------------------------------------|--------|-----------|
| E.          | Wesleyan School, Richmond Hill .. ..                                           | Tues.  | 9.30 a.m. |
|             | Do. do. (New Babies) ..                                                        | Thurs. | 9.30 a.m. |
|             | Do. do. .. ..                                                                  | Thurs. | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Mon.   | 2 p.m.    |
| E.          | University Club, Berking Avenue, York Road ..                                  | Mon.   | 2 p.m.    |
|             | Do. do. (New Babies) ..                                                        | Thurs. | 9.30 a.m. |
|             | Do. do. (Expectant Mothers) ..                                                 | Tues.  | 2 p.m.    |
| N.          | 39, Burmantofts Street (New Babies) ..                                         | Tues.  | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Wed.   | 9.30 a.m. |
|             | Do. do. .. ..                                                                  | Fri.   | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Thurs. | 9.30 a.m. |
| N.W.        | Church of the Holy Name, Servia Road,<br>Woodhouse Street .. ..                | Tues.  | 2 p.m.    |
|             | Do. do. (New Babies) ..                                                        | Thurs. | 9 a.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Thurs. | 2 p.m.    |
| M.H.        | Little Queen Street, West Street .. ..                                         | Mon.   | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Tues.  | 9 a.m.    |
|             | Do. do. .. ..                                                                  | Wed.   | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Thurs. | 9 a.m.    |
| A. & W.     | Oddy House, Theaker Lane, Armley .. ..                                         | Tues.  | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Thurs. | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Fri.   | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Wed.   | 9.30 a.m. |
| New<br>Wor. | Holdforth Street, New Wortley .. ..                                            | Mon.   | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Thurs. | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Tues.  | 9.30 a.m. |
| Hol.        | 6, Granville Terrace, Holbeck .. ..                                            | Tues.  | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Thurs. | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Fri.   | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Wed.   | 9.30 a.m. |
|             | Do. do. (Sunlight Clinic) ..                                                   | Tues.  | 9.30 a.m. |
|             | Do. do. Do. ..                                                                 | Fri.   | 1.30 p.m. |
| E.H.        | St. Oswald's Institute, Balm Road Terminus,<br>Hunslet Carr .. (New Babies) .. | Mon.   | 9.30 a.m. |
|             | Do. do. .. ..                                                                  | Mon.   | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Fri.   | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Thurs. | 9.30 a.m. |
| Bnk.        | Back Barrack Street, off Chapeltown Road ..                                    | Tues.  | 9.30 a.m. |
|             | Do. do. .. ..                                                                  | Wed.   | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Mon.   | 9.30 a.m. |
| S.          | St. Nicholas, 205, Hunslet Road .. ..                                          | Tues.  | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Wed.   | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Tues.  | 9.30 a.m. |
| Bmy.        | Town End House, Bramley (New Babies) ..                                        | Mon.   | 9.30 a.m. |
|             | Do. do. .. ..                                                                  | Wed.   | 2 p.m.    |
|             | Do. do. (Expectant Mothers) ..                                                 | Fri.   | 9.30 a.m. |
| E.H.        | Institute, Town Street, Middleton .. ..                                        | Thurs. | 1.30 p.m. |
| Hdy.        | Wesleyan School, Meanwood .. ..                                                | Wed.   | 1.30 p.m. |
| W.H.        | West Hunslet Wesleyan School, Ladypit Street<br>(New Babies) ..                | Mon.   | 9.30 a.m. |
|             | Do. do. .. ..                                                                  | Wed.   | 1.30 p.m. |
|             | Do. do. (Expectant Mothers) ..                                                 | Fri.   | 9.30 a.m. |
| N.          | St. Aidan's School, Roundhay Road .. ..                                        | Fri.   | 2 p.m.    |
| New.*       | Cross Gates Wesleyan School, Crossgates ..                                     | Tues.  | 2 p.m.    |
| Hdy.        | All Hallows School, Hyde Park Road .. ..                                       | Tues.  | 2 p.m.    |
|             | Do. do. .. ..                                                                  | Thurs. | 2 p.m.    |

\* Roundhay, Seacroft, Shadwell and Crossgates.



ATTENDANCES MADE AT INFANT WELFARE CENTRES DURING  
YEAR 1927.

| WELCOME.        | Consultations and meetings. |                      |                   | Morning treatment. |                      |                   |          |
|-----------------|-----------------------------|----------------------|-------------------|--------------------|----------------------|-------------------|----------|
|                 | Mothers.                    | Babies under 1 year. | Babies 1—5 years. | Mothers.           | Babies under 1 year. | Babies 1—5 years. | Callers. |
| Ellerby ..      | 3,850                       | 3,144                | 2,411             | 60                 | 524                  | 1,639             | 399      |
| West Street ..  | 2,488                       | 3,395                | 2,883             | 72                 | 760                  | 2,380             | 152      |
| Burmantofts ..  | 3,889                       | 3,195                | 3,492             | 303                | 1,289                | 1,539             | 128      |
| Hunslet ..      | 3,907                       | 3,505                | 3,500             | 135                | 477                  | 1,829             | 405      |
| University ..   | 2,488                       | 2,452                | 2,635             | 60                 | 1,600                | 1,204             | 257      |
| Woodhouse ..    | 2,354                       | 3,489                | 1,742             | 78                 | 705                  | 429               | 160      |
| Holbeck ..      | 3,245                       | 3,886                | 3,741             | 136                | 961                  | 2,260             | 472      |
| Armley ..       | 3,179                       | 2,332                | 3,299             | 377                | 1,485                | 3,215             | 798      |
| Chapelton ..    | 1,839                       | 2,970                | 2,322             | 8                  | 881                  | 583               | 313      |
| St. Nicholas .. | 3,908                       | 2,283                | 2,236             | 156                | 736                  | 1,128             | 807      |
| Bramley ..      | 880                         | 1,465                | 1,743             | 144                | 523                  | 465               | 173      |
| New Wortley ..  | 1,775                       | 2,067                | 1,854             | 110                | 811                  | 2,356             | 126      |
| Middleton ..    | 619                         | 1,163                | 1,207             | ..                 | 125                  | 130               | 5        |
| Meanwood ..     | 21                          | 982                  | 784               | ..                 | 7                    | 1                 | ..       |
| West Hunslet    | 1,072                       | 2,541                | 2,252             | 40                 | 401                  | 567               | 39       |
| Harehills ..    | 12                          | 1,642                | 819               | ..                 | 293                  | 25                | ..       |
| Crossgates ..   | 17                          | 747                  | 348               | ..                 | ..                   | ..                | ..       |
| Burley ..       | 764                         | 2,587                | 1,479             | 26                 | 344                  | 392               | 41       |
| Totals ..       | 36,307                      | 43,845               | 38,747            | 1,705              | 11,922               | 20,142            | 4,275    |

## BABIES UNDER ONE REGISTERED DURING YEAR 1927.

| WELCOME.        | 0-1<br>month. | 1-3<br>months. | 3-6<br>months. | 6-12<br>months. | Total. |
|-----------------|---------------|----------------|----------------|-----------------|--------|
| Ellerby ..      | 114           | 118            | 34             | 22              | 288    |
| West Street ..  | 114           | 121            | 29             | 39              | 303    |
| Burmantofts ..  | 106           | 122            | 33             | 18              | 279    |
| Hunslet ..      | 112           | 108            | 26             | 17              | 263    |
| University ..   | 60            | 98             | 24             | 27              | 209    |
| Woodhouse ..    | 105           | 125            | 28             | 22              | 280    |
| Holbeck ..      | 148           | 108            | 36             | 27              | 319    |
| Armley ..       | 93            | 134            | 45             | 30              | 302    |
| Chapelton ..    | 112           | 83             | 31             | 33              | 259    |
| St. Nicholas .. | 97            | 68             | 22             | 25              | 212    |
| Bramley ..      | 33            | 55             | 24             | 13              | 135    |
| New Wortley ..  | 88            | 92             | 17             | 12              | 209    |
| Middleton ..    | 34            | 43             | 9              | 24              | 110    |
| Meanwood ..     | 17            | 42             | 16             | 17              | 92     |
| West Hunslet .. | 55            | 90             | 19             | 13              | 177    |
| Harehills ..    | 32            | 78             | 23             | 18              | 151    |
| Cross Gates ..  | 9             | 37             | 6              | 6               | 58     |
| Burley ..       | 72            | 129            | 41             | 31              | 273    |
| Totals ..       | 1,401         | 1,661          | 463            | 394             | 3,919  |

## BABIES OVER ONE REGISTERED DURING YEAR 1927.

| WELCOME.        | 1-2<br>years. | 2-3<br>years. | 3-4<br>years. | 4-5<br>years. | Total. |
|-----------------|---------------|---------------|---------------|---------------|--------|
| Ellerby ..      | 24            | 19            | 13            | 7             | 63     |
| West Street ..  | 47            | 33            | 15            | 3             | 98     |
| Burmantofts ..  | 22            | 7             | 7             | 1             | 37     |
| Hunslet ..      | 25            | 28            | 19            | 17            | 89     |
| University ..   | 31            | 21            | 10            | 10            | 72     |
| Woodhouse ..    | 39            | 21            | 10            | 6             | 76     |
| Holbeck ..      | 55            | 22            | 18            | 6             | 101    |
| Armley ..       | 33            | 32            | 21            | 15            | 101    |
| Chapelton ..    | 51            | 41            | 20            | 8             | 120    |
| St. Nicholas .. | 31            | 15            | 10            | 6             | 62     |
| Bramley ..      | 14            | 16            | 8             | 7             | 45     |
| New Wortley ..  | 21            | 22            | 13            | 5             | 61     |
| Middleton ..    | 24            | 17            | 24            | 9             | 74     |
| Meanwood ..     | 16            | 15            | 9             | 5             | 45     |
| West Hunslet .. | 28            | 16            | 10            | 2             | 56     |
| Harehills ..    | 17            | 7             | 6             | 1             | 31     |
| Cross Gates ..  | 21            | 13            | 10            | 1             | 45     |
| Burley ..       | 38            | 27            | 12            | 7             | 84     |
| Totals ..       | 537           | 372           | 235           | 116           | 1,260  |



## HOME VISITS PAID BY CLINIC NURSES DURING YEAR 1927.

| WELCOME.        | Babies<br>under<br>1 year. | Babies<br>1—5<br>years. | Odd<br>Visits. | Total<br>Visits. | Expect-<br>ant<br>Mothers. | Total<br>Visits to<br>both. |
|-----------------|----------------------------|-------------------------|----------------|------------------|----------------------------|-----------------------------|
| Ellerby ..      | 75                         | 161                     | 13             | 249              | 45                         | 294                         |
| West Street ..  | 164                        | 295                     | 3              | 462              | 53                         | 515                         |
| Burmantofts ..  | 210                        | 368                     | 26             | 604              | 231                        | 835                         |
| Hunslet ..      | 66                         | 113                     | 14             | 193              | 99                         | 292                         |
| University ..   | 84                         | 89                      | 17             | 190              | 55                         | 245                         |
| Woodhouse ..    | 348                        | 223                     | 117            | 688              | 160                        | 848                         |
| Holbeck ..      | 140                        | 293                     | 22             | 455              | 179                        | 634                         |
| Armley ..       | 167                        | 198                     | ..             | 365              | 34                         | 399                         |
| Chapeltown ..   | 94                         | 64                      | 15             | 173              | 105                        | 278                         |
| St. Nicholas .. | 88                         | 118                     | 16             | 222              | 29                         | 251                         |
| Bramley ..      | 219                        | 229                     | 4              | 452              | 78                         | 530                         |
| New Wortley ..  | 57                         | 118                     | 26             | 201              | 86                         | 287                         |
| Middleton ..    | 11                         | 7                       | 1              | 19               | 19                         | 38                          |
| Meanwood ..     | 3                          | 4                       | ..             | 7                | ..                         | 7                           |
| West Hunslet .. | 49                         | 61                      | 4              | 114              | 22                         | 136                         |
| Harehills ..    | 6                          | 2                       | ..             | 8                | ..                         | 8                           |
| Burley ..       | 48                         | 49                      | 2              | 99               | 7                          | 106                         |
| Totals ..       | 1,829                      | 2,392                   | 280            | 4,501            | 1,202                      | 5,703                       |

**Leeds Babies' Welcome Association.**—The Maternity and Child Welfare Department continued to work in close co-operation with the Leeds Babies' Welcome Association during the year. The task of providing suitable buildings for the clinics is not an easy one and the Association is to be congratulated on finding new premises for Chapeltown Welcome and a suitable house for the first Central Welcome. The work of the voluntary workers at the various Welcomes has been most helpful and their attendance much appreciated.

Sincere thanks are therefore due to the Association—President, Officers, Members of Committee and helpers generally—for their very valuable work during the year and for their constant loyalty and support.

**The Artificial Sunlight Clinic.**—During the early part of the year an artificial sunlight clinic was started at Holbeck Welcome. The lamp, an Atmospheric Vapour Lamp supplied by Kelvin, Bottomley and Baird, was bought by the Babies' Welcome Association and installed, together with an X-Ray apparatus, in the upper storey of the building at Granville Terrace. Dr. C. Shiskin was put in charge of the clinic and a nurse with special experience in ultra-violet-ray therapy was appointed to carry out the treatment under Dr. Shiskin's directions.

