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ADMINISTRATIVE COUNTY OF ESSEX.

REPORT
OF THE
MEDICAL OFFICER OF HEALTH
FOR THE YEAR 1913.

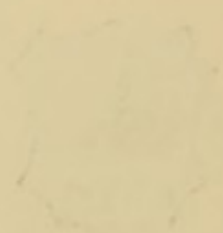
WITH
SUMMARY OF REPORTS OF DISTRICT
MEDICAL OFFICERS OF HEALTH
BY
JOHN C. THRESH, M.D., D.Sc., D.P.H.,
COUNTY MEDICAL OFFICER OF HEALTH,

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1918



ADMINISTRATIVE REPORT OF THE

MEDICAL DEPARTMENT

FOR THE YEAR

SUMMARY OF THE MEDICAL DEPARTMENT

JOHN C. T. ...

COUNTY

Report on Public Health

Printed by the ...

P R E F A C E .

To the Chairman and Members of the Public Health and Housing Committee of the Essex County Council.

GENTLEMEN,

I have now the honour to submit to you my Annual Report for the year 1913 on the sanitary condition and administration of the County, and of its constituent districts. This is the 24th Report which I have prepared, and there can be few, if any, County Medical Officers of Health who have served one County so long. Year by year the work increases, partly on account of new duties placed upon your Council by the Local Government Board, partly on account of the increasing number of persons suffering from Tuberculosis who have applied for treatment under the County Scheme and who have to be dealt with, and partly from the increasing number of cases in which my services are desired by the various sanitary authorities and their officers.

There is great and unnecessary delay in issuing the local reports. The last one was not received until July, and usually it is the short and least satisfactory reports which come in last. The Local Government Board request that the reports be issued not later than the end of February unless there is some reasonable excuse for further delay, but apparently they take no steps to secure early publication. All the reports are printed, with the exception of that for the Rochford Rural District.

Why this has not been printed this year I do not know. Unless printed they cannot be distributed amongst all the members of the Council, and none are available for the Press and the public.

The chief changes in the County are (1) the appointment of a whole time Medical Officer of Health for the combined districts of Braintree Urban and Rural, Halstead Urban and Rural, and Dunmow Rural. E. Bertram Smith, M.B., B.S., D.P.H., commenced his duties in June, and is proving a very efficient officer; (2) Leigh-on-Sea became absorbed in Southend Borough when the Borough boundaries were extended.

Before the end of the present year Southend becomes a County Borough, and will cease to be under the care of the County Council, and early next year East Ham will also cease to form part of the Administrative County.

The statistics compiled from the death and sickness returns show that the past year was a healthy one. There was no excessive mortality amongst infants, the infectious diseases were below the average, and the death-rate continued very low. The corrected County death-rate was only 10·5 per 1,000 population, which is about 3·1 below that for England and Wales.

The Life Table death-rate calculated from Brownlee's equation is 17·8 against 19·0 for England and Wales, and the expectation of life at birth is 56 years in Essex,

against 52.6 years in the country generally. In other words persons born in Essex may expect to live $3\frac{1}{2}$ years longer than the average for England and Wales.

During the whole year work in connection with the Tuberculosis campaign has occupied most of my time, but it has probably now reached its maximum. As one department becomes organized and works with little attention, other departments require organising, and two very important matters have as yet received comparatively little attention. These are the treatment of children of school age and the "care" of patients who have been treated in our Dispensaries and Sanatoria. It is most depressing to see cases relapse after having gained strength in a Sanatorium. They return home, often to follow unsuitable occupations, and too frequently cannot obtain a sufficiency of nourishing food to maintain their strength. The result is, in too many cases, that after the lapse of a few months, they are asking again to be admitted to a Sanatorium. Some 2,000 persons are now being dealt with under the County Scheme, and as there are 150 in Hospitals and Sanatoria, and the average stay does not exceed three months, about 600 persons have been in one or other of these Institutions during the year.

The isolation of advanced cases cannot be secured until the new Sanatorium to be erected at Sandon is completed; then the beds at present used for cases in all stages of the disease can be utilized for the local cases in an advanced stage. At present many of these have to remain in their homes, a source of danger to their relatives, whilst others go into the Union Hospitals. A great deal has been done, but it is obvious that much remains to be done before we can be said to have a reasonably satisfactory scheme in full working order.

Whilst Sanitary Authorities and Medical Officers of Health are assisting us loyally, there are certain districts in the County in which the Medical Practitioners more or less ignore our efforts. Some are a little unreasonable. For example a medical man wished to get an advanced case into a Sanatorium. The Tuberculosis Officer visited and reported that he was not fit to remove, and would not benefit by Sanatorium treatment. Consequently he was not sent to a Sanatorium, and his Medical Attendant expressed his opinion upon the County Scheme, and in future intends to ignore its existence. These unreasonable persons are, however, exceptions, the rule being that medical men are both willing and anxious to benefit the patients by consulting with our Tuberculosis Officer, and agreeing upon some line of treatment.

The results so far obtained are as satisfactory as could be expected. It will be a long campaign and before the scourge of Tuberculosis is eradicated, it will have to be attacked from every side, and our disappointments and reverses must only spur us on to greater efforts.

The housing question is now receiving great attention in the County and when we get the working classes better housed, and better educated, we shall have less consumption. The Tuberculosis Order of 1913 enforcing the notification of cows and other bovine animals suffering from tuberculosis, and giving power to the County Council to secure their slaughter, will also be useful and reduce the amount of tuberculosis amongst children, and the New Milk and Dairies Act, 1914, will be

still more beneficial if the Local Government Board and the Board of Agriculture are sufficiently energetic and use the powers conferred upon them.

I have to thank the Members of the Committee, and particularly the Chairman, for the courteous manner in which they consider all my suggestions and if they have not done all which is possible it is probably more my fault than theirs. There has been the will to succeed, and we have deserved to succeed, but to what extent we have been successful must be left to the decision of those who make a careful study of this report.


I have the honour to be, Gentlemen,

Your obedient Servant,

JOHN C. THRESH.

CHELMSFORD,

September, 1914.



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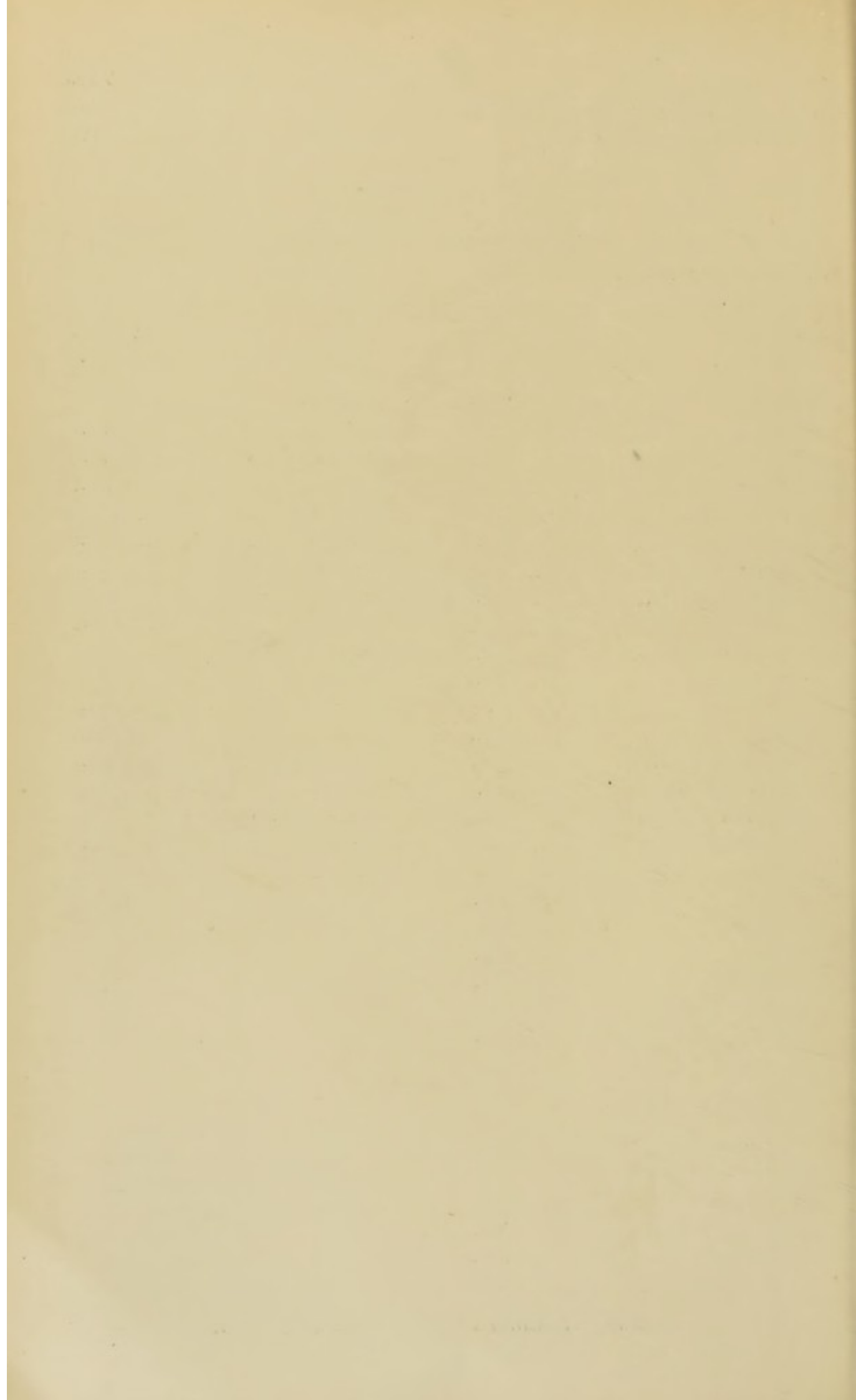
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SECTION I.

POPULATION OF THE COUNTY.

The total population of the County as given in the Annual Reports is 1,109,978, an increase of about 23,000 for the year.

In 1912 the Tilbury Urban District was formed; this increased the Urban population of the County by 6,429, and decreased the rural population by the same number.

In 1913 Southend extended its boundaries and took in Leigh Urban District with a population, at the last census, of 7,713, and a part of the parish of Eastwood in the Rochford Rural District, with an estimated population of 250. The Southend Medical Officer of Health has included both these in his report for 1913, but in calculating the increase of population in Southend during that year I have not included the increase due to the absorption of other districts. As the Borough becomes a County Borough early in 1914 it will cease to be part of the Administrative County, and next year the population of the Administrative County will shew a marked decrease due to this cause. In the following Table Southend is included and the various County statistics given in this report are based on the populations given therein.

| | Population. | | Estimated population middle of 1913. |
|---------------------|--------------------------|-----------|---|
| | Census Returns. 1901. | 1911. | |
| Urban Districts ... | 576,508 | 796,571 | 846,884 |
| Rural Districts ... | 240,132 | 265,429 | 263,094 |
| Whole County ... | 816,640 | 1,062,000 | 1,109,978 |

The Registrar-General's census returns include certain Institutions, such as the Claybury Asylum, which do not belong to the County, whereas the Medical Officers of Health now exclude such places from their returns. The real increase in population since the 1911 census will be about 6,000 more than is shewn by the above figures, or about 54,000 from April 2nd, 1911 to July 1st, 1913. Practically the whole of this increase is in the Urban Districts. The following districts are increasing most rapidly :—

| | | | |
|-------------|-----|-----|----------------------------|
| East Ham | ... | ... | increase 4,017 during 1913 |
| Leyton | ... | ... | 2,666 |
| Southend | ... | ... | 5,134 |
| Walthamstow | ... | ... | 3,156 |

THE BIRTH-RATES.

The total number of births registered in 1912 was 24,236, of which 18,948 were in the Urban Districts and 5,288 in the Rural Districts. The County birth-rate was therefore 21·8. This is 2·0 per 1,000 population less than the average for England and Wales.

The districts with the highest and lowest Birth-rates were :—

| Highest. | | | | Lowest. | | | |
|------------------|-----|-----|------|--------------------|-----|-----|------|
| Tilbury ... | ... | ... | 32·6 | Wivenhoe ... | ... | ... | 15·2 |
| Barking ... | ... | ... | 30·4 | Saffron Walden ... | ... | ... | 15·6 |
| Shoeburyness ... | ... | ... | 30·0 | Wanstead ... | ... | ... | 15·7 |
| Grays ... | ... | ... | 26·8 | Brightlingsea .. | ... | ... | 15·7 |
| East Ham ... | ... | .. | 25·2 | Belchamp R. ... | ... | ... | 15·8 |
| Orsett R.... | ... | ... | 25·0 | Loughton ... | ... | ... | 16·2 |

As remarked in my previous reports, the differences are not so great as the figures indicate, because of the different age distribution in the Urban and Rural Districts. There will be a larger proportion of people at child producing ages in Barking, East Ham, etc., than in the Rural areas. Naturally therefore, assuming that the fecundity of the married couples was the same there would be a higher birth-rate in proportion to the whole population in the Urban Districts than in the Rural areas. The differences observed, however, are far higher than can be accounted for in this way.

TABLE I.
BIRTH-RATES PER 1,000 POPULATION.

| | | | | 1910. | 1911. | 1912. | 1913. |
|-----------------------|-----|-----|-----|-------|-------|-------|-------|
| Urban Districts | ... | ... | ... | 23·7 | 23·2 | 22·2 | 22·3 |
| Rural Districts | ... | ... | ... | 21·4 | 20·7 | 20·2 | 20·1 |
| Administrative County | ... | ... | ... | 23·1 | 22·6 | 21·7 | 21·8 |

THE DEATH-RATES.

The total number of deaths registered in the County corrected for all transferable deaths was 12,006, of which 8,941 belonged to the Urban and 3,065 to the Rural districts.

TABLE II.
DEATH-RATES PER 1,000 POPULATION.

| | | | | 1910. | 1911. | 1912. | 1913. |
|-----------------------|-----|-----|-----|-------|-------|-------|-------|
| Urban Districts | ... | ... | ... | 9·95 | 11·7 | 10·0 | 10·55 |
| Rural Districts | ... | ... | ... | 11·5 | 12·0 | 11·8 | 11·6 |
| Administrative County | ... | ... | ... | 10·35 | 11·8 | 10·5 | 10·8 |
| England and Wales | ... | ... | ... | 13·4 | 14·6 | 13·3 | 13·6 |

The Registrar-General has kindly furnished me with the following factors for correcting the death-rates of the Administrative County, and of the aggregates of Urban and Rural Districts in the County for differences of age and sex constitution of the population :—

| | | | | |
|------------------------------|-----|-----|-----|--------|
| Total of County | ... | ... | ... | ·9737 |
| Aggregate of Urban Districts | ... | ... | .. | 1·0225 |
| Aggregate of Rural Districts | ... | ... | ... | ·8464 |

These factors are based upon the populations enumerated in 1911, and only after correction do the death-rates for the County and for England and Wales become comparable. The corrected rates are therefore as under :—

| | | | |
|------------------------------|-----|-----|------|
| Urban Death-rate | ... | ... | 10·8 |
| Rural Death-rate | ... | ... | 9·8 |
| County Death-rate | ... | ... | 10·5 |
| England and Wales Death-rate | ... | ... | 13·6 |

The death-rate, therefore, in the Urban Districts is higher than in the Rural, although before correction the reverse would appear to be the case, and the County rate is about 3·1 below that of England and Wales.

It is doubtful whether any other County has had so low a death-rate. Table B in the Appendix gives the uncorrected nett death-rate for each District in the County, and the following Table gives the Registrar-General's factor for correction for age and sex distribution, and the corrected death-rates, which alone are comparable.

TABLE III.

CORRECTED DEATH-RATES, 1913, IN URBAN AND RURAL DISTRICTS.

| Urban Districts. | Correction factor. | Corrected Death-rate. | Rural Districts. | Correction factor. | Corrected Death-rate |
|-------------------|--------------------|-----------------------|---------------------|--------------------|----------------------|
| Barking | ... 1·0470 | 14·7 | Belchamp | ... ·7492 | 10·0 |
| Braintree | ... ·8898 | 14·7 | Billericay | ... ·9322 | 10·8 |
| Brentwood | ... 1·0142 | 9·6 | Braintree | ... ·7900 | 10·9 |
| Brightlingsea | ... ·8247 | 9·7 | Bumpstead | ... ·7803 | 14·65 |
| Buckhurst Hill | ... 1·0003 | 12·2 | Chelmsford | ... ·8243 | 9·2 |
| Burnham-on-Crouch | ... ·8326 | 7·2 | Dunmow | ... ·7791 | 9·6 |
| Chelmsford | ... ·9273 | 10·1 | Epping ... | ... ·8920 | 9·9 |
| Chingford | ... 1·0334 | 9·5 | Halstead | ... ·8086 | 8·9 |
| Clacton ... | ... ·9625 | 11·4 | Lexden and Winstree | ·8150 | 10·5 |
| Colchester | ... 1·0097 | 11·2 | Maldon ... | ... ·8024 | 9·1 |
| East Ham | ... 1·0536 | 10·6 | Ongar ... | ... ·8953 | 9·6 |
| Epping ... | ... ·8126 | 8·7 | Orsett ... | ... ·9601 | 9·3 |
| Frinton-on-Sea | ... 1·1189 | 7·6 | Rochford | ... ·8735 | 12·7 |
| Grays Thurrock | ... 1·0762 | 10·65 | Romford | ... ·9617 | 8·5 |
| Halstead ... | ... ·8697 | 14·8 | Saffron Walden | ... ·7812 | 10·2 |

TABLE III.—*continued.*

| Urban Districts, | | Correction factor. | Corrected Death-rate. | Rural Districts, | | Correction factor. | Corrected Death-rate. |
|--------------------|-----|--------------------|-----------------------|------------------|-----|--------------------|-----------------------|
| Harwich ... | ... | 1.1101 | 11.2 | Stansted | ... | .8212 | 10.8 |
| Ilford ... | ... | 1.0637 | 10.05 | Tendring | ... | .8219 | 10.2 |
| Leyton ... | ... | 1.0217 | 10.5 | | | | |
| Loughton ... | ... | 1.0138 | 11.45 | | | | |
| Maldon ... | ... | .8281 | 9.4 | | | | |
| Romford ... | ... | .9491 | 11.2 | | | | |
| Saffron Walden | ... | .8063 | 9.4 | | | | |
| Shoeburyness | ... | 1.0398 | 11.3 | | | | |
| Southend | ... | 1.0026 | 10.6 | | | | |
| Tilbury ... | ... | 1.1022 | 11.0 | | | | |
| Waltham Holy Cross | ... | 1.0139 | 10.7 | | | | |
| Walthamstow | ... | 1.0646 | 10.75 | | | | |
| Walton-on-the-Naze | ... | .9139 | 9.05 | | | | |
| Wanstead | ... | 1.0790 | 9.6 | | | | |
| Witham ... | ... | .9005 | 14.9 | | | | |
| Wivenhoe... | ... | .8370 | 14.4 | | | | |
| Woodford ... | ... | 1.0246 | 10.7 | | | | |

From the above Table, it is seen that a few districts have a comparatively high death-rate, but that with the exception of Barking, they all have small populations, and in such cases the death-rates vary considerably from year to year. One small Rural District (Bumpstead) had a very high death-rate, but in only one of the larger Rural Districts (Rochford) was the death-rate excessive. Amongst the Urban Districts several had very low death-rates, but here again they are districts with small populations. In the Rural Districts Romford had a very low death-rate.

DISTRICTS WITH HIGH DEATH-RATES.

| Urban. | | | Rural. | | |
|-----------|------------|--------------|-----------|------------|--------------|
| | Corrected. | Uncorrected. | | Corrected. | Uncorrected. |
| Witham | ... 14.9 | 16.6 | Bumpstead | ... 14.65 | 18.8 |
| Halstead | ... 14.8 | 16.3 | Rochford | ... 12.7 | 14.6 |
| Barking | ... 14.7 | 14.1 | | | |
| Braintree | ... 14.7 | 16.5 | | | |

DISTRICTS WITH VERY LOW DEATH-RATES.

| Urban. | | Rural. | |
|-------------------|----------|------------|---------|
| Burnham | ... 7.2 | Romford | ... 8.5 |
| Frinton | ... 7.6 | Halstead | ... 8.9 |
| Epping | ... 8.7 | Maldon | ... 9.1 |
| Walton | ... 9.05 | Chelmsford | ... 9.2 |
| Saffron Walden... | 9.4 | Orsett | ... 9.3 |
| Chingford | ... 9.5 | Ongar | ... 9.6 |
| Wanstead | ... 9.6 | Dunmow | ... 9.6 |
| Brentwood | ... 9.6 | Epping | ... 9.9 |
| Brightlingsea | ... 9.7 | | |

COMPARISON OF TOWNS WITH OVER 50,000 POPULATION.

| | | Corrected. | Uncorrected. | Corrected mean 1908-12. |
|-------------|-----|------------|--------------|----------------------------|
| East Ham | ... | 10·6 | 10·1 | 11·7 |
| Ilford | ... | 10·05 | 9·45 | 9·2 |
| Leyton | ... | 10·5 | 10·3 | 10·7 |
| Southend | ... | 10·6 | 10·3 | 10·9 |
| Walthamstow | ... | 10·75 | 10·1 | 11·1 |

Taking a series of years, it is seen that the death-rate of East Ham (11·7) exceeds that of Ilford (9·2) by 2·7 per 1,000, but this does not mean that East Ham is a less healthy locality than Ilford, since there are other obvious reasons why the death-rate should be higher in the one than the other, and these reasons are, I am afraid, not dependent upon the sanitary administration. In the same way it does not follow that Southend is a less healthy locality than Ilford, since a large number of invalids take up their residence in Southend, and notwithstanding that many may greatly benefit by so doing, the influx of persons in a low state of health must affect the death-rate. I make these remarks to prevent persons laying too much stress upon the death-rate as a measure of either salubrity or effectiveness of sanitary administration. Speaking generally a place with a persistently low death-rate is probably salubrious and well administered from a sanitary point of view, and a place with a persistently high death-rate is not salubrious and not so well administered. Although the exceptions may be numerous, yet most people prefer to reside in a locality with a low death-rate than in one with a high rate, if only to be away from those influences social and moral which conduce to excessive mortality. It is a natural tendency, but it has unfortunate results.

DEATHS AT VARIOUS AGE PERIODS.

The following Table gives the percentage of deaths which occurred at different age periods in the Urban and Rural Districts respectively. The mortality amongst the very young was low during the year under consideration, and we find, as usual, that only a little under one-third of the people who die in Urban Districts attain the age of 65 years, whilst very nearly half the residents in Rural Districts reach that age.

TABLE IV.

| | Urban Districts. | Rural Districts. |
|--------------------------|------------------|------------------|
| Under 1 year of age | 15·9 | 11·0 |
| 1 year and under 2 years | 4·3 | 2·1 |
| 2 years „ 5 „ | 3·4 | 2·2 |
| 5 „ „ 15 „ | 4·0 | 2·5 |
| 15 „ „ 25 „ | 4·6 | 3·8 |
| 25 „ „ 45 „ | 13·6 | 10·6 |
| 45 „ „ 65 „ | 21·9 | 19·8 |
| Over 65 years | 32·3 | 48·0 |
| | 100·0 | 100·0 |

INFANTILE MORTALITY.

The year 1913 was a particularly favourable one for infants. The summer was not unusually hot or dry and the winter was mild, consequently the infantile mortality was low, a lower has only once been recorded previously in the County.

In the Urban districts 1,422 infants under 1 year died, and in the Rural 337, a total of 1,759, against 1,660 in the previous year. The number of births has already been given, and from the number of births which occurred during the year and the number of infants under 1 year of age which died during the same period, both definite factors, the mortality per 1,000 births is calculated.

TABLE V.

INFANTILE MORTALITY.

Deaths of Infants under 1 year per 1,000 Births.

| | 1909. | 1910. | 1911. | 1912. | 1913. |
|-----------------------------|-------|-------|-------|-------|-------|
| Urban Districts | 83 | 77 | 110 | 72 | 75 |
| Rural Districts | 71 | 70 | 90.5 | 65 | 64 |
| Administrative County | 80 | 75 | 105 | 70.4 | 72 |
| England and Wales | 109 | 106 | 130 | 95 | 109 |

Excessive mortality occurred in the following districts :—

| | Deaths per 1,000 births. | Average 1908-12. |
|---------------------|-----------------------------|---------------------|
| Loughton | 166 | 75 |
| Witham | 134 | 64 |
| Shoeburyness | 115 | 83 |
| Barking | 113 | 114 |
| Bumpstead R. | 100 | 116 |

In the first three Urban districts the high mortality is exceptional. In Barking and Bumpstead the rates are usually high. The cause of this, especially in the Rural district, is worthy of investigation. The mortality amongst infants in the towns with over 50,000 population is very satisfactory when compared with the average for England and Wales, but there is no question that the rates admit of considerable reduction.

INFANTILE MORTALITY IN TOWNS WITH OVER 50,000 POPULATION.

| | 1913. | Average for 1908-12. |
|--------------------|-------|-------------------------|
| East Ham | 63 | 96 |
| Ilford | 68 | 73 |
| Leyton | 83 | 83 |
| Southend | 82 | 86 |
| Walthamstow | 78 | 92 |

TABLE VI.

DEATHS FROM DIFFERENT DISEASES AMONGST CHILDREN UNDER
1 YEAR OF AGE PER 1,000 BIRTHS.

| | 1912. | | 1913. | |
|--------------------------------|------------------|------------------|------------------|------------------|
| | Urban Districts. | Rural Districts. | Urban Districts. | Rural Districts. |
| Prematurity of Birth | 15.4 | 16.3 | 16.3 | 16.3 |
| Congenital Defects | 4.9 | 2.6 | 5.0 | 4.3 |
| Convulsions | 4.0 | 5.2 | 3.5 | 4.7 |
| Diarrhoea and Enteritis | 4.9 | 3.2 | 10.5 | 3.8 |
| Debility, &c. | 12.4 | 10.8 | 11.9 | 7.4 |
| Tubercular Diseases | 2.4 | .57 | 2.0 | 0.9 |
| Injury at Birth | .39 | 1.52 | .6 | .6 |
| Whooping Cough | 4.6 | 3.9 | 1.9 | 3.6 |
| Pneumonia | 6.4 | 3.9 | 7.2 | 6.2 |
| Bronchitis | 5.8 | 6.1 | 4.2 | 5.7 |

In the Urban districts the deaths of infants from diarrhoeal and other wasting diseases, and from tuberculosis are excessive, whilst in the Rural areas deaths from pneumonia, bronchitis, and convulsions are in excess.

TABLE VII.

PERCENTAGE NUMBER OF DEATHS OF INFANTS UNDER 1 YEAR OF AGE
AT VARIOUS AGES.

| | 1913. | | 1912. | | 1911. | |
|--|------------------|------------------|------------------|------------------|------------------|------------------|
| | Urban Districts. | Rural Districts. | Urban Districts. | Rural Districts. | Urban Districts. | Rural Districts. |
| Dying before attaining the age of 1 week ... | 26.7 | 32.6 | 28.3 | 35.1 | 19.6 | 25.9 |
| „ between 1 week and 1 month ... | 15.7 | 11.0 | 17.9 | 15.5 | 12.7 | 11.0 |
| „ „ 1 month and 3 months ... | 18.3 | 14.6 | 17.9 | 19.0 | 17.1 | 17.2 |
| „ „ 3 months and 6 months ... | 15.6 | 15.7 | 14.5 | 12.9 | 20.3 | 17.2 |
| „ „ 6 months and 12 months ... | 23.7 | 26.1 | 21.4 | 17.5 | 30.3 | 28.7 |
| | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

A larger proportion of infants die before attaining the age of one month in Rural districts than in the Urban districts, but the excess is limited to those who die before attaining the age of *one week*. Is it that the infants in our villages receive less skilled attention at birth, or are they more weakly? If the latter were the case the excessive

mortality would continue after the first week, even if it did not extend over the whole year. The former, therefore, would seem to be the more likely explanation.

Possibly the multiplication of Midwife Nurses in our Rural districts will effect an improvement. If the employment of such Nurses could be encouraged by adopting the Notification of Births Act and appointing each Nurse the Health Visitor for the area she serves, much good work could be done, but no Rural Authority has adopted this Act, and the County Council, after considering the matter and obtaining information, through the Clerk, from other counties, decided not to adopt the Act at present. The Act is adopted in the following Urban districts:—Barking, Clacton, Colchester, East Ham, Grays, and Ilford. Southend has adopted the Act but it only comes in force during January, 1914.

DEATHS FROM VARIOUS CAUSES.

1. CANCER.

The mortality from this dread disease is still increasing in the Rural districts, but there is a decline in the Urban areas and in the County as a whole. During the past year, one out of each fourteen deaths in the Urban districts and one out of every nine in the Rural districts was due to this cause. It causes more deaths than tuberculosis of the lungs. The cancer death-rate in certain health resorts is in excess of the average, but this is doubtless due to persons in failing health being attracted to such places in the hope of prolonging life.

The disease is only curable in its early stages, and there is no doubt that many lives could be saved were the disease recognised earlier. During the past 40 years the death-rate from cancer has about doubled, and making all allowances for more careful diagnosis, the actual increase must have been very great.

In Tables VIII. and XI. (page 17) the actual number of deaths recorded in the Urban and Rural districts and the death-rates for the County are given for a series of years.

The excessive proportion of cases in the Rural Districts, 1·3 per 1,000 persons as against ·75 per 1,000 in the towns, is no proof that town dwellers are less prone to the disease, but merely that cancer is most common amongst persons of mature age, and such persons are relatively more numerous in rural areas. If these could be corrected for age and sex distribution, the death-rates in both districts would be very nearly the same, and a little below that for England and Wales.

Dr. Blasford, Director of the Imperial Cancer Research Fund, has shown that cancer can be transferred from one animal to another of the same species, but he says that this is not a process of infection, but of actual transplantation. "During the last 12 years healthy mice, young and old, have been housed with mice naturally suffering from cancer, and mice inoculated with it. The housing of animals in this way, where they have been exposed both to possible natural and experimental infection, has in no case lead to a higher frequency of cancer than has occurred in mice not so exposed.

TABLE VIII.

DEATHS RECORDED FROM CANCER SINCE 1900.

| | Rural Districts. | Urban Districts. | Administrative County |
|------|------------------|------------------|-----------------------|
| 1900 | 215 | 312 | 527 |
| 1901 | 220 | 344 | 562 |
| 1902 | 266 | 316 | 582 |
| 1903 | 246 | 367 | 613 |
| 1904 | 213 | 433 | 646 |
| 1905 | 245 | 476 | 721 |
| 1906 | 226 | 504 | 730 |
| 1907 | 249 | 369 | 618 |
| 1908 | 251 | 561 | 812 |
| 1909 | 270 | 578 | 848 |
| 1910 | 310 | 605 | 915 |
| 1911 | 282 | 683 | 965 |
| 1912 | 311 | 753 | 1064 |
| 1913 | 334 | 627 | 961 |

TABLE IX.

CANCER DEATH-RATE PER 1,000 POPULATION.

| | Administrative County. | England and Wales. |
|-----------|------------------------|--------------------|
| 1871—80 | ... 48 | ... 47 |
| 1881—90 | ... 54 | ... 59 |
| 1891—1900 | ... 66 | ... 75 |
| 1901—1905 | ... 71 | ... 86 |
| 1906 | ... 76 | ... 92 |
| 1907 | ... 63 | ... 90 |
| 1908 | ... 84 | ... 92 |
| 1909 | ... 86 | ... 96 |
| 1910 | ... 88 | ... 97 |
| 1911 | ... 91 | ... 99 |
| 1912 | ... 98 | ... 100 |
| 1913 | ... 87 | ... |

This has a most important bearing on the occurrence of so-called cancer-houses in mankind." As the disease cannot be communicated from one person to another, no one need fear living in a house which has previously been inhabited by a person suffering from cancer. Dr. Blasford's researches show that cancer occurs in practically every phase of life and in every species as an indirect result of chronic irritation. The actual cause of the disease remains unknown, but there is no evidence, as yet, to prove that it is due to any form of parasite. Still it has been found possible to render certain animals immune, and it is just possible that at some future time it may be found possible to render human beings immune.

2. TUBERCULOSIS.

The deaths attributed to this group of diseases may be tabulated as under:--

TABLE X.

| | 1913. | | | 1912. | | | 1911. | | |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Urban. | Rural. | Total. | Urban. | Rural. | Total. | Urban. | Rural. | Total. |
| Pulmonary Tuberculosis | 701 | 173 | 874 | 638 | 171 | 809 | 703 | 181 | 884 |
| Tubercular Meningitis .. | 144 | 25 | 169 | 120 | 18 | 138 | 114 | 33 | 147 |
| Other Tubercular Diseases | 122 | 38 | 160 | 184 | 35 | 219 | 158 | 51 | 209 |
| Totals ... | 967 | 236 | 1203 | 942 | 224 | 1166 | 957 | 265 | 1340 |

It will be observed that 1911 was an exceptional year, many more deaths occurring from all tubercular diseases than in 1910, 1912, or 1913. The next table shows that the death-rate from this group of diseases is slowly but continuously decreasing.

TABLE XI.

DEATH-RATES PER 1,000 POPULATION FROM TUBERCULOSIS.

| | From Pulmonary Tuberculosis. | | | | From Non pulmonary Tuberculosis. | | | |
|---------|------------------------------|--------|---------|--------------------|----------------------------------|--------|---------|--------------------|
| | Urban. | Rural. | County. | England and Wales. | Urban. | Rural. | County. | England and Wales. |
| 1901-10 | ·84 | ·78 | ·82 | 1·17 | ·39 | ·34 | ·37 | ·49 |
| 1910 | ·80 | ·72 | ·77 | 1·015 | ·30 | ·215 | ·28 | ·42 |
| 1911 | ·88 | ·68 | ·83 | 1·08 | ·34 | ·31 | ·335 | ·38 |
| 1912 | ·77 | ·65 | ·74 | 1·04 | ·37 | ·21 | ·33 | ·33 |
| 1913 | ·83 | ·66 | ·79 | ... | ·32 | ·24 | ·29 | ... |

The distribution of the disease throughout the County will be referred to in a later section relating to the prevalence of Infectious Diseases.

3. THE SEVEN PRINCIPAL ZYMOTIC DISEASES.

Deaths from these diseases reached a minimum in 1910, the number in that year being only about one-third the average for the previous 10 years. In 1911 there was an enormous increase, chiefly due to the prevalence of infantile diarrhoea. Since then comparatively few deaths have occurred from this disease, and the total zymotic mortality has fallen below the average.

TABLE XII.

DEATHS FROM SEVEN PRINCIPAL ZYMOTIC DISEASES.

| | | | | | 1910 | 1911 | 1912 | 1913 |
|--------------------|-----------------|-----|-----|-----|------|------|------|------|
| Small-pox | ... | ... | ... | ... | 2 | 1 | 0 | 0 |
| Measles | .. | ... | ... | .. | 84 | 297 | 122 | 199 |
| Scarlet Fever | ... | ... | ... | ... | 33 | 29 | 28 | 18 |
| Whooping Cough | ... | ... | ... | ... | 161 | 142 | 223 | 131 |
| Diphtheria | ... | ... | ... | .. | 88 | 105 | 102 | 97 |
| Fevers | Enteric Fever | ... | ... | ... | 16 | 47 | 26 | 28 |
| | Puerperal Fever | ... | ... | ... | 17 | 24 | 28 | 23 |
| Total | | | | | 406 | 645 | 529 | 496 |
| Epidemic Diarrhoea | ... | ... | ... | ... | 113 | 1087 | 161 | 316 |
| Grand Total | | | | | 519 | 1732 | 690 | 812 |

The whole of these infectious diseases caused far fewer deaths than were due to Tuberculosis alone, in fact Tuberculosis of the Lungs (Consumption) alone caused nearly as many deaths. The mortality of these diseases is always greater in the Urban Districts than in the Rural, but this difference is unusually marked during the year under consideration.

| | | |
|---|-----|-----|
| Zymotic death-rate in the Urban Districts | ... | ·80 |
| „ Rural „ | ... | ·48 |
| „ Administrative County | ... | ·73 |

In a later section it will be found that the number of cases of Infectious Disease which occur in the Urban Districts is much higher, in proportion to the population, than in Rural Districts. Usually also the severity of the disease is a little higher in the towns. Consequently the death-rate must be higher. This is due to two causes, one the greater overcrowding of houses on space, and the other the more sedentary occupations of the dwellers in towns.

TABLE XIII.