From the commencement until December, 1927, 215 cases (203 children and 12 mothers) have passed through the clinic. The diseases treated were rickets, malnutrition, skin diseases (farunculosis, eczema, etc.), anæmia, catarrhs, tuberculosis-afebrile cases only—and ante-natal and post-natal conditions in mothers.

Dr. Shiskin in her report states that "All cases of rickets that attended regularly improved and a cure was effected in some. The mothers were satisfied that the children were brighter and more alert as the result of treatment; children suffering from sleeplessness, irritability and anorexia were also much benefited. As a means of preventing rickets, ultra-violet radiation would seem to be more effective than administration of cod liver oil."

Holbeck Welcome, however, is only within the reach of a minority of the mothers and babies in Leeds. It would appear therefore that the ideal method of preventing this very common disease amongst the children of Leeds would be to have a lamp at each Welcome and to give every baby who attends a course of ultra-violet radiation, not after it has developed the disease but before it has had time to do so. This, of course, is not possible at the present time but it is hoped that at an early date, lamps may be installed at Armley, Chapeltown and the Central Welcome. With these additional lamps it will then be possible to do more actual preventive work.



**Milk Distribution.**—Particulars respecting the amount of liquid and dried milk supplied to necessitous babies attending the Welcomes are given in the accompanying tables. As in previous years the scheme for distribution has been in the hands of a special Committee composed of representatives from the Maternity and Child Welfare Committee, the Leeds Babies' Welcome Association and other outside bodies engaged in social work.

The Committee met on 50 occasions and considered 8,434 applications which was 1,587 less than the previous year. In addition it supervised generally the work of the milk staff, details of which appear in the table on page 191.

The amount of dried milk distributed during the year was 66,107 lbs. a decrease of 4,861 lbs. as compared with the previous year. As regards the recipients there was an increase from 3,921 in 1926 to 4,101 in 1927.

The amount of cows' milk distributed decreased from 24,883 to 23,980 pints though the number of recipients remained the same as for the previous year, namely, 209.

The cost of the milk distribution scheme for the year was £4,489 1s. 10d. which is £17 1s. in excess of the figure for last year.

The nett cost per head to the Corporation was £1 os. 9½d.

COST OF MILK DISTRIBUTION SCHEME FOR YEAR ENDED  
31ST DECEMBER, 1927.

| INCOME.                                 |        |    |    | EXPENDITURE.                 |        |    |    |
|-----------------------------------------|--------|----|----|------------------------------|--------|----|----|
|                                         | £      | s. | d. |                              | £      | s. | d. |
| To cash received for sale of dried milk | 1,489  | 16 | 4  | By salaries and wages        | 615    | 11 | 10 |
|                                         |        |    |    | „ Cost of dried milk         | 4,921  | 5  | 8  |
|                                         |        |    |    | „ Cost of cows' milk         | 348    | 6  | 8  |
|                                         |        |    |    | „ Printing, stationery, etc. | 57     | 12 | 0  |
|                                         |        |    |    | „ Superannuation             |        |    |    |
|                                         |        |    |    | „ Contributions              | 30     | 8  | 6  |
| „ balance—loss                          | 4,489  | 1  | 10 | „ Sundries                   | 5      | 13 | 6  |
|                                         | £5,978 | 18 | 2  |                              | £5,978 | 18 | 2  |

Nett cost per head to Corporation, £1 os. 9½d.

## WORK OF MILK STAFF.

|                                                                        | I.<br>Quarter. | II.<br>Quarter. | III.<br>Quarter. | IV.<br>Quarter. | Year.  |
|------------------------------------------------------------------------|----------------|-----------------|------------------|-----------------|--------|
| Applications dealt with (new)                                          | 307            | 305             | 432              | 291             | 1,335  |
| "    "    (repeat)                                                     | 3,857          | 3,132           | 3,095            | 2,924           | 13,008 |
| "    "    (refused)                                                    | ..             | ..              | ..               | ..              | ..     |
| No. of re-applications ..                                              | 101            | 94              | 138              | 136             | 469    |
| *No. of external cases dealt<br>with at the office ..                  | 273            | 201             | 164              | 187             | 825    |
|                                                                        | 4,538          | 3,732           | 3,829            | 3,538           | 15,637 |
| No. of visits to Welcomes<br>paid by the milk secre-<br>taries .. .. . | 147            | 151             | 145              | 135             | 578    |

\* Persons under treatment at the Public Dispensary and the General Infirmary.

## AMOUNT OF DRIED MILK DISTRIBUTED IN LBS. (YEAR 1927).

| WELCOME.           | Free.                | Assisted.            | Full Price.         | TOTAL.              |
|--------------------|----------------------|----------------------|---------------------|---------------------|
| Ellerby .. .. .    | 7,864 $\frac{1}{2}$  | 3,572                | 238 $\frac{1}{2}$   | 11,675              |
| West Street .. ..  | 3,472                | 1,504                | 40                  | 5,016               |
| Burmantofts .. ..  | 2,710 $\frac{1}{2}$  | 2,009 $\frac{1}{2}$  | 180 $\frac{1}{4}$   | 4,900 $\frac{1}{4}$ |
| Hunslet .. .. .    | 3,981 $\frac{1}{2}$  | 2,680                | 371                 | 7,032 $\frac{1}{2}$ |
| University .. .. . | 3,356 $\frac{3}{4}$  | 1,920 $\frac{3}{4}$  | 93                  | 5,370 $\frac{1}{2}$ |
| Woodhouse .. .. .  | 1,442 $\frac{3}{4}$  | 1,036 $\frac{1}{2}$  | 148 $\frac{1}{4}$   | 2,627 $\frac{1}{2}$ |
| Holbeck .. .. .    | 2,929                | 2,441 $\frac{1}{2}$  | 356 $\frac{1}{4}$   | 5,726 $\frac{3}{4}$ |
| Armley .. .. .     | 1,878 $\frac{1}{4}$  | 2,043 $\frac{1}{2}$  | 1,215 $\frac{1}{4}$ | 5,137               |
| Chapelton .. .. .  | 2,003 $\frac{1}{4}$  | 1,649 $\frac{3}{4}$  | 539 $\frac{3}{4}$   | 4,192 $\frac{3}{4}$ |
| St. Nicholas .. .. | 3,508 $\frac{1}{4}$  | 1,575 $\frac{1}{4}$  | 147                 | 5,230 $\frac{1}{2}$ |
| Bramley .. .. .    | 400 $\frac{1}{2}$    | 298                  | 175                 | 873 $\frac{1}{2}$   |
| New Wortley .. ..  | 1,495 $\frac{1}{4}$  | 854 $\frac{1}{2}$    | 228                 | 2,577 $\frac{3}{4}$ |
| Middleton .. .. .  | 989                  | 676                  | 65                  | 1,730               |
| West Hunslet .. .. | 681 $\frac{1}{4}$    | 881 $\frac{1}{4}$    | 379                 | 1,941 $\frac{1}{2}$ |
| Burley .. .. .     | 55                   | 177                  | 69                  | 301                 |
| Crossgates .. .. . | 106                  | 81                   | 23                  | 210                 |
| External .. .. .   | 1,172 $\frac{3}{4}$  | 387 $\frac{3}{4}$    | 4                   | 1,564 $\frac{1}{2}$ |
| Totals .. .. .     | 38,046 $\frac{1}{2}$ | 23,788 $\frac{1}{4}$ | 4,272 $\frac{1}{4}$ | 66,107              |



## NUMBER OF RECIPIENTS (YEAR 1927).

| WELCOME.           | Free. | Assisted. | Full Price. | TOTAL. |
|--------------------|-------|-----------|-------------|--------|
| Ellerby .. ..      | 310   | 182       | 21          | 513    |
| West Street .. ..  | 157   | 95        | 17          | 269    |
| Burmantofts .. ..  | 149   | 114       | 26          | 289    |
| Hunslet .. ..      | 173   | 166       | 48          | 387    |
| University .. ..   | 158   | 107       | 19          | 284    |
| Woodhouse.. ..     | 104   | 56        | 29          | 189    |
| Holbeck .. ..      | 180   | 160       | 43          | 383    |
| Armley .. ..       | 165   | 122       | 60          | 347    |
| Chapelton .. ..    | 121   | 105       | 42          | 268    |
| St. Nicholas .. .. | 150   | 120       | 24          | 294    |
| Bramley .. ..      | 32    | 42        | 36          | 110    |
| New Wortley .. ..  | 77    | 61        | 33          | 171    |
| Middleton .. ..    | 56    | 41        | 9           | 106    |
| West Hunslet .. .. | 50    | 62        | 52          | 164    |
| Burley .. ..       | 13    | 15        | 14          | 32     |
| Crossgates .. ..   | 14    | 6         | 5           | 25     |
| External .. ..     | 190   | 78        | 2           | 270    |
| Totals .. ..       | 2,089 | 1,532     | 480         | 4,101  |

## COWS' MILK DISTRIBUTED—NUMBER OF RECIPIENTS.

| WELCOME.           | Pints<br>(Free). | Recipients<br>(Free). |
|--------------------|------------------|-----------------------|
| Ellerby .. ..      | 1,485            | 20                    |
| West Street .. ..  | 1,290            | 12                    |
| Burmantofts .. ..  | 1,145½           | 12                    |
| Hunslet .. ..      | 3,119            | 15                    |
| University .. ..   | 1,794            | 20                    |
| Woodhouse.. ..     | 263              | 3                     |
| Holbeck .. ..      | 1,297            | 13                    |
| Armley .. ..       | 1,810½           | 13                    |
| Chapelton .. ..    | 2,564½           | 17                    |
| St. Nicholas .. .. | 1,407½           | 13                    |
| Bramley .. ..      | 303              | 1                     |
| New Wortley .. ..  | 1,403½           | 10                    |
| Middleton .. ..    | 1,259            | 9                     |
| West Hunslet .. .. | 592              | 5                     |
| Burley .. ..       | ..               | ..                    |
| Crossgates .. ..   | 515              | 4                     |
| External .. ..     | 3,731½           | 42                    |
| Totals .. ..       | 23,980           | 209                   |

### THE INFANTS' HOSPITAL, WYTHER.

The number of cots in this hospital is 50, 12 for babies under one year and 38 for children from one up to five years. The nursing staff consists of matron, one sister, three staff nurses, one senior nurse and thirteen probationers. There is also one whole-time masseuse who does not reside at the hospital.

The cases chiefly dealt with during the year were infants suffering from dietetic disorders, marasmus, malnutrition and rickets and older children with active rickets accompanied in many cases by deformities. Although these children are out in the open-air as much as possible, the diseases from which they are suffering necessitate for their cure some form of artificial sunlight in addition to the small amount of real sunlight obtainable in a city like Leeds. It is hoped, therefore, that an artificial sunlight lamp may soon be installed at this hospital.

Details of the work in the hospital are given in the attached tables.

#### SUMMARY OF CASES TREATED IN THE INFANTS' HOSPITAL, WYTHER.

|                                                  | Males. | Females. | Total. |
|--------------------------------------------------|--------|----------|--------|
| Remaining in Hospital, January 1st, 1927 .. .. . | 25     | 21       | 46     |
| Admitted during the year ..                      | 105    | 79       | 184    |
| Discharged during the year ..                    | 98     | 72       | 170    |
| Died during the year .. ..                       | 15     | 6        | 21     |
| Remaining in Hospital, December 31st, 1927 .. .. | 17     | 22       | 39     |

Mortality rate per cent. on admissions 11.4. Average stay in Hospital 69.8 days.

#### CLASSIFICATION OF ADMISSIONS ACCORDING TO AGE AND SEX.

| Males.        |              | Females.      |              | Total Infants |              | Grand Total. |
|---------------|--------------|---------------|--------------|---------------|--------------|--------------|
| Under 1 year. | Over 1 year. | Under 1 year. | Over 1 year. | Under 1 year. | Over 1 year. |              |
| 34            | 71           | 29            | 50           | 63            | 121          | 184          |



## ANALYSIS OF DEATHS DURING 1927.

| Cause.                                          | Under one year. |    | Over one year. |    | Total. |
|-------------------------------------------------|-----------------|----|----------------|----|--------|
|                                                 | M.              | F. | M.             | F. |        |
| Pyelitis and convulsions .. ..                  | 1               | .. | ..             | .. | 1      |
| Prematurity and convulsions.. ..                | ..              | 1  | ..             | .. | 1      |
| Congenital heart disease .. ..                  | ..              | 1  | ..             | .. | 1      |
| Gastro-enteritis and convulsions .. ..          | ..              | 1  | ..             | .. | 1      |
| Tuberculous meningitis .. ..                    | ..              | .. | 1              | .. | 1      |
| Broncho pneumonia .. ..                         | ..              | .. | 2              | .. | 2      |
| Marasmus and chronic enteritis .. ..            | 1               | 1  | ..             | .. | 2      |
| Malnutrition and chronic enteritis .. ..        | 1               | .. | ..             | .. | 1      |
| Marasmus and prematurity .. ..                  | ..              | 1  | ..             | .. | 1      |
| Malnutrition and inanition .. ..                | 1               | .. | ..             | .. | 1      |
| Marasmus .. ..                                  | 2               | 1  | ..             | .. | 3      |
| Broncho pneumonia and colitis .. ..             | 1               | .. | ..             | .. | 1      |
| Inanition .. ..                                 | 1               | .. | ..             | .. | 1      |
| Rickets, abdominal distention, syncope .. ..    | 1               | .. | ..             | .. | 1      |
| Marasmus, tetany, ileocolitis .. ..             | 1               | .. | ..             | .. | 1      |
| Cœliac disease and congestion of lung .. ..     | ..              | .. | 1              | .. | 1      |
| Marasmus, chronic enteritis and pemphigus .. .. | 1               | .. | ..             | .. | 1      |
| TOTAL .. ..                                     | 11              | 6  | 4              | .. | 21     |

## ANALYSIS OF CASES TREATED DURING 1927.

| Reason for admission                                  | Under one year. |    | Over one year. |    | Total. |
|-------------------------------------------------------|-----------------|----|----------------|----|--------|
|                                                       | M.              | F. | M.             | F. |        |
| Chronic enteritis and impetigo of face .. ..          | 1               | .. | ..             | .. | 1      |
| Rickets, malnutrition and acute mastoid abscess .. .. | ..              | .. | 1              | .. | 1      |
| Congenital heart disease .. ..                        | ..              | 1  | ..             | .. | 1      |
| Congenital syphilis .. ..                             | ..              | .. | 1              | .. | 1      |
| Gastro enteritis .. ..                                | ..              | 1  | ..             | .. | 1      |
| Abscess of vulva .. ..                                | ..              | .. | ..             | 1  | 1      |
| Pyloric stenosis .. ..                                | 1               | .. | ..             | .. | 1      |
| Cœliac disease and congestion of lung .. ..           | ..              | .. | 1              | .. | 1      |
| Acute bronchitis .. ..                                | ..              | .. | ..             | 1  | 1      |
| Eczema .. ..                                          | 1               | .. | ..             | .. | 1      |
| Marasmus and bronchitis .. ..                         | 1               | 1  | ..             | .. | 2      |
| Marasmus and mastoiditis .. ..                        | 1               | .. | ..             | .. | 1      |
| Other .. ..                                           | 1               | .. | ..             | .. | 1      |

ANALYSIS OF CASES TREATED DURING 1927 (*continued.*)

| Reason for admission.                                                  | Under one year. |    | Over one year. |    | Total. |
|------------------------------------------------------------------------|-----------------|----|----------------|----|--------|
|                                                                        | M.              | F. | M.             | F. |        |
| Osteogenesis imperfecta .. .. .                                        | ..              | .. | ..             | 1  | 1      |
| Chronic enteritis and unresolved pneumonia ..                          | ..              | .. | 2              | .. | 2      |
| Marasmus, abscess of neck .. .. .                                      | 1               | .. | ..             | .. | 1      |
| Rickets and bronchitis .. .. .                                         | 1               | .. | 2              | 2  | 5      |
| Tuberculous meningitis .. .. .                                         | ..              | .. | 1              | .. | 1      |
| Mentally deficient .. .. .                                             | ..              | .. | 1              | 1  | 2      |
| Broncho pneumonia .. .. .                                              | 2               | 1  | 2              | 1  | 6      |
| Albinism, rickets and keratitis .. .. .                                | ..              | .. | ..             | 1  | 1      |
| Rickets and chronic otorrhœa .. .. .                                   | ..              | .. | 1              | 1  | 2      |
| Marasmus and chronic enteritis .. .. .                                 | 5               | 1  | ..             | 1  | 7      |
| Malnutrition and chronic enteritis .. .. .                             | ..              | 1  | 2              | 2  | 5      |
| Marasmus and broncho pneumonia .. .. .                                 | 1               | 1  | ..             | .. | 2      |
| Marasmus and anæmia .. .. .                                            | ..              | 3  | ..             | .. | 3      |
| Marasmus and pyelitis .. .. .                                          | 1               | .. | ..             | .. | 1      |
| Marasmus and prematurity .. .. .                                       | ..              | 2  | ..             | .. | 2      |
| Malnutrition and inanition .. .. .                                     | 1               | .. | ..             | .. | 1      |
| Infantile paralysis .. .. .                                            | ..              | .. | 3              | .. | 3      |
| Marasmus .. .. .                                                       | 10              | 15 | 1              | .. | 26     |
| Malnutrition .. .. .                                                   | 4               | 2  | 6              | 12 | 24     |
| Marasmus and otorrhœa .. .. .                                          | 1               | .. | ..             | .. | 1      |
| Rickets and malnutrition .. .. .                                       | 1               | 1  | 14             | 11 | 27     |
| Rickets and impetigo .. .. .                                           | ..              | 1  | ..             | 1  | 2      |
| Rickets with severe deformities .. .. .                                | ..              | .. | 15             | 11 | 26     |
| Rickets and marasmus .. .. .                                           | 1               | .. | 1              | .. | 2      |
| Broncho pneumonia and colitis .. .. .                                  | 1               | .. | ..             | .. | 1      |
| Marasmus and myocarditis .. .. .                                       | ..              | .. | ..             | 1  | 1      |
| Malnutrition and unresolved pneumonia .. .. .                          | ..              | .. | 7              | .. | 7      |
| Rickets and unresolved pneumonia .. .. .                               | ..              | .. | 1              | .. | 1      |
| Marasmus with chronic enteritis and pemphigus .. .. .                  | 1               | .. | ..             | .. | 1      |
| Marasmus and tuberculous peritonitis .. .. .                           | ..              | .. | ..             | 1  | 1      |
| Rickets and chronic enteritis .. .. .                                  | 1               | .. | 6              | 2  | 9      |
| Inanition .. .. .                                                      | 1               | .. | ..             | .. | 1      |
| Marasmus, chronic enteritis and bronchitis .. .. .                     | ..              | 1  | ..             | .. | 1      |
| Rickets .. .. .                                                        | 1               | 1  | 14             | 10 | 26     |
| Marasmus, tetany and ileocolitis .. .. .                               | 1               | .. | ..             | .. | 1      |
| Fibrosis of lung .. .. .                                               | ..              | .. | ..             | 1  | 1      |
| Rickets with conjunctivitis, keratitis, and corneal ulceration .. .. . | ..              | .. | 1              | .. | 1      |
| Empyema .. .. .                                                        | ..              | .. | ..             | 1  | 1      |
| Ulcer of cornea .. .. .                                                | ..              | .. | ..             | 1  | 1      |
| Convulsions and pyelitis .. .. .                                       | 1               | .. | ..             | .. | 1      |
| Prematurity and convulsions .. .. .                                    | ..              | 1  | ..             | .. | 1      |
| Chronic osteomyelitis .. .. .                                          | ..              | .. | 1              | .. | 1      |
| Improper feeding .. .. .                                               | ..              | 1  | ..             | .. | 1      |
| Rickets, malnutrition and abscess of scalp .. .. .                     | ..              | .. | 1              | .. | 1      |
| Chronic enteritis .. .. .                                              | 1               | 1  | 2              | .. | 4      |
| TOTAL .. .. .                                                          | 43              | 36 | 87             | 64 | 230    |



**Day Nursery.**—There is room in the Day Nursery for 40 children. The nursing staff consists of one matron, one staff nurse and nine probationers. The number of children who have been regular attenders for whole or half-days during the year was 37. The total attendances are given in the accompanying table.

There is always a long waiting list of about 40 or more children whose mothers are desirous of leaving their children in the nursery while they are out at work. An extension of the present Day Nursery or more suitable and larger premises are therefore urgently required. There is a difficulty, however, in obtaining suitable premises in that part of the City which would be easily accessible to the working mothers.

**Residential Nursery.**—The number of cots in the Residential Nursery is 28 (two of which are kept for isolation purposes). The nursing staff consists of one matron, one staff nurse and six probationers. There were 28 children in residence on January 1st, 1927, 78 were admitted during the year and 22 remained on December 31st. Nineteen of the children admitted were illegitimate. The average length of stay was 85 days. The reasons for admission were as follows:—In 24 cases, mothers' illness; in two cases, the death of the mother; in one case, the illness of the father; in 36 cases, mothers expecting confinement; in one case, father at sea, mother working; in 10 cases, mothers working; and four cases, mothers deserted.

TOTAL ATTENDANCES OF RESIDENT AND DAY CHILDREN AT THE NURSERIES, IN AGE GROUPS FOR THE YEAR ENDED 31ST DECEMBER, 1927.

| Nursery.                               | Whole attendances.   |               |                     |        | Half attendances.    |               |                     |        |
|----------------------------------------|----------------------|---------------|---------------------|--------|----------------------|---------------|---------------------|--------|
|                                        | Under<br>3<br>years. | 3-5<br>years. | Over<br>5<br>years. | Total. | Under<br>3<br>years. | 3-5<br>years. | Over<br>5<br>years. | Total. |
| Red House<br>Residential<br>Nursery .. | 8,705                | 450           | ..                  | 9,155  | ..                   | ..            | ..                  | ..     |
| Cobden Place<br>Day Nursery            | 7,614                | 1,549         | 79                  | 9,242  | 793                  | 134           | ..                  | 927    |



I should like to place on record my appreciation of the services rendered by the Executive Committees of the Day and Residential Nurseries during the year.

**Proposed Appointment of Montessori Teacher for the Infants' Hospital, Wyther, The Day Nursery and the Residential Nursery.—**

There is always a number of children in the three institutions, the Infants' Hospital, Wyther, Day Nursery, and the Red House Residential Nursery, who would benefit considerably by having some simple instructions given them on the lines advocated by Madam Montessori. At the present time the nurses give such instruction of this sort as is given but they have other duties to perform and have very little time at their disposal to devote to the children's training and amusement. It is hoped therefore that a suitable person with experience in Montessori methods may be appointed in the near future to take over the organization and expression of this side of the work. She will divide her time amongst the three institutions.

**Convalescent Treatment for Mother and Babies.—**The number of mothers and babies for whom convalescence was arranged was 77 and of mothers without babies eight. The average period of stay at the convalescent homes was 14·3 days. The cost to the Corporation of this provision was £400 2s. 2d., or an average of £2 5s. 11½d. per case per week. Forty-six of the mothers were too poor to contribute anything towards their convalescence but the remainder contributed various amounts according to their means. The total sum contributed by the parents was £16 12s. 0d.

During the year arrangements for convalescence were made by the Leeds Adult Convalescent Society on behalf of the Maternity and Child Welfare Committee. Both mothers and babies benefited considerably from the treatment provided and more were recommended than could be dealt with. It is therefore hoped that the scheme will be extended so that next year 50 per cent. more mothers and babies will receive benefit.

In addition to the above, 166 children under five years were sent for convalescence to the Meanwood Convalescent Home. The average stay of each child was 26·7 days, the cost to the Corporation was £650 17s. 8d., or an average of £3 18s. 5d. per case.



## Housing.

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Housing still remains the most urgent as well as the most difficult of the problems which face the Local Health Authority. Its urgency may be estimated by the unsatisfied demand for new houses as well as by the amount of slum property and the overcrowding which exists. As regards new houses for the working classes one must acknowledge that Leeds has faced its obligations as well as most of the great towns and better than many. Since 1920, no fewer than 5,280 houses have been built by the Corporation itself, whilst those erected by private enterprise in the same period amount to 5,588. Still the list of applicants remains large, indeed shows very little sign of diminishing. Unfortunately the class of individual going into these new houses is not the class that stands most in need of improved conditions. The poorer paid worker, of whom there is a considerable number, has not been catered for and still continues to occupy the low-rented inferior dwelling in the congested parts of the City and to crowd into houses already carrying more than their quota of occupants. It is in connection with the housing of this class that the need to-day is most urgent.

Slum clearance has become a question of the very greatest moment to the community of this as of other Cities in the Kingdom, and in the interest of public health and common humanity consideration of it cannot be longer delayed. The problem is not entirely local, it is national, and the responsibility of finding a solution lies equally with the Local Authority and the State. For Leeds to bear the whole burden of dealing with its slums would be an impossible task, no matter how willing the Municipality was to face the issue.

During the year the proposals for the improvement of the West Street Unhealthy Area were advanced a step further. A local enquiry was held by the Ministry of Health in October, as a result of which the scheme was confirmed and the Corporation authorized to proceed with the usual formalities prior to clearance. At present the question of the re-housing of the tenants displaced



from the houses in the area is being considered and it is hoped to build the required number of houses on certain of the existing housing estates.

But even when this area is cleared and the tenants satisfactorily re-housed only the merest fringe of the problem will have been touched. Other areas almost as bad as West Street call urgently for attention and I hope it may be possible in the coming year to go forward with at least another.

**Number of Houses.**—The total number of houses in the City on December 31st, 1927, was 121,620, made up of approximately 77,652 back-to-back houses and 43,968 through houses. Of these, it is said that something like 2,000 are at present unoccupied. They are mostly of the larger type situated in parts of the City which were once residential but in the course of time have changed their nature and become industrial, though there is also a considerable proportion of houses of the modern villa type in the landward parts of the City which are vacant.

**New Houses.**—The total number of new houses completed and occupied during the year was 2,815, of which 2,491 were suitable for persons of the working classes, and 324 were of a larger type.