DEATH-RATES PER 1,000 POPULATION FROM EACH OF THE SIX
PRINCIPAL ZYMOTIC DISEASES, 1913.

| | | | | | Small-pox. | Measles. | Scarlet Fever. | Whooping Cough. | Diphtheria. | Enteric and other Fevers. | Totals. |
|----------------------------------|-----|-----|-----|-----|------------|----------|----------------|--------------------|-------------|------------------------------|---------|
| Urban Districts | ... | ... | ... | ... | ·00 | ·21 | ·02 | ·11 | ·10 | ·025 | ·46 |
| Rural Districts | ... | ... | ... | ... | ·00 | ·09 | ·01 | ·14 | ·08 | ·026 | ·32 |
| Administrative County | ... | ... | ... | ... | ·00 | ·18 | ·02 | ·12 | ·09 | ·025 | ·43 |
| England and Wales | .. | ... | ... | ... | ·00 | 0·28 | 0·06 | 0·14 | 0·12 | 0·04 | ·64 |
| Administrative County, 1901-1910 | ... | ... | ... | .. | ·013 | ·19 | ·07 | ·24 | ·20 | ·09 | ·80 |

It will be observed that the above diseases caused 33 per cent. fewer deaths in Essex in proportion to the population than in England and Wales as a whole.

SECTION II.

PREVALENCE OF INFECTIOUS DISEASE.

The number of cases of disease notified under the Infectious Diseases Notification Act was about 30 per cent. below the average for the last 10 years, and a little above the number notified in 1912. Scarlet Fever and Typhoid Fever were below the average. Puerperal Fever and Diphtheria exceeded the average.

Although Cerebro-spinal Meningitis (Spotted Fever) and Poliomyelitis (a paralytic disease of childhood) are notifiable under the Act by Order of the Local Government Board, they are not included in the "total" for 1912 and 1913, as this would render the figures less comparable with those of previous years. The numbers of these cases, however, is so small that the rate per 1,000 population is not affected.

The figures given are the totals taken from the Annual Reports. They differ slightly from the totals obtained from the weekly returns published by the Local Government Board.

TABLE XIV.

TOTAL NUMBER OF CASES OF INFECTIOUS DISEASES NOTIFIED
DURING THE 11 YEARS 1903-1913.

| Year. | Small-pox | Scarlet Fever. | Diphtheria and Membranous Croup. | Fever-Typhoid and Continued. | Puerperal Fever. | Erysipelas. | Cerebro-spinal Meningitis. | Poliomyelitis. | Totals. | Rate per 1,000 population. |
|----------------------|-----------|----------------|----------------------------------|------------------------------|------------------|-------------|----------------------------|----------------|---------|----------------------------|
| 1903 | 96 | 2,528 | 1,659 | 589 | 42 | 750 | ... | ... | 5,664 | 6.4 |
| 1904 | 112 | 3,534 | 1,764 | 453 | 51 | 812 | ... | .. | 6,726 | 7.4 |
| 1905 | 3 | 4,563 | 1,453 | 398 | 45 | 863 | ... | ... | 7,325 | 7.8 |
| 1906 | 0 | 4,434 | 1,869 | 366 | 56 | 833 | ... | ... | 7,558 | 7.8 |
| 1907 | 0 | 5,138 | 1,918 | 243 | 41 | 758 | ... | ... | 8,098 | 8.0 |
| 1908 | 3 | 4,490 | 1,767 | 266 | 39 | 738 | ... | ... | 7,303 | 7.0 |
| 1909 | 0 | 3,645 | 1,371 | 161 | 42 | 688 | ... | ... | 5,907 | 5.5 |
| 1910 | 7 | 2,338 | 1,062 | 139 | 38 | 655 | ... | ... | 4,239 | 3.8 |
| 1911 | 10 | 2,964 | 1,369 | 327 | 50 | 754 | ... | ... | 5,474 | 5.1 |
| 1912 | 1 | 2,508 | 1,153 | 182 | 72 | 755 | (4) | (30) | 4,671 | 4.3 |
| 1913 | 4 | 2,711 | 1,585 | 189 | 63 | 650 | (16) | (48) | 5,202 | 4.7 |
| Average 1903-1912... | 23.5 | 3,614 | 1,538 | 312 | 48 | 761 | ... | ... | 6,270 | 6.3 |

The following Table, based upon the weekly notifications, is taken from a recent Report of the Local Government Board:—

TABLE XV.

NOTIFICATIONS OF INFECTIOUS DISEASE AND ATTACK-RATES, 1913.

| | Estimated Population in the middle of 1912. | Small-pox. | | Scarlet Fever. | | Diphtheria. | | Enteric Fever. | | Puerperal Fever. | | Erysipelas. | |
|--|--|------------|-------|-------------------|-------|-------------|-------|-------------------|-------|---------------------|-------|-------------|-------|
| | | Cases. | Rate. | Cases. | Rate. | Cases. | Rate. | Cases. | Rate. | Cases. | Rate. | Cases. | Rate. |
| ADMINISTRATIVE COUNTY ... | 1,094,323 | 4 | 0·00 | 2,732 | 2·50 | 1,548 | 1·41 | 186 | 0·17 | 63 | 0·06 | 540 | 0·58 |
| AGGREGATE OF BOROUGH AND URBAN DISTRICTS. | 831,790 | 3 | 0·00 | 2,331 | 2·80 | 1,366 | 1·64 | 140 | 0·17 | 53 | 0·06 | 525 | 0·63 |
| AGGREGATE OF RURAL DIS- TRICTS. | 262,533 | 1 | 0·00 | 401 | 1·53 | 182 | 0·69 | 46 | 0·18 | 10 | 0·04 | 115 | 0·44 |
| BOROUGH AND URBAN DIS- TRICTS:— | | | | | | | | | | | | | |
| Barking Town ... | 32,585 | ... | ... | 136 | 4·17 | 36 | 1·10 | 5 | 0·15 | 4 | 0·12 | 33 | 1·01 |
| Braintree ... | 6,279 | ... | ... | 3 | 0·48 | 13 | 2·07 | 1 | 0·16 | ... | ... | 2 | 0·32 |
| Brentwood ... | 7,187 | ... | ... | 2 | 0·28 | 5 | 0·70 | ... | ... | ... | ... | 4 | 0·56 |
| Brightlingsea ... | 4,390 | ... | ... | ... | ... | ... | ... | 2 | 0·46 | ... | ... | 4 | 0·91 |
| Buckhurst Hill ... | 4,899 | ... | ... | 3 | 0·61 | 6 | 1·22 | 1 | 0·20 | 2 | 0·41 | 4 | 0·82 |
| Burnham-on-Crouch ... | 3,226 | ... | ... | 4 | 1·24 | 1 | 0·31 | ... | ... | ... | ... | ... | ... |
| Chelmsford ... | 18,331 | ... | ... | 15 | 0·82 | 43 | 2·35 | 1 | 0·05 | 1 | 0·05 | 6 | 0·33 |
| Chingford ... | 8,689 | ... | ... | 17 | 1·96 | 33 | 3·80 | 1 | 0·12 | ... | ... | 2 | 0·23 |
| Clacton ... | 10,984 | ... | ... | 33 | 3·27 | 9 | 0·89 | ... | ... | ... | ... | ... | ... |
| Colchester ... | 44,125 | ... | ... | 103 | 2·33 | 52 | 1·18 | 8 | 0·18 | 2 | 0·05 | 32 | 0·73 |
| East Ham ... | 138,450 | ... | ... | 535 | 3·86 | 259 | 1·87 | 26 | 0·19 | 8 | 0·06 | 121 | 0·87 |
| Epping ... | 4,314 | ... | ... | 24 | 5·56 | 19 | 4·40 | ... | ... | ... | ... | 1 | 0·23 |
| Frinton-on-Sea ... | 1,624 | ... | ... | 2 | 1·23 | ... | ... | ... | ... | ... | ... | ... | ... |
| Grays Thurrock ... | 16,285 | 1 | 0·06 | 79 | 4·85 | 61 | 3·75 | 5 | 0·31 | ... | ... | 3 | 0·18 |
| Halstead ... | 6,289 | ... | ... | 3 | 0·48 | 48 | 7·63 | ... | ... | 1 | 0·16 | 1 | 0·16 |
| Harwich ... | 14,092 | ... | ... | 49 | 3·48 | 24 | 1·70 | 33 | 2·34 | ... | ... | 4 | 0·28 |
| Ilford ... | 83,080 | ... | ... | 242 | 2·91 | 129 | 1·55 | 3 | 0·04 | 4 | 0·05 | 35 | 0·42 |
| Leigh-on-Sea ... | 8,249 | ... | ... | 6 | 0·85 | 3 | 0·43 | 3 | 0·43 | ... | ... | 1 | 0·14 |
| Leyton ... | 128,155 | ... | ... | 343 | 2·68 | 147 | 1·15 | 10 | 0·08 | 10 | 0·08 | 97 | 0·76 |
| Loughton ... | 5,526 | ... | ... | 3 | 0·54 | 7 | 1·27 | 2 | 0·36 | ... | ... | ... | ... |
| Maldon ... | 6,844 | 1 | 0·16 | 33 | 5·20 | 2 | 0·32 | ... | ... | ... | ... | 5 | 0·79 |
| Romford ... | 17,409 | ... | ... | 26 | 1·49 | 25 | 1·44 | 2 | 0·11 | 2 | 0·11 | 23 | 1·32 |
| Saffron Walden ... | 6,366 | ... | ... | 6 | 0·94 | ... | ... | ... | ... | ... | ... | 6 | 0·94 |
| Shoburyness ... | 5,126 | ... | ... | 6 | 1·17 | 4 | 0·78 | 2 | 0·39 | 1 | 0·20 | 2 | 0·39 |
| Southend-on-Sea ... | 67,196 | ... | ... | 106 | 1·55 | 53 | 0·77 | 18 | 0·26 | 8 | 0·12 | 38 | 0·56 |
| Tilbury ... | 6,591 | ... | ... | 22 | 3·34 | 6 | 0·91 | ... | ... | 1 | 0·15 | 3 | 0·46 |
| Waltham Holy Cross ... | 6,828 | ... | ... | 25 | 3·66 | 4 | 0·59 | 2 | 0·29 | ... | ... | 2 | 0·29 |
| Walthamstow ... | 128,480 | ... | ... | 455 | 3·54 | 319 | 2·48 | 12 | 0·09 | 10 | 0·08 | 84 | 0·65 |
| Walton-on-the-Naze ... | 2,193 | ... | ... | ... | ... | 1 | 0·46 | ... | ... | ... | ... | ... | ... |
| Wanstead ... | 14,446 | 1 | 0·07 | 24 | 1·66 | 7 | 0·48 | ... | ... | ... | ... | 2 | 0·14 |
| Witham ... | 3,483 | ... | ... | ... | ... | 1 | 0·29 | 2 | 0·57 | ... | ... | 1 | 0·29 |
| Wivenhoe ... | 2,351 | ... | ... | ... | ... | 4 | 1·70 | 1 | 0·43 | ... | ... | 2 | 0·85 |
| Woodford ... | 19,118 | ... | ... | 26 | 1·36 | 45 | 2·35 | ... | ... | ... | ... | 10 | 0·52 |
| RURAL DISTRICTS:— | | | | | | | | | | | | | |
| Belchamp ... | 4,653 | ... | ... | 3 | 0·64 | 1 | 0·21 | ... | ... | ... | ... | ... | ... |
| Billericay ... | 22,091 | ... | ... | 35 | 1·58 | 26 | 1·18 | 1 | 0·05 | 2 | 0·09 | 15 | 0·68 |
| Braintree ... | 18,510 | ... | ... | 33 | 1·78 | 9 | 0·49 | 2 | 0·11 | ... | ... | 12 | 0·65 |
| Bumpstead ... | 2,601 | ... | ... | ... | ... | 6 | 2·31 | ... | ... | ... | ... | 2 | 0·77 |
| Chelmsford ... | 23,065 | ... | ... | 17 | 0·74 | 3 | 0·13 | ... | ... | ... | ... | 3 | 0·13 |
| Dunmow ... | 16,134 | ... | ... | 38 | 2·36 | 6 | 0·37 | 2 | 0·12 | ... | ... | 9 | 0·55 |
| Epping ... | 14,115 | ... | ... | 56 | 3·97 | 41 | 2·90 | 2 | 0·14 | ... | ... | 5 | 0·35 |
| Halstead ... | 10,353 | ... | ... | 13 | 1·26 | 3 | 0·29 | ... | ... | ... | ... | 11 | 1·06 |
| Lexden and Winstree ... | 19,832 | ... | ... | 17 | 0·86 | 2 | 0·10 | 2 | 0·10 | 1 | 0·05 | 8 | 0·40 |
| Maldon ... | 16,367 | ... | ... | 23 | 1·41 | 5 | 0·31 | ... | ... | ... | ... | 5 | 0·31 |
| Ongar ... | 10,723 | ... | ... | 19 | 1·77 | 3 | 0·28 | ... | ... | ... | ... | ... | ... |
| Orsett ... | 18,938 | ... | ... | 36 | 1·90 | 19 | 1·00 | 2 | 0·11 | 3 | 0·16 | 5 | 0·26 |
| Rochford ... | 18,880 | ... | ... | 22 | 1·17 | 43 | 2·28 | 7 | 0·37 | 3 | 0·16 | 8 | 0·42 |
| Romford ... | 26,194 | ... | ... | 66 | 2·52 | 9 | 0·34 | 1 | 0·04 | ... | ... | 24 | 0·92 |
| Saffron Walden ... | 10,816 | 1 | 0·09 | 8 | 0·74 | 4 | 0·37 | ... | ... | ... | ... | 3 | 0·28 |
| Stansted ... | 7,090 | ... | ... | 3 | 0·42 | ... | ... | 1 | 0·14 | ... | ... | ... | ... |
| Tendring ... | 22,171 | ... | ... | 12 | 0·54 | 2 | 0·09 | 26 | 1·17 | ... | ... | 2 | 0·09 |

SMALL POX.

Four cases occurred during the year, one in each of the following districts:—Grays Thurrock, Maldon Borough, Wanstead, and Saffron Walden Rural District.

The following Abstract of the Report of the Medical Officer of Health for the Port of London shows how the disease was imported into Grays.

The S.S. "Gloucestershire" arrived at Gravesend on March 8th. She had sailed from Rangoon, calling at Colombo, Port Said, Marseilles, and Portland.

"The vessel was boarded at Gravesend by the Assistant Medical Officer of this Authority, in company with the Customs Preventive Officer. They were received by the Captain and the Surgeon of the vessel at the top of the ladder, and, in reply to their questions, each stated that there had been no sickness on board save that a member of the Native crew had fallen from the bridge, injuring his leg. The Assistant Medical Officer, accompanied by the Captain, inspected the Native members of the crew, looking especially for signs of Plague as the vessel had come from, and had touched at, ports where that disease existed. It was dark at the time, and artificial light had to be used for the purpose of examination.

"The Surgeon subsequently filled in a certificate, stating that there had been no contagious or infectious disease, or any illness exhibiting feverish symptoms or diarrhoea while lying in the port of Rangoon or on the voyage to London. This certificate also stated that he had examined the crew within twelve hours of arrival, and found all in good health and free from symptoms of Cholera, Yellow Fever and Plague.

"The vessel was in a hurry to save her tide for docking, and the vessel entered Tilbury Dock, where the passengers landed, their names and addresses having been previously furnished to the Medical Officer. In the course of the day various members of the crew departed for their homes. At 10 p.m. I received a telephone message that one of the crew, who had gone to his home at Grays, had developed Small-pox. I telephoned Dr. Willoughby, communicated the facts to him, and he proceeded at 11.30 p.m. to Tilbury Dock, and visited the vessel. The donkeyman was found to be ill, and Dr. Willoughby, on examining him, found that he was in the very earliest stage of the eruptive condition of the disease. On March 9th, at 8 a.m., the launch entered Tilbury Dock, and the donkeyman and three members of the Native crew were removed to Denton Hospital suffering from Small-pox."

Two members of the crew who had gone to Liverpool subsequently developed the disease. The Master of the ship and the ship's Surgeon did not answer truthfully the questions put them, as it was found that there were three generations of this disease on the vessel between Rangoon and her arrival in Tilbury Dock.

The origin of the case which occurred in Maldon could not be traced.

The case which occurred at Wanstead was that of a person employed at the Woolwich Arsenal. The source of infection is not referred to.

The Saffron Walden case was that of a servant at Arkesden, who, being out of a situation had spent three weeks' in London. How she became infected whilst there does not appear to be known.

The following return recently laid before Parliament by the President of the Local Government Board shows that the percentage of children ultimately unvaccinated is gradually approaching 50 per cent.

TABLE XVI.

| Year. | Number of births registered during the year. | Number of exemptions received during the year. | Percentage of statutory exemptions. | Percentage of children ultimately unvaccinated. |
|-------|--|--|-------------------------------------|---|
| 1906 | 935,081 | 52,391 | 5·6 | 16·8 |
| 1907 | 918,042 | 57,675 | 6·3 | 20·4 |
| 1908 | 940,383 | 162,799 | 17·3 | 27·9 |
| 1909 | 914,472 | 190,689 | 20·9 | 32·3 |
| 1910 | 896,962 | 230,947 | 25·7 | 36·3 |
| 1911 | 881,138 | 248,483 | 28·2 | 38·9 |
| 1912 | 872,767 | 275,929 | 31·6 | 42·9 |
| 1913 | 881,480 | 308,235 | 35·0 | Figures not available. |

The latest return for individual counties is for the year 1911 and it shows that out of 32,186 children born in Essex only 13,609 were successfully vaccinated. I have no doubt that fully 50 per cent. of the children born in recent years in this county are not vaccinated, and that in some portions of the county a much larger number of unvaccinated children are to be found.

The necessity for being prepared to isolate any cases of the disease which may occur, at the earliest possible moment, and to vaccinate or re-vaccinate all contacts and persons living in the vicinity in which the cases occur cannot be too strongly urged.

The County Council has given great attention to this matter and has been successful in bringing about combinations of areas for Small-pox Isolation purposes. A hospital is being provided in the Halstead Rural District for North-west Essex, and the Colchester Small-pox Hospital has been made available for all North-East Essex. With the exception of Leyton I understand that all the extra metropolitan urban areas have made an arrangement with the County Borough of West Ham for the reception of any cases which may occur. The following description of the Hospital is from the Annual Report for the County of West Ham, 1913:—

“Dagenham Small-pox Hospital, situate about nine miles from the Borough, occupying a site of $6\frac{1}{2}$ acres, enclosed within a farm of 119 acres, owned and cultivated by the Council, was opened in 1899. It consists of permanent buildings capable of accommodating 50 patients with the administrative staff required for their care

together with temporary iron buildings sufficient to treat 300 cases. Under agreement, eight other Sanitary Authorities contribute to the establishment and maintenance of this Hospital, in consideration of West Ham undertaking to receive and treat all the Small-pox cases sent to the Hospital by those Authorities. This Hospital is now being used as a temporary Sanatorium."

LEYTON. The agreement which this Urban Council had with the Metropolitan Asylums Board terminated in March last and negotiations with West Ham were commenced, but proved abortive. The question then arose of joining South Mimms but the Health Committee and the Council rejected the report of the Sub-Committee which had visited that Hospital and reported in favour of entering the combination. The Medical Officer of Health says, "Their reason for so doing (*i.e.*, rejecting the proposal of the Sub-Committee) being that they did not see their way to incur an annual expenditure of something like £500 to insure against a contingency that they do not think likely to arise." According to the Vaccination Officer's return the number of children vaccinated is decreasing rapidly, and for the last four years has not reached 50 per cent. If a case of this disease occurs "it must be allowed to remain at home to infect the neighbourhood, and so an epidemic will be started, the results of which cannot be foreseen." "Objectors to vaccination should be amongst the strongest supporters of Hospital segregation."

SCARLET FEVER.

The number of cases notified during the year was much below the average. The Medical Officers of Health's returns shew that 2,326 occurred in the Urban Districts and 385 in the Rural. The only districts which were free from the disease during the whole year were Brightlingsea, Burnham, Frinton, Walton, Witham, Wivenhoe and the Belchamp and Bumpstead Rural Districts. Most cases in proportion to the population occurred in the following areas:—

| | | | |
|---------------|-----|-----|----------------------------------|
| Barking | ... | ... | 4·17 cases per 1,000 population. |
| Clacton | ... | ... | 3·27 " " |
| Epping | ... | ... | 5·56 " " |
| Grays | ... | ... | 4·85 " " |
| Harwich | ... | ... | 3·48 " " |
| Maldon | ... | ... | 5·20 " " |
| Tilbury | ... | ... | 3·34 " " |
| Waltham Cross | ... | ... | 3·66 " " |
| Walthamstow | ... | ... | 3·54 " " |
| Epping (R.) | ... | ... | 3·97 " " |

The average for the whole of the Urban Districts was 2·8 per 1,000 population and for the Rural Districts 1·53. Very few deaths occurred, the most which occurred in any area was four and this was in East Ham.

The number of deaths per 100 persons attacked was only

·64 in the Urban Districts and
·78 in the Rural Districts,

in other words, only about one fatal case occurred amongst every 150 notified. The disease therefore was exceedingly mild, milder than previously recorded in this county. Unfortunately both the prevalence and severity of the disease tend to a more or less regular rhythmic change, and unless the disease is being gradually stamped out we may have years of much greater prevalence, and when the severity may be many times that of the past year.

In the Urban Districts 79 per cent. of the cases were removed to Isolation Hospitals, and in the Rural Districts 72 per cent.

The difficulty of diagnosing very mild cases of Scarlet Fever is so great that there is no doubt a somewhat large percentage of error. In Barking the Medical Officer of Health estimates that this error amounts to 12 per cent. A wrongly diagnosed case may be admitted to an Isolation Hospital and then become infected and develop this disease. This is a difficulty which the Superintendents of Isolation Hospitals have to contend with.

DIPHTHERIA AND MEMBRANOUS CROUP.

One thousand three hundred and eighty-nine cases, with 83 deaths, were notified in the Urban Districts, and 186 cases with 14 deaths in the Rural Districts. These are many more than have occurred during recent years and more than have been notified in any one year since 1908, but in consequence of the increase in population the case rate is not nearly so high as in that year. In the Urban Districts 1·64 out of every 1,000 population were attacked, the rate being 0·69 only in the Rural areas. The attack rate was therefore more than twice as great in the towns as in the country. Fortunately the type of disease was very mild, much milder, in fact, than in any previous year, but although the cases were fewer in proportion to the population in the Rural areas the disease was a little more severe, the mortality per 100 cases being 6·0 in the Urban Districts and 7·5 in the Rural.

The following Table shews that the conditions favouring a high and low mortality amongst persons suffering from Diphtheria seem to have a similar effect on Scarlet Fever:—

TABLE XVII.

DEATHS PER 100 CASES NOTIFIED.

| | | Diphtheria. | | Scarlet Fever. |
|-----------|-----|-------------|-----|----------------|
| 1895-1900 | ... | 16·4 | ... | 1·55 |
| 1901 | ... | 11·4 | ... | 1·4 |
| 1902 | ... | 10·6 | ... | 1·5 |
| 1903 | ... | 8·9 | ... | 2·2 |
| 1904 | ... | 9·2 | ... | 1·8 |
| 1905 | ... | 9·7 | ... | 1·8 |
| 1906 | ... | 12·9 | ... | 2·2 |
| 1907 | ... | 10·6 | ... | 2·1 |
| 1908 | ... | 11·6 | ... | 1·8 |

TABLE XVII.—*continued.*

DEATHS PER 100 CASES NOTIFIED.

| | | Diphtheria. | | Scarlet Fever. |
|------|-----|-------------|-----|----------------|
| 1909 | ... | 8.9 | ... | 1.6 |
| 1910 | ... | 8.3 | ... | 1.6 |
| 1911 | ... | 7.6 | ... | .95 |
| 1912 | ... | 8.8 | ... | 1.1 |
| 1913 | ... | 6.2 | ... | .67 |

An excessive number of cases occurred in the following districts:—

| | | | |
|-----------|-----|-----|---------------------------|
| Chingford | ... | ... | 3.8 per 1,000 population. |
| Epping | ... | ... | 4.4 „ „ |
| Grays... | ... | ... | 3.75 „ „ |
| Halstead | ... | ... | 7.63 „ „ |

The only districts which remained free from the disease were Brightlingsea, Frinton, Saffron Walden, and the Stanstead Rural District; in a few districts only a single case occurred. *Vide* Table XV.

CHINGFORD. Thirteen out of the 33 cases which occurred here were in a home for girls. A “carrier” case was discovered *who had suffered from the disease two years previously*, and when she was isolated, the outbreak came to an end.

EPPING. In a special report the Medical Officer of Health traced the outbreak to milk infection through a “carrier” case. Almost as soon as this case was recognized and isolated, the epidemic came to an abrupt termination.

GRAYS. Forty-two out of the 50 notified cases occurred amongst children attending school, and about half the patients attended Bridge Road Infants' School.

HALSTEAD. The outbreak here chiefly affected young children attending school. A special search was made for unrecognized cases, and eight or nine were found. The disease was prevalent from April to July.

Seventy-six per cent. of the cases in the Urban Districts and 74 per cent. of those in the Rural Districts were removed to Isolation Hospitals.

ENTERIC FEVER.

According to the Annual Reports, 141 cases of Enteric Fever resulting in 21 deaths were notified in the Urban Districts, and 48 cases with seven deaths in the Rural Districts.

No cases occurred in Brentwood, Burnham, Clacton, Epping, Frinton, Halstead, Maldon, Saffron Walden, Tilbury, Walton, Wanstead and Woodford, nor in Belchamp, Bumpstead, Chelmsford, Halstead, Maldon, Ongar, or Saffron Walden Rural Districts. The case rate per 1,000 population being .17, this was considerably exceeded in the following districts:—

| | | | | |
|------------------|-----|-----|-----|------|
| Brightlingsea | ... | ... | ... | ·46 |
| Grays | ... | ... | ... | ·31 |
| Harwich | ... | ... | ... | 2·34 |
| Shoeburyness | ... | ... | ... | ·39 |
| Witham | ... | ... | ... | ·57 |
| Wivenhoe | ... | ... | ... | ·43 |
| Rochford (Rural) | ... | ... | .. | ·37 |
| Tendring (Rural) | ... | ... | ... | 1·17 |

Save at Witham, all these districts abut on the coast where shell fish can be picked up, and it is in these districts that we have a continued prevalence of the disease. In the Brightlingsea, Harwich, Shoeburyness, Witham, Wivenhoe and Rochford districts, the prevalence was excessive in 1912. Eighty-one per cent. of the cases in the towns and 63 per cent. of those in the rural areas were removed to hospitals. The type of disease was not very severe, only 14·9 per cent. of the cases in the Urban Districts and 14·6 of those in the Rural Districts proving fatal.

BRIGHTLINGSEA. Two outbreaks of Enteric Fever which occurred outside this County were suspected to be due to the eating of oysters from Brightlingsea. The Medical Officer of Health fully investigated the complaints, and the subject is thoroughly discussed, but the conclusion is fairly summed up in the following paragraph:—

“If the oysters were the means of conveying the disease at S—, it cannot have been a pollution on a large scale, but one very limited in the number of oysters affected. Such a pollution might take place in the oyster beds, in transit to the consumer, in the distributor's premises, or in the consumer's houses. In this particular case, it is difficult to say at which point the infection, if any, occurred, but it is quite as likely to have occurred after they left the beds as before.”

HARWICH BOROUGH AND TENDRING RURAL. An outbreak occurred early in the year and was investigated by an Inspector of the Local Government Board. The outbreak commenced in Parkeston in the Tendring Rural District, and Dr. Cook, the Medical Officer of Health, strongly suspected that the infection was being spread from a certain dairy. This proved to be the case. Altogether 44 cases occurred in Harwich and 25 in Parkeston. The Inspector says in the concluding section of his report: “The outbreak of enteric fever dealt with . . . adds one more to the somewhat rapidly growing list of epidemics traceable to a individual who, whether having previously passed through an acute attack of the disease or not, is yet periodically capable of conveying the disease, directly or indirectly, to other individuals owing to the discharge in the urine or fæces, of the specific micro-organism of the disease in virulent form.”

“In the present instance it is obvious that if I.A.G. was such a ‘carrier’ the infection of the milk supply during the period in question can readily be accounted for on the assumption that he introduced infection into the milk by means of his hands during the three weeks he was employed as a milker.”

ROCHFORD RURAL. Six cases occurred here. In two the diagnosis was doubtful, two were infected outside the district, the cause of the two others apparently infected within the district "was not clear," but in one the well water was under suspicion.

The average Enteric Fever case rate for England and Wales is .22 per 1,000, that for Essex being .17; it is well below, and had it not been for the Harwich outbreak the County case rate would have been exceedingly low.

PUERPERAL FEVER.

The case rate per 1,000 population was one of the highest for any County in the Kingdom, but this is exceptional. A number of cases occurred in East Ham, Leyton, Walthamstow and Southend (*Vide* Table XV.), but not large in proportion to the population.

EAST HAM. The Medical Officer of Health says the disease is becoming less common with the increasing knowledge of Hygienic conditions, and greater care exercised during the lying-in-period and supervision of Midwives under the Midwives' Act.

LEYTON. No special reference.

WALTHAMSTOW. Four cases occurred in the practice of doctors, two in the practice of one midwife, one in that of another, two in that of a Nursing Institution, and one case was notified by a medical man called in on account of abortion.

SOUTHEND. Of the eight cases notified here one turned out to be Typhoid Fever. Of the other seven cases, four were in the practice of three registered midwives.

Vide also section on Administration of Midwives' Act.

CEREBRO-SPINAL FEVER AND POLIOMYELITIS.

Cases of these diseases occurred in the following districts :—

TABLE XVIII.

| Urban. | Cerebro-spinal Meningitis. | | Poliomyelitis. | |
|--------------------|-------------------------------|----|----------------|----|
| Barking | ... | 2 | ... | 9 |
| Colchester | ... | 3 | ... | 0 |
| East Ham | ... | 6 | ... | 8 |
| Leyton | ... | 2 | ... | 6 |
| Romford | ... | 0 | ... | 1 |
| Shoeburyness | ... | 0 | ... | 1 |
| Southend | ... | 2 | ... | 2 |
| Waltham Holy Cross | ... | 0 | ... | 2 |
| Walthamstow | ... | 0 | ... | 9 |
| Wanstead | ... | 0 | ... | 1 |
| Totals | ... | 15 | ... | 39 |

TABLE XVIII.—*continued.*

| Rural. | | Cerebro-spinal Meningitis. | | | Poliomyelitis. |
|----------------|--------|-------------------------------|----|-----|----------------|
| Braintree | ... | ... | 1 | ... | 0 |
| Chelmsford | ... | ... | 0 | ... | 1 |
| Dunmow | ... | ... | 0 | ... | 2 |
| Epping | ... | ... | 0 | ... | 1 |
| Romford | ... | ... | 0 | ... | 3 |
| Saffron Walden | ... | ... | 0 | ... | 2 |
| | Totals | ... | 1 | ... | 9 |
| Grand totals | ... | ... | 16 | ... | 48 |

BARKING. Although a greater proportion of cases occurred here than in any other district, the Medical Officer of Health makes no reference to them in the body of his Report.

COLCHESTER. The three cases of Cerebro-spinal Meningitis were removed to the Hospital. Two died.

EAST HAM. Of the six cases of Cerebro-spinal Meningitis notified, four proved fatal, and the Medical Officer of Health thinks those which recovered were not genuine cases of the disease. Two cases were not notified until after death had occurred. Eight cases of Poliomyelitis were notified, four after death had occurred. None of the above 14 cases appear to have been of an infectious character.

LEYTON. The two cases of Cerebro-spinal Meningitis proved fatal. Referring to the case of Poliomyelitis, the Medical Officer of Health says: "Each case was visited by me, and I found in every instance that a considerable time had elapsed since the first onset of the disease, in one case four months; that there were many other children in the families, in two cases four and five respectively; that no isolation had been practised; that the disease had in no instance spread to other children; that no intercourse between the affected children was traceable; and that the cases were distributed in parts of the district remote from one another."

In all other Districts the cases notified appear to have been visited and properly dealt with, but in no single instance have the diseases appeared to be of an infective type. No case could be traced to an antecedent case. It is a well-known fact that these diseases have a tendency to become epidemic, hence the necessity for notification and continued watchfulness. Many Medical Officers of Health comment on the fact that notifications are not received at an early stage of the disease, in fact a large proportion is not notified until after death has occurred.

In connection with all infectious diseases it may be stated that Dr. Sinclair, the Chief School Medical Officer keeps me well informed upon all matters of mutual interest. We have found that in many districts the Medical Officers of Health do not inform the School Teachers of cases occurring amongst children, nor send official

notices for exclusion of scholars. We have therefore drawn up a special book of forms for this purpose, and copies have been sent to all the Medical Officers of Health in the County, with the suggestion that they should use them. This I hope will be done. Of course, in all the larger and more important areas this has been done for many years, and I was surprised to find that there were so many districts in which the Medical Officers of Health did not keep in touch with the Schools.

TUBERCULOSIS.

Weekly notifications are received from each sanitary district, according to a Local Government Board order, which came in force on Feb. 1st. A Table compiled from these weekly returns was found to differ, in some instances considerably, from the returns given in the Annual Reports. As the latter is more likely to be correct, it is given here. The death-returns which I obtained from the Registrar General differed from the returns in the Annual Reports, and I have accepted the latter, and the numbers of deaths given in Table XX. are taken from the returns of the Medical Officers of Health.

In the Urban Districts, 2,118 cases of Pulmonary Tuberculosis, and 1,144 of Non-Pulmonary Tuberculosis were notified, corresponding to 2·5, and 1·35 per 1,000 population respectively, a total of 3·85 per 1,000.

In the Rural Districts, 367 cases of Pulmonary and 192 cases of Non-Pulmonary Tuberculosis were notified, corresponding to 1·4 and ·7 per 1,000 respectively, a total of 2·1 per 1,000. We therefore have a much larger number of cases notified in proportion to the deaths in towns than in the rural areas.

| | Pulmonary Tuberculosis. | | Non-Pulmonary Tuberculosis. | |
|-----------------|-------------------------|-------------|-----------------------------|-------------|
| | Case-rate. | Death-rate. | Case-rate. | Death-rate. |
| Urban Districts | ... 2·5 | ·81 | 1·35 | ·30 |
| Rural Districts | ... 1·4 | ·65 | ·7 | ·24 |

The only inference which can be drawn from this Table is that nearly half the cases of Tuberculosis which occur in Rural Districts are escaping notification, or that their notification is being seriously delayed. Medical Officers of Health in Rural Districts should give this matter attention, as these missed cases are a danger to the community, and their chances of cure are becoming gradually less.

The ratios of notified cases to deaths from Pulmonary Tuberculosis are as under :—

| | Ratio of cases notified to deaths. | |
|-----------------|------------------------------------|-------|
| | 1912. | 1913. |
| Urban Districts | ... 3·2 | 3·1 |
| Rural Districts | ... 2·3 | 2·1 |

Notwithstanding the remarks made in last years' Report, about one-third of the cases of Consumption, and one-half the other forms of Tuberculosis in several areas are not notified.

It will have been noted that over 2,000 cases of Pulmonary Tuberculosis were notified in 1912, and about 2,500 in 1913, and notifications appear to be coming in still at about the same rate. Consequently either a far greater number of persons are suffering from Phthisis than had been anticipated, or a very large proportion become cured. Assuming that 2,000 cases are notified annually and 800 die each year, the annual increment of consumptives would be 1,200. Since the death-rate from Phthisis is not increasing but decreasing, either the notifications must speedily fall to about 800 a year, of which there is at present no sign (1,350 new cases having been notified in the first-half of the present year (1914)), or about two-thirds the patients notified become cured. If so the disease must have a much greater tendency to arrest, or be much more amenable to treatment than is usually supposed.

It would be most interesting if some of our Medical Officers of Health would trace up all the cases notified, and ascertain their subsequent history. At the present time it seems as if only one person out of three notified to be suffering from Pulmonary Tuberculosis dies from this disease.

Table XIX. shews that the highest death-rates from Pulmonary Tuberculosis occurred in the following districts :—

| | | | | |
|--------------|-----|-----|-----|-----------------------|
| Barking | ... | ... | 1.4 | per 1,000 population. |
| Clacton | ... | ... | 1.3 | „ „ |
| Rochford R. | ... | ... | 1.2 | „ „ |
| Bumpstead R. | ... | ... | 1.1 | „ „ |
| Braintree | ... | ... | 1.1 | „ „ |
| Southend | ... | ... | 1.0 | „ „ |

and the lowest in Brentwood, Brightlingsea, Frinton and Loughton; not a single death being recorded in any of these towns. Very low rates prevailed in many other small districts.

Returns for a single year are of little or no value, the average for a series of years being necessary for justifying any definite conclusion. There can be no doubt that there is an excessive prevalence of tubercular diseases in Barking, Southend, Grays, Clacton, Colchester, Epping, Frinton, Halstead, Walthamstow, Leyton and East Ham. The excess in Southend, Clacton and Frinton is easily explained. They are watering places to which persons with lowered vitality flock in the hope of receiving relief or of being cured.