Up to December 31st, 1927, the Leeds Corporation had built a total of 5,280 houses, all of which were in occupation. Details of these are given in the table on page 204, which also indicates the various housing estates.

At the present time houses are in course of erection on housing estates at York Road and Meanwood, whilst further building is projected on most of the existing estates. An entirely new estate has been acquired at Henconner Lane, Bramley, on which building has already commenced.

**Smokeless Heating.**—In connection with the Corporation housing schemes the question of the introduction of appliances for smokeless heating and cooking has been under consideration from time to time and I attach herewith a letter from the City Engineer, Mr. W. T. Lancashire, on the matter which shows the position at December, 1927.



CITY ENGINEER'S OFFICE,  
MUNICIPAL BUILDINGS,  
LEEDS.

22nd December, 1927.

DEAR DR. JERVIS,

THE WEST RIDING OF YORKSHIRE  
REGIONAL SMOKE ABATEMENT COMMITTEE.

In reply to your letter of the 16th instant, the Corporation of Leeds during the years 1926 and 1927 has erected or has let Contracts for the purpose of the erection of 1,251 houses, parlour and non-parlour, provided with gas fires in all rooms except the living-room, where a coal fire is provided together with a fire-back boiler, and the small bedroom where no fire is provided. These houses contain in the scullery a gas cooker and a gas copper. Twenty-four of these houses have also secondary means of heating the water required for the bath and lavatory by gas, in addition to the fire-back boiler.

Twenty-four houses have also been erected in which the equipment is similar to the twenty-four gas houses mentioned above, with the substitution of electricity for gas.

Yours faithfully,

(Signed) W. T. LANCASHIRE,  
City Engineer.

Nothing is more important in the interest of health than a pure atmosphere and the speediest and surest way of obtaining this is for each householder to abandon the use of raw coal and adopt gas, electricity or other smokeless fuel for domestic purposes. This applies especially to the person entering into the occupation of a house for the first time. Smoke is the housewife's greatest enemy just as it is the best friend of the house decorator and the upholsterer.

*Flats.*—A certain number of cottage flats are now in course of erection on the York and Selby Road Estate, but none were completed during the period under review. A large number of applications have been received for these small dwellings which have the advantage of being low-rented and of a size suitable for small families or single persons. The actual number under erection at December 31st, 1927, was 100. I hope these flats will be popular as they appear to provide one method of solving the housing difficulty.

*Housing Shortage.*—The number of applications for new houses on the register at December 31st, 1927, was 4,336, and fresh applications are being received daily.

TABLE SHEWING THE NUMBER OF HOUSES ERECTED IN LEEDS DURING THE LAST TWENTY-SIX YEARS, ENDED 31ST MARCH, 1928.

| Year.       |    |    |    |    | Number of Houses. |
|-------------|----|----|----|----|-------------------|
| 1903        | .. | .. | .. | .. | 2,572             |
| 1904        | .. | .. | .. | .. | 2,923             |
| 1905        | .. | .. | .. | .. | 2,442             |
| 1906        | .. | .. | .. | .. | 1,748             |
| 1907        | .. | .. | .. | .. | 1,135             |
| 1908        | .. | .. | .. | .. | 919               |
| 1909        | .. | .. | .. | .. | 836               |
| 1910        | .. | .. | .. | .. | 584               |
| 1911        | .. | .. | .. | .. | 505               |
| 1912        | .. | .. | .. | .. | 350               |
| 1913        | .. | .. | .. | .. | 220               |
| 1914        | .. | .. | .. | .. | 287               |
| 1915        | .. | .. | .. | .. | 228               |
| 1916        | .. | .. | .. | .. | 146               |
| 1917        | .. | .. | .. | .. | 51                |
| 1918        | .. | .. | .. | .. | 5                 |
| 1919        | .. | .. | .. | .. | 4                 |
| 1920        | .. | .. | .. | .. | 7                 |
| 1921        | .. | .. | .. | .. | 196               |
| 1922        | .. | .. | .. | .. | 1,048             |
| 1923        | .. | .. | .. | .. | 1,918             |
| 1924        | .. | .. | .. | .. | 618               |
| 1925        | .. | .. | .. | .. | 951               |
| 1926        | .. | .. | .. | .. | 1,376             |
| 1927        | .. | .. | .. | .. | 2,378             |
| 1928        | .. | .. | .. | .. | 2,383             |
| TOTAL .. .. |    |    |    |    | 25,830            |

*Overcrowding.*—The number of notices served by the Department for overcrowding during the year was 233, of which 63 were abated. The truth is that in the majority of cases the notices cannot be complied with, not because the people are unwilling to do so but because of the absence of alternative accommodation at a rental within their means. The service of a notice has the effect of stimulating some families to make greater efforts to secure other accommodation but in very many instances it is entirely futile.



That overcrowding exists to a very considerable extent especially in the working-class areas of the City cannot be contested. I daresay it will always exist to a certain extent even under the most favourable circumstances because there will always be people in whom the herd instinct predominates and who would rather be one of a company than live in solitary state. In many cases the overcrowding is the result of the natural increase in the size of the family, where either from ignorance, indisposition to move, or lack of sufficient means, the parents have remained in occupation of a dwelling large enough for a childless couple or perhaps a one or two child family but much too small for say, a six or eight child family. The size of family in itself is a difficulty when it comes to renting a house because many landlords refuse to accept as tenants men with large families.

I have already referred to cottage flats being erected on the York and Selby Road Estate and in this connection I should like to point out that these flats might be of the greatest service in providing accommodation for old people or childless couples now occupying houses larger than their needs require in the congested parts of the City and thus making these available for parents with large families. Unfortunately many of the flats are being let to people well enough able to pay the rent of larger houses on the other housing estates, hence the congested areas get very little advantage and the overcrowding remains unrelieved.

What is required in this City is that a proportion of the new houses should be set aside for use in cases of urgency, that is to say, into which one might put a family until such time as a larger and more suitable house could be obtained. In other large towns, notably Birmingham, this has been done. A certain number of houses are allotted to the Health Committee of that City for what are termed "priority" cases, and these "priority" houses are let to families selected because of some urgent need.

**Unfit Houses.**—The number of houses inspected and found to be unfit for human habitation was 125 as against 226 in the previous year, whilst 367 were found not to be in all respects reasonably fit for human habitation.

Closing orders were made in respect of nine dwelling-houses, whilst three houses were demolished in furtherance of such orders.

In response to notices served 321 houses were repaired and rendered fit.



In addition to the above, 24,507 houses were found to be defective in some respect and were repaired.

Further details of housing work are set out in the table on page 205.

**Street Improvements.**—In connection with the acquisition of property for various street widening schemes inspections and reports of 124 houses were made during the year.

**Public Wash-house.**—The first public wash-house in the City was opened in Holbeck at the beginning of the current year. There are 20 hand washing stalls, where the user can scrub the clothes in the old fashion, and 12 mechanical washers. The hand washing stalls are the most popular, being occupied all day, from 8 a.m. to 6.30 p.m., though the objection to the mechanical washers is slowly disappearing as the women become more used to them. The electric irons provided at the opening have proved insufficient and additional ones are to be purchased.

The wash-house is a great boon and the wonder is that a City like Leeds with its difficult housing problem should have been without one for so long. The living-room of a back-to-back house is the most unsuitable place in which to do a family washing and the street outside the most unsuitable place to dry it. Cleanliness and domestic health and comfort demand that special provision should be made for this very important weekly event.

**Unhealthy Areas.**—I am pleased to be able to report further progress in connection with the West Street Unhealthy Area. As already stated a Public Enquiry into the Corporation's scheme for the improvement of this area was held by the Ministry of Health in October, and lasted several days, during which the scheme was examined and objections heard from the various owners of the property involved. Up to the end of the year no decision had been received, but since December 31st, the Minister has issued an Order confirming the scheme and steps are now being taken to give effect to the Minister's decision.

The promotion of the scheme afforded an opportunity for the critics of the procedure laid down in the Housing Acts for dealing with Unhealthy Areas to ventilate their objections. These objections have since been considered by the Minister and an Act is at present before Parliament which has as its chief object the removal of existing anomalies and inequalities and the simplification of the existing rather complicated procedure.



TABLE SHEWING THE TOTAL AMOUNT OF HOUSING WORK  
DONE TO 31st MARCH, 1928.

ASSISTED SCHEMES.

| NAMK OF ESTATE.                         | Sewers<br>laid.<br>Length<br>in yds. | Roads<br>formed,<br>pitched and<br>ashed.<br>Length<br>in yds. | No. of<br>Houses<br>for which<br>Contracts<br>have<br>been<br>signed. | No. of<br>Houses<br>upon<br>which<br>work has<br>been com-<br>menced. | No. of<br>Houses<br>completed<br>included<br>in<br>previous<br>column. |
|-----------------------------------------|--------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|
| Hawksworth Wood ..                      | 4,436                                | 5,109                                                          | 402                                                                   | 402                                                                   | 402                                                                    |
| Wyther House ..                         | 3,857                                | 4,048                                                          | 492                                                                   | 492                                                                   | 492                                                                    |
| Meanwood .. ..                          | 4,394                                | 5,931                                                          | 800                                                                   | 800                                                                   | 800                                                                    |
| Crossgates .. ..                        | 4,510                                | 6,063                                                          | 488                                                                   | 488                                                                   | 488                                                                    |
| Middleton .. ..                         | 4,239                                | 5,477                                                          | 697                                                                   | 697                                                                   | 697                                                                    |
| Ivy House .. ..                         | Existing                             | Existing                                                       | 46                                                                    | 46                                                                    | 46                                                                     |
| Section 12/3 Houses                     | do.                                  | do.                                                            | 398                                                                   | 398                                                                   | 398                                                                    |
| Demonstration Houses,<br>Meanwood .. .. | included                             | above.                                                         | 6                                                                     | 6                                                                     | 6                                                                      |

OTHER THAN ASSISTED SCHEMES  
(including 1923 and 1924 Acts).

|                                                      |          |         |       |       |       |
|------------------------------------------------------|----------|---------|-------|-------|-------|
| Wyther House—<br>(Phormium Houses)                   | included | in A.S. | 6     | 6     | 6     |
| (Gas, Electric and<br>Ordinary) .. ..                | included | in A.S. | 18    | 18    | 18    |
| (N. Area) .. ..                                      | 1,058    | 1,595   | 160   | 160   | 160   |
| Meanwood—<br>Area 4 .. ..                            | 1,542    | 1,361   | 172   | 150   | 14    |
| (Part of 500 scheme)                                 | 770      | 812     | 100   | 100   | 100   |
| (Atholl Steel Houses)                                | 51       | 53      | 2     | 2     | 2     |
| (Gas, Electric and<br>Ordinary) .. ..                | included | above . | 18    | 18    | 18    |
| Crossgates .. ..                                     | included | in A.S. | 26    | 26    | 26    |
| Do. (Part of 500 scheme)                             | included | in A.S. | 150   | 150   | 150   |
| Middleton—<br>(For Improvements<br>Committee) .. ..  | 503      | 500     | 200   | 200   | 200   |
| (Gas, Electric and<br>Ordinary) .. ..                | —        | —       | 18    | 18    | 18    |
| (Part of 500 scheme)                                 | 1,896    | 2,341   | 250   | 250   | 250   |
| Hollin Park .. ..                                    | 2,647    | 2,396   | 345   | 345   | 345   |
| York Road .. ..                                      | 5,676    | 6,001   | 838   | 792   | 554   |
| Harehills .. ..                                      | 603      | 703     | 72    | 72    | 72    |
| Hawksworth—<br>(Gas, Electric and<br>Ordinary) .. .. | included | in A.S. | 18    | 18    | 18    |
| Surplus Lands ..                                     | 575      | 398     | ..    | ..    | ..    |
| Grand Totals ..                                      | 36,757   | 42,788  | 5,722 | 5,654 | 5,280 |



**THE HOUSING, TOWN PLANNING, &c. ACTS, 1909, 1919, 1920, and  
THE HOUSING OF THE WORKING CLASSES ACT, 1890, Parts I. & II.**

Table showing the number of houses examined by the Medical Officer of Health as part of the general survey of the town during the year ending December 31st, 1927, and the numbers represented or otherwise dealt with, pursuant to the Housing Acts, with the corresponding figures for 1925 and 1926.