In the Rural Districts the variations in prevalence are not so great, but there are two areas, Billericay and Stansted, where the death-rates are very low.

As Brentwood has the lowest death-rate of any Urban District, and is in the Billericay Union, it certainly seems as if there were conditions there inimical to the spread of tubercular diseases.

TABLE XIX.
PREVALENCE OF TUBERCULOSIS, 1913.

| Urban Districts. | Notifications. | | Deaths. | | Pulmonary death-rate. | Non-pulmonary death-rate. |
|-----------------------------------|----------------|----------------|------------|----------------|-----------------------|---------------------------|
| | Pulmonary. | Non-pulmonary. | Pulmonary. | Non-pulmonary. | | |
| Barking ... | 179 | 65 | 50 | 19 | 1·4 | ·57 |
| Braintree ... | 8 | 5 | 7 | 4 | 1·09 | — |
| Brentwood ... | 4 | — | — | 2 | — | — |
| Brightlingsea ... | 1 | 4 | — | — | — | — |
| Buckhurst Hill ... | 5 | 3 | 1 | — | ·20 | — |
| Burnham ... | 6 | 4 | 3 | 1 | ·92 | — |
| Clacton ... | 22 | 4 | 13 | 4 | 1·3 | — |
| Chelmsford ... | 40 | 15 | 11 | 3 | ·59 | — |
| Chingford ... | 14 | 6 | 6 | 1 | ·64 | — |
| Colchester ... | 107 | 61 | 34 | 18 | ·76 | ·4 |
| East Ham ... | 492 | 196 | 124 | 39 | ·87 | ·27 |
| Epping ... | 10 | 1 | 5 | — | ·84 | — |
| Frinton-on-Sea ... | 1 | 1 | — | — | — | — |
| Grays ... | 46 | 8 | 15 | 4 | ·9 | — |
| Halstead ... | 10 | 6 | 4 | 1 | ·63 | — |
| Harwich ... | 14 | 13 | 12 | 9 | ·83 | — |
| Ilford ... | 143 | 105 | 51 | 22 | ·6 | ·3 |
| Leyton ... | 288 | 195 | 106 | 28 | ·81 | ·21 |
| Loughton ... | 2 | 3 | — | 3 | — | — |
| Maldon ... | 23 | 14 | 4 | — | ·62 | — |
| Romford ... | 37 | 25 | 13 | 9 | ·72 | — |
| Saffron Walden ... | 5 | 8 | 3 | 1 | ·47 | — |
| Shoeburyness ... | 4 | 7 | 4 | 2 | ·76 | — |
| Southend-on-Sea ... | 269 | 109 | 81 | 25 | 1·00 | ·31 |
| Tilbury ... | 13 | 10 | 4 | 2 | ·52 | — |
| Waltham Holy Cross ... | 14 | 38 | 5 | 4 | ·73 | — |
| Walthamstow ... | 285 | 189 | 119 | 46 | ·90 | ·35 |
| Wanstead ... | 27 | 19 | 2 | 4 | ·12 | — |
| Witham ... | 4 | 1 | 3 | 2 | ·86 | — |
| Woodford ... | 42 | 27 | 9 | 7 | ·46 | — |
| Walton-on-the-Naze ... | 1 | 1 | 1 | 1 | ·45 | — |
| Wivenhoe ... | 2 | 1 | 1 | — | ·4 | — |
| Total ... | 2118 | 1144 | 691 | 261 | ·30 | ·30 |
| Rural Districts. | | | | | | |
| Belchamp ... | 11 | 2 | 3 | 3 | ·64 | — |
| Billericay ... | 28 | 10 | 8 | 6 | ·37 | — |
| Braintree ... | 28 | 20 | 14 | 5 | ·75 | — |
| Bumpstead ... | 2 | 1 | 3 | 2 | 1·1 | — |
| Chelmsford ... | 28 | 14 | 13 | 4 | ·56 | — |
| Dunmow ... | 22 | 4 | 8 | 3 | ·49 | — |
| Epping ... | 15 | 20 | 10 | 6 | ·69 | — |
| Halstead ... | 19 | 2 | 8 | 1 | ·77 | — |
| Lexden and Winstree ... | 25 | 24 | 14 | 4 | ·70 | — |
| Maldon ... | 23 | 14 | 6 | 3 | ·36 | — |
| Ongar ... | 11 | 8 | 9 | 1 | ·83 | — |
| Orsett ... | 20 | 12 | 12 | 4 | ·65 | — |
| Rochford ... | 33 | 19 | 23 | 5 | 1·2 | — |
| Romford ... | 53 | 28 | 16 | 6 | ·59 | — |
| Saffron Walden ... | 9 | 1 | 3 | 2 | ·27 | — |
| Stansted ... | 5 | — | 4 | — | ·56 | — |
| Tendring ... | 35 | 23 | 18 | 8 | ·80 | — |
| Total ... | 367 | 192 | 172 | 63 | ·65 | ·24 |
| Total for whole County ... | 2485 | 1336 | 863 | 324 | ·77 | ·29 |

TABLE XX.

AVERAGE DEATH-RATES FROM PHTHISIS IN EACH URBAN AND RURAL DISTRICT FOR THE 5 YEARS 1907-11 AND THE DEATH-RATES FOR 1912 AND 1913.

| Urban Districts. | 5 years average. | 1912. | 1913. | Rural Districts. | 5 years average. | 1912. | 1913. |
|------------------|---------------------|----------|----------|------------------|---------------------|---------|---------|
| Leigh | ... 1.44 |82 | ... * | Dunmow |97 |99 |49 |
| Barking | ... 1.21 |86 | ... 1.4 | Belchamp |81 | ... 1.1 |64 |
| Southend | ... 1.16 |98 | ... 1.0 | Lexden and | | | |
| Grays | ... 1.05 |61 |9 | Winstree |81 | ... 1.0 |70 |
| Clacton | ... 1.03 |54 | ... 1.3 | Maldon |81 |8 |36 |
| Colchester |96 |88 |76 | Ongar |81 |56 |83 |
| Epping |91 |48 |84 | Saffron Walden |81 |66 |27 |
| Frinton |90 |0 |0 | Braintree |79 |86 |75 |
| Halstead |88 | ... 1.1 |63 | Chelmsford |79 |39 |56 |
| Walthamstow |88 |83 |90 | Tendring |76 |85 |80 |
| Leyton |87 |90 |81 | Romford |71 |69 |59 |
| East Ham |87 | ... 1.07 |87 | Rochford |69 |43 | ... 1.2 |
| Romford |79 |73 |72 | Halstead |68 |55 |77 |
| Braintree |78 | ... 1.3 | ... 1.09 | Orsett |65 |43 |65 |
| Walton |74 |86 |45 | Epping |55 |49 |69 |
| Chingford |71 |81 |64 | Bumpstead |54 |77 | ... 1.1 |
| Witham |70 |44 |86 | Billericay |54 |41 |37 |
| Chelmsford |67 |34 |59 | Stansted |49 |42 |56 |
| Shoeburyness |66 |59 |76 | | | | |
| Waltham Holy | | | | | | | |
| Cross |65 | ... 1.0 |73 | | | | |
| Ilford |64 |56 |6 | | | | |
| Maldon |62 | ... 1.1 |62 | | | | |
| Buckhurst Hill |62 |82 |20 | | | | |
| Brightlingsea |58 |45 |0 | | | | |
| Harwich |56 |43 |83 | | | | |
| Saffron Walden |55 |47 |47 | | | | |
| Burnham |51 |0 |92 | | | | |
| Wivenhoe |50 | ... 2.0 |4 | | | | |
| Woodford |50 |52 |46 | | | | |
| Loughton |45 |90 |0 | | | | |
| Wanstead |44 | ... 1.4 |12 | | | | |
| Brentwood |18 |29 |0 | | | | |

NOTE.—All the districts above the line have a death-rate from phthisis above the average for the County, and those under the line have a death-rate below the average.

* Now merged in Southend.

BARKING. The Medical Officer of Health, in referring to the housing of the persons notified, gives the following Table:—

| No. of rooms in house. | | | Persons attacked. | | No. of deaths. |
|------------------------|-----|----------|-------------------|-----|----------------|
| 2 rooms | ... | ... | 1 | ... | 0 |
| 3 | „ | ... | 2 | ... | 0 |
| 4 | „ | ... | 52 | ... | 18 |
| 5 | „ | ... | 17 | ... | 5 |
| 6 | „ | and over | 15 | ... | 4 |

He says, "From this it would appear as if the disease, once having declared itself, was not very materially modified by the kind of house occupied, which is rather an unexpected result."

He has made a study, also, of the occupations of those attacked, but he is unable to say which favour phthisis and which do not.

GRAYS. The Medical Officer of Health thinks some cases are notified "more on suspicion than from definite evidence of the disease."

COLCHESTER. The returns shew that there is a gradual diminution in the death-rate during recent years. The Health Visitor visits each notified case once a quarter. (She has since been appointed Tuberculosis Nurse).

EPPING. Some cases escape notification here. Special Tuberculosis Wards or Shelters are provided at the Union Infirmary.

HALSTEAD. The Medical Officer of Health points out that the age and sex distribution of the population is such that the district ought to have a slightly lower death-rate from Phthisis than the County generally, whilst the rate is really a little above the average.

LEYTON. No less than 486 notifications were received from public institutions. Dr. Pitt, the Tuberculosis Officer, has been appointed Assistant Medical Officer of Health for Tuberculosis purposes. This simplifies the visiting and is an advantage all round.

WALTHAMSTOW. The incidence of the disease in the different Wards is referred to. The variation is not great, but most occur in St. James' Street Ward (2.5 per 1,000 population), and fewest in Higham Hill Ward (1.6 per 1,000 population). In December, Dr. Pitt was appointed Assistant Medical Officer of Health for Tuberculosis purposes, to prevent overlapping in dealing with notified cases. The visits to notified cases are now made by Dr. Pitt and the Nurses working under him.

EAST HAM. In 1912, there were 190 deaths from Tuberculosis; last year there were only 168.

Elaborate tables shewing the age and sex of all the cases notified in each Sanitary District in the County, were prepared early in the year for the Local

Government Board. These are too voluminous to reproduce, but they are summarised in the appended table. The cases are those notified weekly from February 1st to December 31st, 1913, and, therefore, do not correspond with the previous tables which refer to the whole year, and were prepared from the Annual Reports:—

NOTIFICATIONS OF CASES OF PULMONARY TUBERCULOSIS.

| Age period. | Urban Districts. | | | Rural Districts. | | | Whole County. | |
|------------------|------------------|----------|-----|------------------|----------|-----|---------------|----------|
| | Males. | Females. | | Males. | Females. | | Males. | Females. |
| Under 1 year ... | 3 | 2 | ... | 0 | 0 | ... | 3 | 2 |
| 1 to 5 years... | 20 | 14 | ... | 2 | 0 | ... | 22 | 14 |
| 5 to 10 „ ... | 58 | 73 | ... | 6 | 3 | ... | 64 | 76 |
| 10 to 15 „ ... | 56 | 65 | ... | 13 | 13 | ... | 69 | 78 |
| 15 to 20 „ ... | 68 | 85 | ... | 26 | 16 | ... | 94 | 101 |
| 20 to 25 „ ... | 114 | 98 | ... | 21 | 22 | ... | 135 | 120 |
| 25 to 35 „ ... | 240 | 244 | ... | 45 | 41 | ... | 285 | 285 |
| 35 to 45 „ ... | 193 | 164 | ... | 34 | 28 | ... | 227 | 192 |
| 45 to 55 „ ... | 91 | 77 | ... | 17 | 9 | ... | 108 | 86 |
| 55 to 65 „ ... | 56 | 33 | ... | 10 | 7 | ... | 66 | 40 |
| Over 65 „ ... | 17 | 14 | ... | 4 | 2 | ... | 21 | 16 |
| Totals | 916 | 869 | | 178 | 141 | | 1,094 | 1,010 |

NOTIFICATION OF CASES OF NON-PULMONARY TUBERCULOSIS.

| Age period. | Urban Districts. | | | Rural Districts. | | | Whole County. | |
|------------------|------------------|----------|-----|------------------|----------|-----|---------------|----------|
| | Males. | Females. | | Males. | Females. | | Males. | Females. |
| Under 1 year ... | 15 | 12 | ... | 1 | 0 | ... | 16 | 12 |
| 1 to 5 years... | 103 | 83 | ... | 15 | 3 | ... | 118 | 86 |
| 5 to 10 „ ... | 141 | 103 | ... | 12 | 29 | ... | 153 | 132 |
| 10 to 15 „ ... | 101 | 91 | ... | 17 | 21 | ... | 118 | 112 |
| 15 to 20 „ ... | 42 | 68 | ... | 9 | 7 | ... | 51 | 75 |
| 20 to 25 „ ... | 25 | 34 | ... | 11 | 9 | ... | 36 | 43 |
| 25 to 35 „ ... | 34 | 44 | ... | 7 | 12 | ... | 41 | 56 |
| 35 to 45 „ ... | 34 | 27 | ... | 0 | 6 | ... | 34 | 33 |
| 45 to 55 „ ... | 16 | 21 | ... | 4 | 4 | ... | 20 | 25 |
| 55 to 65 „ ... | 4 | 10 | ... | 1 | 1 | ... | 5 | 11 |
| Over 65 „ ... | 5 | 4 | ... | 1 | 0 | ... | 6 | 4 |
| Totals | 520 | 497 | | 78 | 92 | | 598 | 589 |

It will be observed that the majority of the cases of Pulmonary Tuberculosis occur in persons over 20 years of age, whereas the majority of non-pulmonary cases occur between the ages of 1 and 15 years. Based on the above we get the following Table, which is of interest in connection with the provision of Sanatoria for males and females, children and adults.

| | | | | Notifications. | Deaths. |
|--------------------------------------|-----|-----|-----|----------------|---------|
| Percentage of children under 5 years | ... | ... | ... | 1·9 | ·6 |
| " " between 5 and 15 years | ... | ... | ... | 13·7 | 1·4 |
| " of persons " 15 and 45 " | ... | ... | ... | 68·4 | 71·1 |
| " " over 45 years of age... | ... | ... | ... | 16·0 | 23·9 |
| | | | | 100· | 100· |
| Males .. | ... | ... | ... | 52· | 55· |
| Females | ... | ... | ... | 48· | 45· |
| | | | | 100· | 100· |

The percentage of notifications and of deaths at various ages from which the above is chiefly taken is given, since it may at some time be useful.

PERCENTAGE OF NOTIFICATIONS AND DEATHS AT VARIOUS AGES.

| | | | Notifications. | Deaths. |
|------------|-----|-----|----------------|---------|
| 0— 5 years | ... | ... | 1·9 | 1·5 |
| 5—10 " | ... | ... | 6·7 | ·5 |
| 10—15 " | ... | ... | 7·0 | 3·3 |
| 15—20 " | ... | ... | 9·3 | 7·5 |
| 20—25 " | ... | ... | 12·1 | 14·5 |
| 25—35 " | ... | ... | 27·1 | 27·3 |
| 35—45 " | ... | ... | 19·9 | 18·5 |
| 45—55 " | ... | ... | 9·2 | 15·9 |
| 55—65 " | ... | ... | 5·0 | 6·9 |
| Over 65 " | ... | ... | 1·8 | 4·1 |
| | | | 100· | 100· |

It now remains to consider the steps which are being taken in the County to control the spread of tubercular diseases, and for dealing with patients suffering from such diseases. This divides itself naturally into two parts (1), work undertaken by the various Local Authorities, and (2) work undertaken and controlled by the County Council.

WORK UNDERTAKEN BY THE LOCAL AUTHORITIES.

The campaign against Tuberculosis is in part undertaken by the Local Authorities and in part by the County Council. The action taken by Local Authorities is almost entirely of a preventive character. The disease is fostered by overcrowding of persons in houses, the overcrowding of houses on space, poverty, excessive use of stimulants, dirty and insanitary surroundings, want of personal cleanliness, intimate contact with persons suffering from the disease, tuberculous milk, and possibly by other infected foods. The action taken in each district with reference to the various forms of overcrowding is recorded in the Section, "Housing of the Working Classes," that against

insanitary conditions in the "Summary of Work done by Sanitary Inspectors," that against the sale of infected food under "Milk Supply." This still leaves some of the most important factors such as poverty, excessive use of stimulants, personal cleanliness, and contact of healthy with infective persons to be dealt with by other agencies. The County Council is undertaking to deal with the last mentioned, but the others are not at present receiving the attention they deserve. The campaign against them must be chiefly educational, and many Local Authorities are doing good work by the employment of Health Visitors, whose duty it is to visit infected families and to instruct them, as far as possible, how to prevent the disease spreading and how to give the patient the best chances of recovery. The Tuberculosis Nurses are also doing good work in this direction and every District Nurse is helping. Much more admits of being done in this direction and the Essex Insurance Committee attempted to do something by arranging with a gentleman, who kindly offered his services without remuneration, to give a series of lectures at different centres throughout the County. These lectures were illustrated with lantern slides and, I understand, were fairly well attended. The effort, however, was not very vigorous, and it might be repeated during the ensuing winter, on a wider scale and in a more systematic manner. The lecturers should be medical men with an intimate knowledge of the subject and capable of maintaining the interest of an audience of working men and women. Unfortunately such men are few and too busy to lecture, unless a reasonable fee could be offered to recompense them for the time they would have to give to the mission.

Neither Local Authorities, Medical Officers of Health, Health Visitors, Nurses nor Lecturers can deal adequately with the poverty problem. No doubt most of the poverty is due to preventible causes and would be remedied if families followed the advice given to them. Education may do much but more is required. Parliament will have to continue the study of the problem of how to utilize the surplus wealth of the rich to decrease the poverty of the very poor.

Temporary expedients generally accentuate the very evil they are devised to alleviate, but the problem is one which must be grappled with, and its solution would be rendered easier if the wealthier members of the community would only realise that it is not only their duty to do all they can to help the poor, but that it is in their own interest and in the interest of the entire nation, to eradicate poverty and so improve the general well being of the community. The general standard of health would be increased, and after all the health of the people is the truest measure of a country's wealth.

Care Committees would doubtless see after the poorer class of consumptives and after their families, and as will be seen later the County Council is not altogether unmindful of the help such committees could afford.

WORK UNDERTAKEN BY THE COUNTY COUNCIL.

The work undertaken by the County Council is chiefly of a "curative" character, but certain aspects of it are also "preventive." If a sufferer is cured he is no longer a source of danger to the community, and if the most advanced and infectious cases

are segregated the most dangerous source of infection is removed and the spread of the disease by such persons is prevented. As the County Council has organised a scheme for dealing with such cases it may, to this extent, be said to be assisting in the "preventive" campaign. The County scheme includes the provision of Dispensaries and Visiting Stations, with a staff of well qualified medical experts and nurses, and the provision of shelters and of hospitals chiefly for advanced cases, and of sanatoria for the early and curable cases.

The whole of the Tuberculosis administration of the County has been relegated to the Public Health and Housing Committee of the County Council and this Committee has met monthly to receive reports from myself, as the County Medical Officer of Health acting as Chief Tuberculosis Officer for the County. An arrangement has been entered into with the Essex Insurance Committee for dealing with all their Tuberculosis patients in the following manner :—

1. After an insured person has been certified to be suffering from Tuberculosis, his name and address, and the name and address of his panel doctor is sent to the Tuberculosis Officer for the district in which the patient resides.
2. The Tuberculosis Officer then visits the patient, after notifying the medical attendant and giving him the option of being present, and examines him or her fully and fills in Form A (*vide* appendix to this section), describing the condition of the patient and the form of treatment recommended, Dispensary, Domiciliary, Observational, Hospital, or Sanatorium.
3. The Tuberculosis Officer or his Nurse also fills in Forms B and C, B giving the history of the case and family history so far as can be ascertained, and C describing the environmental conditions.

These 3 forms constitute the original dossier of the patient.

4. This dossier is returned by the Tuberculosis Officer to the Clerk to the Insurance Committee and twice a week a Tuberculosis Officer, deputed by me for the purpose, attends at the office of the Insurance Committee and goes over the dossiers. He then fills in Form Med. 4, embodying his recommendation to the Insurance Committee. This is then signed by the Chairman of the Tuberculosis Sub-Committee for and on behalf of the Insurance Committee, but this form is not attached to the original dossier. The dossiers are then forwarded to me at the head office at Chelmsford, and such details as I require are entered on a large card and the case duly indexed. At the same time a form is sent by the Insurance Committee to me and to the Tuberculosis Officer who reported on the case, stating the nature of the treatment ordered.
5. The dossier is then sent to the Tuberculosis Officer concerned and retained by him if the patient is ordered Dispensary or Domiciliary treatment. If

the patient is being sent to a Hospital or Sanatorium the Tuberculosis Officer is notified when the patient is admitted and the dossier is then sent to the institution. When the patient leaves, a progress sheet (Form D (A)) is filled in, attached to the dossier and returned to the office for registration, etc.

6. The Tuberculosis Officer furnishes progress reports (Form D (A)) every three months relating to all cases in his area, or at shorter intervals if necessary.
7. When a patient ceases to receive treatment at the Dispensary, his or her name is transferred from the "treatment" to the "observation" register, and these cases under observation will only be reported upon once a year.
8. Each Hospital or Sanatorium makes a return weekly to my office, giving the names of the patients under treatment, with a brief note on their progress, and recommendation for further stay if deemed desirable. Patients are all sent for six weeks in the first instance and if at the end of four weeks a further stay is indicated the period is prolonged to 12 weeks. In exceptional cases patients may stay still longer.
9. The Clerk to the Insurance Committee sends out weekly to all the Tuberculosis Officers a list of all insured persons who have entered or left hospitals and sanatoria.
10. Each week the Clerk to the Insurance Committee sends to each Tuberculosis Officer a list of patients for whom reports are due within the next 10 days. The Tuberculosis Officer then fills in a progress report, Form D (A), and sends it the Insurance Committee, together with his recommendation for further treatment. When the treatment is ordered the Form D (A) is sent to the Chelmsford office for registration, and then returned to the Tuberculosis Officer, to attach to the patient's dossier.

Un-insured patients apply in the first instance to me, when a form (*vide* appendix) is sent to fill in and return. When this is received and approved, it is forwarded to the Tuberculosis Officer in whose district the patient resides. He then sees the patients and the subsequent procedure is exactly as with insured persons, save that all dossiers and reports are sent to me, and dealt with by me. Of course, domiciliary treatment is never ordered. If the patient cannot attend a Dispensary, or is not sent to a Hospital or Sanatorium, he or she is advised to call in or remain under his or her own medical man. Consultations are arranged with the medical men, if already in attendance, both when the patient is first visited, and at subsequent visits. Such patients are kept on the observation register, and seen every three months by the Tuberculosis Officer.

DISPENSARY DISTRICTS.

The County has been divided into 7 Districts with 11 Dispensaries and 10 Visiting Stations, as under:—

| No. of District. | Area in Acres. | Population. | No. of cases of Pulmonary Tuberculosis notified annually. | No. of Dispensaries. | No. of Consulting Rooms. | No. of Hospitals | No of Beds available for observation, etc. |
|------------------|----------------|-------------|---|----------------------|--------------------------|------------------|--|
| 1 | 14,500 | 306,000 | 620 | 3 | — | 1 | 22 |
| 2 | 15,000 | 253,000 | 610 | 3 | — | 2 | 17 |
| 3 | 228,000 | 149,000 | 210 | 2 | 2 | 2 | 22 |
| 4 | 310,000 | 92,000 | 102 | — | 4 | 2 | 22 |
| 5 | 209,000 | 136,000 | 222 | 1 | 3 | 2 | 16 |
| 6 | 188,000 | 72,000 | 105 | 1 | 1* | 2 | 16 |
| 7 | 7,750 | 86,000 | 300 | 1 | — | — | — |

* The position of this is not yet decided upon.

No. 1 District comprises the Urban Districts of Walthamstow, Leyton, Woodford, Chingford, and Buckhurst Hill.

No. 2 District comprises the Borough of East Ham, and the Urban Districts of Ilford and Barking.

No. 3 District comprises the Urban Districts of Romford, Grays, Waltham Abbey, Epping, Brentwood, and Loughton, and the Rural Districts of Romford, Orsett, Epping, Ongar, and Billericay.

No. 4 District comprises the Urban Districts of Saffron Walden, Braintree, Halstead, and Witham, and the Rural Districts of Saffron Walden, Braintree, Halstead, Dunmow, Belchamp, Bumpstead, and Stansted.

No. 5 District comprises the Boroughs of Colchester and Harwich, the Urban Districts of Clacton, Frinton, Brightlingsea, Walton, Wivenhoe, and Maldon, and the Rural Districts of Lexden and Winstree, Tendring and the portion of the Maldon District north of the Blackwater Estuary.

No. 6 District comprises the Borough of Chelmsford and Burnham Urban District, and the Rural Districts of Chelmsford, Rochford, and that portion of Maldon to the south of the Blackwater.

No. 7 District comprises the Borough of Southend, with which Leigh is now incorporated, and the Urban District of Shoeburyness.

During the year 1914, Southend became a County Borough, and will take over the Dispensary; arrangements have, however, been made for the attendance of patients from Shoeburyness, and from the parishes in the Rochford Rural District abutting on the Borough.

When East Ham becomes a County Borough a further change will be necessitated, and has been arranged for.

The Dispensaries, with hours of attendance, &c., are given in the appended Table.

HOSPITALS AND SANATORIA.

The County Scheme includes the provision of a Sanatorium for 120 early cases, and of Hospital beds in special pavilions attached to existing Isolation Hospitals for about 100 beds.

An estate of 99 acres has been purchased at Sandon, about four miles from Chelmsford Station, upon which to erect the Sanatorium, and plans have been prepared for submission to the Local Government Board.

Until this is completed, early and advanced cases are being dealt with in pavilions at the Isolation Hospitals, and elsewhere. The following is a list of beds available at the present time (July 1914), most of which have been in use all the year.

BEDS AVAILABLE AND IN USE AT SANATORIA AND HOSPITALS.

| | | For Insured Persons. | | | For Uninsured Persons. | | |
|---------------|-----|----------------------|---------|-----|------------------------|---------|-----|
| | | Male. | Female. | | Male. | Female. | |
| Chingford | ... | 14 | 8 | ... | 0 | 0 | ... |
| Romford | ... | 0 | 6 | ... | 0 | 2 | ... |
| Orsett | ... | 10 | 0 | ... | 4 | 0 | ... |
| Ilford | ... | 6 | 0 | ... | 0 | 0 | ... |
| Sandon | ... | 0 | 6 | ... | 0 | 4 | ... |
| Colchester | ... | 4 | 0 | ... | 4 | 0 | ... |
| Black Notley | ... | 14 | 0 | ... | 2 | 0 | ... |
| Victoria Park | ... | 5 | 5 | ... | 0 | 0 | ... |
| Nayland | ... | 10 | 10 | ... | 0 | 0 | ... |
| East Ham | ... | 11 | 0 | ... | 1 | 0 | ... |
| Maldon | ... | 8 | 0 | ... | 0 | 0 | ... |
| Halstead | ... | 0 | 0 | ... | 0 | 6 | ... |
| Galleywood | ... | 0 | 0 | ... | 0 | 6 | ... |
| | | — | — | | — | — | |
| Totals | ... | 82 | 35 | | 11 | 18 | |
| | | 117 | | | 39 | | |

Grand Total, 146.

CHINGFORD. This is a special pavilion erected from plans approved by the Local Government Board, situated on land just outside the enclosure of the Chingford Sanatorium, the name given to the Isolation Hospital of the Walthamstow Urban District. The County Council pays the Walthamstow District Council 30/- per week for each bed whether occupied or not. There is a Resident Medical Superintendent. This is the rate paid at all other Hospitals when the beds are provided by the Hospital authority.

| Name and Address of Tuberculosis Officer. | Address of Dispensary or Visiting Station. | Days and hours of Attendance. |
|---|--|---|
| W. O. Pitt, B.A., M.D., D.P.H., 66, Upper Walthamstow Road, Walthamstow. | LEYTON 180, High Road (adjoining Leyton Station, G.E.R.) | Monday, 2.30 to 4.30 p.m. Thursday, 10 to 12 noon. " 6 to 8 p.m. |
| | WALTHAMSTOW 334, Hoe Street (Near Hoe Station, G.E.R., and opposite Co-operative Store). | Tuesday, 10 to 12 noon } Women and Friday, 10 to 12 noon } children only. Tuesday, 7 to 9 p.m. } Friday, 2.30 to 4.40 p.m. } For men only. |
| | WOODFORD Florence Villa, Malmesbury Road. | Wednesday, 10 to 12 noon. |
| | | |
| O. Bruce, M.R.C.S., L.R.C.P., "Kinsale," Wanslead. | EAST HAM 19, Wakefield Street. | Tuesday, 10 to 1 p.m. } For men only. Friday, 6 to 8 p.m. } |
| | | Wednesday, 10 to 1 p.m. } Women and Friday, 5 to 8 p.m. } children only. |
| H. Platts, M.R.C.S., L.R.C.P., 35, St. Albans Road, Woodford Green, Assistant to Drs. Pitt and Bruce. | ILFORD 38, Oakfield Road. | Monday, 3 to 5 p.m. |
| | BARKING 37, Linton Road. | Monday, 6 to 8 p.m. Thursday, 10 to 12 noon. |
| E. E. Goodbony, B.A., M.D., D.P.H., 29, Eastern Road, Romford. | ROMFORD 29, Eastern Road. | Tuesday, 10.30 to 12.30. Friday, 10.30 to 12.30. |
| | GRAYS Hildrop House, London Road. | Monday, 2 to 4.30. Thursday, 10.30 to 12.30. |
| | WALTHAM ABBEY 31, Greenyard. | Wednesday, 2 to 3 p.m. |
| | EPPING Victoria Buildings. | Wednesday, 10.30 to 11.30 a.m. |

| Name and Address of Tuberculosis Officer | Address of Dispensary or Visiting Station. | Days and hours of attendance. |
|--|--|---|
| J. D. Macfie, M.B., B.CH., Fawley Lodge, Lexden Road, Colchester. | COLCHESTER St. John Street. | Monday, 6.30 to 7.30 p.m. Wednesday, 10.30 to 12.30 noon. Saturday, 11 a.m. to 1 p.m. |
| | MALDON 114, High Street. | Friday, 11.30 to 12.30 noon. |
| | CLACTON | Thursday, 11.30 to 12.30 noon. |
| | HARWICH 62, Church Street. | Tuesday, 11.30 to 12.30 noon. |
| A. T. Williamson, M.A., M.D., Wharf Cottage, Chelmsford. | CHELMSFORD Duke Street (Over Gas Co.'s office near Shire Hall). | Tuesday, 10.30 to 12.30 noon. Thursday, 7 to 8 p.m. Friday, 10.30 to 12.30 noon. |
| | | |
| W. R. S. Roberts, M.B., D.P.H., Linden House, Braintree. | BRAINTREE New Street. | Tuesday, 9.30 to 10.30 a.m. Friday, 2.30 to 4.30 p.m. |
| | DUNMOW 18, Mount Pleasant Terrace. | Tuesday, 11.30 to 12.30 noon. |
| | HALSTEAD 43, North Street. | Friday, 10.30 to 12.30 noon. |
| | SAFFRON WALDEN 80, High Street. | Tuesday, 1.30 to 3 p.m. |
| W. Scarsbrick, M.D., B.Sc., D.P.H., Public Health Officer, Southend-on-Sea. | SOUTHEND 30, Clarence Street. | Monday, 2.30 to 4.30 p.m. Thursday, 2.30 to 4.30 p.m. Saturday, 10 a.m. to 12 noon. |
| | | |



ROMFORD. Connected with and in the grounds of the Romford Joint Hospital the County Council has had erected a wooden pavilion for eight patients. This can be removed at any time if necessary. The County Council pays 29/- per week per bed. This is the rate paid to all Hospitals where the pavilions, &c., have been provided by the County Council.

ORSETT. At the Grays and Orsett Joint Hospital a similar pavilion has been erected by the County Council, and six other patients are treated in shelters near.

ILFORD. At this Hospital the patients are treated in a small ward block, to which a deep verandah has been added. An arrangement has been entered into with the Ilford Urban District Council for the erection of a special pavilion for 12 beds, and plans have been sent to the Local Government Board.

SANDON. By arrangement with Dr. Marrett, who has a private Sanatorium here, in which the patients are treated in shelters, 10 patients are sent and housed in shelters provided by the County Council.

COLCHESTER. Eight patients are accommodated in 2 small wards at the Isolation Hospital pending the erection of a special pavilion for 12 beds, plans for which have been sent to the Local Government Board.

BLACK NOTLEY. The Braintree Joint Hospital Board possess a small Hospital here and six or seven acres of ground for use in case of an outbreak of Small-pox. This was purchased and a pavilion for 12 beds erected, which, with the two small wards already existing, gives accommodation for 16 patients. It is proposed to enlarge it still further and make it the Hospital centre for all North West Essex. Arrangements had to be made for dealing with Small-pox in the event of any case occurring, and a Joint Hospital for this purpose for all the Urban and Rural Districts around has been decided upon.

VICTORIA PARK AND NAYLAND. Arrangements have been made with the Victoria Park Hospital and Dr. Jane Walker's Sanatorium at Nayland for accommodation for 10 and 20 patients respectively at 30s. per week per bed.

EAST HAM. Twelve patients are dealt with here in a pavilion at the Isolation Hospital. For most of the year we had the use of two pavilions and 24 beds, but in consequence of an outbreak of Diphtheria the use of one pavilion had to be abandoned, and the Local Government Board will not now sanction the use of more than the one pavilion.

MALDON. Five shelters are erected in the grounds of the Isolation Hospital of the Maldon Joint Hospital District, four for eight patients and the fifth for the Nurse. They are connected together by means of a verandah, and could be removed at any time.

HALSTEAD. There are five double shelters here provided by the County Council in the grounds of the Halstead Isolation Hospital. Three are used for six patients, one is a Nurse's room, and the fifth a dining and recreation room. The fifth was

really provided for a special case, but was afterwards found so useful that it has been allowed to remain. Four of the shelters are in a row and connected by means of a verandah.

GALLEYWOOD. This is the Small-pox Hospital of the Chelmsford Joint Hospital Board which has been temporarily converted into a Sanatorium. Six patients are accommodated in the two wards and two shelters have been erected in the grounds—one for a dining room and the other for the Nurse and Stores. £1 a week is paid for rent, and the Sanatorium is run by the County Council.

The Local Committees—which will be referred to later—for the Braintree and Chelmsford Districts supervise the Black Notley and Galleywood Sanatoria respectively.

When the County Sanatorium is complete the beds at Mayland and Victoria Park will be given up and the shelters, etc., at the various Hospitals will be removed if it is found that the accommodation is more than the County requires. This would leave about 84 beds for advanced cases and for observation purposes.

A few cases of bone tuberculosis, chiefly in children, are sent to Institutions outside the County, but it may be found possible to arrange for dealing with these at the new Sanatorium.

SHELTERS.

Altogether about 80 shelters have been provided for the use of patients who could be thus dealt with at home. Their use is invaluable. In advanced cases—a serious source of infection—the patient is far better isolated than he could possibly be in the home, and earlier cases where the accommodation in the house is very limited, are far better dealt with and stand a far better chance of recovery if placed in a shelter.