|                                                                                                                                                                                    | 1925.  | 1926.  | 1927.  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|
| Number of new houses erected during the year :—                                                                                                                                    |        |        |        |
| (a) Total including numbers given separately under (b)                                                                                                                             | 1,199  | 2,065  | 2,815  |
| (b) With State Assistance under the Housing Acts :                                                                                                                                 |        |        |        |
| (i) By the Local Authority .. .. .                                                                                                                                                 | 239    | 780    | 971    |
| (ii) By other bodies or persons .. .. .                                                                                                                                            | 583    | 1,004  | 1,520  |
| <i>Unfit dwelling-houses.</i>                                                                                                                                                      |        |        |        |
| Inspection—(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) .. .. .                                                         | 9,127  | 11,695 | 11,260 |
| (2) Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910 or the Housing Consolidated Regulations, 1925 .. .. . | 614    | 651    | 492    |
| (3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation .. .. .                                               | 343    | 226    | 125    |
| (4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation .. .. .         | 271    | 325    | 367    |
| <i>Remedy of Defects without Service of formal Notices.</i>                                                                                                                        |        |        |        |
| Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers .. .. .                                                | 262    | 302    | 321    |
| <i>Action under Statutory Powers.</i>                                                                                                                                              |        |        |        |
| A.—Proceedings under Section 3 of the Housing Act, 1925.                                                                                                                           |        |        |        |
| (1) Number of dwelling-houses in respect of which notices were served requiring repairs .. .. .                                                                                    | ..     | ..     | ..     |
| (2) Number of dwelling-houses which were rendered fit after service of formal notices :—                                                                                           |        |        |        |
| (a) By owners .. .. .                                                                                                                                                              | 242    | 286    | 267    |
| (b) By Local Authority in default of owners .. .. .                                                                                                                                | ..     | ..     | ..     |
| (3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close .. .. .                             | ..     | 1      | 2      |
| B.—Proceedings under Public Health Acts.                                                                                                                                           |        |        |        |
| (1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied .. .. .                                                                     | 22,339 | 26,869 | 24,435 |
| (2) Number of dwelling-houses in which defects were remedied :—                                                                                                                    |        |        |        |
| (a) By owners .. .. .                                                                                                                                                              | 24,235 | 26,959 | 24,507 |
| (b) By Local Authority in default of owners .. .. .                                                                                                                                | ..     | ..     | ..     |
| C.—Proceedings under Sections 11, 14, and 15 of the Housing Act, 1925.                                                                                                             |        |        |        |
| (1) Number of representations made with a view to the making of Closing Orders .. .. .                                                                                             | 1      | 1      | 9      |
| (2) Number of dwelling-houses in respect of which Closing Orders were made .. .. .                                                                                                 | 1      | 1      | 9      |
| (3) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit .. .. .                                             | ..     | ..     | ..     |
| (4) Number of dwelling-houses in respect of which Demolition Orders were made .. .. .                                                                                              | ..     | 1      | 9      |
| (5) Number of dwelling-houses demolished in pursuance of Closing or Demolition Orders .. .. .                                                                                      | 24     | 21     | 3      |



## Propaganda.

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To teach the individual the ways of health and to foster a general desire to acquire knowledge concerning the basic physiological facts of life, should constitute a fundamental part of the activities of a Public Health Department. Health propaganda should therefore be continuous and not spasmodic and the Annual Health Week should be regarded as an accentuation of the educational work which goes on throughout the year.

The Health Week arrangements in 1927 were varied, having regard to the need for reaching all classes of people, and the following brief particulars will convey an idea of its scope :—

(1) Some 17 Health Talks were given during the week, some to women only, others to men, and a few to mixed audiences. Talks were also given during the dinner-hours at several large works in the City, and addresses were delivered to various religious and welfare organizations. In addition, lectures were given to the Local Branches of the Railway Clerks' Association and the Association of Distributive and Allied Workers ; at each lecture questions were invited and as a rule the invitation was well taken advantage of.

A circular letter was sent to Ministers of Religion in the City, requesting them to touch upon the subject of health in their sermons for the Sunday of Health Week, and to this letter a gratifying response was made.

By favour of Dr. A. Wear, the School Medical Officer, talks on health were given in various Leeds schools during Health Week by members of the school medical staff.

(2) Arrangements were made for the announcement of Health Week by lantern slides at the various music halls and 21 cinemas. The health propaganda film "Giro the Germ," was put on during the week preceding Health Week at the Majestic and Rialto Picture

Houses by kind permission of the respective managements. Unfortunately it was not possible to arrange for the film to be shown during Health Week itself, as the programmes at both cinemas were already full at the time application was made. The film was well received.

(3) Some 50,000 special bookmarks, bearing suitable health slogans were prepared, and by the kind co-operation of the City Librarian were distributed in books issued during the week from the various public libraries in the City. This proved a good means of reaching what might be assumed to be the more intelligent section of the public.

By favour of the Tramways Manager, similar health slogans were also exhibited in the tramcars during the week.

Health posters (16 sheet size) supplied by the Health and Cleanliness Council were displayed at 50 points of vantage throughout the City.

Instructive health literature was distributed during the week to those attending the various meetings, to the employees of numerous factories, to religious congregations, and to the mothers attending the various welfare centres.

Apart from Health Week an endeavour was made through the Leeds Committee for Social Hygiene to meet all demands for lectures on Health subjects from whatever quarter received. It is not generally known that the Leeds Committee for Social Hygiene is the body responsible for organising health propaganda on behalf of the Health Committee. Though on a voluntary basis it is to all intents and purposes financed by the Health Committee. The members including two representatives from the Health Committee give their services gratuitously and for the valuable contribution they thus make to the welfare of the citizens they merit the gratitude alike of the Council and the people.

The Committee met on six occasions during the year.

The number of lectures and addresses given during the year was 27.



**STAFF CHANGES.**

H. E. Reburn, M.B., B.S., L.M.S.S.A., appointed Assistant Resident Medical Officer at Killingbeck, March, 1927, in place of Mabel M. McLean, M.B., Ch.B., resigned February, 1927.

Gladys E. Ainscow, M.B., Ch.B., D.P.H., appointed Assistant Medical Officer of Health for Maternity and Child Welfare, January, 1927, in place of Dr. Nora Smith, resigned December, 1926.

Arthur Massey, M.D., Ch.B., D.P.H., appointed Assistant Medical Officer of Health and Chief Sanitary Inspector, May, 1927, in place of Dr. A. S. Hebblethwaite, resigned March, 1927.

E. T. Ruston, M.B., Ch.B., appointed Assistant Medical Officer for Venereal Diseases, May, 1927, in place of Dr. D. J. Mackinnon, resigned March, 1927.

L. W. Hearn, M.B., B.S., appointed Assistant Clinical Tuberculosis Officer, October, 1927, in place of Dr. Z. P. Fernandez.

H. E. Reburn, M.B., B.S., L.M.S.S.A., appointed Resident Medical Officer at Gateforth Sanatorium, October, 1927, in place of Dr. H. M. Holt, retired on superannuation.

Thomas Ramsbottom appointed Manager at Factory-in-the-Field at Rutland Lodge, November, 1927.

J. A. Dunlop, M.B., Ch.B., D.P.H., appointed Assistant Resident Medical Officer at Killingbeck, November, 1927, in place of Dr. H. E. Reburn, transferred to Gateforth Sanatorium.

Sarah N. S. Barker, M.B., Ch.B., L.R.C.P., M.R.C.S., appointed Assistant Medical Officer for Maternity and Child Welfare, December, 1927, in place of Dr. Marion E. Mackenzie, resigned, July 1927.

Anne M. Forrest, M.B., Ch.B., D.P.H., appointed Assistant Medical Officer for Maternity and Child Welfare, December, 1927, in place of Dr. H. M. Holt, resigned December, 1927.

Catherine M. Gray, M.B., Ch.B., appointed Assistant Medical Officer for Maternity and Child Welfare, December, 1927, in place of Dr. E. Thompson, resigned.

B. A. Burrell, F.I.C., F.C.S., City Analyst, died July 10th, 1927.

## APPENDIX 1.

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### SCHEME FOR THE ESTABLISHMENT OF ARTIFICIAL SUNLIGHT, ORTHOPÆDIC AND DENTAL CLINICS AT CENTRAL PREMISES IN CALVERLEY STREET.

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*Approved by the City Council Oct. 5th, 1927.*

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The scheme given in detail in the Annual Report for 1926 and since approved by the Minister of Health for the treatment of orthopaedics in children under three years of age included proposals for the holding of special clinics at five of the Infant Welfare Centres, these clinics to be under the supervision of the orthopaedic specialist appointed under the scheme.

Since presenting the scheme the two bungalows in Calverley Street, formerly used for exhibition purposes by the Gas and Electricity Departments, have been generously offered by the Committees of these Departments to this Committee. The offer has been accepted, and the buildings handed over to the Leeds Babies' Welcome Association, upon which the responsibility for the provision and upkeep of buildings required by the Maternity and Child Welfare scheme rests.

The acquisition of these two bungalows makes it possible to limit the number of centres at which it was proposed to hold special orthopaedic clinics, and to centralize this work in one building. By doing so there will be a considerable saving of time of the staff, and the organization will be greatly simplified, besides which premises so centrally situated will be conveniently accessible to mothers residing in all but the most outlying parts, thereby adding to the general usefulness and efficiency of the scheme.

Both bungalows are of similar size and construction. The accommodation in each bungalow consists of four rooms of the following dimensions:—11' 0" × 9' 6", 17' 0" × 14' 0", 16' 0" × 10' 0", and 18' 0" × 12' 0". The bungalows are of wood, well lighted, aspect Southerly, and are provided with gas, electricity and water. There is no drainage at present, and this will have to be provided if the proposals I am now making are adopted. It is proposed to devote one bungalow entirely to orthopaedic work, whilst the other would be adapted for use as a dental clinic for expectant mothers and children under five years of age.



## APPENDIX 1.

*Orthopaedic Bungalow.*—The rooms in the orthopaedic bungalow will be allocated as follows :—

- (1) Consulting room for medical officer.
- (2) Room for massage and remedial exercises.
- (3) Plaster room.
- (4) Room for artificial sunlight.

The equipment, apart from cupboards, chairs and tables which would be supplied by the Leeds Babies' Welcome Association, would consist of remedial appliances, plaster room appurtenances, electro-medical instruments and an artificial sunlight lamp with necessary accessories, the total estimated cost being £190. It is not proposed that the artificial sunlight installation should be available only for orthopaedic cases, but that it should serve the Infant Welfare Centres on the North side of the river.

The centre will be open every day, and the two masseuses recently appointed will be in attendance three sessions a week to carry out such treatment as may have been ordered by the medical officer. One special clinic will be held every week, at which the orthopaedic specialist will attend and see any children referred to him from the Infant Welfare Centres.

The artificial sunlight clinic will be open for six sessions per week, and will be under the medical supervision of Dr. Cecilia Shiskin, who has had experience of light therapy at the Holbeck Sunlight Clinic.

*Dental Bungalow.*—The second bungalow will make an admirable centre for the treatment of dental defects in expectant mothers and children under five years of age. Such facilities have long been required in this city. Indeed, in 1920 a scheme was prepared and about to be launched when the Government's economy proposals were introduced and prevented the scheme coming to fruition. Since then the building in which the clinic was to have been established has been sold, and it has not been possible to find other suitable premises.

The bungalow could be adapted for the purpose of a dental clinic with very little expenditure. The furnishing and general equipping of the building, as in the case of the orthopaedic bungalow, is the responsibility of the Leeds Babies' Welcome Association, and I understand is already in hand.

The accommodation in the dental bungalow would be allocated as follows :—

- (1) Dental surgery.
- (2) Recovery room.
- (3) Staff room and office.
- (4) General waiting room to serve both bungalows.

Dental appliances, instruments and other special equipment would have to be provided at an estimated cost of £100.

The dental clinic will be open on five sessions, that is three mornings and two afternoons, each week, three of which would be for expectant mothers

## APPENDIX 1.

and two for children under five years. It is proposed to appoint a qualified dental surgeon to take charge, but as there will not be sufficient work to occupy his whole time, the appointment would be joint with the Tuberculosis Department, which would absorb the remaining six sessions per week. In this way it will be possible to make the appointment full time and thus avoid the difficulties and inconvenience inseparable from part-time service. A nurse or attendant will also have to be appointed to assist the dentist.

*Staff.*—The staff required will, therefore, include a consultant orthopaedic surgeon, a dentist, a fully-trained nurse, if possible with experience in sunlight therapy, and a dental attendant. The appointment of the two former has already received the approval of the Health Committee, whilst the two masseuses have already taken up duty.

*Finance.*—The initial outlay for the purchase of appliances, equipment, etc., will be £190 for the orthopaedic and sunlight clinic, and £100 for the dental clinic, a total of £290.

The cost of maintenance for both clinics for a full year is estimated to be:—

|                               |                                         | £      | s. | d. |
|-------------------------------|-----------------------------------------|--------|----|----|
| <i>Orthopaedic<br/>Clinic</i> | Consultant orthopaedic surgeon .. ..    | 160    | 0  | 0  |
|                               | Salaries—2 masseuses .. ..              | 750    | 0  | 0  |
|                               | Electricity for medical purposes .. ..  | 20     | 0  | 0  |
|                               | Repairs and renewals .. ..              | 25     | 0  | 0  |
|                               | Printing, postages and stationery .. .. | 15     | 0  | 0  |
|                               | Travelling expenses—staff .. ..         | 5      | 0  | 0  |
|                               | Superannuation contributions .. ..      | 45     | 10 | 0  |
|                               | Salary of Nurse .. ..                   | 170    | 0  | 0  |
| <i>Dental<br/>Clinic.</i>     | Salary—Dental Surgeon .. ..             | 225    | 0  | 0  |
|                               | Electricity .. ..                       | 10     | 0  | 0  |
|                               | Repairs and renewals .. ..              | 25     | 0  | 0  |
|                               | Printing, postages and stationery .. .. | 15     | 0  | 0  |
|                               | Travelling expenses—staff .. ..         | 5      | 0  | 0  |
|                               | Superannuation contributions .. ..      | 19     | 15 | 0  |
|                               | Drugs and dressings .. ..               | 30     | 0  | 0  |
| TOTAL ..                      |                                         | £1,520 | 5  | 0  |

It is not proposed for the present to make any charge for the treatment of expectant mothers, except in the case of those who are insured and in receipt of dental benefit and when dentures are supplied, or an anæsthetic has to be given.