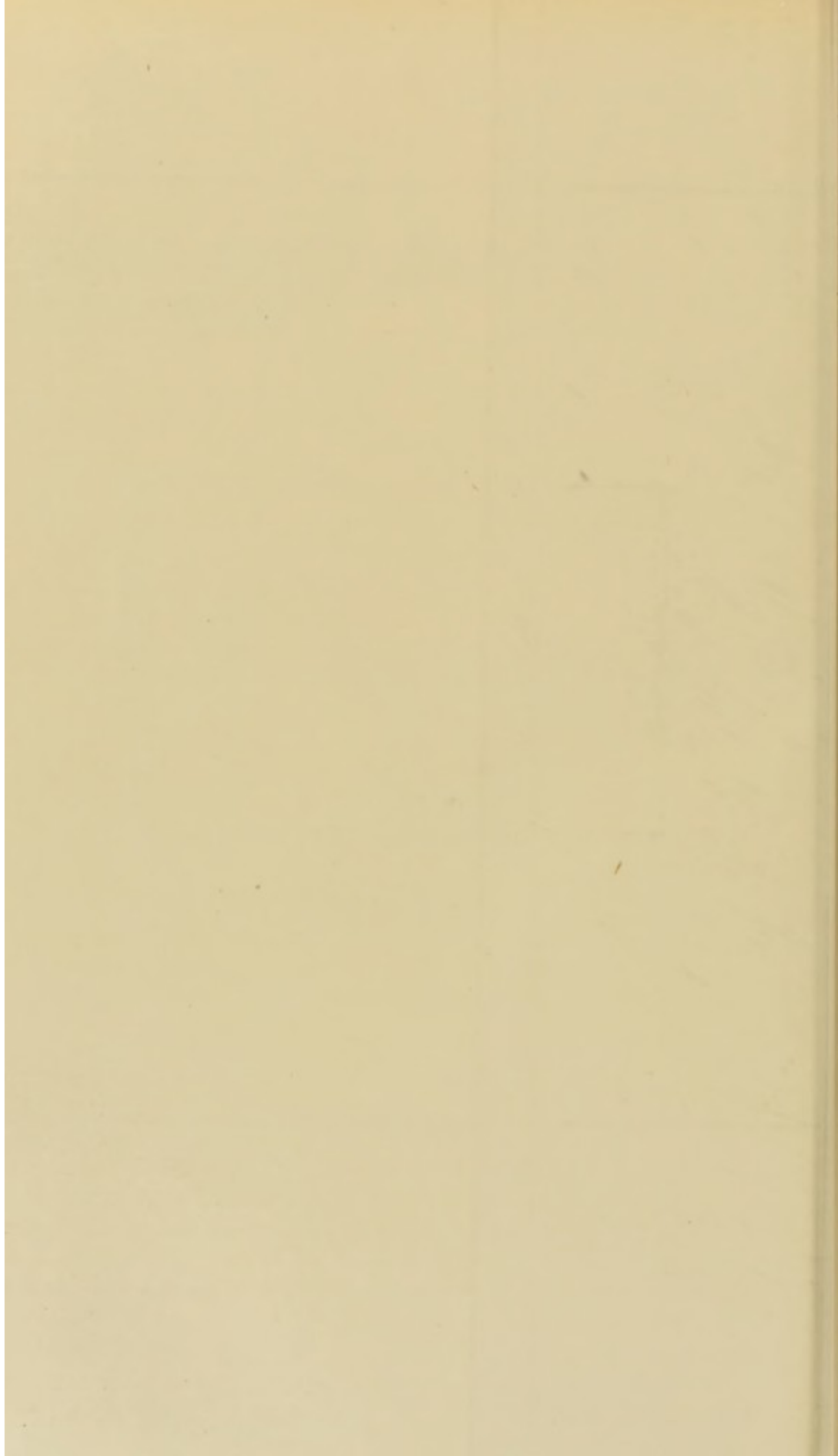
When a shelter is recommended by the Tuberculosis Officer, the Medical Officer of Health of the district in which the patient resides is communicated with and the Shelter is not sent until the Medical Officer of Health has certified that the site is suitable and (in certain Districts) that the Sanitary Authority do not object to its erection. The patient also must sign a form undertaking to use it so long as it remains in his possession.

I estimate that at least 100 shelters will be required in the County.

The shelters are of three types. No. 1 is constructed to take to pieces in such a way that it can be carried through a house to erect in the yard or garden at the rear. These are only required in Leyton, Walthamstow, and East Ham.

No. 2 is the standard shelter, 12ft. by 8ft., *vide* diagram, and is known as the "Essex Shelter."

No. 3 is similar to No. 2 but is 12ft. square and admits of two beds. It is supplied when there are two cases in a house or when the patient is a child and the



mother wishes to sleep in the same room. This size is also used at the isolation hospitals but it is then made with two large flaps at the back so that much more free access of air is provided.

The Insurance Committee pays the County Council 1/- per week for the hire of each shelter provided for an insured person, and it was decided to charge 1/- per week against each Sanitary Authority for the hire of a shelter for an uninsured person. It was soon found that this caused great delay and unnecessary correspondence so that this charge has been dropped. When a well-to-do person requires a shelter I am empowered to require the payment of 1/- per week rental.

THE DUTIES, ETC., OF THE TUBERCULOSIS OFFICERS.

These as laid down originally required very slight modification. As finally amended they are here reproduced.

Essex County Council.

DUTIES, ETC., OF TUBERCULOSIS OFFICERS.

1. To visit the homes of all persons suffering from Tuberculosis who apply for Sanatorium Benefit and such others as he may be instructed to visit by the Chief Tuberculosis Officer.
2. To fill in the forms supplied shewing the results of such visits, and supply a copy thereof, if required, to the Medical Officer of Health for the district in which the patients resides.
3. To examine all applicants for Sanatorium Benefit and any others who may attend at his Dispensaries, and to fill in the forms supplied for this purpose.
4. To transmit immediately the forms prepared in accordance with paragraphs "2" and "3" to the Chief Tuberculosis Officer, if for an uninsured person, and to the Insurance Committee if an insured person.
5. To examine all "contacts" and to keep proper records of the results thereof, and to notify all such as are found to be suffering from Tuberculosis to the proper authorities.
6. To take entire charge of any Dispensaries or Branch Dispensaries established by the County Council in his district. To attend at fixed hours approved by the Chief Tuberculosis Officer or ordered by the County Council; examine and treat all suitable cases, and select therefrom such as may require treatment in Hospitals or Sanatoria, and to keep all necessary records.
7. To visit all cases in Hospitals or Sanatoria in his district weekly in consultation with the Medical Superintendent.
8. To report every week to the Chief Tuberculosis Officer upon the condition of the patients, and recommend an extension of period of treatment where he thinks it desirable.

9. To keep all such records as may be required by the Chief Tuberculosis Officer and to prepare monthly reports on the work done in his Dispensary and District.
10. To arrange for the erection and removal of any shelter which may be supplied in his district, and to visit the patient therein from time to time to see that the shelter is being properly utilised.
11. To send samples of sputum which may require examination for Tubercle Bacilli to the Chief Tuberculosis Officer at his Laboratory.
12. To consult with all the Medical Officers of Health in his district and by arrangement with them discharge his duties so as to assist them in carrying out the Regulations and requirements of the Local Government Board relating to Tuberculosis with the minimum of inconvenience to the patients and their families.
13. Each Tuberculosis Officer to be allowed four weeks' holiday in the year, and to make arrangements satisfactory to the Chief Tuberculosis Officer for the discharge of his duties during his absence.
14. All petty cash payments, postages, etc., to be paid out of a sum of £10 which will be paid to each Officer when he commences his duties. An account of such payments to be presented quarterly and when checked he will receive an amount equal to that disbursed. The balance on hand unexpended to be returned to the County Council upon the termination of the appointment. All travelling and sustenance expenses to be paid out of the allowance which will be made by the County Council for this purpose.
15. The Candidate to take up his residence in the district assigned to him and in some place approved by the Chief Tuberculosis Officer.
16. No Tuberculosis Officer must absent himself from his Dispensary or Dispensaries at his appointed times without having previously made arrangements satisfactory to the Chief Tuberculosis Officer.

With reference to No. 12, special arrangements have been made in the Leyton, Walthamstow, Barking and Colchester Districts. In each of these places the Tuberculosis Officer has been officially appointed Assistant Medical Officer of Health for Tuberculosis purposes at a nominal salary. This has only recently been arranged, and it is too early to give an opinion upon the benefits which accrue from the arrangement. In each District the arrangements between the Medical Officer of Health and the Tuberculosis Officer vary, and time only will shew which is best. So much depends upon the personal equation that what may be found most satisfactory in the relationship of one pair of officers might not be so satisfactory with another pair. I have left the detailed arrangements entirely in the hands of the officers concerned. In all other districts save one, the Medical Officer of Health and Tuberculosis Officer render each other every possible assistance.

LOCAL COMMITTEES.

Quite recently a Sub-Committee of the Public Health and Housing Committee has been appointed in each Dispensary District, and at present are meeting monthly at the Dispensaries or the Sanatoria (Black Notley). At each meeting the Tuberculosis Officer presents a brief report, and any matters requiring attention are dealt with. Special cases are considered and the local knowledge of the members utilized. The Tuberculosis Officer or Nurses report on any case requiring assistance, and in time it is hoped that these will develop into "Care" Committees. At present only members of the County Council who are on the Public Health Committee are nominated, but it may be found desirable to co-opt other persons before long, but at present this course has not suggested itself as being necessary. During the winter I found many patients insufficiently clad, and I made a private appeal to a number of gentlemen in the county and secured a small sum of money, which I spent in buying boots, etc., and a supply of excellent clothing, including overcoats. These proved most useful. I hope the Local Committees will relieve me of the necessity of repeating the experiment.

CLASS OF PERSON DEALT WITH.

The County Council decided, as far as possible, to deal with every class suffering from Pulmonary Tuberculosis and for such other cases of Tuberculosis as I might recommend. It is found, however, that we cannot at present deal with all Poor-law cases. Where there is a reasonable hope of the working capacity being restored, even temporarily, they are treated in Sanatoria or Hospitals or Dispensaries, but where recovery is hopeless they are referred to the Guardians. Most of the Unions now possess shelters or special pavilions for the reception of such cases.

At the other extreme we have persons who can afford to pay the whole or part of the cost of Sanatorium treatment. Of these, only persons who wish to pay 10s. to £1 a week towards their maintenance ever apply, and almost invariably they desire help to go to some Sanatorium outside the County and with which the County Council has no arrangement. A few persons have been so sent, but the results are not satisfactory, and now the rule is to offer such persons a bed in one of our own Institutions free of charge, and if they do not accept this the County cannot assist them.

ESTIMATED COST OF COUNTY SCHEME.

CAPITAL EXPENDITURE.

| | | | £ |
|--|-----|-----|----------------|
| Sanatorium for 120 beds | ... | ... | 20,000 |
| Hospitals for 80 beds | ... | ... | 8,000 |
| Provision of 11 Dispensaries | ... | ... | 900 |
| „ 100 Shelters | ... | ... | 1,500 |
| Total | ... | ... | £30,400 |
| Less Local Government Board Grant of $\frac{2}{3}$ ths | ... | ... | 18,240 |
| | | | <u>£12,126</u> |

ANNUAL EXPENDITURE.

| | £ | £ |
|--|--------|---------|
| Repayment of Loans for Sanatorium & Hospitals... | | 730 |
| Maintenance of 200 patients at 30/- per week ... | 15,600 | |
| Less 120 beds taken by Insurance Committee | 9,360 | |
| | <hr/> | 6,240 |
| Maintenance of 11 Dispensaries and 11 Consulting Rooms ... | 7,000 | |
| Less, say £2,000, paid by Insurance Committee | 2,000 | |
| | <hr/> | 5,000 |
| Examination of Sputum ... | | 200 |
| Extra Office Expenses ... | | 500 |
| | | <hr/> |
| | | £12,670 |
| | | <hr/> |
| Less half from Hobhouse Grant | | 6,335 |
| | | <hr/> |

When Southend and East Ham take over the Tuberculosis work in their areas the expense will be decreased, but not in proportion to the decrease in population. The work will increase, and 10 of the Dispensaries must be maintained. Certain beds, however, will be taken over by the Southend Corporation and possibly by the East Ham Corporation. If not, then the number of Hospital beds can be decreased.

RESULTS OBTAINED DURING 1913.

Early in the year the Insurance Commissioners applied to the Essex Insurance Committee for elaborate returns as to the number of persons treated for Tuberculosis and the result of such treatment from the commencement of Sanatorium benefit. An enormous amount of labour was entailed in getting out this statistical report, and Mr. Semaine had to visit nearly all the Dispensaries and go through the records with the Tuberculosis Officers. To ascertain the results of treatment in Sanatoria and Hospitals every record in the Central Office had to be gone through. The results are summarised below, the original Tables being far too elaborate to produce here.

One important fact was discovered—namely, that some of our Tuberculosis Officers were treating a large number of insured persons who had never applied for Sanatorium Benefit and a number of uninsured persons who had not applied to me. The consequence is that there are no records at the Central Office of any of these cases. This is an irregularity which has been dealt with. Take Walthamstow for example.

On the 1st of January, 1914, the Tuberculosis Officer had on his books :—

| | |
|-----------|------------------------|
| | 99 Insured persons. |
| | 139 Uninsured persons. |
| | <hr/> |
| Total ... | 238 |

Yet only 39 insured persons had been ordered Sanatorium Benefit, and 14 others County Benefit, or 53 out of a total of 238.

The following abstract applies, therefore, only to persons who had been ordered Sanatorium Benefit by the Essex Insurance Committee for the year ending January 11th, 1914:—

SUMMARY OF TABLES A AND B.

Results of Dispensary Treatment.

| | Insured. | Dependants. | Totals. |
|--|----------|-------------|---------|
| No. of patients discharged with working capacity restored... | 149 | 81 | 230 |
| No. discharged improved ... | 109 | 56 | 165 |
| No. discharged who showed no improvement ... | 36 | 14 | 50 |
| No. worse on discharge ... | 28 | 21 | 49 |
| No. in which treatment was discontinued for non-medical ... | 71 | 79 | 150 |
| No. who died ... | 42 | 14 | 56 |
| Total of above cases ... | 435 | 265 | 700 |
| Cases still under treatment ... | 301 | 278 | 579 |
| Total cases treated in 1913 ... | 736 | 543 | 1279 |

SEX OF PATIENTS TREATED.

| | Males. | Females. | Total. |
|----------------|--------|----------|--------|
| Insured ... | 498 | 238 | 736 |
| Dependants ... | 193 | 350 | 543 |
| | 691 | 588 | 1279 |

PERCENTAGE OF EACH SEX INSURED AND OF DEPENDANTS TREATED.

| | Insured. | Dependants. |
|-------------|----------|-------------|
| Males ... | 72 | 40 |
| Females ... | 28 | 60 |

Of the total patients treated

57% were insured, and

43% were dependant.

The results of Sanatoria and Hospital treatment are as follows;—

| | | | | Dependants. | | | |
|---|-----|-----|-----|-------------|---------|-----------|----|
| | | | | Insured. | Adults. | Children. | |
| Patients discharged fit for work | ... | ... | 140 | ... | 13 | ... | 9 |
| „ „ improved | ... | ... | 143 | ... | 12 | ... | 7 |
| „ „ without improvement | ... | ... | 45 | ... | 6 | ... | 2 |
| „ „ worse | ... | ... | 15 | ... | 0 | ... | 0 |
| Treatment discontinued for other than medical | | | | | | | |
| reasons | ... | ... | 22 | ... | 2 | ... | 0 |
| Died | ... | ... | 18 | ... | 2 | ... | 0 |
| <hr/> | | | | | | | |
| Total number treatment concluded | ... | ... | 383 | ... | 35 | ... | 18 |
| Cases still in Sanatoria | ... | ... | 97 | ... | 0 | ... | 0 |
| <hr/> | | | | | | | |
| Total number of cases treated | ... | ... | 480 | ... | 35 | ... | 18 |
| <hr/> | | | | | | | |
| Grand total of patients treated in Sanatoria | | | | | ... | 533 | |
| <hr/> | | | | | | | |

In details of the scheme the Local Government Board wish to have copies of the various forms in use in each administrative area. Those appended are in use at the County Council Office, those used by the Insurance Committee are not included. They comprise all the more important ones, others of minor importance simply prepared to save trouble in the office are not included.

Arrangements have been made with Registrars of Births and Deaths and others for copies of all death returns to be sent monthly. These are then tabulated and copies sent to the Insurance Committee and each Tuberculosis Officer. The dossiers of the deceased persons are then returned to the Office, and are kept as at future time they may be useful for statistical purposes.

Extra nourishment is only given by the Insurance Committee and all orders and correspondence regarding extra food is done from the Insurance Committee's Office. Each month a tabulated report based upon the Dispensary report is printed and issued to each member of the County Public Health Committee, to each Medical Officer of Health, to each Tuberculosis Officer, and the Local Government Board, and 30 copies are sent to the Clerk to the Insurance Committee.

A copy of a recent issue is appended.

Whilst the dossiers in actual use are at the Dispensaries or Sanatoria the chief information of importance is tabulated on cards 10in. by 7in. of various colours.

| | | | |
|--------------|-----|-----|------------------|
| Colour White | ... | ... | Insured Men. |
| „ Blue | ... | ... | „ Women. |
| „ Yellow | ... | ... | Non-insured Men. |
| „ Green | ... | ... | „ Women. |
| „ Salmon | ... | ... | „ Children. |

The pulmonary cases are kept apart from the non-pulmonary in different drawer sections.

Alphabetical indices are used for both insured and uninsured shewing at a glance in which of the following sub-sections the larger card will be found :—

Dispensary Treatment.

„ Observation.

Domiciliary.

In Sanatorium or Hospital, etc., as shown on card.

Treatment concluded.

When for any reason the patient is no longer under treatment or observation the cards are indexed under :—

Disease arrested.

Left the district and not traced.

Transferred to Poor-law.

Discharged for other than Medical reasons.

Dead.

Naturally it took considerable time to get everything into working order, but now we appear to have the minimum of trouble and much of the work has become mere routine.

We have now indexed about 2,000 insured persons and 850 uninsured, but many of these are dead or have resumed full work, or for other reasons have ceased to be under treatment or observation.

As all those who are under treatment or observation have to be reported upon every three months the work at the Central Office requires the services of three clerks.

We cannot yet have reached the maximum as the number of persons applying for treatment each month exceeds the number removed from the registers, but I doubt whether we shall ever much exceed 2,000 persons who will be attending the Dispensaries or receiving treatment in Hospitals and Sanatoria.

NOTES.—1. Cod Liver Oil and Oil and Malt is supplied at all the Dispensaries. Medicines are prescribed and the prescriptions compounded by Panel Chemists.

2. Tubes for specimens of sputa are stocked at all the Dispensaries and the examinations are made at the County Public Health Laboratory at the expense of the County Council. About 50 specimens per week examined after solution in 5 per cent. Phenol and centrifugalisation.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

.....191...

Dear

An uninsured person suffering from any form of Tuberculosis may now apply to the County Council for treatment at one of their Dispensaries or at a Sanatorium.

Application must be made to me on a form supplied for that purpose and which is attached hereto, and, if possible, the approval of the Medical Attendant to the application being made should be secured. Upon receipt of the application a Tuberculosis Officer will be instructed to call upon you and make such enquiries and examinations as may be necessary. Upon receipt of his report your case will be considered by the Tuberculosis Committee and the result communicated to you.

Yours faithfully,

JOHN C. THRESH.

To.....

.....

NOTE.—To save unnecessary correspondence it may be stated that the County Council cannot supply food or clothing, nor can they pay for any domiciliary treatment. Patients may be treated at the nearest Tuberculosis Dispensary, and a certain number of selected cases can be provided with beds at Sanatoria, but until the County Sanatorium is completed there are very few beds available for uninsured persons.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Application of an UNINSURED person for treatment under the County Council Scheme. To be carefully filled in and sent to

DR. THRESH,

Chief Tuberculosis Officer,
Chelmsford.

Name, in full, of patient applying for treatment

Address, in full

Age last birthday

Occupation, or
if a child, name of school attended.

When last at work, or
if a child, when last at school.

Name of Medical Attendant, if any.

Has the Medical Attendant approved of this
application being made?

Organ affected. Lungs, gland, bone, etc.

Average weekly income of family.

Signed,

Date,

Visited by Tuberculosis Officer.....

Reported to Committee.....

Treatment ordered.....

To be reported upon again in weeks.

.....
Chief Tuberculosis Officer.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

SUMMARISED

PERSONAL RECORD.

Case No.

Notification received

Name

Sex

Age

Address

Occupation

Organ affected

Stage of disease T.G. R. L. Astor T.B. in sputum

Date Tuberculosis Officer's
Report sent to Chief Office.

Date when case considered.

Treatment allowed.

Remarks.

RECORD OF TREATMENT.

| Dispensary. | Period. | | Result of Treatment. | | | Result of Sputum Exam. | a, b, c, d, or dead |
|-------------|---------|----|----------------------|-----------------|----|------------------------|---------------------|
| | From | To | Astor Stage. | Turban Gerhardt | | | |
| | | | | R. | L. | | |
| | | | | | | | |

| Sanatorium or Hospital. | Period. | | Result of Treatment. | | | Result of Sputum Exam. | a, b, c, d, or dead. |
|-------------------------|---------|----|----------------------|-----------------|----|------------------------|----------------------|
| | From | To | Astor Stage. | Turban Gerhardt | | | |
| | | | | R. | L. | | |
| | | | | | | | |

[illegible]

FORM A.

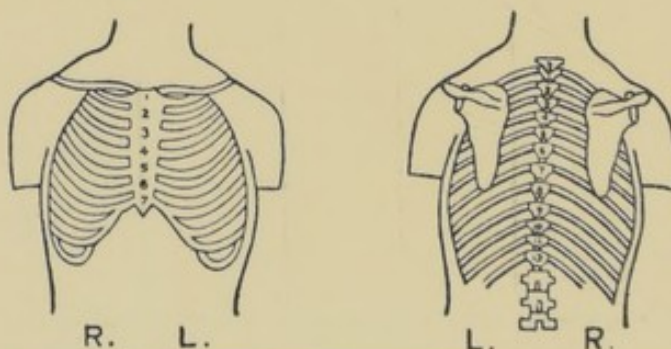
Reference No.

RECORD OF PRIMARY EXAMINATION. ESSEX COUNTY COUNCIL.—Tuberculosis Department.

Dispensary Centre.

| | | |
|---|------------|-----|
| Name | Sex | Age |
| Address | Occupation | |
| Name and Address of Practitioner notifying or otherwise connected with the case | | |

| PRESENT CONDITION. | 1.—General Health and Symptoms. | Temperature Range. |
|----------------------|---------------------------------|-------------------------------|
| Cough | Condition of Heart | Highest—(a) Morning |
| Sputum | Pulse—Rate | (b) Evening |
| Wasting | Clubbing | |
| Night Sweats | Physique | |
| Weakness | Appetite | Weight (without boots) |
| Pain | Tongue | Gaining or losing Weight |
| Dyspnoea | Teeth | |
| Hoarseness | Digestion | Degree of Working Capacity |
| Colour | Bowels | |
| Glands | Urine | |
| Hæmoptysis | | |
| Extent and Frequency | | |



2. Organs affected by Tuberculosis and their present condition.

Physical Signs.

| | |
|-------------------------|------------|
| Chest Expansion | } R. L. |
| Dulness | |
| Bronchial Breath sounds | |
| Rales | |
| Vocal Resonance | |
| Larynx | |

3. Complications and other diseases now present

4. Classification of disease (if pulmonary)

Turban-Gerhardt.

Astor Report.

5. Observations upon which the Diagnosis of Tuberculosis is based.

6. T.B. in Sputum
Re-action to Tuberculin
Tuberculo-cutaneous Re-action (Von-Pirquet)

7. Kind of treatment prescribed

The back of this form is ruled for Notes on Condition, progress, etc.

Signature of Tuberculosis Officer,

Date.

FORM B.

Reference No.

RECORD OF PERSONAL HISTORY.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

DISPENSARY CENTRE.

Name Sex Age
 Address Married, Single or Widowed
 Present Occupation
 Occupation at Date of onset of the first definite Symptoms

PERSONAL—

Health (including record of past illnesses)

- (a) In Childhood
 (b) In Adolescence
 (c) In Adult age

PRESENT ILLNESS—

Duration since onset of the first definite Symptom

Has illness been accompanied by:—

| | | |
|---------|------------|------------------------|
| Malaise | Emaciation | Night Sweats |
| Cough | Sputum | { Hæmoptysis |
| Pain | Dyspnœa | { Extent and frequency |

HABITS—

In person—Clean, indifferent or dirty

As to Alcohol—Heavy drinker, Moderate drinker or Abstainer.

FAMILY HISTORY—

| Statements by patient or others. | Father and Mother. | | Brothers and Sisters. | | Husband or Wife. | | Children. | |
|-------------------------------------|-----------------------|-------|--------------------------|-------|------------------|-------|-----------|-------|
| | Alive. | Dead. | Alive. | Dead. | Alive. | Dead. | Alive. | Dead. |
| Affected by Tuberculosis | | | | | | | | |
| Not affected.. .. | | | | | | | | |
| Unknown | | | | | | | | |

Previous Hospital or Sanatorium treatment

Where and when

Has patient been under treatment at any other Dispensary

if so, where and when?

Signature of Tuberculosis Officer

Date.

RECORD OF ENVIRONMENTAL CONDITION.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

DISPENSARY CENTRE.

-
- | | | |
|---|-----------------------|-------------|
| 1. Name | Sex | Age |
| 2. Address | 3. Present Occupation | |
| 4. HOUSE and locality, general description (Flat, Back to back, &c.) | | |
| 5. Number of living rooms (excluding scullery or shop) | 6. Number of bedrooms | Rental |
| 7. Does the patient sleep in a separate bedroom? Or in a separate bed? | | |
| 8. Number of Occupants of House | | |
| (a) Members of family.....Males over 12.....Males under 12..... | | |
|Females over 12.....Females under 12..... | | |
| (b) Lodgers (c) Servants | | |
| 9. Clean | Dirty | Dry |
| | | Damp |
| | | Lighting |
| | | Ventilation |
| 10. Do Windows open and are they kept open? | | |
| 11. Has the house a private yard or garden? | | |
| 12. If a shelter is desired :—(a) Is there ample space? | | |
| (b) Give dimensions of garden or yard. | | |
| (c) Is there access to garden without going through the house? | | |
| 13. How long has the patient lived here? | | |
| 14. Previous address if moved within two years. | | |
| 15. Is there history of open Tuberculosis occurring in the house : | | |
| (a) During previous tenancy | | |
| (b) During present tenancy. | | |
| 16. SOURCE OF INFECTION.—Is there any history of intimate association with any case of open Tuberculosis :— | | |
| At home | Work | Elsewhere |
| 17. FINANCIAL CIRCUMSTANCES.—Number of persons to be supported by patient. | | |
| Estimated weekly earnings. | | |
| Evidence of present or habitual privation. | | |
| 18. General dietary (including alcohol). | | |
| 19. Is Patient at work, part or whole time, or in bed? | | |
| 20. How long has he been off work? | | |
| 21. Panel Doctor, name of. | | |
| 22. If Pulmonary Tuberculosis, has patient a Sputum Flask or Japanese Handkerchiefs? | | |
| 23. Contacts: Name and age of any ailing. | | |
| 24. Can patient take exercise and to what extent? | | |
| 25. Is patient willing to :—(a) Go to Hospital or Sanatorium? | | |
| If so, can he pay his travelling expenses? | | |
| (b) Use a Shelter, if provided? | | |

Visited by

Date

FORM D (A).

RECORD OF PROGRESS.

Reference No.

UNINSURED.

ESSEX COUNTY COUNCIL.—Tuberculosis Department.

Dispensary, Sanatorium or Hospital, at

Transferred from Dispensary, Sanatorium or Hospital at Date

Name

Sex

Age

Address

Present Occupation

PRESENT CONDITION***1. GENERAL HEALTH.**

Cough

Sputum

Hæmoptysis

Extent and Frequency

What amount of exercise can the patient take?

TEMPERATURE RANGE.

Highest—(a) Morning

(b) Evening

WEIGHT (without boots).

Gaining or losing weight

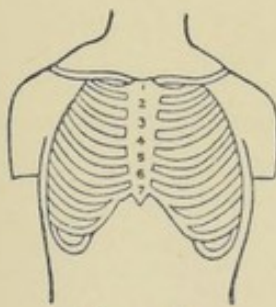
Degree of working capacity

2. Organs affected by tuberculosis and their present condition

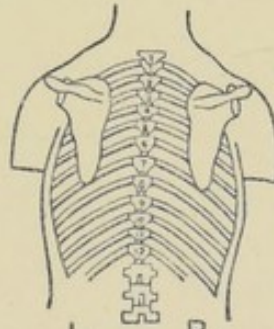
3. Complications now present

4. Other diseases present

5. Relapses or extensions of disease which have occurred since the last report



R. L.



L. R.

6. Classification of Disease (if pulmonary).

| | Turban-Gerhardt | Astor Report |
|-------------------------|-----------------|--------------|
| (a) Stage | | |
| (b) Result of treatment | | |

7. General line of treatment followed since the last report, giving sufficient detail, if the patient is to be transferred, to enable the treatment to be continued.

If Tuberculin has been used, state kind and dose.

Further Recommendation.

Signature of Tuberculosis Officer.

Date.

*Any known change in the Environmental conditions may be given on the back of this form.

RECORD OF PROGRESS.

ESSEX COUNTY COUNCIL.—Tuberculosis Department.

Dispensary Centre.

Name _____

Sex

Age

Address

Occupation

The Result of every examination for Tubercle Bacilli made throughout active treatment and subsequent general supervision is to be recorded on this form.

[illegible]

*Signatures of Tuberculosis, Sanatorium or Hospital Officers with dates.

*To be signed only when papers are being transferred.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

.....191...

Case No. U.....

Dear

Treatment of Non-Insured Persons.

Adverting to your application for Sanatorium Benefit as a Non-Insured person under the County Council Scheme, I have to inform you that your case has been considered, and, in accordance with the Report of our Tuberculosis Officer, you are recommended to receive treatment at a Dispensary. I shall therefore be glad if you will attend at the undermentioned Dispensary at the time stated, or as arranged with the Tuberculosis Officer, in order that he may advise you and prescribe treatment suitable for your case.

Yours faithfully,

JOHN C. THRESH,

Chief Tuberculosis Officer.

| Dispensary. | Day for first attendance. | Hour. |
|-------------|---------------------------|-------|
| | | |

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

.....191...

Case No. U.....

Dear

Treatment of Non-Insured Persons.

Adverting to your application for Sanatorium Benefit as a Non-Insured person under the County Council Scheme, I have to inform you that your case has been considered, and, in accordance with the Report of our Tuberculosis Officer, you are recommended to receive treatment at a Dispensary until such time as a bed at ^{Sanatorium} ~~Hospital~~ can be offered. I shall therefore be glad if you will attend at the undermentioned Dispensary at the time stated, or as arranged with the Tuberculosis Officer, in order that he may advise you and prescribe treatment suitable for your case.

Yours faithfully,

JOHN C. THRESH,

Chief Tuberculosis Officer.

| Dispensary. | Day for first attendance. | Hour. |
|-------------|---------------------------|-------|
| | | |

C.S.
Form 3 (c).

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

.....191...

Case No. U.....

Dear,

Treatment of Non-Insured Persons.

Adverting to your application for Sanatorium Benefit as a non-insured person under the County Council Scheme, I have to inform you that the Tuberculosis Officer's report on your case indicates that you are in need of Domiciliary Treatment. As such treatment cannot be provided by the County Council, I regret they are unable to do anything for you, but I will instruct the Tuberculosis Officer to keep your case under observation, and give you and your private Medical Attendant the benefit of his advice.

Yours faithfully,

JOHN C. THRESH,

Chief Tuberculosis Officer.

C.S.
Form 4.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

.....191...

Case No. U.....

Dear,

Treatment of Non-Insured Persons.

Referring to your application for Sanatorium Benefit as a non-insured person under the County Council Scheme, in accordance with a Report made by the Tuberculosis Officer I have pleasure in offering you a bed at.....Sanatorium, which becomes vacant on.....Hospital and must be filled on that date. The treatment will be for six weeks in the first instance, but may be extended for a further six weeks, if a recommendation to that effect is received from the Medical Superintendent of the Institution. Please sign the enclosed Form 4 (a) stating whether you accept the offer or not, and return it to me at once. If I do not hear from you by..... I shall assume that you refuse the bed, and shall proceed to fill it with another patient.

I enclose a list of clothing, etc., which you are expected to take, and would direct your attention to the fact that the County Council cannot, under any circumstances, bear the whole or part of your travelling expenses.

Yours faithfully,

JOHN C. THRESH,

Chief Tuberculosis Officer.

FORM OF ACCEPTANCE.

Case No. U.....

Address.....
.....
.....

Date.....19.....

DEAR SIR,

In reply to your letter, I am prepared to avail myself of your offer and will enter
the.....Sanatorium as instructed on
.....Hospital
.....

I understand that the County Council cannot allow the whole or part of my
travelling expenses, and in accepting your offer I undertake to pay my own travelling
expenses to the Sanatorium, and to take with me sufficient money to pay the Return
Fare

Yours faithfully,

To Dr. Thresh,
Chelmsford.

FORM OF REFUSAL.

Case No. U.....

Address.....
.....
.....

Date.....19.....

DEAR SIR,

In reply to your letter, I regret that I am unable to accept your offer of a bed at
.....Sanatorium, my reason being
.....Hospital
.....
.....

Yours faithfully,

To Dr. Thresh,
Chelmsford.

[Specimen.]

C.S.
Form 4 (b).

Case No. U.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Information *re* Black Notley Sanatorium for the Use of Patients.

1. You are expected to take with you one change of Underlinen, at least one spare Suit of Clothes, a warm Overcoat, Brush and Comb, Toothbrush, and anything else you may choose to take which is necessary.

3. Your Route from.....will be as follows :—

3. The Railway Stations for the Sanatorium are :—

(a) Cressing.

(b) Braintree.

Cressing is nearer, being only half a mile from the Institution, but as it is difficult to obtain a conveyance there, you are not recommended to go unless you are prepared to walk the half mile to the Sanatorium. You can get a man to take your luggage up for you.

Braintree is $2\frac{1}{2}$ miles away, and a cab can be obtained there to the Sanatorium at a charge of 3s. if arrangements are made beforehand with the Proprietor of the White Hart Hotel, Braintree, Essex.

4. Approximate Railway Fare, single,

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

.....191...

Dear,

Treatment of Non-Insured Persons.

I have to inform you that the following non-insured patients ^{have} ~~has~~ been instructed to enter your Institution under the County Council Scheme on the date given.

| Case No. | Names and Address. | Date for Admission. |
|----------|--------------------|---------------------|
| | | |

Yours faithfully,

JOHN C. THRESH,

Chief Tuberculosis Officer.

Dr.

Medical Superintendent,..... Hospital.
..... Sanatorium.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

..... 191...

Case No. U.....

Dear,

Treatment of Non-Insured Persons.

I thank you for your letter of the....., and I am glad to hear that you accept my offer. I have advised the Medical Superintendent of the..... Sanatorium that you will enter his Institution on the..... Hospital

Kindly notify me on the post card enclosed immediately you arrive.

Yours faithfully,

JOHN C. THRESH,

Chief Tuberculosis Officer.

C.S.
Form 6 (a).

Case No.....
Insured or
Non-Insured

.....Hospital or
Sanatorium
Date.....19.....

Dear Sir,

I beg to inform you that I have been admitted to the above Institution this day, in accordance with your instructions.

Yours faithfully,

ESSEX COUNTY COUNCIL.

G.
Form 2.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

.....191...

Please send the dossiers* relating to the undermentioned persons to the Institutions given opposite their names, addressed to "The Matron."

Your immediate attention will oblige.

JOHN C. THRESH.

| Name. | Case No. | Institution to which dossiers are to be sent. |
|-------|----------|---|
| | | |
| | | |
| | | |
| | | |
| | | |

*All the papers relating to each dossier should be securely fastened together.

To Dr.....

Tuberculosis Officer.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

..... 19

Treatment of Non-Insured Persons.

Yours faithfully,

JOHN C. THRESH,

Chief Tuberculosis Officer.

Dr.....

Medical Superintendent,

..... Hospital.
..... Sanatorium.

[illegible]

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Summary showing kind of treatment recommended on.....to applicants.

| Case No. | Surname. | Christian Name. | Address. | Treatment recommended. | Remarks. |
|----------|----------|-----------------|----------|------------------------|----------|
| | | | | | |

Chelmsford

JOHN C. THRESH,

191.....

Chief Tuberculosis Officer.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

..... 19...

Dear

Shelters.

I have to inform you that the County Insurance Committee has recommended a Shelter for your use, subject to your acceptance and the approval of the Medical Officer of Health to the site suggested for its erection. I have written to the Medical Officer of Health and he will shortly visit the site for the purpose of reporting to me as to its suitability.

Are you prepared to live in a Shelter if one is provided ?

Please fill up the form at the foot of this letter and return the whole to me, as soon as possible.

Yours faithfully,

JOHN C. THRESH.

*County Medical Officer and
Chief Tuberculosis Officer.*

Case No.....

Address.....

.....

.....

Dear Sir,

In reply to your letter, I accept your offer of a Shelter, subject to the approval of the site by the Medical Officer of Health, and, if one is provided for my use, I agree to live in it, and carry out the treatment prescribed.

(Signed)

Date.....19...

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

.....191...

Dear Dr.

Shelters.

The Patient named in the Schedule below has been recommended for treatment at ^{her} _{his} own home in a Shelter by the County Insurance Committee, subject to the approval of the site by the Medical Officer of Health. I shall therefore be glad if you will kindly favour me with a Report on the site suggested for the erection of a Shelter ; whether it is suitable in point of size, and also whether it is desirable to erect a Shelter in the locality. I shall be glad to receive a reply as soon as possible, in order that a Shelter may be put in hand if you consider the site and surroundings satisfactory.

I have written to the patient and asked ^{her} _{him} whether ^{she} _{he} is prepared to live in a Shelter if one is provided for ^{her} _{his} use. Perhaps you will be good enough to mention this on your visit, and confirm ^{her} _{his} acceptance.

Yours faithfully,

JOHN C. THRESH,

County Medical Officer and
Chief Tuberculosis Officer.

To.....

Medical Officer of Health.

SCHEDULE.

| Case No. | Insd. or Non-Insd. | Name. | Address. |
|----------|-----------------------|-------|----------|
| | | | |

G.

Form 5.

TUBERCULOSIS DEPARTMENT.

ESSEX COUNTY COUNCIL.

Hospital or Sanatorium.

No. of beds available, (a) for Insured Persons.

(b) Non-Insured.

Report on Patients for week ending 1914.

No. of beds occupied at date of this Return (a) by Insured Persons.

(b) Non-Insured.

| CLASS 1. Names of Patients who have been in the Institution less than 4 weeks. | Insured or Non-Insured. | Date of Admission. | Progress, if any. "Satisfactory = S." "Fair = F." "No progress = N.P." "Worse = W." Please state if Dossier has not been received. | CLASS 3. Names of Patients who have been in the Institution more than 5 weeks. | Insured or Non-Insured. | Date of Admission. | *Progress made. Also state if sputum has been sent for Examination, and with what result. N.B.—Sputum should be sent for Examination at about 10th week so that result can be inserted in Progress Report. | |
|---|-------------------------|--------------------|---|--|-------------------------|--------------------|---|----------|
| CLASS 2. Names of Patients who have been in the Institution over 4 weeks and less than 5 weeks. | Insured or Non-Insured. | Date of Admission. | Progress. Also state distinctly whether an extension of treatment is desirable and reasons. | Names of Patients discharged during the week. | Insured or Non-Insured. | Date of Admission. | Date Patient discharged and Dossier returned. | Remarks. |

Signed

Tuberculosis Officer.

*A Progress Report D. (A) must be sent for all persons who have been in the Institution 10 weeks.

Medical Officer

An extension of period of treatment may be recommended in special cases.

.....191...

TABLE III.

Summary of Cases, Treatment, etc.

No. of patients under treatment at end of month—

Suffering from Pulmonary Tuberculosis

,, Non-pulmonary ,,

Total

No. of persons examined because they were contacts, or for diagnosis only—

For diagnosis only.

Contacts.

No. found suffering from Pulm. Tub.

,, Non-pulm. ,,

No. of doubtful cases

Not suffering from Tuberculosis

Totals

No. of Domiciliary visits paid by

(a) Tuberculosis Officer.

(b) Nurse

No. of days on which the Dispensary was open.

No. of patients receiving

(a) Tuberculin.

(b) Medicine.

(c) Oil and Malt.

(d) Extra nourishment.

No. of attendances made by

(a) Patients under treatment.

(b) Patients under observation, including 'those
who attended for diagnosis only.

Observations :—

Date.....1914.

Signed,

Tuberculosis Officer.

PULMONARY TUBERCULOSIS CARD.

| Name | | Age at Application | Date | 19 | INSURED OR NON-INSURED. | | |
|---|-----------------|--------------------|------------------|------------------|----------------------------|------------------|------------------|
| Address | | Occupation | Case No. | | | | |
| Pulmonary Tuberculosis. | Primary Report. | Progress Report. | Progress Report. | Progress Report. | Progress Report. | Progress Report. | Progress Report. |
| Report received from | | | | | | | |
| Date | | | | | | | |
| Stage of Disease T.G. | | | | | | | |
| " Astor | | | | | | | |
| Working (a) (b) (c) | | | | | | | |
| T.B. in sputum | | | | | | | |
| Complications | | | | | | | |
| Well to do (W) Poor (P) Very Poor (V P) | | | | | | | |
| Home conditions, Bad (B) Fair (F) | | | | | | | |
| Good (G) | | | | | | | |
| Date of Treatment Order | | | | | | | |
| Treatment Ordered (H) (San) | | | | | | | |
| (Shl) (Dsp) (Dom) (Ext. N.) | | | | | | | |
| Period | | | | | | | |
| Hospital or Sanatorium Entered | | | | | | | |
| Date of Entry | | | | | | | |
| " Discharge | | | | | | | |
| Shelter erected | | | | | | | |
| Transferred to observation list | | | | | | | |
| " another district | | | | | | | |
| Lost sight of | | | | | | | |
| Died | | | | | | | |

NON-PULMONARY TUBERCULOSIS CARD.

| <i>Name</i> | <i>Age on application</i> | <i>Date</i> | <i>INSURED OR NON-INSURED.</i> |
|---|---------------------------|-------------|--------------------------------|
| <i>Address</i> | <i>Occupation</i> | <i>191</i> | <i>Case No.</i> |
| Non-pulmonary Tuberculosis. | | | |
| Report received from | | | |
| Date | | | |
| Organ affected | | | |
| Extent of Disease | | | |
| Complications | | | |
| Well to do (W.), Poor (P.), Very poor (V.P.) | | | |
| Home conditions. Bad (B.), Fair (F.), Good (G.) | | | |
| Date of Treatment order | | | |
| Treatment ordered | | | |
| Result of Treatment | | | |
| Transferred to observation list | | | |
| " another district | | | |
| Lost sight of | | | |
| Died | | | |

Copy of letter sent to each Medical Officer of Health in the County.

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

CHELMSFORD,

May 13th, 1913.

Dear

The County Council is exceedingly anxious to secure the active co-operation of all the Medical Officers of Health in the County for the purpose of dealing with the prevention of Tuberculosis. They have therefore asked their six Tuberculosis Officers to render the M.O.H. in their respective districts all the assistance possible, and I am requested to send you a copy of the duties of these Officers as defined by the County Council and approved by the Chief Medical Officer of the Local Government Board.

You will observe that Duties No. 2 and 13 should bring the Tuberculosis Officer for your district in touch with your department.

Where Dispensaries are established any Medical Man or Medical Officer of Health may send patients suffering from Tuberculosis, or suspected to be so suffering, for examination. (Duty No. 6). Where there is no Dispensary the Tuberculosis Officer for the district, upon request and by appointment will visit and examine any case at the home of the patient.

Sanatorium beds for over 100 cases have been provided, and in a few weeks about 150 beds will be available. These will chiefly be used by insured persons, but when beds are available uninsured cases will be taken in. These cases will be reported upon by the District Tuberculosis Officer, but the final selection for any available beds will be made by me. Shelters of an excellent type are also provided for patients where the M.O.H. certifies that there is suitable ground available.

Already many M.O.H. are taking the keenest interest in the subject and rendering us every assistance possible, and the Council think that it is only necessary for their endeavours to be made more widely known to secure similar co-operation from every M.O.H. in the County.

The address of the Tuberculosis Officer for your district is :—

and I shall be glad if you will consult with him upon any points which may arise and require discussion.

Suggestions for rendering the work more effective will be willingly considered by

Yours faithfully,

JOHN C. THRESH.

Chief Tuberculosis Officer.

Copy of letter sent to every Medical Practitioner in the County (a somewhat similar letter was sent during 1913).

ESSEX COUNTY COUNCIL.

TUBERCULOSIS DEPARTMENT.

Chelmsford,

July 1st, 1914.

DEAR SIR,

I am directed by the County Council to again direct your attention to the facilities they are affording to the Medical profession for the early diagnosis of cases of Tuberculosis, in order that such treatment may be offered to patients as is most likely to lead to their recovery.

The Council has established 11 Dispensaries and 9 Visiting Stations. Appended you will find a list of these together with the names and addresses of the 7 Tuberculosis Officers who attend, and the days and hours of such attendance. These officers have been elected on account of their experience in the diagnosis and treatment of cases of tubercular disease and their services *for consultative purposes* are at your disposal. You are at liberty to send any patient suffering or suspected to be suffering from tuberculosis to the Dispensary or Visiting Station, for diagnosis or for treatment if you wish. Your presence at the examination will be welcomed. Private cases may be seen at their homes by arrangement with the tuberculosis officer for the district in which they reside.

To facilitate early diagnosis you can obtain from any Dispensary or Visiting Station a sputum outfit and specimens can be sent to the County Laboratory in the packet and envelope provided. By return of post you will be informed whether the sputum contains the tubercle bacillus or not.

The County Council has provided 140 beds at Hospitals and Sanatoria for suitable cases. If you desire to have a patient sent to such an Institution you should communicate with me or the Tuberculosis Officer for your district, when the case will receive careful consideration.

The County Council is very anxious that the Tuberculosis Officers and medical men practising in the County should co-operate for the purpose of controlling tuberculosis infection, and the Tuberculosis Officer of your district will be glad to afford you any information or assistance in his power.

I am, Dear Sir,

Yours faithfully,

JOHN C. THRESH.

Chief Tuberculosis Officer.

To Dr.....

.....

ESSEX COUNTY COUNCIL.

Summary of Reports of Tuberculosis Officers for the Month ending
August 31st, 1914.

TABLE I.

Patients attending Dispensaries for Treatment.

| | Walthamstow. | Leyton. | East Ham. | Ilford. | Barking. | Woodford. | Romford. | Grays. | Southend. | Chelmsford. | Colchester.* | Braintree. | Totals. |
|---|--------------|---------|-----------|---------|----------|-----------|----------|--------|-----------|-------------|--------------|------------|---------|
| 1 No. of Patients on Register, 31st July, 1914— | | | | | | | | | | | | | |
| (a) Insured | 83 | 60 | 109 | 23 | 25 | 5 | 15 | 29 | 34 | 15 | 23 | 6 | 427 |
| (b) Uninsured | 140 | 76 | 222 | 27 | 31 | 9 | 36 | 33 | 37 | 19 | 28 | 7 | 665 |
| Total | 223 | 136 | 331 | 50 | 56 | 14 | 51 | 62 | 71 | 34 | 51 | 13 | 1092 |
| 2 No. of Patients added to Register during the month— | | | | | | | | | | | | | |
| (a) Insured | 10 | 5 | 11 | 8 | 2 | 1 | 5 | 7 | 4 | 2 | 4 | — | 59 |
| (b) Uninsured | 8 | 5 | 9 | 4 | 0 | 1 | 8 | 4 | 3 | 1 | 3 | — | 46 |
| Total | 18 | 10 | 20 | 12 | 2 | 2 | 13 | 11 | 7 | 3 | 7 | — | 105 |
| 3 No. of Patients removed from Register during the month— | | | | | | | | | | | | | |
| (a) Insured | 3 | 5 | 13 | — | 5 | 2 | 1 | 1 | 1 | 1 | 2 | — | 34 |
| (b) Uninsured | 10 | 3 | 11 | — | — | 1 | — | — | 2 | — | — | — | 27 |
| Total | 13 | 8 | 24 | — | 5 | 3 | 1 | 1 | 3 | 1 | 2 | — | 61 |
| 4 No. of Patients on Register, 31st August, 1914— | | | | | | | | | | | | | |
| (a) Insured | 90 | 60 | 107 | 31 | 22 | 4 | 19 | 35 | 37 | 16 | 25 | 6 | 452 |
| (b) Uninsured | 138 | 78 | 220 | 31 | 31 | 9 | 44 | 37 | 38 | 20 | 31 | 7 | 684 |
| Total | 228 | 138 | 327 | 62 | 53 | 13 | 63 | 72 | 75 | 36 | 56 | 13 | 1136 |

* Includes cases at Maldon and Harwich.

TABLE II.
Patients attending Dispensary for Observation.

| | | Walthamstow. | Leyton. | East Ham. | Ilford. | Barking. | Woodford. | Romford. | Grays. | Southend. | Chelmsford. | Colchester. | Braintree. | TOTALS. |
|--|-------------------------------------|--------------|---------|-----------|---------|----------|-----------|----------|--------|-----------|-------------|-------------|------------|---------|
| 5 | No. on Register, 31st July, 1914— | | | | | | | | | | | | | |
| | (a) Insured | 85 | 53 | 154 | 8 | 25 | 4 | 12 | 10 | 36 | 8 | 5 | 5 | 405 |
| | (b) Uninsured | 181 | 55 | 95 | 8 | 9 | 3 | 8 | 7 | 56 | 15 | — | 7 | 444 |
| | Total | 266 | 108 | 249 | 16 | 34 | 7 | 20 | 17 | 92 | 23 | 5 | 12 | 849 |
| 6 | No. on Register, 31st August, 1914— | | | | | | | | | | | | | |
| | (a) Insured | 90 | 54 | 174 | 11 | 38 | 7 | 15 | 10 | 30 | 8 | 7 | 5 | 449 |
| | (b) Uninsured | 184 | 59 | 103 | 9 | 12 | 3 | 8 | 7 | 44 | 10 | — | 7 | 446 |
| | Total | 274 | 113 | 277 | 20 | 50 | 10 | 23 | 17 | 74 | 18 | 7 | 12 | 895 |
| Total under Treatment and Observation, | | 502 | 251 | 604 | 82 | 103 | 23 | 86 | 89 | 149 | 54 | 63 | 25 | 2031 |

TABLE III.
Patients Removed from Treatment Register.

| Dispensary. | Insured. | Non-insured. | Total. | Causes of Removal. | | | | | |
|--------------------|------------|--------------|--------|----------------------------|---------------------------------|----------------------------|----------------|-------|---------------|
| | | | | Working capacity restored. | Gone to Hospital or Sanatorium. | For Domiciliary Treatment. | Left District. | Dead. | Other Causes. |
| Walthamstow | 3 | 10 | 13 | 7 | 1 | 2 | — | — | 3 |
| Leyton .. | 4 | 4 | 8 | 1 | 2 | — | 3 | 2 | — |
| East Ham .. | 13 | 11 | 24 | 3 | 7 | 2 | 7 | — | 5 |
| Ilford .. | — | — | — | — | — | — | — | — | — |
| Barking .. | 5 | — | 5 | — | 1 | 3 | — | — | 1 |
| Woodford .. | 2 | 1 | 3 | 1 | 2 | — | — | — | — |
| Romford .. | 1 | 2 | 3 | — | 2 | — | — | 1 | — |
| Grays .. | 1 | — | 1 | — | 1 | — | — | — | — |
| Southend .. | 1 | 2 | 3 | 1 | 2 | — | — | — | — |
| Chelmsford .. | 1 | — | 1 | — | — | — | — | 1 | — |
| Colchester .. | 2 | — | 2 | — | 2 | — | — | — | — |
| Braintree .. | No returns | | — | — | — | — | — | — | — |
| Epping and Waltham | — | — | — | — | — | — | — | — | — |
| Totals .. | 33 | 30 | 63 | 13 | 20 | 7 | 10 | 4 | 9 |

TABLE IV.

Summary of Cases, Treatment, etc.

| | Walthamstow. | Leyton. | East Ham. | Ilford. | Barking. | Woodford. | Romford. | Grays. | Southend. | Chelmsford. | Colchester. | Braintree. | TOTALS. |
|---|--------------|---------|-----------|---------|----------|-----------|----------|--------|-----------|-------------|-------------|------------|---------|
| 7 No. of Patients on Treatment Register, August 31st, 1914, suffering from :— | | | | | | | | | | | | | |
| (a) Tuberculosis of Lungs | 212 | 131 | 310 | 58 | 45 | 12 | 59 | 60 | 58 | 29 | 52 | 13 | 1039 |
| (b) Other forms of Tuberculosis.. .. | 16 | 7 | 17 | 4 | 8 | 1 | 4 | 12 | 17 | 7 | 4 | 0 | 97 |
| Total | 228 | 138 | 327 | 62 | 53 | 13 | 63 | 72 | 75 | 36 | 56 | 13 | 1136 |
| 8 No. of contacts examined .. | 9 | 3 | 2 | 1 | 1 | — | 2 | — | 8 | — | 4 | — | 30 |
| 9 No. of contacts found suffering from Pulmonary Tuberculosis | 2 | 3 | 1 | — | 1 | — | — | — | — | — | — | — | 7 |
| 10 No. suffering from Non-pulmonary Tuberculosis .. | 1 | — | — | 1 | — | — | — | — | — | — | — | — | 2 |
| 11 No. of doubtful cases .. | 5 | — | 1 | — | — | — | 2 | — | — | — | — | — | 8 |
| 12 No. non-tubercular .. | 1 | — | — | — | — | — | — | — | 8 | — | 4 | — | 13 |
| 13 No. of domiciliary visits paid by Tuberculosis Officer .. | — | — | 21 | 3 | 8 | 3 | 15 | 17 | 96 | 3 | 34 | 31 | — |
| 14 No. of domiciliary visits paid by Nurse | 50 | 74 | 136 | 13 | 43 | 3 | 22 | 21 | 68 | 11 | 58 | — | 499 |
| 15 No. of days Dispensary open .. | 12 | 9 | 16 | 4 | 5 | 4 | 8 | 8 | 13 | 8 | 17 | 3 | 107 |
| 16 No. of patients receiving Tuberculin | 39 | 33 | — | — | 1 | — | 2 | — | 15 | 13 | 24 | — | 127 |
| 17 No. of patients receiving Medicine | 88 | 53 | 126 | 14 | 19 | 6 | 34 | 29 | 40 | 18 | 15 | — | 442 |
| 18 No. of patients receiving Oil and Malt | 84 | 62 | 249 | 20 | 46 | 8 | 28 | 26 | 15 | 10 | 12 | 3 | 563 |
| 19 No. of Patients receiving extra nourishment | — | — | 4 | — | 1 | — | 2 | 2 | 6 | 1 | 1 | — | — |
| 20 Total number of attendances made by patients under Treatment | 310 | 170 | 438 | 90 | 76 | 26 | 115 | 119 | 156 | 78 | 140 | 5 | 1723 |
| 21 Total number of attendances made by patients under Observation and for diagnosis | 62 | 40 | 63 | 16 | 8 | 3 | 14 | 1 | 43 | 18 | 21 | 4 | 293 |
| 22 Total attendances for all patients | 372 | 210 | 501 | 106 | 84 | 29 | 129 | 120 | 199 | 96 | 161 | 9 | 2016 |
| 23 No. of patients examined for diagnosis only | 1 | 1 | 20 | 4 | 3 | — | — | 1 | 7 | — | 10 | — | 47 |
| 24 No. of same found suffering from Tuberculosis | 1 | 1 | 14 | 3 | 2 | — | — | — | 2 | — | 7 | — | 30 |

TABLE V.

BEDS AVAILABLE AND IN USE AT SANATORIA AND HOSPITALS.

| For Insured Persons. | | | | | | | | For Uninsured Persons. | | |
|----------------------|----|----|----|-----|----|----|----|------------------------|----|----|
| Male] | | | | | | | | Female. | | |
| Male. | | | | | | | | Female. | | |
| Chingford | .. | .. | 14 | .. | 8 | .. | .. | 0 | .. | 0 |
| Romford | .. | .. | 0 | .. | 6 | .. | .. | 0 | .. | 2 |
| Orsett.. | .. | .. | 10 | .. | 0 | .. | .. | 4 | .. | 0 |
| Ilford .. | .. | .. | 6 | .. | 0 | .. | .. | 0 | .. | 0 |
| Sandon | .. | .. | 0 | .. | 6 | .. | .. | 0 | .. | 4 |
| Colchester | .. | .. | 5 | .. | 0 | .. | .. | 3 | .. | 0 |
| Black Notley | .. | .. | 14 | .. | 0 | .. | .. | 2 | .. | 0 |
| Victoria Park | .. | .. | 5 | .. | 5 | .. | .. | 0 | .. | 0 |
| Nayland | .. | .. | 10 | .. | 10 | .. | .. | 0 | .. | 0 |
| East Ham | .. | .. | 11 | .. | 0 | .. | .. | 0 | .. | 0 |
| Maldon | .. | .. | 8 | .. | 0 | .. | .. | 0 | .. | 0 |
| Halstead | .. | .. | 0 | .. | 3 | .. | .. | | .. | 3 |
| Galleywood | .. | .. | 0 | .. | 0 | .. | .. | 1 | .. | 5 |
| Totals | | | .. | 83 | .. | 38 | | 10 | .. | 14 |
| | | | | 121 | | | | 24 | | |
| Grand Total 145 | | | | | | | | | | |

Tables I. and II. shew that the number of cases dealt with at the Dispensaries is increasing.

SUMMARY.

| | | Cases under actual treatment. | | Cases under observation. | | Total. | Attendances at Dispensaries. | |
|----------|----|-------------------------------|----|--------------------------|----|--------|------------------------------|-------------|
| July | .. | 1087 | .. | 849 | .. | 1936 | .. | 2620 |
| August | .. | 1136 | .. | 895 | .. | 2031 | .. | 2016 |
| Increase | .. | 49 | .. | 46 | .. | 95 | .. | 604Decrease |

In consequence of the War, Dr. Roberts and Dr. Williamson having been called up to join the Territorial Army, a number of changes have been necessitated. To cope with the work the number of attendances at the Dispensaries has been decreased in some areas, and patients are not recommended to visit so frequently, hence the decrease in the number of attendances.

JOHN C. THRESH,

Chief Tuberculosis Officer.

CHELMSFORD,

September 7th, 1914.

ISOLATION HOSPITALS.

The number of cases of Diphtheria, Scarlet Fever and Enteric Fever dealt with in the Isolation Hospital was 3,445, being 77 per cent. of the whole of the notified cases; they were distributed as under:—

TABLE XXI.

| | Urban Districts. | | | Rural Districts. | | |
|----------------------|------------------|----------------------------|--------------------|------------------|----------------------------|--------------------|
| | Cases notified. | Cases removed to Hospital. | Per cent. removed. | Cases notified. | Cases removed to Hospital. | Per cent. removed. |
| Diphtheria | 1,389 | 1,049 | 76 | 386 | 138 | 74 |
| Scarlet Fever | 2,326 | 1,838 | 79 | 385 | 276 | 72 |
| Enteric Fever | 141 | 114 | 81 | 48 | 48 | 62 |
| Totals | 3,856 | 4,001 | 78 | 619 | 444 | 72 |

As many cases of these diseases occur in houses removal from which is unnecessary, the percentage of cases treated in Hospitals is very satisfactory. Not quite so large a proportion is removed in the Rural Districts, but this is obviously due to the fact that in very thinly populated areas there is not the same necessity for removal as obtains in towns.

Small-pox cases are not referred to in the above Table as cases of this disease are not dealt with in the ordinary Isolation Hospital. A brief account of the Hospital accommodation in each district is given below.

All the permanent Hospitals in the County, save that at Colchester, receive an annual grant not exceeding £5 per bed (2,000 cubic feet) after an inspection has been made by me in the Spring, and the results have been considered by the Public Health Committee. The Clerks to the Hospitals also furnish me with a copy of their annual balance sheet, and the study of this has lead many authorities to effect economies in management.

The grant to the Dunmow Hospital referred to in last years' report was ultimately given, as the Rural District Council considerably improved the administrative arrangement after my visit. The disarrangement was in part due to a change of Matron and Caretaker.

This year the grant to the Saffron Walden Joint Hospital Board has been temporarily withheld until the Board has actually entered into a formal contract for the enlargement of the existing hospital.

The Grants made for the Years 1913-14 were as under:—

TABLE XXII.

| HOSPITALS. | No. of Beds. | Grant per Bed. | Grant. |
|-------------------------|------------------|----------------|---------|
| | | £ s. d. | £ s. d. |
| Southend | 36 | 5 0 0 | 180 0 0 |
| Rochford | 12 | 4 15 0 | 57 0 0 |
| Grays and Orsett | 20 | 5 0 0 | 100 0 0 |
| Dunmow | 8 | 5 0 0 | 40 0 0 |
| Saffron Walden | Grant with held. | | |
| East Ham | 42 | 5 0 0 | 210 0 |
| Halstead | 6 | 5 0 0 | 30 0 |
| Romford Joint | 42 | 5 0 0 | 210 0 0 |
| Ilford | 80 | 5 0 0 | 400 0 0 |
| Walthamstow | 84 | 5 0 0 | 420 0 0 |
| Waltham Joint | 42 | 5 0 0 | 210 0 0 |
| Maldon „ | 10 | 5 0 0 | 50 0 0 |
| Clacton „ | 17 | 5 0 0 | 85 0 0 |
| Chelmsford Joint | 21 | 5 0 0 | 105 0 0 |
| Braintree „ | 8 | 5 0 0 | 40 0 0 |
| Total Grants ... | | £2,137 0s. 0d. | |

In the County Annual Report for 1910 will be found a description of all the Isolation Hospitals in the County.

BARKING. The Hospital has 50 beds, and a new administrative block was completed and occupied on December 23rd. A new Hospital on the present site has been decided upon, and a block plan for 100 beds approved. The present temporary buildings are far from satisfactory. The cost of maintaining the Hospital during the year was £1,623, but it includes some large items for furnishing, &c.

BURNHAM. A cottage has been enlarged and is kept in repair and good condition ready for immediate use, and no doubt would be used for small-pox if not occupied by patients suffering from some other disease. An attempt to bring about a combination with the Maldon District has so far failed.

BRAINTREE. This Hospital belongs to the Braintree Joint Hospital Board, and comprises an approved block for eight beds with two small wooden wards for three or four other cases. There is ample room for erection of tent hospitals if required.

At Black Notley there is a Small-pox Hospital now used for Tuberculosis (*q.v.*). The Board has just arranged to become one of the Authorities in the North-west Essex Small-pox Hospital Scheme.

The area under the Board's control comprises the Urban District of Braintree, and the Braintree Rural District.

BRENTWOOD. This Authority has no Hospital, but by arrangement sends its cases to the Billericay Rural District Hospital. This arrangement is not satisfactory, and the Council has given the County Council an undertaking that if a satisfactory agreement cannot be arrived at, they will provide a Hospital for their own District. For Small-pox cases also the town is dependent on Billericay, but I am informed that the Billericay Rural District Council can have a hospital marquee erected ready for the reception of patients in four hours from the receipt of the notification.

BRIGHTLINGSEA. This district possesses a complete tent hospital for 12 beds and an available site for its erection. It would accommodate 12 patients. There is also a temporary arrangement for the sending of patients to the Colchester Hospital. A scheme for including Brightlingsea and adjacent districts for utilizing and enlarging the Colchester Isolation Hospital is under consideration. Small-pox cases could be dealt with in the hospital or at Colchester.

BUCKHURST HILL. Forms one of the constituent authorities of the Waltham Joint Hospital Board.

CHELMSFORD. The Chelmsford Joint Hospital Board provides hospital accommodation for the Borough and the Chelmsford Rural District. The hospital has 23 beds and is of modern type. The rapid increase in the industrial population renders its enlargement desirable and this is now being considered.

At Galleywood the Board has a wood and iron Small-pox Hospital with six beds which is being used temporarily for cases of Tuberculosis.

CHINGFORD. This Authority is also one of the constituents of the Waltham Joint Hospital Board.

CLACTON. The hospital here is the approved model for 17 beds. Tents are kept ready for erection should a case of Small-pox occur.

COLCHESTER. There is a hospital here on a fine site at Mile End and a quarter of a mile away there is a well equipped hospital for Small-pox which would accommodate some 16 cases. If more beds were required tents could be erected.

Negotiations are proceeding for making these hospitals serve the following districts :—

Colchester Borough.
Brightlingsea Urban.
Wyvenhoe "
Frinton "
Walton "
Tendring Rural.
Lexden and Winstree Rural.

This will necessitate the enlargement of the hospital and plans for this purpose have already been prepared.

EPPING. Cases are sent by arrangement to the Epping Rural District Council Hospital (*q.v.*).

EAST HAM. This hospital is chiefly of a temporary character but 42 patients can be accommodated in model pavilions. About 100 other patients can be dealt with in the wood and iron pavilions. The Borough Council has an arrangement with the West Ham Corporation for the reception of cases of Small-pox in their hospital at Dagenham.

FRINTON. No Hospital. *Vide* Colchester.

GRAYS. This forms part of the Grays and Orsett Joint Hospital District. The Isolation Hospital in Stifford Long Lane, about one mile from Grays, has provision for 46 beds, 26 being in temporary buildings. A new block for Diphtheria cases has been sanctioned by the Local Government Board. About a quarter of a mile away there are wood and iron buildings, properly enclosed, always ready for the reception of Small-pox patients. A large number could be accommodated here.

HALSTEAD. There is a small model hospital here with two wards for four beds each. It is about to be enlarged, and a Joint Hospital District, comprising Halstead Urban and Rural Districts, has been agreed upon. (*Vide* Halstead Rural).

HARWICH. There is a small hospital here, which at one period during the year was so full that a wood and iron ward was erected. There is no steam disinfecter. Being a Borough, the County Council has no powers under the Isolation Hospital Act. The Hospital proper has 16 beds, and the new building provides accommodation for six more. In the Medical Officer of Health's Report for 1910 it is stated that the Hospital had 24 available beds. The Medical Officer of Health thinks that cases of Small-pox would be isolated in the floating hospital belonging to the Port Authority.

ILFORD. There is an excellent hospital here for 80 beds. The question of the enlargement of the Administrative Block is under consideration, as more Nurses will be required when the Pavilion for Tuberculosis cases is completed. The laundry extension was completed during the year. Small-pox cases would be sent to the Dagenham Hospital of the West Ham Borough.

LEYTON. The Hospital here is of a temporary character and accommodates 70 Scarlet Fever and 22 Diphtheria patients. The Medical Officer of Health says "it has adequately served the needs of the district." A Nurses' dining room and recreation room have just been added. There is no arrangement for isolating cases of Small-pox.

LOUGHTON. The Council possesses no Isolation Hospital but sends cases of Scarlet Fever and Diphtheria to the Chingford Sanatorium of the Walthamstow Urban District and cases of Enteric Fever to the Waltham Joint Hospital.

MALDON. This is a constituent district of the Maldon Joint Hospital Board. The Hospital is as described in 1910, but shelters for eight Tuberculosis patients have been erected in the grounds during 1913.

The Board has a tent hospital, shed, etc., at Little Totham, which can be utilized at very short notice for Small-pox cases.

ROMFORD. This is one of the constituent districts of the Romford Joint Hospital Board. There is an excellent Hospital for 42 beds, and a Pavilion for eight Tuberculosis patients has just been erected in the grounds by the County Council.

Small-pox cases are sent to the Dagenham Hospital of the West Ham Borough.

SOUTHEND. A new administrative block has just been completed, and the erection of a new ward pavilion for 18 beds is being proceeded with.

With regards to Small-pox, the Medical Officer of Health says: "The land upon which the Hospital is erected is part of that purchased as a site for the Cemetery. It will shortly be needed for cemetery purposes, and consequently it will be necessary for the Council to seek another site, or make arrangements with neighbouring Sanitary Authorities to provide and maintain a Joint Small-pox Hospital. With a motor ambulance available, a hospital in a central position would meet the needs of all the Sanitary Authorities in South-east Essex." This is an arrangement which the County Council is endeavouring to bring about.

SHOEBURYNESS. Joins with the Rochford Rural District (*q.v.*).

SAFFRON WALDEN. The Hospital remains practically as described in 1910, but the Joint Board has decided upon bringing it up-to-date. Plans for the new buildings and for alteration of the existing buildings have been submitted to the Local Government Board.

This Borough has decided to join with adjacent Districts in the North-west Essex Small-pox Hospital Scheme.

TILBURY. This area is included in the Grays Joint Hospital Board, and all its infectious cases, including Small-pox, are sent to the Hospitals provided by this Board.

WALTHAM HOLY CROSS. This is one of the constituent Districts of the Waltham Joint Hospital Board. As the Board has provided no accommodation for Small-pox, the Council has arranged for hospital tents, &c., being erected on available land at very short notice.

WALTHAMSTOW. This Hospital is of most modern type and accommodates 117 patients. A pavilion for 16 cases of Tuberculosis has recently been added. Small-pox cases are sent by arrangement to the West Ham Hospital at Dagenham.

WALTON-ON-THE-NAZE. No Hospital accommodation at present. *Vide* Colchester.

WANSTEAD. The Hospital is of wood, and 20 patients can be accommodated in it. The description given in the 1910 Report still applies. Small-pox cases are sent by arrangement to the West Ham Hospital at Dagenham.

WITHAM.—An arrangement has been made with the Maldon Joint Hospital Board for the reception of all cases of infectious disease in the Joint Board's Hospitals.

WIVENHOE. No hospital. *Vide* Colchester.

WOODFORD. This is one of the constituent authorities of the Waltham Joint Hospital Board. Small-pox cases would be sent to Dagenham.

RURAL DISTRICTS.

BELCHAMP. No hospital. Small-pox, *vide* Halstead Rural District.

BUMPSTEAD. The Clare and Bumpstead Joint Hospital was originally provided for Small-pox. It has only four beds.

BILLERICAY. A new hospital for 22 beds is being provided. There is to be one block of two wards for eight beds each and an observation block for six beds each isolated from the other. There will also be a new administrative block.

A tent arrangement which can be ready for reception of cases in four hours is provided for Small-pox cases.

BRAINTREE. One of the two Authorities in the Braintree Joint Hospital area. For Small-pox *vide* Halstead Rural.

CHELMSFORD. One of the constituents of the Chelmsford Joint Hospital Board. *Vide* Chelmsford Borough.

DUNMOW. A hospital of modern type for eight beds. It is frequently full and the Medical Officer of Health has asked the Council to consider the question of enlarging it. For Small-pox *vide* Halstead Rural.

EPPING. The hospital here is used also by the Urban District. It is of "temporary" type as described in 1910. During the year a few cases had to be sent to the Waltham Joint Hospital. Tents would be used if Small-pox occurred.

HALSTEAD. Now (1914) a part of the Halstead Joint Hospital District. Although not completed in 1913 it may be stated here that it has been decided that this Rural Council shall provide and maintain a Small-pox hospital for north-west Essex. The land has been purchased and tenders for the hospital accepted. The constituent Authorities are :—

Braintree Joint Hospital Board.

Saffron Walden „ „

Belchamp Rural District.

Dunmow „ „

Halstead Urban District.

„ Rural „

LEXDEN AND WINSTREE. *Vide* Colchester.

MALDON. The northern half of the District is in the area served by the Maldon Joint Hospital Board. A lady has offered to give a bungalow and land for a hospital for the Southern area, and at Asheldham there is a building in which a tent, furniture, etc., are stored, and which would be at once utilized if a case of Small-pox occurred. All efforts to bring about a combination with Burnham have failed.

ONGAR. There is an emergency tent hospital stored in a two-roomed building which could be utilized at any time. Arrangements have been made, however, with both the Romford and Waltham Joint Hospital Boards for the reception of cases of Scarlet Fever, Diphtheria, and Enteric Fever, and with West Ham Borough for the reception of cases of Small-pox in the Dagenham Hospital.

ROMFORD. *Vide* Romford Urban.

ORSETT. *Vide* Grays Urban.

SAFFRON WALDEN. *Vide* Saffron Walden Borough.

STANSTED. This Rural District is combined with Henham (Herts) for hospital purposes.

ROCHFORD. There is a proper hospital here belonging to the Rochford and Shoebury Joint Hospital Board. Twenty patients can be accommodated, eight being in a wooden pavilion. The Board also possess a small wood and iron hospital for Small-pox cases. It has been suggested that this should be enlarged and made to serve for Southend also.

TENDRING. *Vide* Colchester.

When the combinations now in progress of formation are completed and the proposed arrangements effected the County will be well provided with Hospital accommodation. The most pressing matter is the provision of beds for cases of Small-pox in Leyton. If an outbreak of this disease occurred here amongst a community so imperfectly protected by vaccination it might spread through the whole extra-Metropolitan area and then into Rural Essex. It is a danger which affects not only Leyton but also every other district in the County.

'MIDWIVES' ACT, 1902.

The names of 326 midwives were entered on the Essex register during 1913, but 64 left the County or ceased practice, leaving 262 names at the end of the year.

The various Nursing Associations at present employ about 54 midwives, and there are 36 women who wish to remain on the register, but are not at present acting as midwives.