As regards children under five years of age, where the parents are in a position to pay they will be expected to do so, the amount of contribution to be assessed by the Milk Committee in accordance with a scale of charges to be approved.



## APPENDIX 2.

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### A SCHEME TO PREVENT DIPHTHERIA IN CHILDREN.

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*Approved by the City Council, October 5th, 1927.*

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Since the cause of diphtheria was discovered in 1884 by Klebs and Loeffler, much progress has been made in the treatment and prevention of this important infectious disease. Diphtheria was first made notifiable in 1889, following upon which measures for the isolation of infected persons, the control of contacts, and the disinfection of premises and clothing came into general operation. Treatment by antitoxin was introduced in 1894 and quickly reduced the case mortality of the disease from 30 per cent. to 10 per cent.; since 1904, however, this decline has slowed down and the case mortality has been for some time around 7 per cent. Meanwhile the attack rate and the virulence of the disease have been increasing and despite antitoxin treatment, the mortality and damaged health due to it are still serious enough to compel the close attention of the public health worker. In recent years a new line of attack has been developed by the elaboration of practical immunizing measures.

In 1913 Schick of Vienna introduced his immunity test for diphtheria and in the same year made the first attempts to immunize human beings by means of a toxin-antitoxin mixture. Since then as a result of exhaustive experimental work in many countries, notably the U.S.A. and this country, the methods of applying the test, as well as of immunizing susceptibles has been perfected. In 1925-26 toxoid-antitoxin was substituted for toxin-antitoxin thus removing any element of danger to the patient which might have previously existed. Recent work on the subject has further improved and simplified the process.

In Great Britain from 1920 Schick testing and immunization have been practised in :—

- (a) Certain residential institutions such as hospitals, children's homes, etc., in many large towns and certain counties.
- (b) The elementary schools of Edinburgh since 1923, Aberdeen and county since 1924, and Birmingham, Cardiff, and Dundee in 1926.
- (c) The infant welfare centres of certain of the London Boroughs.

Outside Great Britain Schick testing and immunization are also in active use, though to a varying extent, in certain European countries and in Canada, South America, Australia, New Zealand, South Africa and Japan.



## APPENDIX 2.

The *modus operandi* generally adopted is:—

- (I.) The application of the susceptibility test by means of which the community is divided into susceptibles and non-susceptibles.
- (II.) The susceptibles are then immunized by a series of three sub-cutaneous injections in the arm of toxoid-antitoxin at intervals of a week.

The need for a susceptibility test prior to immunization depends entirely on age. The younger the child above six months the less the need to apply the test, and it is generally assumed that the great majority of children between six months and five years of age are susceptible. It is possible therefore to dispense with the test entirely in children of these ages and to proceed direct with inoculation. This greatly simplifies the procedure and renders possible the ideal of having every child between the ages mentioned rendered immune.

The most favourable age for inducing immunity is between six months and five years as it ensures the protection of the child during the susceptible years and until the natural immunity of later life is established.

In the inauguration of a scheme of child immunization, the co-operation, interest, and consent of parents are, of course essential, and these can be obtained only by patient and tactful propaganda in the schools and infant welfare centres.

That facilities for the immunizing of young children against diphtheria are required will be apparent from a perusal of the following facts relating to the disease in Leeds:—

During the 10 years 1917-1926 the total number of cases notified in this City was 5,375 of which 23·3 per cent. were in children under five years of age. The deaths numbered 392, of which as many as 56·6 per cent. occurred in children under five years. The case mortality at all ages was 7·3 per cent. and under five years of age 16·9 per cent.

Of the 5,375 cases notified 4,829 were treated in hospital at a cost to the City estimated at £110,101 4s., or an average annual cost of £11,000 during the 10 years 1917-1926. This is computed on the basis of an average stay per case in hospital of 38 days at a cost of 12s. od. per day, of which 8s. 6d. represents maintenance and 3s. 6d. capital charges. This does not include the cost of removal and disinfection of the house, bedding, etc., which would probably add some £314 to the annual total or 13s. od. to the cost per case in respect of hospital cases. The disinfection work undertaken by this Department in respect of cases nursed at home would give an additional cost of £22 annually, or 8s. od. per case.

Theoretically if every child in the above total had been immunized against diphtheria in its early years, the expenditure of such a large sum on treatment would have been unnecessary. Such a result is too utopian to be attainable, at present at all events, perhaps at some future date it may not only be possible but even commonplace.



## APPENDIX 2.

There are in Leeds approximately 37,000 children under five years of age. The cost of material for immunization (toxoid-antitoxin, syringes, etc.) works out at about 3s. 0d per head. Therefore to immunize the whole infant population would involve the expenditure of £5,500—that is assuming the work were carried out by the present medical staff of the Department. Once the infant population was immunized all that would be required to maintain immunity would be the inoculation of the infants born each year into the population amounting to an average of say 7,000, which at 3s. 0d. per head would entail a yearly outlay of £1,050. It is unlikely that more than a minority of parents would take advantage of the facilities provided for the protection of their children, at least for a few years, until the benefits to be derived from it became more widely understood and appreciated. But if only a few cases were prevented, the financial saving would be considerable.

The scheme at present proposed is a limited one and is restricted to children attending the infant welfare centres, of which there are some 8,700 under five years of age. Assuming that parental consent could be obtained in only 30 per cent. of cases, that would mean the immunization of 2,600 children at a cost of roughly £400. According to the statistics of past years, out of every 2,600 children of six months of age some 38 cases of diphtheria with three deaths would occur between six months and five years, and the cost of treatment of 38 children in hospital would be about £850. It is apparent therefore that even a small start such as that outlined would represent a saving of life, health, and money, besides giving an additional sense of security, both to the Health Authority and to parents themselves.

*Combined Immunization against Scarlet Fever and Diphtheria.*—Similar preventive measures as those directed against diphtheria have been practised—so far principally in U.S.A.—in respect of scarlet fever, but this work is only in the experimental stage and the results not sufficiently conclusive to justify immediate adoption in this city.

In one big town in Great Britain there has recently been inaugurated a scheme of combined immunization of children against diphtheria and scarlet fever. The technique is similar to that briefly outlined above in connection with diphtheria, immunization being effected by three injections, at intervals of a week, of a mixture of diphtheria toxoid-antitoxin and scarlatinal antitoxin. The process claims to produce concurrently immunity to both diseases. This work is still in its infancy and it would appear that unless the prophylactic mixture is exactly balanced (and it is not possible at this stage to procure a mixture of tested and guaranteed balance) there is real danger of the diphtheria toxoid-antitoxin losing much of its immunizing power and moreover the extent of the scarlet-immunization efficiency of such a mixture is problematical. Combined prophylaxis therefore has hardly yet been sufficiently tested to justify its inclusion in the present scheme. Laboratory work on the subject is however proceeding and ere long its adoption as a practical preventive measure may be possible.

# APPENDIX 2.

## INCIDENCE AND DEATHS FROM DIPHTHERIA. YEARS 1917—1926.

| Number of Cases notified. |      |      |      |      |      |      |      |      |      |        | Number of Cases notified under 5 years. |      |      |      |      |      |      |      |      |      |       |
|---------------------------|------|------|------|------|------|------|------|------|------|--------|-----------------------------------------|------|------|------|------|------|------|------|------|------|-------|
| 1917                      | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | Total. | 1917                                    | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | Total |
| 549                       | 542  | 811  | 885  | 665  | 470  | 368  | 289  | 422  | 374  | 5,375  | 141                                     | 151  | 169  | 176  | 135  | 104  | 86   | 83   | 117  | 90   | 1,252 |

| Number of Deaths. |      |      |      |      |      |      |      |      |      |        | Number of Deaths under 5 years. |      |      |      |      |      |      |      |      |      |       |
|-------------------|------|------|------|------|------|------|------|------|------|--------|---------------------------------|------|------|------|------|------|------|------|------|------|-------|
| 1917              | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | Total. | 1917                            | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | Total |
| 60                | 47   | 43   | 64   | 38   | 28   | 20   | 27   | 39   | 26   | 392    | 33                              | 23   | 29   | 38   | 17   | 18   | 14   | 13   | 17   | 10   | 212   |



# APPENDIX 3.

## MINISTRY OF HEALTH TABLES.

TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1927 AND PREVIOUS YEARS.

| YEAR. | Population<br>estimated to<br>Middle of each<br>Year. | BIRTHS.                     |         |       | TOTAL DEATHS<br>REGISTERED IN THE<br>DISTRICT. |       |         | TRANSFERABLE<br>DEATHS. |                                                           | NETT DEATHS BELONGING TO<br>THE DISTRICT.                  |                      |                                      |              |       |
|-------|-------------------------------------------------------|-----------------------------|---------|-------|------------------------------------------------|-------|---------|-------------------------|-----------------------------------------------------------|------------------------------------------------------------|----------------------|--------------------------------------|--------------|-------|
|       |                                                       | Un-<br>corrected<br>Number. | Nett.   |       | Number.                                        | Rate. | Number. | Rate.                   | Of Non-<br>residents<br>registered<br>in the<br>District. | Of Resi-<br>dents not<br>registered<br>in the<br>District. | Under 1 Year of Age. |                                      | At all Ages. |       |
|       |                                                       |                             | Number. | Rate. |                                                |       |         |                         |                                                           |                                                            | Number.              | Rate per<br>1,000<br>Nett<br>Births. | Number.      | Rate. |
|       |                                                       |                             |         |       |                                                |       |         |                         |                                                           |                                                            |                      |                                      |              |       |
| 1     | 2                                                     | 3                           | 4       | 5     | 6                                              | 7     | 8       | 9                       | 10                                                        | 11                                                         | 12                   | 13                                   |              |       |
| 1917  | 438,254                                               | 7,738                       | 7,566   | 17.3  | 6,962                                          | 15.9  | 307     | 397                     | 1,023                                                     | 135                                                        | 7,052                | 16.1                                 |              |       |
| 1918  | 427,589                                               | 7,609                       | 7,392   | 17.3  | 8,452                                          | 19.8  | 318     | 395                     | 984                                                       | 133                                                        | 8,529                | 19.9                                 |              |       |
| 1919  | 430,834                                               | 7,837                       | 7,564   | 17.6  | 7,099                                          | 16.5  | 401     | 294                     | 899                                                       | 119                                                        | 6,992                | 16.2                                 |              |       |
| 1920  | 448,913                                               | 11,587                      | 11,229  | 25.0  | 6,725                                          | 15.0  | 417     | 283                     | 1,232                                                     | 110                                                        | 6,591                | 14.7                                 |              |       |
| 1921  | 465,500                                               | 10,427                      | 10,144  | 21.8  | 6,424                                          | 13.8  | 408     | 269                     | 997                                                       | 98                                                         | 6,285                | 13.5                                 |              |       |
| 1922  | 466,700                                               | 9,500                       | 9,253   | 19.8  | 6,589                                          | 14.1  | 425     | 315                     | 935                                                       | 101                                                        | 6,479                | 13.9                                 |              |       |
| 1923  | 469,900                                               | 8,991                       | 8,684   | 18.5  | 6,128                                          | 13.0  | 451     | 309                     | 773                                                       | 89                                                         | 5,986                | 12.7                                 |              |       |
| 1924  | 471,600                                               | 8,862                       | 8,558   | 18.1  | 6,824                                          | 14.5  | 435     | 358                     | 921                                                       | 108                                                        | 6,747                | 14.3                                 |              |       |
| 1925  | 472,900                                               | 8,518                       | 8,180   | 17.3  | 6,286                                          | 13.3  | 570     | 321                     | 748                                                       | 91                                                         | 6,037                | 12.8                                 |              |       |
| 1926  | 473,400                                               | 8,437                       | 8,065   | 17.0  | 6,285                                          | 13.3  | 531     | 308                     | 748                                                       | 93                                                         | 6,062                | 12.8                                 |              |       |
| 1927  | 477,500                                               | 8,075                       | 7,790   | 16.3  | 6,438                                          | 13.5  | 578     | 338                     | 629                                                       | 81                                                         | 6,198                | 13.0                                 |              |       |

Area of District in acres (land and inland water) } 30,136½  
 Total population at all ages at the 1921 Census 458,232  
 Do. adjusted for the 1921 Census 465,500