NOTICES FOR THE YEAR.

| | | | |
|-------------------------------|-----|-----|-----------------|
| Medical help records received | ... | ... | 447 |
| Still-births | ... | ... | 101 |
| Deaths of mothers | ... | ... | 3 |
| Deaths of infants | ... | ... | 18 |
| Bodies prepared for burial | ... | ... | 6 |
| Total | ... | ... | <hr/> 575 <hr/> |

TABLE XXIII.
 STATISTICAL INFORMATION RELATING TO ISOLATION HOSPITALS APPLYING FOR A GRANT.
 YEAR ENDING MARCH 31ST, 1914.

| | Walthamstow. | East Ham. | Bilcock. | Romford Joint Hospital. | Southeast. | Orsett Joint Hospital. | Waltham Joint Hospital. | Chelmsford Joint Hospital. | Rochford Joint Hospital. | Chertsey. | Danmow. | Reigate Joint Hospital. | Saffron Walden Joint Hospital. | Histon Joint Hospital. | Hatfield. |
|--|--------------|--------------|---------------|----------------------------|---------------|---------------------------|----------------------------|-------------------------------|-----------------------------|-----------|-------------|----------------------------|-----------------------------------|---------------------------|-----------|
| Total Number of Beds in Hospital | 117 | 124 | 90 | 70 | 70 | 46 | 42 | 23 | 20 | 17 | 12 | 11 | 10 | 14 | 6 |
| Number for purpose of Grant | 54 | 42 | 80 | 42 | 35 | 20 | 42 | 21 | 12 | 17 | 8 | 8 | 6 | 10 | 6 |
| Cases admitted during year— | | | | | | | | | | | | | | | |
| Scarlet Fever | 350 | 448 | 176 | 129 | 94 | 55 | 60 | 38 | 18 | 38 | 28 | 34 | 6 | 73 | 4 |
| Diphtheria | 249 | 237 | 91 | 29 | 70 | 43 | 52 | 8 | 55 | 4 | 5 | 25 | 2 | 2 | 48 |
| Typhoid Fever | 11 | 15 | 1 | 4 | 17 | 6 | 4 | — | 1 | 1 | 2 | 2 | — | — | 1 |
| Other Diseases | — | 58 | 29 | — | 3 | 4 | 4 | — | 4 | 1 | — | — | 3 | 1 | — |
| Total | 610 | 758 | 297 | 162 | 184 | 109 | 120 | 46 | 78 | 44 | 35 | 61 | 11 | 76 | 53 |
| Permanent Staff Residing in Hospital | 34 | 53 | 35 | 21 | 23 | 16 | 10 | 10 | 5 | 4 | 3 | 3 | 4 | 8 | 2 |
| Expenditure for year:— | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| Structural Expenses | 225 16 7 | 1691 0 0 | 1923 1 5 | 893 5 11 | 890 9 9 | 570 12 11 | 806 17 2 | 539 15 4 | 237 2 7 | 268 13 7 | 414 6 11 | 219 1 7 | 60 5 2 | 590 3 4 | 205 12 10 |
| Establishment | 5473 11 7 | 6469 0 0 | 4740 15 5 | 1788 1 7 | 2417 5 3 | 1694 14 0 | 1330 7 1 | 1140 2 | 576 19 1 | 387 5 11 | 496 9 1 | 747 14 0 | 269 13 0 | 969 5 5 | 410 4 1 |
| Patients | 440 19 2 | 977 0 0 | 276 19 3 | 323 6 5 | 219 13 5 | 60 7 6 | 75 2 3 | 101 9 9 | 70 12 | 5 14 6 | 21 1 10 | 117 16 6 | 50 2 6 | 67 15 11 | 32 8 5 |
| Total | 8169 1 4 | 9137 0 0 | 6940 16 1 | 3094 14 11 | 3327 8 5 | 2325 14 5 | 2212 6 6 | 1772 7 10 | 834 14 3 | 651 14 0 | 931 17 10 | 1084 12 1 | 380 0 8 | 1356 4 8 | 669 5 4 |
| Name of Clerk | C. S. Watson | C. E. Wilson | A. Partington | W. Smith | H. J. Worwood | James Beck | T. J. Tee | Leonard Gray | F. Gregson | G. Lewis | A. S. Floyd | F. J. Wiles | W. Adams | F. H. Bright | R. Morton |
| Details of Establishment Expenses:— | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| Food, Appliances, Heating, Lighting, and Repairs | 3763 8 5 | 4229 0 0 | 2928 3 3 | 770 7 2 | 1690 17 6 | 906 4 0 | 475 15 1 | 531 4 7 | 165 16 7 | 253 5 11 | 181 9 4 | 368 11 1 | 120 4 1 | 515 14 11 | 233 4 0 |
| Rates, Rents and Taxes | 385 0 3 | 135 0 0 | 130 1 3 | 144 14 2 | 75 4 10 | 79 1 3 | 112 16 0 | 53 15 0 | 43 18 10 | 7 11 3 | 36 18 1 | 45 6 3 | 12 15 0 | 20 5 7 | 18 0 9 |
| Office and Other Expenses | 294 0 0 | 49 0 0 | 57 8 6 | 260 10 8 | 96 3 1 | 96 15 9 | 104 13 0 | 95 7 5 | 23 5 6 | 13 1 4 | 8 13 2 | 16 10 0 | 14 4 10 | 35 0 3 | 14 3 2 |
| Salaries | 1121 2 10 | 2065 0 0 | 1725 2 5 | 563 9 7 | 644 19 10 | 612 13 0 | 635 3 0 | 459 15 9 | 343 18 2 | 113 7 5 | 269 8 6 | 317 6 8 | 122 9 1 | 318 4 8 | 144 16 2 |
| Total | 5473 11 6 | 6469 0 0 | 4740 15 5 | 1788 1 7 | 2417 5 3 | 1694 14 0 | 1330 7 1 | 1140 2 9 | 576 19 1 | 387 5 11 | 496 9 1 | 747 14 0 | 269 13 0 | 969 5 5 | 410 4 1 |



There have been 63 cases of Puerperal Fever notified in the County, of which 20 were attended by midwives.

The total number of births in the County was 24,236, and the number attended by midwives 7,068 or 29 per cent.

We endeavour to visit every midwife in the County at least once a year, and the untrained and unsatisfactory women as much oftener as possible. The majority of the midwives combine the duties of district nurse and midwife, and are well trained and trustworthy women who do admirable work. This is especially true of the Rural Districts; in some of the Urban Centres the midwives are not so satisfactory, and I fear many unqualified women still practise, notwithstanding our efforts to prevent them.

Taking the County as a whole, however, there have been many less complaints in 1913 of unqualified women practising than in former years, and I think these women will disappear entirely in course of time.

One woman was prosecuted at Colchester; she pleaded guilty, and was bound over to take no cases in future.

A woman at Romford attended a case which developed Puerperal Fever. She was unqualified and very old, and promised never to take another case.

A young woman at Wix was discovered by the police to be going about in nurse's uniform, and taking midwifery cases. On investigation it was found that she was not a midwife, and she was seen and warned, and I believe has left the County. We have had a good deal of trouble with a woman at Epping said to be acting as a midwife. It has been impossible to get sufficient evidence against her, but she is certainly acting as a monthly nurse and not sending for the doctor until the last minute, which has several times resulted in harm to her patients.

We investigated all the cases of Puerperal Fever which occurred in the practice of midwives. One midwife, Nurse E——, of Leyton, was suspended for a month, as she had several cases of fever in her practice, but she did not appear to be to blame, as she took every precaution to disinfect, etc.

A death occurred in a midwife's practice, Nurse R——of Colchester, and an inquest was held. The midwife was reproved for delay in sending for medical help.

Another death occurred at Colchester in the practice of Nurse E——, but the woman did not develop dangerous symptoms until after the midwife had ceased visiting her.

Nurse H——of Great Wakering lost a patient in fits. She had sent for medical help, but the doctor did not arrive in time.

Another midwife, Nurse H——of Rainham, lost a patient through hæmorrhage. She got two medical men there, but they could not save the patient.

There was some trouble with a Nurse M——of Southend, who had a case of fever, and also of Ophthalmia in her practice. She was visited several times and warned to be more careful about keeping the Central Midwives' Board's rules.

Another midwife residing in Southend had cases of Ophthalmia and Puerperal Fever in her practice. She had a large practice, and was warned several times to observe the Central Midwives' Board rules better, but as she ignored the warning, her name was crossed off the Roll of Midwives at a meeting of the Central Midwives' Board held on November 11th, 1913.

Another Southend midwife, Nurse G——, was ordered to attend the Central Midwives' Penal Board on a charge of negligence. A case of hers developed Enteric Fever. She was cautioned as to her future conduct.

Four midwives were visited and their homes specially inspected at the request of the Central Midwives' Board, as they applied to take pupil midwives.

SECTION III.

SANITARY ADMINISTRATION.

WATER SUPPLIES.

I have written so much on this subject during recent years that I do not propose going into any detail in the present report, especially as the Government Report on the water supply to the County which is being prepared is nearing completion and will be issued shortly after the publication of this report. The information contained therein has been accumulated by the writers during the past 20 years and must prove invaluable in the future. It is one of the series of memoirs produced by the Geological Survey and will probably be the largest and most comprehensive of any yet issued.

METROPOLITAN WATER BOARD'S AREA OF SUPPLY. This includes Buckhurst Hill, Chingford, East Ham, Ilford (part of), Leyton, Loughton, Waltham Holy Cross, Walthamstow, Woodford, and Wanstead. The total population supplied is about 500,000, or nearly half the population of the Administrative County. It is very rare indeed that any complaint is received about either the quantity or the quality of the water, and the Board's Works are so admirably supervised that I never feel any anxiety about the water supply to any portion of its area. This year, however, the Medical Officer of Health for the Waltham Holy Cross Urban District seems to have a legitimate cause for complaint. He says, "For the past 20 years the water supply available through the East London Water Works Company has been constant, abundant, and of exceptional purity. The very many chemical and bacteriological analyses made in the past have demonstrated beyond doubt these facts, and for all-round excellence as a domestic supply (if the rather high degree of total hardness is disregarded) there would have been considerable difficulty in finding its superior in England or Wales. Unfortunately during the past year the supply derived from the Deep Well in Lee Road has been mixed with water obtained from a second boring at Ramney Marsh Lock and distributed to town and district. This innovation has been received with disfavour by your Council, the War Department, and the people; the general complaint being that the water is unpalatable, deficient in aeration, not of the same organic purity, and moreover contains a large quantity of iron in suspension and solution."

"Representations have been made to the Metropolitan Water Board on these points, and a reply from Dr. Houston, Medical Officer to the Water Board, asserts that the present supply 'has a high degree of bacteriological purity.' The logical conclusion to be drawn from the above fact is that the water is fit for all domestic purposes, but remains unpalatable, contains an excess of iron, and compares unfavourably with that previously obtained from the Lea Road Deep Well when that source alone was distributed."

"There appears little hope of ever reverting to the original standard of purity, because the two wells in question are connected by an extensive channel."

SOUTH ESSEX WATER CO.'S AREA OF SUPPLY. This includes Barking, Ilford (part of), Grays, Romford, Brentwood, Tilbury, the Romford Rural District and parts of the Orsett and Billericay Rural Districts. The population supplied will be about 180,000. The water is obtained from four deep wells in the chalk at Ilford, Red Bridge, Great Warley and Linford, and from the springs in the Chalk Quarries at Grays. The water from the last-mentioned place is softened before being turned into the mains. I recently inspected all the wells and found them most satisfactory, and that every care was taken to preserve the pristine purity of the water. Samples of water are examined every fortnight, and the results shew that all the wells yield water of the highest degree of organic and bacterial purity.

At Barking, after certain main extensions, the water tasted of tar, but this speedily passed off. At Grays the water became very cloudy in July, and was found to contain oxide of iron and chalk in suspension. Either the flushing had been neglected or the softening plant had been out of order. However, the Company promptly put matters right.

In Romford various extensions of the water mains are reported.

In the Billericay Rural District the Southend Water Company supplies the eastern side of the district and the South Essex Company the western side. Here the mains have been extended to Little Warley and Childerditch, and the Medical Officer of Health strongly urges that Ingrave and East Horndon should receive a supply. Both the parishes are outside the area served by the South Essex Company, but they could deliver water at Ingrave Green and the Rural District Council could convey it to the houses.

In the Romford Rural District, Havering requires a water supply.

The Company's service reservoirs hold about 6,500,000 gallons of water.

SOUTHEND WATER CO.'S AREA. This includes the Borough of Southend (with Leigh), Shoeburyness, most of the Rochford Rural District, and parts of the Orsett and Billericay Rural Districts. Water is derived from no less than 25 different wells sunk through the London Clay to the sands and chalk beneath. The population served is about 100,000, and if it continues to increase at the rate maintained in recent years the task of providing an ample supply will become a very serious one. However, the Company has always realised its responsibility, and can be depended upon to look well into the future.

I examine all the wells annually and collect samples from each. Three samples from various parts of the district are also examined quarterly. The water is derived from such a depth that pollution is impossible.

Storage for no less than 25,000,000 gallons of water has been provided.

No complaint of any kind has been received during the year.

The following article, reproduced by kind permission of the Editor of the "Lancet" is sufficiently interesting to justify its inclusion in this report:—

"A NEW WATER RESERVOIR AT SOUTHEND.

(*From a Correspondent.*)

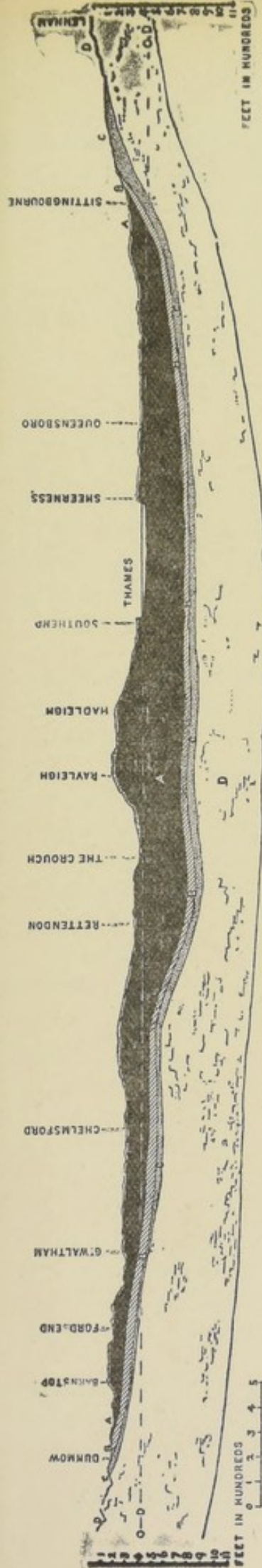
"At Vange, some 12 miles distant from Southend, there has recently been completed the first half of what will be eventually one of the largest covered reservoirs in the United Kingdom. This section is capable of storing not less than 17 million gallons of water. The population of Southend and the adjacent district is multiplying rapidly, and those who realise the difficulty attendant upon obtaining a large quantity of water suddenly for a community will appreciate the foresight of the water company.

"Though the reservoir is an underground one, the bottom is above the drainage level of the neighbouring watercourses, thus reducing the risk of local pollution. The clay from the excavation has been used to form the puddled embankment necessary to impound this huge volume of water, covering some 4 acres to a depth of 25 feet. The floor is of concrete, while the sloping sides of the retaining embankments are lined internally with artificial stone slabs. A series of dividing walls formed of brick arches cross its width, to support the longitudinal girders carrying the roof, which last is formed of reinforced concrete. The pumping-house, inspection chamber, and provisions necessary to ensure immunity from possible pollution have been carefully considered, to secure a supply of pure water for a population never less than 100,000, and during the summer months probably 150,000. The old reservoirs at Thundersley and elsewhere, containing $7\frac{1}{2}$ million gallons of water, have been retained, and all water is supplied direct to the consumer without previous treatment. There are in all 26 wells, some being of great depth, passing down to the chalk to a total depth of 900 feet. In order to obtain the necessary supply these wells are placed at great distances apart, covering in all a radius of about 20 miles, necessitating some 160 miles of mains, trunk and distributory. Each well has a separate pumping station.

"*The Cause of the Softness of the Water.*

"The expense connected with obtaining such a large supply under these difficult conditions has been very great. The overlying clay mantle in many places is known to be 500 feet thick, and is, of course, impervious to water. It is this unfavourable geological formation, together with chemical peculiarities of the water, that give special interest to this particular water-supply. The chalk, from which some of the water is drawn, is overlain by the Thanet sands, forming the bottom bed of the London tertiaries. It is therefore only at its outcrop, on the north round Colchester and Braintree, and on the south in the neighbourhood of Grays and in Kent, that the rainfall can find access and maintain the supply of this great reservoir of the London basin. The rain water, charged with carbonic acid falling upon the chalk, dissolves calcium carbonate to an extent that produces in wells near the outcrop a hardness of 31.0, while the same water when reaching mid-Essex and the south-eastern district

Section Illustrating the Geological Conditions on which Dr. Thresh bases his Conclusions.



A, London clay of varying thicknesses, excluding the rainfall between Dunmow on the north, and the district round Rochester, Lenham, and Charing on the south, at which places the chalk comes to the surface. The clay is covered with alluvial deposits, boulder clay, Bagshot sands, &c., in varying quantities.
B, The Woolwich and Reading beds, some impervious, others porous to some extent, from 20 feet to 80 feet thick.
C, Thanet Sands. It is thought that in the Eocene epoch these were derived from flints, the composition of which is silica, chemically deposited round some silicious sponge or other similar nucleus. They

are associated with glauconite grains whose chemical constituents tend to reduce any hardness due to calcium carbonate.
D, Chalk. This, on the north-west, rises to the higher elevation round Safron Walden, and is some 1000 feet thick, while towards the south its surface has been denuded, and finally ends abruptly in the south-east in an escarpment overlooking the weald of Kent and Sussex, where it is only some 400 feet thick. Its trend is upwards, and in Eocene times it rose to form the lofty anticlinal over the weald, falling to join the Sussex downs. The denudation of this dome, it is supposed, provided most of the material for the formation of the London tertiary. on, Ordnance datum.

is almost alkaline, having but 1·8 degrees of hardness, due to the presence of sodium carbonates and sulphates. Now it is known that sea water percolates through fissures in the chalk, so much so that certain wells at a distance from the coast have had to be abandoned owing to the excess of sodium chloride present in the water. This percolation from the sea is thought to account for the large amount of sodium chloride frequently present in mid-Essex water, varying considerably in different localities. However, unlike the calcium salts of the hard water, which seem to be replaced by salts of sodium (carbonate and sulphate) in the soft water, the sodium chloride bears no relation to the other salts present. The point of interest is the gradual increase in the softness of the water as it approaches the point of greatest depth of clay. Dr. J. C. Thresh, medical officer of health to the Essex County Council, who has devoted great attention to the subject, accounts for this by the following theory. The immense mass of clay compresses the chalk in proportion as it approaches its greatest depth, rendering the chalk impervious to water or nearly so. Thus water falling on the outcrop at first dissolves the chalk-forming fissures until the acid is exhausted. The water then recedes from the outcrop along the top of the chalk through the Thanet sands towards the centre of the great mass of clay, and owing to increased compression and loss of acid is unable to soak deeper into the chalk and rests in the Thanet sands above. These sands have a varying thickness of 10—40 feet. According to the theory of Dr. Thresh, in which he is supported by Bischoff in his 'Chemical and Physical Geology,' 'calcareous water passing through certain silicates of alumina containing potash and soda become softened.' Such silicates are present in the Thanet sands in the form of glauconite,

a hydrous silicate of aluminium, iron (in the condition of peroxide), potassium, magnesium, and calcium.¹ Glauconite is the soft earthy substance found in shells of foraminifera, which when present in great quantities forms greensands and glauconite limestone.

“Dr. Thresh proved the softening property of these sands by experiment, but found that though the softening power was lost after long contact with a hard water this could be reinstated by contact with a saline water such as would be supplied by infiltration from the sea. In another experiment by mixing water composed of similar constituents to sea water with one hardened by calcium carbonate, &c., similar in composition to water drawn direct from the chalk and afterwards passing the same through a green sand filter, a water was produced similar in its chemical constituents to the deep well water of central and south-east Essex. This theory seems to prove that the extreme softness of the water supplied to the Southend district is due to two circumstances: the compression of the water in the Thanet sands above the chalk acting as a softening filter, and the renewal of the softening properties contained in these sands by the presence of sea water due to percolation.”²

“The following is an analysis of No. 1: the soft water supplied to Southend. No. 2: salts in ordinary sea water. No. 3: hard water drawn directly from the chalk:—

“No. 1.—*Southend Water.*

| | | | | Grains per gallon. |
|---------------------|-----|-----|-----|-----------------------|
| Calcium carbonate | ... | ... | ... | 1·2 |
| Magnesium carbonate | ... | ... | ... | 0·4 |
| Sodium carbonate | ... | ... | ... | 21 0 |
| Sodium sulphate | ... | ... | ... | 9·1 |
| Sodium chloride | ... | ... | ... | 22·7 |
| Silica, &c. | ... | ... | ... | 0·9 |
| | | | | <hr/> 55·3 |

“No. 2.—*Salts in Sea Water.*

| | | | | Per cent. |
|---|-----|-----|-----|--------------|
| Sodium chloride | ... | ... | ... | 78·32 |
| Magnesium chloride | ... | ... | ... | 9·44 |
| Magnesium sulphate | ... | ... | ... | 6·40 |
| Calcium sulphate | ... | ... | ... | 3·94 |
| Potassium chloride | ... | ... | ... | 1·69 |
| Other substances, including calcium carbonate and silica | ... | ... | ... | 0·21 |
| | | | | <hr/> 100·00 |

¹ For analysis see “Report on the Deep Sea Deposits,” Challenger Reports, 1891, p. 387.

² THE LANCET, Feb. 3rd, 1912, p. 315.

"No. 3.—*Hard Chalk Water*

(Manningtree, North Essex.)

| | | | | Grains per gallon. |
|---------------------|-----|-----|-----|-----------------------|
| Calcium carbonate | ... | ... | ... | 16.4 |
| Magnesium carbonate | ... | ... | ... | 4.5 |
| Magnesium sulphate | ... | ... | ... | 5.0 |
| Magnesium chloride | ... | ... | ... | 1.3 |
| Sodium chloride | ... | ... | ... | 16.0 |
| Silica, &c. | ... | ... | ... | 1.2 |
| | | | | <hr/> 44.4 |

"The chalk water at Manningtree undoubtedly contains a trace of sea water, and it will be seen that if most of the calcium and magnesium salts were converted by the action of the Thanet sand into the corresponding salts of sodium, a water identical in character with the Southend water would result. Such soft, alkaline waters appear to be excellently adapted for drinking and general domestic purposes."

THE HERTS AND ESSEX WATER CO.'S AREA. This Company supplies Epping Urban District and part of the Epping, Ongar and Dunmow Rural Districts. The water is exceedingly pure but very hard, and the Company has been repeatedly asked to soften it. The Company has only a small capital, and its mains ramify through a thinly populated area, and the expense seems practically prohibitive. The Medical Officer of Health for Epping says:—"The water is obtained from deep wells in the chalk at Sawbridgeworth, eight miles to the north of Epping, the pumping station being well secured from any possible source of contamination. The supply is abundant and constant, the water is of exceptional purity, but with one objection, its hardness, which it has been the hope of the consumers, will one day receive attention and be rectified."

In the Epping Rural District the mains are shortly to be extended to Netteswell Cross and Burnt Mill.

THE TENDRING HUNDRED WATER CO.'S AREA. This Company supplies Harwich and a good deal of the Tendring Rural District. The Company complains that mains are extended to parishes said to require a supply of water, but that the Rural District Council does not compel the owners of houses to lay on a supply. This is very hard on a company supplying water in thinly populated areas. The mains have been extended to the parishes of Great and Little Oakley, but few houses have been connected. The Medical Officer of Health says water is also required in Weeley parish.

CHELMSFORD. The new bore-hole at Galleywood has been completed and a temporary pumping plant installed. One of the spring water supplies became slightly contaminated. The cause was found to be bird-droppings on the roof of the collecting reservoir. After a heavy rainfall the filthy water found a short cut into the reservoir. When this was remedied the water was again found quite good. The

Medical Officer of Health does not regard such springs as a satisfactory source of supply, and urges the Corporation to proceed with the provision of more water from deep sources. (This is now being done). The waters from all the sources are examined at regular intervals both chemically and bacteriologically.

CLACTON. An increased supply is required here. A boring was made at Great Bentley, but the Medical Officer of Health says the result was not satisfactory.

SAFFRON WALDEN. A covered reservoir for storing 220,000 gallons of water has just been completed. It is on a brick tower at an elevation of 353ft. + O.D. The cost was £2,469. The pressure is now adequate for the supply of all the town save Swards End, and for this part there is a small tank (5,000 gallons) on ground 450ft. + O.D. The water is softened before distribution.

BRAINTREE. The Medical Officer of Health says with reference to the New Waterworks at Bocking:—

“The Council’s works for the supply to this parish were opened in April last. The works consist of a well constructed of iron cylinders 45 feet deep, from the bottom of which a 10 inch bore tube is continued down to a depth of 325 feet into the chalk which lies at a level of 285 feet. The level of the water in the well is 18 feet from the surface and it is lowered 18-24 inches at the end of a day’s pumping. The water is pumped by suction gas engines of 13 h.p. and three throw pumps, all in duplicate, to the water tower at the rate of 10,000 gallons per hour.

“The tower stands in the highest part of the parish, on the site of the first bore-hole, over a mile away from the pumping station. The tank is 52 feet above the ground level and 182 feet above the pumping station, and has a capacity of 64,000 gallons. Owing to the scattered nature of the houses in the parish, it has been necessary to lay over nine miles of mains, which has made the total cost very heavy, a little over £10,000, but the money has been well spent, as the supply is of immense benefit to the parish. At the end of the year 659 houses had been connected up and the daily consumption was about four hours pumping or 40,000 gallons.

“The supply is constantly maintained, the pressure good and the water of excellent quality, though a little hard.”

When this well was being sunk some water was met with in the Thanet Sands, and a sample submitted to me showed that it was a very soft water containing sodium carbonate, and resembling in all respects the water obtained from the sands in other parts of Essex. When the chalk was pierced the water level fell two feet, and the water obtained was hard and contained no trace of sodium carbonate. The sand water was not cut out but obviously the quantity from that source is not sufficient to materially affect the hardness of the chalk water.

The soft Coggeshall water received a good deal of attention during the year because some person wrote to the *Press* stating that it had marked curative properties when taken by people suffering from rheumatism. Being an alkaline water it may have an effect in some cases, but inasmuch as very similar water is being used over

large areas in the County, these districts should all be desirable as residential areas for rheumatic people.

CHELMSFORD RURAL. At the end of the year the works to supply Broomfield had made great progress. The boring of the well had been completed and contracts entered into for all the other works.

DUNMOW. In this Rural District, Thaxted is most urgently in need of a water supply. The Rural District Council has undertaken to provide one, but very little progress is made. A trial bore has not even been made.

HALSTEAD. The proposed supply for Earls Colne has made good progress. The Local Government Board sanctioned a loan for £7,500, and no doubt the works will be completed during the year.

LEXDEN AND WINSTREE. The only parish with a public water supply is East Donyland (Rowhedge), but a deep boring has been made to supply water to Stanway. Abberton, Langenhoe, Messing, Salcot, Virley, and West Mersea are sadly in want of a public supply. Schemes have been considered, but so far all appear to have been rejected.

MALDON. The public supply to Heybridge (from Messrs. Bentall's Works) is nearly completed, and the Tollesbury scheme has made some progress. A public supply is greatly needed to aid development here, and the trial bore having proved the presence of sufficient water, the works are being proceeded with. The Local Government Board has sanctioned a loan for £5,500.

The Board has also sanctioned a loan for £400 for extending the Tiptree mains to supply a portion of Tolleshunt D'Arcy parish. The Purleigh system is also to be improved by the erection of a tank on a tower at Althorne. This will increase the pressure in the mains towards the end of the district.

ROCHFORD. The Rural District Council has obtained an Act of Parliament enabling them to dispose of their Waterworks to the Southend Water Company. The well at South Benfleet is therefore now linked up with the Southend system, and the Council is free from the worry and responsibility of maintaining an abundant supply for the parishes traversed by the mains.

During the year I have had the usual crop of letters asking if such and such a water supply was likely to cause rheumatism or cancer, but most of the letters had reference to the Coggeshall water and its alleged therapeutic effects.

Whilst I have been consulted about several Urban water supplies I have been more frequently consulted by Medical Officers of Health and private individuals about small local and parish supplies.

There seems to be a good deal of misapprehension as to the duties and powers of Rural Authorities; hence I propose dealing rather fully with the question of water supplies for rural districts. The whole of the blame for the unsatisfactory character of the water supplies to our villages is not entirely the fault of the Rural District

Councils. The powers possessed under existing Acts of Parliament are insufficient as will be shewn later.

The Public Health Act of 1875, and the Public Health Water Act of 1875, were intended to empower Sanitary Authorities, both Urban and Rural, to provide water supplies for their districts, and the Limited Owners Reservoirs and Water Supply Further Facilities Act of 1877 enabled owners, especially in rural districts, to assist in such provision. The result has been eminently satisfactory so far as urban areas are concerned, but unfortunately as much cannot be said for rural districts, and the reasons for this I purpose considering.

The Public Health Act of 1875 had not been long in force when it was found that it required modification to render it useful in rural districts, since special powers were required in such districts. Consequently in 1878 the Public Health Water Act was passed, and it is the failure of this Act with which we are chiefly concerned.

The Act may be divided into three parts: (1) Sections dealing with the duty of Rural Authorities to provide or require provision of sufficient water supplies and the procedure for enforcing such requirements. (2) A Section for ensuring that every new house shall have a sufficient water supply. (3) Sections empowering Rural Authorities to expend money in ascertaining the condition of the water supply in any parish or part of a parish.

The last division is of such fundamental importance that it is desirable to consider it first since it is obvious that unless an Authority is aware of the exact condition of the water supply to any locality no steps will be taken to improve it, since the necessity for improvement will remain unknown. This ignorance is inexcusable since the Authorities have the necessary powers for ascertaining the condition of all public and private water supplies in their districts. They do not instruct their officers to make the necessary detailed inspections and empower them to incur the expenditure required for ascertaining the quality by chemical or bacteriological analyses, and their officers wait for this instruction instead of regarding the subject, as it should be, a part of their routine duty. I speak in this matter from experience as I had recently to compile a report on the water supplies of every parish in Essex, some 400, and I found that in many instances the information obtainable from official sources was of a very meagre character and far from sufficient for my purpose. My enquires led to information being obtained with reference to the number of wells and the abundance of the water, but the only information relative to the quality was an expression of an opinion that the quality must be satisfactory since disease attributable to impure water was practically unknown.

The popular opinion is that water derived from shallow wells is in the majority of cases polluted and therefore that its use must give rise to Typhoid Fever or some other disease. It is this opinion which causes many people to shun the country even for a holiday, and prevents many from taking up their abode away from the towns. The opinion is based upon statements which have appeared in the Reports of Royal Commissions and other official documents, statements which have some foundation of truth but which are often unnecessarily alarmist in character. It is quite true that

the majority of well waters are not free from signs of pollution, and that few reach a high standard of purity, but it is not true that they cause a large number of cases of Typhoid Fever or of any other disease. Cases of Typhoid Fever rarely occur from the use of well water, they are more usually due to the use of water from polluted streams, ditches, ponds and springs. A carefully constructed well appears to afford almost entire immunity from Typhoid Fever, but unfortunately few wells are properly constructed or adequately protected from pollution. Powers to make bye-laws with reference to the construction of shallow wells are urgently needed.

If the prevention of Typhoid Fever were the only reason why improved water supplies are necessary in so many Rural Districts, then the argument that few or no cases of such Fever occur in a district might suffice to prove that better supplies were not needed, but such is not the case. An abundant supply of water is necessary to secure personal cleanliness, cleanliness of the homes and premises, without which cleanliness the general health must suffer. An abundance of water also adds greatly to one's comfort and sense of well-being and when provided in Rural Districts it increases their attractiveness as places of temporary or permanent abode. Such a supply is especially required where dairy farming is carried on and where it is desired to encourage the establishment of works and factories in which to find employment for the people. The advantages in case of fire must also not be overlooked. Moreover when it is known that wells are polluted with matter of excrementitious origin, whether derived from sewage or manure, nature revolts against the use of water therefrom for drinking purposes even if there is no risk of its causing disease.

Returning now to the first division of the Public Health Water Act referring to the provision of water to houses already occupied, it is easy to demonstrate that the Act has been a failure. We will first consider the powers of Sanitary Authorities to compel owners to provide supplies. The wording of these sections appear to indicate that the framers of the Act considered only such districts as had public water supplies with water mains ramifying in all directions, since, as we shall see, it is barely applicable to any district without such a supply, and where the inhabitants are dependent upon wells. Where there are no water mains, this part of the Act is almost a dead letter, since the owner can only be compelled to provide water, where this can be laid on to each house at a cost not exceeding £8 13s. 4d. or with the consent of the Local Government Board, not exceeding £13. The idea of a Sanitary Authority having to appeal to the Local Government Board whenever the cost of sinking a well exceeds £8 is so ridiculous that I have never known an Authority request the Board to "determine whether under all the circumstances of the case" the cost was "reasonable." Besides this, Authorities are too much afraid of the Board holding that a public supply should be provided, ever to court their interference. In very few instances can an Authority prove that a supply can be obtained at such a cost. To do this they must have made an investigation, which usually includes the digging or boring of a hole on the premises to find whether there is water within a few feet of the surface, and the taking of a sample and payment for an analysis to prove that it is wholesome; all this in order to prove that for the sum named a sufficient supply of wholesome water can be obtained. This is an exceedingly troublesome matter, as

I can testify, and usually results in the attempt to compel the owner to provide water, being abandoned. It would have been thought that where there were several houses belonging to the same or different owners, that the Authority could have caused them to provide one well or one source to supply all, but this is not the case, save in the exceptional circumstance where the water can be laid on to each separate house. This is about the most serious defect in the Act. Local Authorities should have the power to provide or cause to be provided a supply of water for a group of houses and to apportion the expense as they deem just amongst all the owners having houses within a reasonable distance of the source of supply, and the question of reasonable cost and reasonable expense should be left to them, subject to appeal to a Court of Summary Jurisdiction or to the County Council. Until there is some alteration in the law it is practically impossible to cause any improvement in the supplies by any action taken against the owners of property.

Where there are water mains, provided either by the Sanitary Authority or by a Private Company, there is no difficulty in compelling the owners of property without a proper supply to lay on the water, but I receive many complaints from private water companies with reference to the difficulty met with in getting the Authorities to take action to compel defaulting owners to lay on the water. It is very annoying to a Company to find that, after yielding to the entreaties of a District Council and expending a considerable sum of money to convey water to a particular parish, the authority takes no further interest in the matter, makes no specific investigation as to the character of the water used on the various properties and takes no steps to get the water laid on to the houses. Such neglect does not encourage a Company to make further extensions.

The second division of the Act referring to new houses is also unsatisfactory. It was obviously intended that no new house should be occupied unless it had "within reasonable distance an available supply of wholesome water, sufficient for the consumption and use for domestic purposes of the inmates of the house." Sanitary Authorities generally wish to encourage building, and therefore in many districts no regard is paid to the water supply to new houses, and no certificate is ever granted. I acknowledge that in some few places, if this section were harshly interpreted, no new house could be legally occupied, but this is no reason why the requirements of the Act should be entirely ignored. In other cases certificates are granted on deficient and objectionable rain water supplies, on wells which can only be used on sufferance, on sources at a great distance, or when the supply is obtained from ponds, ditches, streams or unprotected springs. If Sanitary Authorities were more careful to see that new houses had a proper supply of water it would be a great advantage to the community. In the section giving the Sanitary Authorities the necessary powers there is nothing said about a reasonable cost, so that the limit of £8 to £13 does not apply, but most unfortunately a limit is indirectly fixed. The maximum penalty for occupying a house without a water certificate is £10 only, and it is not a recurring penalty. After a person has defied the Authority and paid the penalty, only such steps can afterwards be taken as have already been referred to when dealing with occupied houses.

Leaving now the Public Health Water Act, we may consider the powers and duties of Rural Sanitary Authorities to provide public supplies under the Public Health Act, 1875. Under Section 51 any rural authority *may* provide their district or any contributory place therein, or any part of any such contributory place, with a proper supply of water, and under Section 299 complaint may be made against any such authority for not providing their district with a supply of water, in cases where danger arises to the health of the inhabitants from the insufficiency or unwholesomeness of the existing supply of water, and a proper supply can be got at a reasonable cost, and the Local Government Board can compel the Authority to provide a supply. Here two important factors have to be considered. There must be "danger to health" and the supply must be "obtainable at a reasonable cost," and it is only when these conditions obtain that an Authority can be compelled to provide a supply; and we may go further and say that unless both these conditions obtain they are not justified in providing a public supply at the expense of the ratepayers. There are either very few rural districts requiring public supplies or the Local Government Board receives very few complaints, as we rarely hear of the Board taking any action thereon. Were this duty of attending to defaulting Authorities placed upon County Councils they could not do less, and probably in many cases they would do more, than has been done by the Board. There are hundreds of reports from Medical Officers of Health presented annually which contain complaints about the water supplies of their districts, yet how rarely do we hear of any active interference by this Government Department. All the blame does not attach to Rural District Councils; if the Local Government Board takes no notice of the complaints of the Officials, why should they? A little pressure from above, whether from the Local Government Board or the County Council, often has a most salutary influence, and it is a pity that it is not more frequently exercised.