# APPENDIX 4.

| NOTIFIABLE DISEASE.                                  | NUMBER OF CASES NOTIFIED. |                |                |                 |                  |                  |                  | TOTAL CASES NOTIFIED IN EACH LOCALITY.<br>(e.g. Parish or Ward) of the District. |        |             |           |       |        |               |               |          |            |       |             |            | Total Cases removed to Hos-<br>pital. |              |                     |          |             |       |
|------------------------------------------------------|---------------------------|----------------|----------------|-----------------|------------------|------------------|------------------|----------------------------------------------------------------------------------|--------|-------------|-----------|-------|--------|---------------|---------------|----------|------------|-------|-------------|------------|---------------------------------------|--------------|---------------------|----------|-------------|-------|
|                                                      | At all Ages.              | At Ages—Years. |                |                 |                  |                  |                  | Central.                                                                         | North. | North-East. | New Ward. | East. | South. | East Hunslet. | West Hunslet. | Hilbeck. | Mill Hill. | West. | North-West. | Brunswick. |                                       | New Wortley. | Armley and Wortley. | Bramley. | Headingley. |       |
|                                                      |                           | under 1.       | 1 and 5 years. | 5 and 15 years. | 15 and 25 years. | 25 and 45 years. | 45 and 65 years. |                                                                                  |        |             |           |       |        |               |               |          |            |       |             |            |                                       |              |                     |          |             |       |
| Small-pox .. .. .                                    | 59                        | 1              | 3              | 17              | 16               | 7                | 14               | 1                                                                                | 4      | 9           | 19        | 1     | 6      | 1             | 2             | 5        | ..         | 2     | ..          | 8          | ..                                    | 6            | 1                   | ..       | 3           | 59    |
| *Chicken-pox .. .. .                                 | 321                       | 10             | 125            | 177             | 6                | 3                | ..               | ..                                                                               | 5      | 33          | 11        | 14    | ..     | ..            | 18            | 41       | 17         | 2     | 40          | 8          | 8                                     | 6            | 38                  | 23       | 31          | 17    |
| Cholera (C) Plague (P) .. .. .                       | ..                        | ..             | ..             | ..              | ..               | ..               | ..               | ..                                                                               | ..     | ..          | ..        | ..    | ..     | ..            | ..            | ..       | ..         | ..    | ..          | ..         | ..                                    | ..           | ..                  | ..       | ..          | ..    |
| Diphtheria (including Mem-<br>branous croup) .. .. . | 439                       | 3              | 94             | 257             | 59               | 23               | 3                | ..                                                                               | 19     | 34          | 37        | 19    | 47     | 15            | 44            | 11       | 37         | 12    | 15          | 47         | 27                                    | 9            | 8                   | 8        | 50          | 425   |
| Erysipelas .. .. .                                   | 320                       | 9              | 6              | 18              | 33               | 81               | 133              | 40                                                                               | 9      | 36          | 28        | 7     | 28     | 10            | 32            | 24       | 19         | 13    | 14          | 17         | 18                                    | 10           | 15                  | 9        | 31          | 127   |
| Scarlet Fever.. .. .                                 | 773                       | 1              | 206            | 458             | 70               | 37               | 1                | ..                                                                               | 41     | 56          | 52        | 40    | 47     | 19            | 79            | 37       | 47         | 29    | 24          | 34         | 62                                    | 23           | 59                  | 25       | 99          | 716   |
| Measles .. .. .                                      | 8,569                     | 531            | 4,837          | 3,112           | 65               | 24               | ..               | ..                                                                               | 150    | 580         | 491       | 373   | 827    | 360           | 1,531         | 766      | 460        | 110   | 386         | 308        | 214                                   | 327          | 496                 | 359      | 831         | 134   |
| German Measles .. .. .                               | 95                        | 10             | 31             | 46              | 6                | 2                | ..               | ..                                                                               | 2      | 17          | 9         | 3     | 3      | 2             | 2             | 12       | 4          | 2     | 2           | 3          | 4                                     | 1            | 2                   | 1        | 26          | 2     |
| Typhus Fever .. .. .                                 | ..                        | ..             | ..             | ..              | ..               | ..               | ..               | ..                                                                               | ..     | ..          | ..        | ..    | ..     | ..            | ..            | ..       | ..         | ..    | ..          | ..         | ..                                    | ..           | ..                  | ..       | ..          | ..    |
| Enteric Fever .. .. .                                | 14                        | ..             | 3              | 6               | 3                | 1                | 1                | ..                                                                               | ..     | 2           | 1         | ..    | 1      | ..            | ..            | ..       | ..         | 4     | 3           | ..         | ..                                    | ..           | 1                   | ..       | 2           | 8     |
| Relapsing fever (R) Continued<br>fever (C) .. .. .   | ..                        | ..             | ..             | ..              | ..               | ..               | ..               | ..                                                                               | ..     | ..          | ..        | ..    | ..     | ..            | ..            | ..       | ..         | ..    | ..          | ..         | ..                                    | ..           | ..                  | ..       | ..          | ..    |
| Puerperal Fever .. .. .                              | 37                        | ..             | ..             | ..              | 10               | 27               | ..               | ..                                                                               | ..     | 3           | 5         | 1     | 2      | ..            | 4             | ..       | ..         | 1     | 5           | 2          | 1                                     | 2            | 5                   | 1        | 5           | 17    |
| Puerperal Pyrexia .. .. .                            | 89                        | ..             | ..             | ..              | 22               | 67               | ..               | ..                                                                               | 1      | 9           | 5         | 1     | 5      | 7             | 9             | 1        | 10         | ..    | 15          | 3          | 3                                     | 2            | 2                   | 5        | 11          | 23    |
| Cerebro-Spinal Meningitis .. .. .                    | 5                         | 2              | ..             | ..              | 3                | ..               | ..               | ..                                                                               | 1      | ..          | ..        | ..    | 1      | ..            | ..            | 1        | ..         | 1     | ..          | ..         | ..                                    | ..           | ..                  | 1        | ..          | 1     |
| Poliomyelitis .. .. .                                | 17                        | 1              | 11             | 5               | ..               | ..               | ..               | ..                                                                               | 1      | 5           | 6         | ..    | 11     | 5             | 11            | 4        | 4          | ..    | 9           | 2          | 3                                     | 10           | 7                   | 3        | 5           | 1     |
| Ophthalmia Neonatorum .. .. .                        | 86                        | ..             | ..             | ..              | ..               | ..               | ..               | ..                                                                               | 3      | ..          | ..        | ..    | ..     | ..            | 3             | 2        | ..         | ..    | ..          | ..         | ..                                    | ..           | ..                  | ..       | ..          | ..    |
| Encephalitis Lethargica .. .. .                      | 8                         | ..             | ..             | ..              | 3                | 1                | 4                | ..                                                                               | ..     | ..          | ..        | ..    | ..     | ..            | ..            | 1        | ..         | ..    | ..          | ..         | ..                                    | ..           | ..                  | ..       | ..          | ..    |
| Malaria .. .. .                                      | 1                         | ..             | ..             | ..              | ..               | 1                | ..               | ..                                                                               | ..     | ..          | ..        | ..    | ..     | ..            | ..            | ..       | ..         | ..    | ..          | ..         | ..                                    | ..           | ..                  | ..       | ..          | ..    |
| Dysentery .. .. .                                    | 2                         | ..             | 1              | ..              | ..               | 1                | ..               | ..                                                                               | ..     | ..          | ..        | ..    | ..     | ..            | ..            | ..       | ..         | ..    | ..          | ..         | ..                                    | ..           | ..                  | ..       | ..          | ..    |
| Other Diseases .. .. .                               | 215                       | 15             | 57             | 46              | 47               | 40               | 7                | 3                                                                                | 7      | 15          | 23        | 50    | 17     | 5             | 14            | 3        | 9          | 12    | 5           | 3          | 7                                     | 5            | 1                   | 18       | 21          | 215   |
| Pulmonary Tuberculosis .. .. .                       | 811                       | ..             | 16             | 122             | 191              | 296              | 165              | 21                                                                               | 32     | 74          | 85        | 8     | 80     | 27            | 79            | 47       | 52         | 8     | 57          | 43         | 38                                    | 31           | 59                  | 28       | 63          | 720   |
| Other Forms of Tuberculosis .. .. .                  | 155                       | 4              | 32             | 52              | 31               | 26               | 9                | 1                                                                                | 5      | 7           | 16        | 3     | 9      | 2             | 11            | 21       | 18         | 3     | 8           | 7          | 8                                     | 8            | 12                  | 12       | 5           | 31    |
| Pneumonia (Acute primary) .. .. .                    | 939                       | 75             | 236            | 164             | 109              | 166              | 148              | 41                                                                               | 28     | 78          | 75        | 14    | 86     | 43            | 159           | 62       | 119        | 2     | 42          | 55         | 43                                    | 35           | 34                  | 30       | 34          | 35    |
| Do. (Acute Influenzal) .. .. .                       | 212                       | 17             | 38             | 35              | 21               | 56               | 27               | 18                                                                               | 6      | 33          | 45        | 2     | 31     | 3             | 20            | 16       | 9          | ..    | 4           | 13         | 6                                     | 1            | 3                   | 4        | 16          | 4     |
| TOTALS .. .. .                                       | 13,167                    | 765            | 5,696          | 4,515           | 695              | 859              | 512              | 125                                                                              | 314    | 991         | 910       | 536   | 1,211  | 519           | 2,020         | 1,056    | 806        | 199   | 629         | 555        | 443                                   | 472          | 743                 | 527      | 1,236       | 2,540 |

Isolation Hospital or Hospitals, Sanatoria, &c.:—City Fever Hospital, Seacroft and Killingbeck.

In addition to the 720 Pulmonary Tuberculosis and 31 Tuberculosis (Other Forms), removed, 108 Pulmonary Tuberculosis and 9 Tuberculosis (Other Forms), were admitted to "The Hollies," Westwood Lane, and 145 Pulmonary Tuberculosis and 2 Tuberculosis (Other Forms), were admitted to Gateforth Sanatorium which is outside the City. They are included in the 811 and 155 notified.

\*Notified from 1st November, 1927.



## APPENDIX 5.

CAUSES OF, AND AGES AT DEATH DURING THE CALENDAR YEAR 1927.