Rural Sanitary Authorities in the great majority of cases do what they think is the best for their districts, and it will be a bad thing for Rural England when they begin to have as little regard for the pockets of the ratepayers as many Urban Authorities exhibit. They want educating no doubt, but what they are taught must bear the impress of truth and admit of simple proof. It is no use talking to them about the grave danger of outbreaks of Typhoid Fever when they are perfectly aware that such a case rarely occurs in their district. We have cried "Wolf" so often that they cease to regard the cry even when the wolf is upon them. They must have officials who can demonstrate to them the real advantages which accrue to a district from the possession of a public water supply, and who can go so far into details as to be able to prove that a supply can be obtained at a cost which the district can reasonably be expected to bear. The County Council should be able to bring some direct pressure to bear upon such authorities as refuse to be guided by their advisers, and they (the County Council) should also have power to combine together for the purposes of water supply adjoining contributory places in different sanitary areas. Often, by means of combining a number of parishes, a scheme becomes reasonable in cost, and therefore feasible, which would be altogether too expensive for a smaller area.

I feel convinced that it is the question of cost which precludes many Rural District Councils from taking action, and unfortunately for a period the Local Government Board insisted on such perfection of works that no simple scheme could be carried out. The Board ought to encourage the provision of rural supplies by approving of schemes, which, though they might not be satisfactory for a town, yet would meet all the reasonable requirements of a rural area. To illustrate my meaning I may instance the provision of all machinery in duplicate. In a town, a breakdown of machinery for a day might be a very serious matter if there were no duplicate plant available, but in a rural area such an accident would not be so serious, and it is better to have a scheme which may on very rare occasions cause some inconvenience rather than have no scheme at all. It is the additional expense due to such things as duplicating wells, machinery, etc., which often makes schemes so expensive that they can no longer be considered reasonable.

I strongly urge Authorities to consider comprehensive schemes for supplying a number of parishes rather than a series of small local supplies. They are more economical and more efficient and entail less anxiety in their supervision. District Councils would be greatly encouraged to undertake such schemes if large landowners would render them assistance. The provision of public supplies greatly increases the value of the land through which the mains ramify and in some few instances the landlords have greatly helped in obtaining public supplies. My experience however has been unfortunate as I have rarely been able to obtain from them the assistance which I thought might reasonably be expected and which the "Water Supply Further Facilities Act" was intended to afford.

Finally, may I direct attention to the Parish Councils and their powers under the so called Parish Councils Act. From a sanitary point of view the formation of Parish Councils has not been an unmixed blessing. It is only necessary for a Rural District Council to suggest that a parish should have a public water supply to ensure a meeting of the Parish Council and the passing of a resolution objecting to any such scheme on the ground that it is not wanted and would be a ruinous expense. This, all too often, then serves as an excuse for no further action being taken. The parish objects to it, there is an end of it. The Parish Council has power to complain to the County Council if the Rural District Council fails to provide a parish with water, and on receipt of such complaint the County Council has power to cause a supply to be provided. This is a most important provision, yet who ever heard of a Parish Council making such a complaint? I have not. This section, No. 16, Local Government Act, 1894, it was anticipated would greatly stimulate the provision of water supplies, drainage schemes, etc., in rural parishes, but such has not been the case. The fact is that Parish Councillors are less able to judge of the sanitary requirements of their parishes than the District Councillors, and are much more averse to spending money for sanitary improvements. Unfortunately County Councils have no power to take action unless moved thereto by a resolution of the Parish Council. If County Councils could hold enquiries on receipt of a report of the Medical Officer of Health for the District, or of the County Medical Officer of Health, and were empowered to carry out works of water supply, etc., where a Rural District Council was in default

some progress might be made. In any event matters could not be worse than they are, and the mere knowledge that County Councils had this power would stimulate District Councils to action.

The Parish Council has also power to utilize any well, spring or stream, within their parish and provide facilities for obtaining water therefrom (subject to certain restrictions) and may even combine with any other Parish Council for a mutual supply. I believe there are difficulties in carrying out these works and that such works would be better undertaken by the District Councils but the powers are there and if they were exercised merely in protecting wells, streams and springs from pollution, and in keeping the parish pumps in proper repair the results would be beneficial.

The duty of seeing that a parish is properly supplied with water devolves upon the Rural District Council and cannot be ignored simply because the Parish Council objects to it. Such objection does not relieve them of any responsibility whatever.

SEWAGE WORKS AND RIVER POLLUTION.

This subject was dealt with at some length last year. During 1913 the various rivers in the County were kept under supervision, and many samples of river water and of sewage effluents entering the rivers were collected and examined.

The Burnham Urban District Council consulted me about an engineer to advise them about re-laying a main sewer and improving the sewage disposal works. Eventually Mr. Taylor, of Newcastle, was engaged to inspect the works and report. The result I have not yet heard.

At Brightlingsea the Medical Officer of Health points out that the clarified effluent has a much lower specific gravity than the sea water into which it is discharged, and therefore that it will float on the surface, and so the oysters are protected from pollution. The nearest oyster layings are 800 yards from the outfall, the two nearer layings being rented by the Urban District Council and unoccupied. The collection of winkles from the locality is also prohibited.

The Joint Sewerage Board for the Thurrock, Grays and Tilbury Districts has been formed, and on December 13th they considered a scheme submitted by Mr. Midgley Taylor, which is estimated to cost £90,000 without land. The works will take two years to complete. At the end of the year the scheme had not been sent to the Local Government Board.

The Halstead Sewage Works have now had a fair trial, and the results are not so satisfactory as had been anticipated. About £1,800 has been spent, chiefly in providing six Dibdin state beds. Bacterial purification is greatly hindered by the presence in the sewage of the effluent from a tannery.

The negotiations for discharging the sewage of Leyton and Walthamstow into the Metropolitan sewers have not as yet led to any practical result.

The new works at Southend-on-Sea are nearing completion. It is anticipated that they will be in use this summer (1914).

At Saffron Walden all the houses have now been connected with the new sewers.

At Wanstead the new works are making progress. £6,000 has been paid on account to the contractors, and the Board of Trade has authorised the supply of electric current from Ilford to provide the power for the travelling distributors, sludge pumps, etc.

In the Rural Districts there are many large parishes which might be sewered with advantage, and many small villages in which improvements are desirable. In many places the road drains have been connected with sewers leading to more or less serious pollution of the rivers into which they discharge. In some cases w.c.'s have been permitted, and when these discharge into road drains, the insanitary conditions are accentuated. A typical instance of the difficulty of dealing with these conditions is found at East Horndon and Ingrave in the Billericay Rural District. The Medical Officer of Health having reported the danger arising from so many foul ditches, I was requested to inspect the parishes and report to the County Public Health Committee. The drainage of every house in the area was examined, and a plan prepared showing the disposal of the slop water. There are few cesspools. Most of the houses drain into so called sewers, discharging into half-a-dozen different ditches at various points. Many of these ditches were in a very offensive condition. A sewer of about $1\frac{3}{4}$ miles in length would be required to collect all the sewage from the two villages. The report was sent to the Billericay Rural District Council with a suggestion that they should consult an engineer with reference to the sewage of the parishes. The Medical Officer of Health says that he laid a complete scheme before the Council, but as the cost was estimated at £2,000, they were unable to accept it, and have adopted a scheme of additional piping for some of the ditches at a cost of £140.

Little Burstead is another parish in this district which require attention.

The sewerage scheme for Billericay Town has been a great boon. The question arose whether the disposal works would not be a nuisance to the new Isolation Hospital. After visiting them I came to the conclusion that the Hospital would not be affected.

In the Braintree Rural District, Bocking requires serious attention, and the conditions at Coggeshall and Kelvedon are unsatisfactory.

In the Chelmsford District the most pressing requirement is a sewerage scheme for the rapidly growing parish of Broomfield. It is possible that this could be connected with the Borough sewers, which would be better than having a sewage works on the boundary of the town.

In the Dunmow Rural District Dunmow Town is being sewered at an estimated cost of £7,150. Thaxted is to be sewered, and this is an urgent requirement. There are other parishes in an unsatisfactory condition.

In the Epping Rural District a scheme for sewerage Netteswell Cross and Burnt Mill has been approved by the Local Government Board, and the work is to be proceeded with. A large number of houses have been connected with the sewers recently laid at Roydon, Potter Street, Thorndon, and North Weald, and w.c.'s are superseding the old insanitary privies.

In the Halstead Rural District many populous parishes are without any proper system of sewers. A nuisance arises at Sible Hedingham from a waste liquor from a plant making suction gas from sawdust and shavings, and a number of houses erected near the works want sewerage.

In the Lexden and Winstree Rural District Dedham is the only sewerage village. In most of the villages sewage is discharged either into road drains or directly into ditches or streams. West Mersea is urgently in need of sewerage.

In the Ongar Rural District the old sewers at Blackmore pollute the River Wid. A plan for sewerage the village was prepared and submitted to the Local Government Board. (The cost was very great for so small a community, and the Local Government Board has referred the plans back for further consideration).

In the Rochford Rural District the parish of Great Wakering is urgently in need of sewers, and probably the new Medical Officer of Health will find there are other parishes requiring attention.

Hadleigh has grown rapidly, and I have suggested that the place should be sewerage, and the sewers connected with the Southend system.

In the Tendring Rural District the Medical Officer of Health says there has been much talk during the year about the drainage of various parishes. A scheme is being carried out at Lawford, but Thorpe, Great Bentley, and probably other places require attention.

If the Rural District Councils would give more attention to the ditches into which sewage is discharged, we should have far fewer nuisances than now occur. These ditches are in most cases sewers, and therefore vested in the Councils, and they should see that they are cleansed periodically. This would not only improve the sanitary condition of the neighbourhood, but prevent the frequent complaints being made which lead ultimately to a sewerage scheme having to be adopted. Fæcal matter should be kept out of all such ditches; no w.c. should be permitted to be connected with any drain discharging into a ditch.

HOUSING OF THE WORKING CLASSES.

Sufficient details are rarely given in the Annual Reports of the general condition of cottage property, and the investigations made to ascertain whether more houses are really required seem to be comparatively few. In the Urban Districts of recent growth there is but little slum property and the demand for houses has, up to the present, been provided by private enterprise. In all the older towns there are slums, and in some cases, known to me, better houses are urgently required, yet the Medical

Officers of Health say little upon the subject. Before referring to the most urgent need of the County, namely, the need of cottages in the Rural Districts, I give brief extracts from the Reports of such Medical Officers of Health for Urban Districts as make any special reference to the subject of Housing.

BARKING. The Council has provided 52 houses and is erecting 26 more. "I attribute the fall in the number of marriages to the fact that the parties concerned are unable to find suitable accommodation."

BRAINTREE. Inspection has been energetic during the year. There are a few houses in alleys and yards that have little or no space at the rear. 30 houses were erected during the year, and the Medical Officer of Health hopes that further building estates will be developed.

COLCHESTER. Private enterprise is providing all the houses required.

EPPING. "The need for better housing becomes more accentuated every year, the older cottages are becoming less and less fit for human habitation, and practically no new cottages are being provided."

GRAYS. Houses are badly wanted here, but the Council has "decided not to enter upon any further building undertakings on the ground that a considerable number of houses are being erected in the adjoining parish of Little Thurrock," and that houses are to be erected at Tilbury and elsewhere in the neighbourhood.

CHELMSFORD. The Council is completing a further lot of cottages, making 104 in all. Private enterprise is providing many more.

HALSTEAD. There is a great scarcity of good cottages here. "A good many of the older houses are crowded together up yards and have insufficient open space around them and many are very damp." The Council is looking round for suitable sites for the erection of cottages.

HARWICH. The houses here are very crowded on space, and want of cottages is preventing the existing houses being made better fit for human occupation. The Medical Officer of Health hopes that the Council will shortly erect some workmen's houses.

SHOEBURYNESSE. Workmen's dwellings are urgently needed here.

TILBURY. The Council have a scheme for providing over 200 houses. At the request of the Council I made the following report on the requirements of the district.

"I have been fully into the question of the Housing accommodation in the district, and have consulted amongst others :

The Manager of the Tilbury Section of the Midland Railway.

The Superintendent of the Docks.

The Chief Constable for the County.

The Medical Officer of Health and other officials.

Many inhabitant householders.

The Clergy and others interested in the well-being of the district.

"I also examined a few of the houses and my assistant examined many more.

"As the result of my investigations I report as under:—

"The Urban District of Tilbury was formed in 1911, and it includes the whole of the parish of Chadwell-St.-Mary, the lower portion of which was formerly known as Tilbury.

"The population in 1901 was 5,203, and in 1911 was 6,432.

"The rateable value on the County basis is £63,036, and for Sanitary (Housing) purposes £33,219.

"The outstanding Loans amount to £10,380. This does not affect the Loan for Housing purposes under the Housing of the Working Classes Act, 1903, Sec. 2.

"The Docks are under the jurisdiction of the Port of London, and practically all the inhabitants of Tilbury are directly or indirectly dependent upon the docks for their means of subsistence. A large proportion of the population consists of day labourers, whose employment is precarious. Notwithstanding this, a strong and reliable man appears to have no difficulty in earning on an average 30 to 35 shillings per week. Many earn £2 to £3.

"On account of the intermittent character of the work, a large number of workmen prefer to live between Tilbury and the London Docks, so that they may be employed at either. About 600 workmen take tickets between the Docks and places between Barking and Fenchurch Street.

"About 1,500 workmen take such tickets for Gravesend and Grays, and many others, I understand, reside in these two districts but do not travel on the railway or do not use workmen's tickets. Besides the workmen there are about 400 season ticket holders, about half of whom come from Grays and Gravesend.

"The number of labourers employed at the Docks averages 2,570, but about 4,000 persons earn their living at the Docks, though some are not constantly employed.

"Of these, I am informed that about 3,000 live within two miles of the Docks. These include men residing on the Kent side of the river.

"Some employment has been found for mechanics and labourers by the extension of the main dock, a work which will require about two years to complete, and at the end of that time new berths for ships will be available and there will be employment for 400 more men daily.

"It is obvious therefore, that, assuming that the present housing is satisfactory, many more houses will be required in the immediate future, as it is important to the Dock Authorities that the mechanics and artisans should reside near the docks.

"There appears to be no anxiety to have the bulk of the day labourers near the docks. On the contrary the recent strike is said to have shown the undesirability of having a larger population aggregated in one area.

"Every firm and person consulted agreed that more houses were required near the docks, and 100 was usually given as the number which would be occupied at once if they were available. My assistant made enquiries of 40 different families and the results may be tabulated as under :—

"35 or 87 per cent. lived in half a house and 33 said that they would greatly prefer to have a cottage to themselves. Not one of these families took in a lodger.

"5 or 13 per cent. occupied a whole house but four of them took lodgers.

"The average rent paid for half a house with three living rooms was 4/6 per week.

"33 families, or 82 per cent., said they would pay 6/6 per week for a good cottage for their exclusive use.

"27 or 68 per cent. said they must live near the docks.

"3 or 8 per cent. said they would like to live on higher ground, as at Sandy Lane.

"2 or 5 per cent. would live at Sandy Lane if there were 'buses or trams but not otherwise.

"8 or 20 per cent. had no preference, but the probability is that they would prefer to stay near the docks.

"26 or 65 per cent. wished for a garden with the cottage.

"5 or 12 per cent. definitely said they wanted no garden.

"9 or 33 per cent. were indifferent, but some of these had allotments.

"Out of the 40 premises examined only 7 could be said to be really 'dry,' 7 were so damp as to be decidedly unhealthy, and the remainder were intermediate. In practically all the houses with two families both had to use the same sanitary conveniences, yard, etc.

"With reference to the men who work at the docks and who reside at a distance there is no doubt that a large proportion would continue to do so even if houses were plentiful at Tilbury, but there are many who have to walk considerable distances or to come across the river, who would prefer to live in Tilbury if decent houses at a reasonable rent were available. It is practically impossible to estimate the number of these, but 100 families would be a low estimate. Then those families have to be considered who are now occupying half a house and would prefer a cottage.

"There can be no question that the Council would be justified in providing 100 cottages and in obtaining land for 100 more.

"In the first instance 50 might be erected and a very little experience would demonstrate how much further the Council could safely go, but I feel certain they could safely commence with 100.

"The next question is where should these cottages be erected ?

"Over half the Urban area is marsh land and unfortunately this is the southern portion bordering on the docks. By means of drainage and rendering the whole area under the houses impervious to moisture there is no doubt that the site would be healthy, but not so healthy as the higher ground at Chadwell.

"I am quite certain, however, that very few of the persons wishing to reside near the docks would take a cottage at Chadwell unless there was a frequent service of buses at a very low fare. Even then the great majority would prefer to live near the docks. Not only the men but the wives and children prefer to be near streets, shops, places of amusement, etc., and such being the case it would be unwise to provide many cottages at a distance. In fact, I am not certain whether it would not be better to commence by providing about 50 cottages on land near the town and leave the question of providing others further away until later. Still, the Council would be safe in providing, say, six pairs of cottages at Sandy Hill ; cottages of a better class and let to families who could afford to pay 7/6 to 10/- per week for rent.

"I think three classes of cottages are required, examples of each of which can now be seen near Chelmsford where the Corporation has provided about 50 and intends erecting many more.

"The three classes are :—

1. With 2 bedrooms and 1 living room and scullery.
2. With 3 bedrooms and 1 living room and scullery.
3. With 3 bedrooms and 2 living rooms and scullery.

The demand is almost entirely for class 3 at Chelmsford, but at Tilbury I think that each class will be in demand since class 1 will be a great improvement on the present tenement dwellings. These should be let at the following rents :—

20 cottages class 1 let at 5/6.

20 cottages class 2 let at 6/6.

10 cottages class 3 let at 7/6, including rates.

Each cottage should have a small garden.

"If any are erected at Sandy Hill they should be of class 3 with little larger rooms and more garden and be built in pairs. The land owned by the Council at Tilbury is sufficiently far from the Docks. It would not be wise to go further away but to obtain more of the adjoining land if necessary.

| | | | | £ |
|--|-----|-----|-----|--------|
| Cost of 20 cottages, class 1, at £200 each | ... | ... | ... | 4,000 |
| Land, say | ... | ... | ... | 250 |
| | | | | <hr/> |
| | | | | £4,250 |
| | | | | <hr/> |

| | | | |
|-----------------------------------|-----------|-----|------|
| | | | £ |
| Repayment of Loan and Interest... | ... | ... | 170 |
| Repairs ... | ... | ... | 30 |
| Rent collecting ... | ... | ... | 5 |
| Insurance... | ... | ... | 3 |
| Rates, say ... | ... | ... | 80 |
| | Total ... | ... | £283 |
| Let at 5/6 per week each ... | ... | ... | £286 |

| | | | |
|--|-----|-----|--------|
| | | | £ |
| Cost of 20 cottages, class 2, at £225 each ... | ... | ... | 4,500 |
| Land ... | ... | ... | 250 |
| | | | £4,750 |

| | | | |
|-----------------------------------|-----------|-----|------|
| | | | £ |
| Repayment of Loan and Interest... | ... | ... | 190 |
| Repairs ... | ... | ... | 35 |
| Rent collection ... | ... | ... | 6 |
| Insurance... | ... | ... | 4 |
| Rates, say ... | ... | ... | 100 |
| | Total ... | ... | £335 |
| Let at 6/6 per week each ... | ... | ... | £338 |

| | | | |
|---|-----|-----|--------|
| | | | £ |
| Cost of 10 cottages, class 3, at £250 ... | ... | ... | 2,500 |
| Land ... | ... | ... | 300 |
| | | | £2,800 |

| | | | |
|-----------------------------------|-----------|-----|------|
| | | | £ |
| Repayment of Loan and Interest... | ... | ... | 112 |
| Repairs ... | ... | ... | 20 |
| Rent collection ... | ... | ... | 4 |
| Insurance ... | ... | ... | 3 |
| Rates, say ... | ... | ... | 60 |
| | Total ... | ... | £199 |
| Let at 7/6 per week ... | ... | ... | £195 |

"The prices quoted in these estimates would, I believe, allow for the erection of the cottages on ferro-concrete rafts, or if the houses were erected at Sandy Lane it would allow of the rooms being a little larger than in the cottages on the Marsh. I have not entered into the history of the Dock estate, as it is scarcely germane to the question under consideration. The houses were erected without proper foundations and consequently soon became excessively damp. This serious defect has to a great extent been remedied, but the experience was unfortunate and damped the ardour of builders. For this, and possibly other reasons, the place has acquired an unfortunate reputation, and I am informed that it is practically impossible to borrow money for the erection of cottage property in the district.

"Comparatively few cottages have been erected in recent years, but such five-roomed houses as have been built let at 9s. per week. These are in such demand that they are always let to selected tenants.

"I append the recent census returns, which show that at the time of the 1911 census there were 37 houses uninhabited. I am informed that this was due to the fact that they were uninhabitable on account of dampness and other defects, and that these defects have been remedied and most of the cottages are again in occupation.

"Endeavour has been made to ascertain whether there would be any objection to a building scheme, and, if so, its nature.

"It was difficult to find any person who did not think that better housing was an urgent necessity, but it is possible that there will be some objection on the ground that the workmen will not occupy them, but will prefer to reside in the towns and villages around. If such could be proved to be the case, the workmen at the Docks must be very different to workmen elsewhere, who uniformly wish to live within reasonable distance of their work. It is probable that a large number do prefer at present to live elsewhere, but, in my opinion, this is almost entirely due to the character of the available houses. Were substantial, well-appointed, dry and healthy cottages erected, and let at reasonable rents, I feel certain that the majority of those who now travel miles to and from their work would be willing and eager to take them.

"I have also appended to this report other statistical information which the Local Government Board would require, and in conclusion I summarise the conclusions at which I have arrived as the result of my investigations :—

1. That the greater proportion of the persons engaged at Tilbury Docks reside outside the area of the Tilbury Urban District.
2. That whatever the Housing conditions in Tilbury, a good many persons would continue to reside at a distance.
3. But that many hundreds would prefer to reside near the Docks if they could get a dry and healthy house at a reasonable rent.
4. That 100 cottages of different types would readily let at rents which would render any scheme self-supporting.

5. That most of these, say three-fourths, should be erected within half-a-mile of the Docks, and the remainder on the higher ground, as at Sandy Lane.
6. That an attempt should be made to provide a good type of cottage, with not too many in a row, and laid out in such a way as to make the neighbourhood attractive. The erection of 'mean' deadly uniform streets should be avoided. Some, if not all the cottages, should have a small garden attached, for many men would be glad to find an occupation for their enforced leisure, and this they could find in their garden.
7. That Tilbury is bound to increase in importance as more labour is employed at the extending Docks, and the question of Housing is so pressing that the Urban District Council should take immediate steps to provide the necessary accommodation.
8. *For this purpose a scheme should be drawn out by competent architects for the erection of 100 houses and showing that 100 more can be provided if and where found necessary. This scheme, with a complete estimate of the cost, should then be submitted to the Local Government Board for their approval.

WANSTEAD. There is a great conflict of opinion here as to the need for cottages. Early in January, 1914, the Council fully debated the subject which had been raised by a special report made by the Surveyor, and passed resolutions requesting the General Purposes Committee to go fully into the possibility of providing not more than 25 cottages in positions which would not injuriously affect residential property, and at a cost which would make the cottages self-supporting.

WITHAM. The Medical Officer of Health suggests that someone should be appointed to inspect the cottages, and report on the general question of Housing. As a rule when houses have been improved the landlord has raised the rent, and thus the burden has fallen on the tenants.

RURAL DISTRICTS.

According to the returns (Table XXV.) many of which are not as complete as they should be, 5,430 cottages have been inspected during the year under Sec. 17 of the Housing of the Working Classes Act, 1909, and 325 were considered unfit for human habitation. 29 cottages were closed and 18 demolished. It is obvious that separate representations were not made in all cases upon each house considered unfit. I have reason for believing that some single representations have referred to groups of six or even more houses. The Table issued by the Local Government Board either requires amending or special instructions should be given with reference to the way it should be made up. Column I. is, I suspect, very misleading. Some Medical Officers of Health have included every house inspected, irrespective of whether the inspection was under the given Section, or under any other Section of the Housing of the Working Classes Act or Public Health Act.

*The Local Government Board has since sanctioned a scheme for about 100 houses.

TABLE XXV.
PARTICULARS OF WORK DONE UNDER THE HOUSING OF THE WORKING CLASSES ACTS.

| District | Number of Dwelling Houses Inspected under Section 17 of Act of 1909. | Number of Dwelling Houses considered to be unfit for habitation. | Number of representations made to the Council. | Number of Closing Orders made. | Number of Dwelling Houses the defects in which were remedied without Closing Orders. | Number of Dwelling Houses habitation after rendered fit for Closing Orders. | Number of Dwelling Houses closed. | Number of Dwelling Houses demolished by order of the Council. | Number of Dwelling Houses demolished by Owners |
|------------------------|--|--|---|--------------------------------------|---|---|---|---|---|
| Belchamp .. | 87 | 60 | 14 | 14 | 51 | 3 | .. | .. | 1 |
| Billericay .. | 166 | 14 | 14 | 6 | 74 | 1 | 6 | .. | 6 |
| Braintree .. | 82 | 76 | 58 | 30 | 59 | 49 | .. | .. | .. |
| Bumpstead .. | 91 | 6 | 0 | 0 | 38 | .. | .. | .. | .. |
| Chelmsford .. | 419 | 6 | 12 | .. | 210 | .. | 8 | .. | 4 |
| Dunmow .. | 132 | 12 | 12 | 11 | 77 | 0 | 8 | .. | .. |
| Epping .. | 61 | 58 | ? | 2 | 57 | 0 | 2 | .. | .. |
| Halstead .. | 339 | 13 | 13 | 7 | 63 | 7 | .. | .. | .. |
| Lexden and Winstree .. | 303 | 10 | 10 | 1 | 74 | .. | .. | .. | .. |
| Maldon .. | 998 | 6 | 6 | 6 | 3 | 3 | 2 | 2 | .. |
| Ongar .. | 109 | .. | .. | 28 | .. | .. | .. | .. | .. |
| Orsett .. | 397 | 4 | 4 | 4 | 1 | 3 | 2 | .. | .. |
| Rochford .. | 352 | 1 | 1 | 1 | 36 | .. | 1 | 5 | .. |
| Romford .. | 2295 | 22 | 3 | 3 | 56 | .. | .. | .. | .. |
| Saffron Walden .. | 52 | 18 | 9 | 5 | .. | .. | .. | .. | .. |
| Stansted .. | 254 | 4 | 4 | 0 | 4 | 0 | .. | .. | .. |
| Tendring .. | 293 | 19 | 19 | 8 | 81 | 0 | .. | .. | .. |
| Totals .. | 5430 | 325 | 179 | 134 | 884 | 66 | 29 | 7 | 11 |

I made enquiries during the year as to the want of cottages in various rural parts of the County, and whether a rental of 3/6 per week would be obtainable. The result showed that cottages were wanted in nearly every parish, and that in a fair number of districts it was thought that 3/6 per week could be paid. I concluded that at least 800 cottages were required in the County for the purely agricultural districts, and the County Council afterwards considered the question of public authorities providing houses for their employees. This matter is now (1914) receiving attention. The County Council alone would require to build some 200 or 300 cottages, if they erect them in parishes where their roadmen, policemen, &c. find a difficulty in obtaining good cottages at a reasonable rent.

BELCHAMP. In this district, Foxearth could do with eight cottages; Borley with four; Belchamp Walter, Gestingthorpe and Pentlow each with four; making a total of 24.

BUMPSTEAD. There is a great and general want of cottages with three bedrooms, especially in Steeple Bumpstead. Labourers could not pay more than 2s. 6d. to 2s. 9d. per week.

BILLERICAY. The Council has provided seven cottages in Great Burstead and six in Ramsden Bellhouse, but these are let at 4/6 per week. Houses with three bedrooms, to let at 3/6 per week, are wanted in Ingrave, Mountnessing, Little Warley, Hutton, Great Burstead, Ramsden Bellhouse, Laindon, North Benfleet, Downham and Wickford.

BRAINTREE Thirty-seven cottages were built by private enterprise during the year, but they are all let at too high a rental to be available for agricultural labourers. Cottages are wanted in Bocking, Black Notley, Bradwell, White Notley, Hatfield Peverel, Rayne, Finchingfield, and Wethersfield. In 1912 the Council erected two cottages in Coggeshall, letting at 5/- per week; they cost £185 per cottage. Three cottages are to be erected in Bocking, and six between White and Black Notley.

CHELMSFORD. This Council has erected 16 cottages in the parishes of Danbury, Sandon and Little Baddow. Dr. Troup, the Acting Medical Officer of Health, gave the following details of cost, &c., which may be interesting to other districts:—

“During February a Local Government Board inquiry was held regarding the Council's application to borrow £3,000 for the purpose of erecting workmen's cottages in the parishes of Danbury, Little Baddow, and Sandon. It was proposed to erect two types of cottages. Class A, which were to be let at 4s. 9d. per week, consisted of a parlour, living-room, scullery, three bedrooms, coal house, and earth closet. Class B, which were to let at 3s. 9d. per week, would be same as Class A without the parlour. At Danbury two of Class A and four of Class B were to be erected, at Little Baddow two of Class A and four of Class B, and at Sandon two of Class A and two of Class B. It was not proposed to provide cesspools, it being intended that the slop water be got rid of on the gardens.

“The Local Government Board suggested several amendments to the original plans, namely (1) principal bedroom in Class B should be enlarged, (2) to save expense

parlour in Class A should be omitted, (3) they should be built in blocks of four or six and not in pairs, (4) sinks must drain to cesspools. It was also suggested that the Sandon cottages be connected to the water mains.

"It was eventually agreed that (1) the size of Class B cottage be enlarged so as to increase the size of the largest bedroom, (2) that no Class A cottages be erected at either Sandon or Little Baddow, one pair of Class A cottages to be erected at Danbury, (3) that the cottages be erected in pairs and not in blocks of four or six, (4) that no drains or cesspools be provided, the sink waste to be received in galvanised iron pails and disposed of in the garden, (5) as there was an abundant supply of well water at Sandon site, that the mains be not extended so as to supply the cottages.

"Mr. Andrassy has kindly supplied me with the following figures showing the size of the cottages erected, and the estimated balance sheets in each of the three parishes.

"In each case the amount of land purchased was one acre.

"CLASS A.

Ground Floor.

| | | | |
|--------------|-----|----------------------------|-----------|
| Parlour ... | ... | 11ft. 10½in. by 9ft. 1½in. | 8ft. high |
| Living Room | ... | 15ft. by 11½ft. | ... |
| Scullery ... | ... | 7½ft. by 6½ft. | ... |

First Floor.

| | | | |
|-------------|-----|----------------------|-----|
| 1st bedroom | ... | 13½ft. by 9ft. 1½in. | ... |
| 2nd " | ... | 11¼ft. by 8¼ft. | ... |
| 3rd " | ... | 8½ft. by 6¾ft. | ... |

(These figures are all averaged.)

"CLASS B.

Ground Floor.

| | | | |
|--------------|-----|-------------------|-----------|
| Living room | ... | 15ft. by 12ft. | 8ft. high |
| Scullery ... | ... | 9ft. by 7ft. 7in. | ... |

First Floor.

| | | | |
|-------------|-----|-----------------|-----------|
| 1st bedroom | ... | 13½ft. by 9ft. | 8ft. high |
| 2nd " | ... | 10¾ft. by 7¾ft. | ... |
| 3rd " | ... | 7¾ft. by 7ft. | ... |

(These figures are all averaged.)

"COST OF THE COTTAGES.

"(1) Danbury.

| | £ | s. | d. |
|--|--------|----|----|
| Land (1 acre)... | 100 | 0 | 0 |
| Cottages | 972 | 9 | 0 |
| Fencing | 32 | 10 | 0 |
| Contingencies, Legal Expenses, &c. ... | 25 | 0 | 0 |
| | £1,129 | 19 | 0 |

" (2) *Little Baddow.*

| | | | £ | s. | d. |
|------------------------------------|-----|-----|--------|----|----|
| Land (1 acre) | ... | ... | 30 | 0 | 0 |
| Cottages | ... | ... | 968 | 12 | 6 |
| Fencing | ... | ... | 40 | 0 | 0 |
| Contingencies, Legal Expenses, &c. | ... | ... | 25 | 0 | 0 |
| | | | <hr/> | | |
| | | | £1,063 | 12 | 6 |
| | | | <hr/> | | |

" (3) *Sandon.*

| | | | £ | s. | d. |
|------------------------------------|-----|-----|-------|----|----|
| Land (1 acre)... | ... | ... | 85 | 0 | 0 |
| Cottages | ... | ... | 635 | 0 | 0 |
| Fencing | ... | ... | 37 | 0 | 0 |
| Contingencies, Legal Expenses, &c. | ... | ... | 25 | 0 | 0 |
| | | | <hr/> | | |
| | | | £782 | 0 | 0 |
| | | | <hr/> | | |

" BALANCE SHEETS.

" (1) *Danbury.*

(a) *Income.*

| | | | £ | s. | d. |
|---|-----|-----|-------|----|----|
| Two houses at 4s. 9d. | ... | ... | 24 | 14 | 0 |
| Four „ 3s. 9d. | ... | ... | 39 | 0 | 0 |
| | | | <hr/> | | |
| | | | 63 | 14 | 0 |
| Less allowance for empties, 2½ per cent.... | | | 1 | 11 | 11 |
| | | | <hr/> | | |
| | | | £62 | 2 | 1 |
| | | | <hr/> | | |

(b) *Expenditure.*

| | | | £ | s. | d. |
|--|-----|-----|-------|----|----|
| Repayment of loan, principal and interest— | | | | | |
| Land £100, 80 years | ... | ... | 3 | 14 | 9 |
| Cottages £972 19s., 60 years | ... | ... | 39 | 0 | 0 |
| Fencing £32 10s., „ | ... | ... | 1 | 6 | 8 |
| Contingencies, &c., £25 „ | ... | ... | 1 | 0 | 0 |
| Rates at 5s. 8d. in the £ | ... | ... | 7 | 14 | 8 |
| Taxes | ... | ... | 2 | 5 | 6 |
| Insurance | ... | ... | 0 | 18 | 0 |
| Water Rate | ... | ... | 2 | 18 | 6 |
| Allowance for repairs at 30s. per house | ... | ... | 9 | 0 | 0 |
| | | | <hr/> | | |
| | | | £67 | 18 | 1 |
| | | | <hr/> | | |

Annual deficit ... £5 16s. 0d.

“(2) *Little Baddow.*

| (a) <i>Income.</i> | | | | £ | s. | d. |
|--|-----|-----|-----|-------|----|----|
| Six houses at 3s. 9d. weekly rental | ... | | | 58 | 10 | 0 |
| Less allowance for empties, 2½ per cent. | | | | 1 | 9 | 3 |
| | | | | <hr/> | | |
| | | | | £57 | 0 | 9 |
| | | | | <hr/> | | |
| (b) <i>Expenditure.</i> | | | | £ | s. | d. |
| Repayment of loan, principal and interest— | | | | | | |
| Land £30, 80 years | ... | ... | | 1 | 2 | 5 |
| Cottages £968 12s. 6d., 60 years | ... | | | 38 | 14 | 9 |
| Fencing £40 | | „ | ... | 1 | 12 | 0 |
| Contingencies, &c., £25 | | „ | ... | 1 | 0 | 0 |
| Rates | ... | ... | ... | 6 | 10 | 3 |
| Taxes | ... | ... | ... | 2 | 2 | 0 |
| Insurance | ... | ... | ... | 0 | 18 | 0 |
| Water rate | ... | ... | ... | 3 | 12 | 0 |
| Repairs at 30s. per house | ... | | ... | 9 | 0 | 0 |
| | | | | <hr/> | | |
| | | | | £64 | 11 | 5 |
| | | | | <hr/> | | |

Annual deficit ... £7 10s. 8d.

“(3) *Sandon.*

| (a) <i>Income.</i> | | | | £ | s. | d. |
|--|-----|-----|-----|-------|----|----|
| Four houses at 3s. 9d. weekly rental | ... | | | 39 | 0 | 0 |
| Less allowance for empties, 2½ per cent. | ... | | | 0 | 19 | 6 |
| | | | | <hr/> | | |
| | | | | £38 | 0 | 6 |
| | | | | <hr/> | | |
| (b) <i>Expenditure.</i> | | | | £ | s. | d. |
| Repayment of loan, principal and interest— | | | | | | |
| Land £85, 80 years | ... | ... | | 3 | 3 | 7 |
| Cottages £635, 60 years... | ... | | | 25 | 8 | 0 |
| Fencing £37 | | „ | ... | 1 | 7 | 6 |
| Contingencies, &c., £25, 60 years | ... | | | 1 | 0 | 0 |
| Rates | ... | ... | ... | 4 | 15 | 3 |
| Taxes | ... | ... | ... | 1 | 2 | 0 |
| Insurance | ... | ... | ... | 0 | 12 | 0 |
| Repairs at 30s. per house | ... | | ... | 6 | 0 | 0 |
| | | | | <hr/> | | |
| | | | | £43 | 14 | 4 |
| | | | | <hr/> | | |

Annual deficit ... £5 12s. 10d.

| | | | | £ | s. | d. |
|--------------------------------------|-----|-----|-----|-----|----|----|
| Total Annual Deficit on whole scheme | ... | | | 19 | 0 | 6 |
| 1d. rate (approximate) | ... | ... | ... | 500 | 0 | 0 |

"The amount of deficit is really very small when distributed over the whole districts and represents about $\frac{1}{25}$ th of a penny rate.