### REGISTRAR GENERAL'S FIGURES.

| CAUSES OF DEATH.            | Sex. | All Ages. | 0-  | 1-  | 2- | 5-  | 15- | 25- | 45- | 65- | 75- |
|-----------------------------|------|-----------|-----|-----|----|-----|-----|-----|-----|-----|-----|
| All Causes .. ..            | M.   | 3,239     | 375 | 114 | 93 | 100 | 126 | 369 | 998 | 627 | 437 |
|                             | F.   | 2,961     | 254 | 90  | 67 | 84  | 122 | 346 | 711 | 654 | 633 |
| 1. Enteric Fever .. ..      | M.   | 1         | ..  | ..  | .. | ..  | 1   | ..  | ..  | ..  | ..  |
|                             | F.   | 1         | ..  | ..  | .. | ..  | ..  | 1   | ..  | ..  | ..  |
| 2. Small-pox .. ..          | M.   | ..        | ..  | ..  | .. | ..  | ..  | ..  | ..  | ..  | ..  |
|                             | F.   | ..        | ..  | ..  | .. | ..  | ..  | ..  | ..  | ..  | ..  |
| 3. Measles .. ..            | M.   | 68        | 15  | 31  | 19 | 3   | ..  | ..  | ..  | ..  | ..  |
|                             | F.   | 49        | 7   | 21  | 14 | 7   | ..  | ..  | ..  | ..  | ..  |
| 4. Scarlet Fever .. ..      | M.   | 2         | ..  | ..  | .. | ..  | ..  | ..  | ..  | ..  | ..  |
|                             | F.   | 4         | ..  | 2   | .. | ..  | ..  | ..  | ..  | ..  | ..  |
| 5. Whooping Cough .. ..     | M.   | 21        | 5   | 10  | 4  | ..  | ..  | ..  | ..  | ..  | ..  |
|                             | F.   | 25        | 13  | 9   | 1  | ..  | ..  | ..  | ..  | ..  | ..  |
| 6. Diphtheria .. ..         | M.   | 14        | ..  | 2   | 6  | 5   | 1   | ..  | ..  | ..  | ..  |
|                             | F.   | 14        | ..  | 1   | 5  | 8   | ..  | ..  | ..  | ..  | ..  |
| 7. Influenza .. ..          | M.   | 87        | 5   | 6   | .. | 6   | 4   | 18  | 23  | 19  | 6   |
|                             | F.   | 86        | 4   | 3   | 3  | ..  | 5   | 11  | 27  | 22  | 11  |
| 8. Encephalitis Lethargica  | M.   | 2         | ..  | ..  | .. | ..  | 1   | ..  | 1   | ..  | ..  |
|                             | F.   | 4         | ..  | ..  | .. | ..  | 1   | 1   | 2   | ..  | ..  |
| 9. Meningococcal            | M.   | 6         | 3   | ..  | 2  | 1   | ..  | ..  | ..  | ..  | ..  |
| Meningitis                  | F.   | 2         | ..  | ..  | .. | 1   | 1   | ..  | ..  | ..  | ..  |
| 10. Tuberculosis of         | M.   | 284       | 2   | 3   | 4  | 5   | 38  | 108 | 112 | 12  | ..  |
| respiratory system          | F.   | 177       | ..  | ..  | 2  | 12  | 57  | 67  | 33  | 6   | ..  |
| 11. Other Tuberculous       | M.   | 48        | 6   | 8   | 10 | 6   | 8   | 4   | 3   | 2   | 1   |
| Diseases                    | F.   | 48        | 2   | 11  | 7  | 9   | 6   | 4   | 7   | 1   | 1   |
| 12. Cancer, malignant       | M.   | 307       | ..  | ..  | .. | 5   | ..  | 21  | 151 | 99  | 31  |
| disease                     | F.   | 347       | ..  | ..  | 2  | ..  | 1   | 35  | 152 | 102 | 55  |
| 13. Rheumatic Fever         | M.   | 4         | ..  | ..  | .. | ..  | 1   | 3   | ..  | ..  | ..  |
|                             | F.   | 8         | ..  | ..  | .. | 1   | 2   | 3   | 2   | ..  | ..  |
| 14. Diabetes .. ..          | M.   | 28        | ..  | ..  | .. | ..  | 3   | 3   | 12  | 7   | 6   |
|                             | F.   | 36        | ..  | ..  | .. | ..  | ..  | 7   | 55  | 58  | 27  |
| 15. Cerebral Hæmorrhage,    | M.   | 147       | ..  | ..  | .. | ..  | 3   | 3   | 16  | 7   | 7   |
| &c.                         | F.   | 220       | ..  | ..  | .. | ..  | ..  | 1   | 60  | 87  | 72  |
| 16. Heart Disease .. ..     | M.   | 459       | ..  | ..  | 1  | 8   | 8   | 40  | 164 | 134 | 104 |
|                             | F.   | 492       | 1   | ..  | 2  | 8   | 8   | 43  | 132 | 158 | 140 |
| 17. Arterio-sclerosis       | M.   | 286       | ..  | ..  | .. | ..  | ..  | 5   | 62  | 109 | 110 |
|                             | F.   | 198       | ..  | ..  | .. | ..  | ..  | ..  | 28  | 66  | 104 |
| 18. Bronchitis .. ..        | M.   | 181       | 11  | 1   | 1  | 1   | ..  | 11  | 67  | 48  | 41  |
|                             | F.   | 201       | 8   | 2   | 2  | 2   | 3   | 8   | 44  | 49  | 83  |
| 19. Pneumonia (all forms)   | M.   | 315       | 64  | 36  | 18 | 19  | 12  | 33  | 94  | 26  | 13  |
|                             | F.   | 194       | 38  | 26  | 15 | 6   | 5   | 24  | 35  | 25  | 20  |
| 20. Other respiratory       | M.   | 30        | 2   | ..  | 1  | 1   | 2   | 7   | 10  | 4   | 3   |
| diseases                    | F.   | 25        | 1   | 1   | 1  | 1   | 2   | 3   | 3   | 7   | 6   |
| 21. Ulcer of stomach or     | M.   | 40        | ..  | ..  | .. | ..  | ..  | 13  | 19  | 5   | 3   |
| duodenum                    | F.   | 7         | ..  | ..  | .. | ..  | ..  | 3   | 2   | ..  | ..  |
| 22. Diarrhœa, &c. ..        | M.   | 50        | 42  | 4   | 2  | ..  | 1   | 1   | ..  | ..  | ..  |
|                             | F.   | 42        | 30  | 3   | 1  | 1   | 1   | 2   | 1   | 1   | 2   |
| 23. Appendicitis and        | M.   | 19        | ..  | ..  | 1  | 2   | 7   | 4   | 5   | ..  | ..  |
| Typhlitis                   | F.   | 20        | ..  | ..  | .. | 2   | 4   | 7   | 6   | ..  | 1   |
| 24. Cirrhosis of Liver      | M.   | 17        | ..  | ..  | .. | ..  | ..  | 1   | 14  | 1   | 1   |
|                             | F.   | 5         | ..  | ..  | .. | ..  | ..  | 1   | 2   | 2   | ..  |
| 25. Acute and Chronic       | M.   | 87        | 1   | ..  | 1  | 1   | 5   | 10  | 42  | 20  | 7   |
| Nephritis                   | F.   | 96        | ..  | ..  | 1  | 1   | 1   | 14  | 31  | 36  | 12  |
| 26. Puerperal Sepsis ..     | F.   | 15        | ..  | ..  | .. | ..  | 2   | 13  | ..  | ..  | ..  |
| 27. Other accidents and     |      |           |     |     |    |     |     |     |     |     |     |
| diseases of preg-           |      |           |     |     |    |     |     |     |     |     |     |
| nancy & parturition         | F.   | 22        | ..  | ..  | .. | ..  | 2   | 19  | 1   | ..  | ..  |
| 28. Congenital debility and | M.   | 147       | 139 | 1   | 4  | 2   | ..  | 1   | ..  | ..  | ..  |
| Malformation,               | F.   | 101       | 100 | ..  | .. | ..  | ..  | ..  | 1   | ..  | ..  |
| premature birth             |      |           |     |     |    |     |     |     |     |     |     |
| 29. Suicide .. ..           | M.   | 20        | ..  | ..  | .. | ..  | 3   | 2   | 11  | 3   | 1   |
|                             | F.   | 20        | ..  | ..  | .. | ..  | 5   | 10  | 2   | 2   | 1   |
| 30. Other deaths from       | M.   | 115       | 7   | 3   | 6  | 18  | 15  | 24  | 26  | 9   | 7   |
| Violence                    | F.   | 57        | 6   | 1   | 2  | 11  | 2   | 9   | 11  | 5   | 10  |
| 1. Other defined diseases.. | M.   | 454       | 73  | 9   | 13 | 13  | 19  | 53  | 127 | 71  | 76  |
|                             | F.   | 445       | 44  | 10  | 9  | 10  | 11  | 64  | 113 | 76  | 108 |
| 32. Causes ill-defined or   | M.   | ..        | ..  | ..  | .. | ..  | ..  | ..  | ..  | ..  | ..  |
| unknown                     | F.   | ..        | ..  | ..  | .. | ..  | ..  | ..  | ..  | ..  | ..  |

## APPENDIX 6.

INFANT MORTALITY. CALENDAR YEAR 1927. NETT DEATHS FROM STATED CAUSES  
AT VARIOUS AGES UNDER 1 YEAR OF AGE.

| CAUSES OF DEATH.                              | Under<br>1 week. | 1-2<br>weeks. | 2-3<br>weeks. | 3-4<br>weeks. | Total<br>under 4<br>weeks. | 4 weeks<br>and<br>under 3<br>months. | 3<br>months<br>and<br>under 6<br>months. | 6<br>months<br>and<br>under 9<br>months. | 9<br>months<br>and<br>under<br>12<br>months. | Total<br>Deaths<br>under<br>1 year. |
|-----------------------------------------------|------------------|---------------|---------------|---------------|----------------------------|--------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------|-------------------------------------|
| Small-pox .. ..                               | ..               | ..            | ..            | ..            | ..                         | ..                                   | ..                                       | ..                                       | ..                                           | ..                                  |
| Chicken pox .. ..                             | ..               | ..            | ..            | ..            | ..                         | ..                                   | ..                                       | ..                                       | ..                                           | ..                                  |
| Measles .. ..                                 | ..               | ..            | ..            | ..            | ..                         | 1                                    | 2                                        | 7                                        | 11                                           | 21                                  |
| Scarlet fever .. ..                           | ..               | ..            | ..            | ..            | ..                         | ..                                   | ..                                       | ..                                       | ..                                           | ..                                  |
| Whooping Cough .. ..                          | ..               | ..            | ..            | 3             | 3                          | 2                                    | 3                                        | 4                                        | 6                                            | 18                                  |
| Diphtheria .. ..                              | ..               | ..            | ..            | ..            | ..                         | ..                                   | ..                                       | ..                                       | ..                                           | ..                                  |
| Influenza .. ..                               | 1                | ..            | ..            | ..            | 1                          | 1                                    | 1                                        | 4                                        | 3                                            | 10                                  |
| Erysipelas .. ..                              | ..               | ..            | 1             | 1             | 2                          | ..                                   | ..                                       | ..                                       | ..                                           | 2                                   |
| Tuberculous Meningitis .. ..                  | ..               | ..            | ..            | ..            | ..                         | ..                                   | 2                                        | 2                                        | 2                                            | 6                                   |
| Abdominal Tuberculosis .. ..                  | ..               | ..            | ..            | ..            | ..                         | ..                                   | ..                                       | ..                                       | ..                                           | ..                                  |
| Other Tuberculous Diseases .. ..              | ..               | ..            | ..            | ..            | ..                         | ..                                   | 1                                        | ..                                       | 3                                            | 4                                   |
| Meningitis (not Tuberculous) .. ..            | ..               | ..            | ..            | ..            | ..                         | ..                                   | 1                                        | 2                                        | ..                                           | 3                                   |
| Convulsions .. ..                             | 16               | 3             | 1             | 1             | 21                         | 7                                    | 1                                        | 1                                        | ..                                           | 30                                  |
| Bronchitis .. ..                              | 1                | ..            | ..            | ..            | 1                          | 10                                   | 2                                        | 5                                        | 2                                            | 20                                  |
| Pneumonia (all forms) .. ..                   | 2                | 4             | 4             | 2             | 12                         | 10                                   | 18                                       | 27                                       | 32                                           | 99                                  |
| Other diseases of respiratory<br>organs .. .. | ..               | ..            | 1             | ..            | 1                          | 1                                    | ..                                       | ..                                       | 1                                            | 3                                   |
| Diarrhoea .. ..                               | ..               | 4             | 4             | ..            | 8                          | 23                                   | 23                                       | 13                                       | 12                                           | 79                                  |
| Enteritis .. ..                               | ..               | ..            | ..            | ..            | ..                         | ..                                   | ..                                       | ..                                       | ..                                           | ..                                  |
| Gastritis .. ..                               | ..               | ..            | ..            | ..            | ..                         | ..                                   | ..                                       | ..                                       | 1                                            | 1                                   |
| Syphilis .. ..                                | ..               | 1             | 1             | ..            | 2                          | 5                                    | 4                                        | 1                                        | ..                                           | 12                                  |
| Rickets .. ..                                 | ..               | ..            | ..            | ..            | ..                         | 2                                    | 1                                        | ..                                       | ..                                           | 3                                   |
| Suffocation, including overlying .. ..        | 7                | 3             | ..            | 1             | 11                         | 1                                    | 1                                        | ..                                       | ..                                           | 13                                  |
| Injury at birth .. ..                         | 13               | 4             | ..            | ..            | 17                         | ..                                   | ..                                       | ..                                       | ..                                           | 17                                  |
| Atelectasis .. ..                             | 17               | ..            | ..            | 2             | 19                         | ..                                   | ..                                       | ..                                       | ..                                           | 19                                  |
| Congenital Malformations .. ..                | 15               | 3             | 4             | 1             | 23                         | 6                                    | 3                                        | 2                                        | 1                                            | 35                                  |
| Premature birth .. ..                         | 91               | 13            | 10            | 6             | 120                        | 21                                   | 4                                        | 1                                        | ..                                           | 146                                 |
| Atrophy, Debility and<br>Marasmus .. ..       | 3                | 8             | 4             | ..            | 15                         | 7                                    | 7                                        | 3                                        | ..                                           | 32                                  |
| Other Causes .. ..                            | 4                | 6             | 4             | 4             | 18                         | 6                                    | 13                                       | 12                                       | 7                                            | 56                                  |
| Totals .. ..                                  | 170              | 49            | 34            | 21            | 274                        | 103                                  | 87                                       | 84                                       | 81                                           | 629                                 |



| Date |     | Time |    | Place         |       | Remarks      |  |
|------|-----|------|----|---------------|-------|--------------|--|
| 1891 | Jan | 1    | 10 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 2    | 11 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 3    | 12 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 4    | 13 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 5    | 14 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 6    | 15 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 7    | 16 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 8    | 17 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 9    | 18 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 10   | 19 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 11   | 20 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 12   | 21 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 13   | 22 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 14   | 23 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 15   | 24 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 16   | 25 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 17   | 26 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 18   | 27 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 19   | 28 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 20   | 29 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Jan | 21   | 30 | San Francisco | Calif | Left for ... |  |
| 1891 | Jan | 22   | 31 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 1    | 1  | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 2    | 2  | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 3    | 3  | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 4    | 4  | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 5    | 5  | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 6    | 6  | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 7    | 7  | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 8    | 8  | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 9    | 9  | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 10   | 10 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 11   | 11 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 12   | 12 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 13   | 13 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 14   | 14 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 15   | 15 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 16   | 16 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 17   | 17 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 18   | 18 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 19   | 19 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 20   | 20 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 21   | 21 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 22   | 22 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 23   | 23 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 24   | 24 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 25   | 25 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 26   | 26 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 27   | 27 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 28   | 28 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Feb | 29   | 29 | San Francisco | Calif | Left for ... |  |
| 1891 | Feb | 30   | 30 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 1    | 1  | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 2    | 2  | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 3    | 3  | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 4    | 4  | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 5    | 5  | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 6    | 6  | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 7    | 7  | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 8    | 8  | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 9    | 9  | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 10   | 10 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 11   | 11 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 12   | 12 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 13   | 13 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 14   | 14 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 15   | 15 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 16   | 16 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 17   | 17 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 18   | 18 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 19   | 19 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 20   | 20 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 21   | 21 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 22   | 22 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 23   | 23 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 24   | 24 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 25   | 25 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 26   | 26 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 27   | 27 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 28   | 28 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 29   | 29 | San Francisco | Calif | Left for ... |  |
| 1891 | Mar | 30   | 30 | San Francisco | Calif | Arrived ...  |  |
| 1891 | Mar | 31   | 31 | San Francisco | Calif | Left for ... |  |