"Cottages are urgently required in several other parishes. At Ingatestone and East Hanningfield there are houses which should be closed, but as there are no available empty cottages the people if deprived of their homes have nowhere to go, in other parishes, *e.g.*, Stock, cases of overcrowding have been detected, and in almost every instance this has been due to the want of cottages."

DUNMOW. The visit of a Local Government Board Inspector has caused increased activity in this district. The Board consider that four houses are required in Great Easton, six in Stebbing and six in Felstead. This is a very modest estimate. Good cottages with three bedrooms are practically required in every parish. The Medical Officer of Health deals fully and fairly with the subject, and says that the Council are now fully alive to the necessity for providing cottages and are taking the necessary steps for erecting some in the parishes most urgently in need.

EPPING. Probably there is not a parish which does not require more and better cottages. In the more thinly populated parts probably 2s. 6d. per week would be the maximum rent obtainable.

HALSTEAD. In this district the requirement is rather for better cottages than for any considerable increase in the numbers, and it is to be hoped that the Council will endeavour to find a solution for this admittedly difficult problem.

LEXDEN AND WINSTREE. During the year the cottages in Chapel, Wakes Colne, Great Tey, Mount Bures, and Wormingford have been inspected. The Medical Officer of Health thinks that at least six to eight new cottages are required in each of these parishes. Young people leave the district because they cannot find houses in which to live if they get married.

MALDON. This Council erected six cottages in Bradwell in 1890 and six in Tolleshunt D'Arcy in 1912. The first six cost £1,450 and let for £54 12s. 0d. a year. The loss per annum is about £40, equal to a rate of 2½d. in the £. The D'Arcy cottages cost £1,145 and let for £42 per annum, but the nett income is only £26. A scheme for providing six cottages for Tolleshunt Major is being proceeded with. It is estimated that they will cost £1,100 and let at £7 a year each. The result will be a deficit of over £24 a year.

ONGAR. A few more cottages wanted, especially in Doddinghurst, Navestock, Blackmore, Abbess and Beauchamp Roothings, Moreton, and Willingale Spain, but 3s. 6d. per week is more than the average labourer could give.

ORSETT. The Medical Officer of Health reported that cottages were wanted in West Thurrock and Aveley, but says it is probable that there will be little, if any, need for cottages in the outlying rural districts if Tilbury provides accommodation for men working at the Docks.

ROMFORD. The Council is erecting 18 cottages close to Hornchurch village, to be let at a rental of 5s. 3d. per week. If the experiment is successful more may be erected elsewhere. A private Company was mentioned in last year's report as likely to build 200 cottages at Dagenham, but only 12 are in course of erection. The rents will be too high for the ordinary labourer. Cottages are wanted in Upminster, Cranham, Rainham, Wormingford and Dagenham, and labourers might pay 2s. 6d. per week.

ROCHFORD. No reference to any want of houses. During 1912 I presented to the County Council the following report on the Housing Conditions in Foulness. It shews the difficulties in arriving at a definite conclusion even after making an inspection and discussing the question with all the persons interested. [The Report was accidentally omitted in my Annual Report for 1912.]

"HOUSING OF FOULNESS ISLAND.

"I have visited the Island with the Inspector for the Rochford Rural District. I visited many cottages, talked with labourers, farmers, District Nurse, Rector, Publicans, and others. The conclusions at which I arrived can be briefly summarised as follows :—

- "1. The condition of the cottages is neither better nor worse than in our Essex villages generally.
- "2. Most of the cottages have only two bedrooms and as a rule these rooms are small, sometimes one is very small.
- "3. There are two cases only in which there is some overcrowding and this could be relieved were one downstairs room made into a bedroom.
- "4. Overcrowding is likely to occur later in the year when some 50 more labourers will be required on the Island. Most of these will be single men and will be lodged at the farm houses now tenanted by foremen, nearly all the farmers residing off the Island.
- "5. The amount of overcrowding diminishes yearly as more than one man's work is done by machinery. A few years ago 200 men were required to do what the 50 do now.
- "6. There is sufficient labour available on the Island for ordinary times, more are only required at harvest.
- "7. There are few cottages belonging to the farmers. The farm houses are good and roomy and the 'Lookers' board or lodge a certain number of labourers.
- "8. At present there is such a balance of work and labour that the men can command a fair remuneration for their labour. The men are afraid that if more houses were provided more men would remain on the Island and the farmers would be able to dictate their own terms. (The labourer says the average wage is 18/- taking the whole year, the farmer says it is 20/-.)

- "9. The farmers would like more cottages especially on their farms.
- "10. The labourers strongly object to occupying cottages on farms. As one man said 'If you put me in a farm cottage the farmer wants $7\frac{1}{2}$ days labour a week and if he does not get it he 'fires' you and then where are you?
- "11. The men would like larger and better cottages but they all say they could not pay more than 2/6 per week. There is said to be only three families on the Island who could afford to pay more.
- "12. Living on the Island is dearer than on the mainland. It is generally conceded that this extra cost of living averages 2/- per week per family.
- "13. There is neither wood, stone nor brick on the Island. Therefore to erect cottages here would cost at least 20 per cent. more than on the mainland.
- "14. Everybody is anxious for the War Office to connect the Island with the mainland by means of bridges. They think this would result in a natural increase in population, increased number of cottages, decreased cost of living, etc. There is a general impression that everything will be better when they cease to be isolated as at present."

A few cottages if provided in North Shoebury and Rochford would let at 3s. 6d. per week.

SAFFRON WALDEN. The Medical Officer of Health says: "There is a great want of more cottages with three bedrooms. Many of the existing cottages are old and scarcely fit for habitation, and some are overcrowded. It is estimated that 70 houses are needed to meet the requirements of the district" The Housing Committee has considered the matter and have recommended that 40 cottages be built to let at a sum not exceeding 2/- per week, and at a cost not exceeding a charge to the ratepayers of a half-penny in the pound. A penny rate produces £271 so that the Committee will have to exercise a good deal of ingenuity to provide such a scheme.

STANSTEAD. The Medical Officer of Health says there is no marked dearth of cottages, but that the average rent for an agricultural labourer's cottage is only 2s. per week.

TENDRING. Six cottages are being erected (? by the Rural District Council) in Great Oakley. Houses are sorely needed in other parishes. The inspection of houses "came to an end soon after the end of the year as the Inspector declined to do the work, and a new Inspector is about to be appointed solely for house inspection." Cottages are wanted in practically every parish.

During the coming year I hope the County Council will set such an example to other employers of labour that they will be encouraged to follow it. If this were done the benefit to the County would be incalculable.

As showing the different views held upon the Housing question, I may mention that a report I made during the year on the housing of pea-pickers contained a paragraph stating that I found six young children living in a pig-stye with plenty of straw. This got quoted in certain papers and led to my receiving a letter which contained the following paragraph "to my husband and me it is a breath of fresh wholesome air after the sickly hot-house fads for child rearing that one is treated with every day."

The following Tables from the 1911 Census Returns show that the average number of persons per tenement is 4·6 in the Urban Districts and 4·3 in the Rural. Assuming that where the average in the respective districts exceed these numbers, that there is likely to be overcrowding we should expect to find this condition in the following districts :—

| Urban. | Rural. |
|---------------|-------------|
| Barking. | Billericay. |
| Brentwood. | Ongar. |
| Chingford. | Orsett. |
| Grays. | Rochford. |
| Harwich. | Romford. |
| Leyton. | |
| Loughton. | |
| Shoeburyness. | |
| Southend. | |
| Tilbury. | |

The higher average, however, can be accounted for by the character of the houses in many of the areas, and allowing for this, the districts most likely to suffer from overcrowding are Tilbury, Shoeburyness, Grays, Harwich and Barking amongst the towns and the Orsett and Rochford Rural Districts. It is noteworthy that all except Barking and Harwich are on the northern banks of the Thames from Grays to Shoebury. Table XXVI., calculated from the Census figures, may be useful to Medical Officers of Health in studying the returns for their respective districts :—

TABLE XXVI.

AVERAGE NUMBER OF PERSONS PER TENEMENT IN TENEMENTS OF DIFFERENT SIZE.

| | | | Urban Districts. | | Rural Districts. |
|---------|-----|-----|------------------|-------|------------------|
| 1 Room | ... | ... | 1·6 | | 1·3 |
| 2 Rooms | ... | ... | 2·6 | | 2·1 |
| 3 „ | ... | ... | 3·75 | | 3·25 |
| 4 „ | ... | ... | 4·3 | | 3·9 |
| 5 „ | ... | ... | 4·8 | | 4·5 |
| 6 „ | ... | ... | 4·65 | | 4·3 |

TABLE XXVII.

RETURNS FROM 1911 CENSUS BEARING UPON THE QUESTION OF OVERCROWDING.

| | No. of Persons per Tenement. | Percentage of Tenements possibly overcrowded. | Percentage of persons in tenements with more than two persons per room. |
|-------------------------|------------------------------|---|---|
| Urban Districts. | | | |
| Barking ... | 4.9 | 2.0 | 10.8 |
| Braintree ... | 4.1 | 6.5 | 2.6 |
| Brentwood ... | 4.9 | 7.6 | 2.5 |
| Brightlingsea ... | 3.7 | 4.3 | 1.0 |
| Buckhurst Hill ... | 4.5 | 14.7 | 5.2 |
| Burnham ... | 3.9 | 7.8 | 2.8 |
| Chelmsford ... | 4.45 | 7.4 | 1.9 |
| Chingford ... | 5.0 | 11.0 | 2.8 |
| Clacton ... | 4.5 | 9.0 | 2.8 |
| Colchester ... | 4.8 | 6.9 | 1.8 |
| East Ham ... | 4.55 | 14.0 | 6.4 |
| Epping ... | 4.3 | 8.0 | 2.8 |
| Frinton ... | 3.5 | 16.0 | 1.6 |
| Grays ... | 5.2 | 13.0 | 4.8 |
| Halstead ... | 4.0 | 5.9 | 1.3 |
| Harwich ... | 5.1 | 17.0 | 10.5 |
| Ilford ... | 4.6 | 7.2 | 2.1 |
| Leigh ... | 4.2 | 4.5 | 2.6 |
| Leyton ... | 5.6 | 9.7 | 5.5 |
| Loughton ... | 5.0 | 11.8 | 3.1 |
| Maldon ... | 4.35 | 7.8 | 1.8 |
| Romford ... | 4.0 | 11.0 | 3.4 |
| Saffron Walden ... | 4.15 | 6.2 | 5.0 |
| Shoeburyness ... | 5.4 | 12.8 | 5.4 |
| Southend ... | 5.2 | 10.4 | 3.6 |
| *Tilbury ... | 7.0 | — | — |
| Waltham Cross ... | 4.5 | 10.8 | 4.1 |
| Walthamstow ... | 4.7 | 15.5 | 7.4 |
| Walton ... | 4.1 | 6.5 | .7 |
| Wanstead ... | 4.7 | 4.5 | .7 |
| Witham ... | 4.2 | 7.0 | 1.9 |
| Wivenhoe ... | 3.6 | 6.2 | 2.9 |
| Woodford ... | 4.0 | 8.3 | 2.3 |
| All Urban Districts ... | 4.6 | 11.8 | |
| Rural Districts. | | | |
| Belchamp ... | 3.8 | 7.3 | 3.5 |
| Billericay ... | 5.0 | 10.4 | 3.5 |
| Braintree ... | 3.9 | 7.7 | 3.7 |
| Bumpstead ... | 4.0 | 11.4 | 6.4 |
| Chelmsford ... | 4.1 | 8.2 | 2.5 |
| Dunmow ... | 4.1 | 8.9 | 3.4 |
| Epping ... | 3.5 | 10.3 | 4.3 |
| Halstead ... | 4.0 | 7.5 | 2.9 |
| Lexden & Winstree ... | 4.1 | 9.2 | 4.6 |
| Maldon ... | 4.0 | 9.0 | 2.8 |
| Ongar ... | 4.6 | 12.3 | 4.5 |
| Orsett ... | 4.8 | 14.3 | 6.6 |
| Rochford ... | 4.7 | 9.3 | 4.0 |
| Romford ... | 5.0 | 11.7 | 4.6 |
| Saffron Walden ... | 4.0 | 9.9 | 4.4 |
| Stansted ... | 4.3 | 9.1 | 3.6 |
| Tendring ... | 4.05 | 9.6 | 4.1 |
| All Rural Districts ... | 4.3 | 9.8 | 4.1 |

* Was not a separate district when the Census was taken.

TABLE XXVIII.

ADMINISTRATIVE COUNTY OF ESSEX.

BUILDINGS OF VARIOUS KINDS. FAMILIES OR SEPARATE OCCUPIERS AND POPULATION.

| 1911. | | | | | | | | | | | | | |
|-------------------------------------|----------------------------------|-----------------------|---------------------------------|------------------------|--------|--|--|--------------------|---------|---|---|-----------------------------------|-------|
| 1901 | Buildings not used as Dwellings. | | | | | | | | | | | | No. |
| | Total. | Total. Cols. 4-11. | Ordinary Dwelling Houses. | Blocks of Flats. | Shops. | Hotels, Inns and Public Houses. | Offices, Ware- houses, Work shops, Factories. | Institu- tions. | Others. | Vessels, Sheds, Vagrants, etc. | Separate Flats included in Col. 5. | | |
| Cols. 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Whole Administrative County. | | | | | | | | | | | | | |
| Number inhabited | 159,714 | 210,704 | 193,313 | 2,336 | 11,520 | 1,872 | 418 | 689 | 457 | — | 7,366 | Places of worship | 1,291 |
| Separate Occupiers | 174,102 | 240,118 | 211,032 | 7,412 | 12,106 | 1,895 | 433 | 943 | 486 | 811 | 7,412 | Government & Municipal Buildings | 265 |
| Population | 718,640 | 1,061,841 | 921,057 | 27,658 | 52,997 | 10,954 | 1,805 | 39,468 | 1,556 | 6,355 | 25,638 | Shops | 2,579 |
| Uninhabited | 12,255 | 12,894 | 11,638 | 28 | 1,090 | 13 | 25 | 63 | 38 | — | 688 | Offices | 470 |
| Being built | 3,189 | 1,550 | 1,476 | — | 64 | — | 3 | 3 | 4 | — | 77 | Warehouses, Workshops & Factories | 1,942 |
| | | | | | | | | | | | | Theatres and places of amusement | 63 |
| All Urban Districts. | | | | | | | | | | | | | |
| Number inhabited | 106,898 | 150,435 | 136,822 | 2,304 | 9,496 | 813 | 274 | 469 | 257 | — | 7,028 | Places of worship | 553 |
| Separate Occupiers | 120,407 | 173,213 | 153,658 | 7,073 | 10,057 | 823 | 287 | 599 | 277 | 439 | 7,073 | Government & Municipal Buildings | 174 |
| Population | 581,500 | 796,457 | 684,715 | 26,248 | 44,245 | 5,903 | 1,218 | 29,382 | 990 | 3,765 | 24,248 | Shops | 2,210 |
| Uninhabited | 7,635 | 8,742 | 7,635 | 24 | 1,011 | 12 | 13 | 27 | 20 | — | 595 | Offices | 388 |
| Being built | 2,883 | 1,267 | 1,202 | — | 59 | — | 3 | 1 | 2 | — | 77 | Warehouses, Workshops & Factories | 1,178 |
| | | | | | | | | | | | | Theatres and places of amusement | 56 |
| All Rural Districts. | | | | | | | | | | | | | |
| Number inhabited | 52,816 | 60,269 | 56,490 | 32 | 2,024 | 1,059 | 144 | 220 | 200 | — | 338 | Places of worship | 738 |
| Separate Occupiers | 53,695 | 61,905 | 57,374 | 339 | 2,049 | 1,072 | 146 | 344 | 209 | 372 | 339 | Government & Municipal Buildings | 91 |
| Population | 237,140 | 265,384 | 236,343 | 1,410 | 8,752 | 5,051 | 587 | 10,086 | 566 | 2,589 | 1,410 | Shops | 369 |
| Uninhabited | 4,600 | 4,152 | 4,003 | 4 | 77 | 1 | 12 | 36 | 18 | — | 93 | Offices | 82 |
| Being built | 306 | 283 | 274 | — | 5 | — | — | 2 | 2 | — | — | Warehouses, Workshops & Factories | 764 |
| | | | | | | | | | | | | Theatres and places of amusement | 7 |

If 50 per cent. above the average is permissible, then overcrowding would occur if tenements of

| | |
|---|--|
| 1 room had more than 2 occupants | |
| 2 rooms " 3 " | |
| 3 " " 5 " | |
| 4 " " 6 " | |
| 5 " " 7 " | |
| 6 " " 8 " | |

The average number of persons per family in the Urban District is 4·4 and in the Rural 4·1.

Tables XXVII. and XXVIII. may also be useful for reference. They refer to the whole Administrative County.

THE MILK SUPPLY.

TUBERCULOSIS ORDER, 1913. I am informed by the County Clerk that the number of cases of Tuberculosis, the diagnosis of which was confirmed from the date of the Order, May, 1913, to the 31st December, 1913, was 87. We have, therefore, reduced by that number the cows giving milk likely to be infected with Tuberculosis. In Colchester the examination of dairy cows twice a year by a Veterinary Inspector has been given up on account of the above-named Order requiring all farmers to notify cases of Tuberculosis in their herds. Dr. Corfield had nine samples of milk examined for the presence of tubercle bacilli with negative results. He also caused certain enquiries to be made and his replies are given below, since it is fairly certain that similar results would have been obtained in any other part of the county:—

| | Yes. | No. | Doubtful. |
|--|--------|-----|-----------|
| 1. Are your cows ever tested with Tuberculin? | 2 | 22 | 0 |
| 2. Do you insist upon the Tuberculin test before buying a cow? | 0 | 23 | 1 |
| 3. Do the milkers wear overalls when milking? | 18 | 6 | 0 |
| 4. Do the milkers always wash their hands before milking? | 24 | 0 | 0 |
| 5. Are the cows ever groomed? | 7 | 13 | 4 |
| 6. What is the method of milking, wet or dry? | 23 dry | 0 | 1 |
| 7. If dry, is stripping also done with dry hands? | 16 | 4 | 4 |

The answers cannot in all cases be relied upon. Obviously, however, farmers make little use of the tuberculin test, preferring to run the risk of purchasing a diseased animal. I am surprised to find that at as many as seven farms the cows are groomed, certainly this proportion is not reached in most other parts of Essex. It may be true that all the milkers are supposed to wash their hands before milking the cows, but this may be done in such a way as to leave the hands almost as filthy as before. The only way to ascertain exactly what is done at any farm is by repeated visiting.

In practically all districts Dairies, Cowsheds and Milkshops are said to be kept under strict supervision, but it is obviously impossible to give any serious attention to them in Rural Districts with the existing staff of Inspectors. It is very rarely reported that any cows suspected to be suffering from tuberculosis were discovered or that a Veterinary Surgeon had been called in to make an examination.

Adding water to milk or depriving it of its cream is deemed a serious offence and enormous numbers of samples are taken for analysis, but very few samples are taken to ascertain if the milk is clean and wholesome—much more important conditions.

THE PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912.

Particulars for the twelve months ending on the 30th November, 1913 :—

| | | |
|------------------------------|-----|--|
| 2 samples purchased as Cream | .. | No preservatives found. |
| 1 sample purchased as Cream | ... | 0.25 per cent. boracic preservative not declared. (Fat 48 per cent.) Vendor cautioned. |

Seven samples purchased as Preserved Cream contained :—

| Fat. | | | Boracic Preservative. |
|--------------|-----|-----|-----------------------|
| 50 per cent. | ... | ... | 0.25 |
| 51 | „ | ... | 0.3 |
| 41 | „ | ... | 0.4 |
| 47 | „ | ... | 0.4 |
| 50 | „ | ... | 0.4 |
| 51 | „ | ... | 0.5 |
| 55 | „ | ... | 0.5 |

In each of these cases it was stated on the label that boracic preservative was present to an extent not exceeding 0.5 per cent.

1551 samples of Milk were analysed during the year in 3 of which preservative was found, namely :—

- In 1 case ... 20 parts formaldehyde per million (Vendor fined £1 including costs).
- In 1 case ... 20 parts formaldehyde per million (Vendor ordered to pay costs, 11s.).
- In 1 case ... 10 parts formaldehyde per million (Vendor fined £10 and £2 13s. 0d. costs).

BERNARD DYER.

LABORATORY WORK.

The County Public Health Laboratory is becoming better known and the work undertaken therein increases in quantity and in variety. The following is a summary of the work done during 1913:—

Chemical Department—

| | | |
|-----------------------------------|-----|-----|
| Potable Waters | ... | 171 |
| River Waters and sewage effluents | ... | 67 |
| Milk, &c. | ... | 20 |
| Total | | 258 |

Bacteriological Department—

| | | |
|----------------------|-----|-------|
| Diphtheria diagnosis | ... | 1,194 |
| Enteric Fever | „ | 21 |
| Phthisis | „ | 564 |
| Ringworm | „ | 58 |
| Water examination | ... | 146 |
| Sundries | ... | 75 |
| Total | | 2,058 |

Grand total ... 2,316.

At the end of the year my two laboratories, the one at Chelmsford and the other at the London Hospital Medical College, were combined and removed to more commodious premises at 91, Queen Victoria Street, London, E.C. Arrangements were then made for undertaking every kind of work bearing upon Public Health, such as the following:—

Sputum, examination of, for tubercle bacilli, pyogenic cocci, B influenza, &c.
Swabs for diphtheria bacilli.

Blood for Widal's reaction, for paratyphoid bacteria, streptococci, &c.

Hair and skin for ringworm, farus, tinea versicolor.

Blood for differential count, enumeration of red and white blood corpuscles, and estimation of hæmoglobin, and for malarial parasite.

Opsonic index. Wasserman's reaction for syphilis.

Urine, chemical, bacteriological and microscopical examination.

Morbid growths.

Fæces for tubercle bacilli, typhoid bacilli, cholera vibrio, dysentery bacilli, worms, &c.

Vomit for acids, pepsin, &c.

Cultivation of organisms and preparation of Autogenous Vaccines.

Analysis of water, sewage effluents, &c., chemical and bacteriological.

Milk: Estimation of dirt, microscopical examination for pus, bacteria, &c.

Ice cream: Estimation of dirt, microscopical examination for pus, bacteria, &c.

Estimation of carbolic co-efficient of disinfectants.

Estimation of chlorides in conformity with the Rag Flock Act.

Special outfits, in conformity with the Post Office regulations, for swabs, blood, sputa &c., with instructions for taking specimens are supplied free of charge on

request. Sterilized bottles in ice cases are forwarded for the transmission of bacteriological samples of water, milk, &c.

For chemical analysis suitable bottles also are supplied free of charge.

A pamphlet with list of charges, &c., is sent on application.

REPORTS OF INSPECTOR OF NUISANCES.

These are summarised in the usual tables. It is becoming more usual for the Chief Inspector in a district to prepare a separate report. This is not altogether an advantage since when considering any particular subject two reports have to be gone through instead of one, and some Medical Officers of Health leave certain subjects upon which they are required to report entirely to the Inspector. To consider all the subjects reported on by the Inspectors would require another volume as large as the present report and I certainly have not the time to prepare one, moreover if there is anything of special importance in such report I should expect to find it referred to by the Medical Officer of Health.

These reports however shew the great amount of work done in the department and its highly diversified character. For example the Chief Inspector for Southend Borough reports under the following headings :—

- Complaints as to Nuisances.
- Drainage Work and Supervision.
- Infectious Diseases and Disinfection.
- House-to-house Inspection.
- Common Lodging Houses.
- Tents, Vans and Sheds.
- Offensive Trades.
- Slaughter-houses, Bake-houses, &c.
- Food Inspection.
- Factory and Workshops Act,
- Schools.
- Milk Supply.
- Other Foods.
- Sale of Food and Drugs Act.
- Housing of the Working Classes.

There are other Inspectors whose sections even exceed these in number.

Any matter referred to in these reports which is of general interest is referred to in the summary of the Reports of the Medical Officer of Health.

TABLE XXIX.

URBAN DISTRICTS.

SUMMARY OF REPORTS BY SANITARY INSPECTORS.

| | Barking. | Braintree. | Brentwood. | Brightlingsea. | Buckhurst Hill. | Burnham. | Chelmsford. | Chingford. | Clacton. | Colchester. | East Ham. | Epping. | Frinton. | Grays. | Halstead. | Harwich. | Ilford. | Leyton. | Loughdon. | Maldon. | Romford. | Saffron Walden. | No. Report. | Shoeburyness. | Southend-on-Sea. | Tilbury. | Waltham Holy-Cross. | Walthamstow. | Walton-on-the-Naze. | Wansstead. | Witham. | Wivenhoe. | Woodford. |
|---|----------|------------|------------|----------------|-----------------|----------|-------------|------------|----------|-------------|-----------|---------|----------|--------|-----------|----------|---------|---------|-----------|---------|----------|-----------------|-------------|---------------|------------------|----------|---------------------|--------------|---------------------|------------|---------|-----------|-----------|
| 1. Complaints received ... | 118 | 6 | 30 | 5 | 9 | 10 | 57 | 67 | ... | 545 | 1028 | 40 | 17 | 57 | 7 | ... | 373 | 359 | 7 | 4 | 29 | 22 | ... | ... | 786 | 85 | 18 | 175 | 5 | 180 | 2 | 5 | 30 |
| 2. Nuisances detected without complaint ... | 2219 | 291 | 639 | 84 | 18 | 22 | 3867 | 305 | ... | 541 | 4184 | 107 | 5 | 322 | 123 | ... | 872 | 3078 | 21 | 129 | 399 | 310 | ... | ... | 1235 | 322 | 478 | 4509 | 26 | 110 | 4 | 32 | 648 |
| 3. Nuisances abated ... | 2033 | 232 | 519 | 77 | 29 | 27 | 3840 | 335 | ... | 862 | 4967 | 145 | 5 | 361 | 123 | ... | 861 | 3437 | 28 | 133 | 419 | 311 | ... | ... | 1842 | 306 | 540 | 4667 | 52 | 227 | 6 | 36 | 657 |
| 4. Nuisances remaining unaltered ... | 216 | 62 | 140 | 7 | ... | 5 | 27 | 19 | ... | 46 | 245 | 2 | ... | 4 | 7 | ... | 11 | ... | ... | ... | 45 | 21 | ... | ... | 34 | 21 | 111 | 37 | ... | 27 | ... | 1 | 26 |
| 5. Formal notices served ... | 157 | 15 | 102 | 31 | 38 | 3 | 16 | 13 | 11 | 61 | 2607 | ... | ... | 176 | 28 | ... | 438 | 3706 | 54 | 131 | 471 | 79 | ... | ... | 162 | 14 | 24 | 27 | 26 | 10 | ... | 10 | 281 |
| 6. Summonses issued ... | 2 | ... | 2 | ... | ... | ... | 2 | 1 | ... | ... | 11 | ... | ... | ... | ... | ... | 1 | ... | ... | 4 | 3 | ... | ... | 12 | ... | ... | ... | ... | 1 | ... | ... | ... | ... |
| 7. Convictions obtained ... | 2 | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | 9 | ... | ... | ... | ... | ... | 1 | ... | ... | 4 | 2 | ... | ... | 12 | ... | ... | ... | ... | 1 | ... | ... | ... | ... |
| 8. No. of cottages inspected ... | 3655 | 417 | 422 | ... | 29 | 237 | 1432 | 219 | 173 | 3260 | 3166 | 88 | 16 | 1190 | 345 | ... | 2636 | ... | 42 | 202 | 370 | 407 | ... | ... | 5568 | 52 | 330 | 6203 | 164 | 36 | ... | 320 | 613 |
| 9. No. of cottages found unfit for human habitation ... | 2 | 14 | ... | 1 | 3 | 13 | 68 | ... | 2 | 10 | ... | 7 | ... | ... | 3 | ... | 3 | ... | ... | 7 | 3 | ... | ... | ... | 31 | ... | 2 | ... | ... | 22 | ... | ... | 5 |
| 10. No. of representations made with the view of Closing Orders being made ... | 2 | 14 | ... | 1 | ... | 3 | 1 | ... | 2 | 9 | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 15 | ... | ... | ... | ... | 6 | ... | ... | ... | 1 |
| 11. No. of Closing Orders made ... | ... | ... | ... | 1 | 3 | ... | ... | ... | 2 | 9 | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6 | ... | ... | ... | 1 |
| 12. No. of cottages in which defects were remedied without a Closing Order ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 9 | ... | ... | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6 | ... | ... | ... | ... |
| 13. No. of cottages in which defects were remedied after making Closing Order ... | ... | ... | 2 | ... | 3 | ... | ... | ... | 1 | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 6 | ... | ... | ... | ... |
| 14. No. of cottages closed ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 9 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | ... | ... | 17 | 1 | 2 | ... | ... | 10 | ... | ... | 4 |
| 15. No. of cottages demolished by Order ... | 12 | ... | ... | ... | ... | ... | ... | 5 | ... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 16. No. of Common Lodging Houses in District. Frequency of Inspection ... | 5 | 1 | 2 | ... | ... | ... | 2 | ... | ... | ... | 1 | ... | ... | 4 | ... | ... | ... | ... | ... | 1 | 2 | ... | ... | 1 | 2 | ... | ... | ... | ... | ... | ... | ... | ... |
| 17. No. of Slaughter Houses in District ... | 61 | (c) | (d) | ... | ... | ... | 33 | ... | ... | 120 | (b) | ... | ... | (c) | ... | ... | ... | ... | ... | (f) | (c) | ... | ... | 20 | 6 | ... | ... | ... | ... | ... | ... | ... | ... |
| Frequency of Inspection in District ... | 3 | 9 | 7 | 5 | 2 | 4 | 9 | 3 | 13 | ... | 15 | 5 | ... | 4 | 10 | ... | 5 | 19 | 3 | 6 | 10 | ... | ... | 10 | 2 | 4 | ... | 14 | 2 | 2 | 4 | 1 | 6 |
| Frequency of Inspection in District ... | 276 | (d) | (c) | 15 | (c) | (c) | 116 | (c) | ... | 459 | (e) | (a) | ... | (a) | (d) | ... | (d) | 1007 | (c) | (f) | ... | ... | 5 | ... | 361 | 8 | (b) | 168 | 8 | (a) | (d) | 12 | (a) |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|--|-----|---------|-----------------|--------------|------------|-------------|--------------|----------|---------------|---------------|-------------|-------------|------------|------------|---------------|--------------|------------|-----------|-------------|--------------|--------------|--------------|------------|--------------|--------------|------------|-----------------|--------------|---------------|---------------|-------------|-----|
| 18. | No. of Bakehouses in District | ... | 17 | 9 | 9 | 13 | 5 | 5 | 21 | 3 | 18 | 121 | 50 | 5 | 2 | 10 | 14 | 31 | 46 | 5 | 9 | 15 | 13 | 55 | 2 | 6 | 53 | 5 | 3 | 6 | 3 | 9 | |
| 19. | Frequency of Inspection | ... | 66 | (f) | (c) | 26 | (c) | (f) | 253 | (d) | ... | ... | (d) | (c) | (d) | (d) | (d) | (d) | 181 | (c) | (f) | (e) | (f) | 372 | 4 | (d) | 163 | 20 | (d) | (d) | 4 | (d) | |
| 20. | No. of Dairies and Milkshops | ... | 48 | 1 | 5 | 17 | 2 | 5 | 17 | 16 | 30 | 185 | 158 | 3 | 4 | 36 | 6 | 50 | 167 | 3 | 7 | 24 | 13 | 50 | 8 | 2 | 136 | 4 | 8 | ... | 5 | ... | |
| 21. | Frequency of Inspection | ... | 337 | (d) | (c) | ... | (b) | (a) | (c) | (d) | ? | ... | (f) | (c) | (d) | (d) | (d) | (c) | 650 | (c) | (f) | 77 | (d) | 454 | (d) | (d) | 228 | ... | 40 | ... | 6 | ... | |
| 22. | No. of Cowkeepers | ... | 2 | 7 | ... | 7 | 2 | 5 | 8 | 11 | 12 | 77 | 6 | 3 | 1 | 1 | 3 | 14 | 6 | 7 | 7 | 13 | 13 | 17 | 1 | 30 | 12 | 1 | 4 | 10 | 6 | ... | |
| 23. | Frequency of Inspection | ... | 28 | (d) | ... | ... | (b) | (d) | 90 | (d) | ... | ... | (f) | (c) | (d) | (d) | (d) | (d) | 55 | (c) | (f) | 49 | (d) | 69 | 6 | (d) | 87 | 4 | 20 | (d) | 12 | (d) | |
| 24. | No. of samples of milk taken for examination for cleanliness, etc. | ... | ... | ... | ... | ... | ... | ... | ... | 8 | ... | ... | 191 | ... | (i) | ... | ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| 25. | Filthy houses cleansed. | ... | ... | 3 | 2 | ... | ... | 2 | 53 | 35 | ... | 52 | 768 | 7 | ... | 7 | ... | 5 | 1204 | ... | ... | 24 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| 26. | Houses disinfected | ... | 252 | 27 | 15 | 4 | 15 | 7 | 67 | 49 | ... | 205 | 1307 | 37 | 5 | 125 | 57 | 426 | 747 | 13 | 43 | 55 | 22 | 376 | 40 | 34 | 992 | 3 | 50 | ... | 6 | 70 | |
| 27. | Cases of Overcrowding | ... | 31 | ... | 1 | ... | ... | ... | 13 | 17 | ... | 13 | 33 | 1 | ... | 2 | .. | 3 | 17 | 1 | 3 | 2 | 1 | 35 | 16 | 2 | 45 | ... | 4 | ... | ... | 4 | ... |
| 28. | New houses. No. of water certificates applied for... | ... | ... | ... | 1 | 3 | 2 | 9 | ... | ... | ... | ... | 100 | 3 | ... | 18 | 2 | ... | ... | 7 | 7 | ... | 3 | ... | ... | ... | ... | ... | 10 | 113 | 12 | 5 | ... |
| 29. | No. of certificates granted | ... | ... | ... | 1 | 3 | 2 | 9 | ... | ... | ... | ... | 100 | 3 | ... | 18 | ... | ... | ... | 7 | 7 | ... | 3 | ... | ... | ... | ... | ... | 7 | 113 | 12 | 1 | ... |
| 30. | Public wells sunk | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 31. | Privies. No. in district | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 32. | No. abolished during the year | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 33. | No. of pail closets | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 34. | No. of W.Cs. with proper flushing arrangements | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 35. | No. of hand-flushed W.Cs. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 36. | Animals improperly kept removed | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 37. | Samples of water taken for analysis | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 38. | Compensation paid for bedding, clothing, etc., destroyed | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 39. | Seizures of unsound meat, etc. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 40. | Name of Inspector | ... | H. Wood | H. H. Nankivell | A. J. Meeson | H. V. Lord | J. T. Heath | Chas. Weedon | W. Brown | W. R. Wilkins | A. W. Shadick | Thos. Wells | J. G. Banks | H. H. Webb | E. M. Bate | G. H. Rawling | W. Nicholson | F. W. King | H. Miller | J. T. Heath | T. R. Swales | G. R. Bailey | C. D. Bright | E. W. Penn | E. C. Wadham | J. W. Medley | W. W. West | J. C. Brockwell | H. C. Howard | W. P. Perkins | R. H. Barrell | W. S. Mills | |

(a) Weekly.

(b) Fortnightly.

(c) Monthly.

(d) Quarterly.

(e) Half-yearly.

(f) All houses.

(g) Half-yearly.

(h) No record.

(i) Taken by M.O.H.

TABLE XXX.
RURAL DISTRICTS.

SUMMARY OF REPORTS BY SANITARY INSPECTORS.

| | Belchamp. | Billericay East. | Billericay West. | Braintree. | Bumpstead. | Chelmsford. | Dunmow. | Epping. | Halstead No. 1. | Halstead No. 2. | Lexden and Winstree. | Malden. | Ongar. | Orsett. | Rochford. | Romford. | Saffron Walden. | Stansted. | Tendring. |
|---|-----------|------------------|------------------|------------|------------|-------------|---------|---------|-----------------|-----------------|----------------------|---------|--------|---------|-----------|----------|-----------------|-----------|-----------|
| 1. Complaints received | 17 | 23 | | 40 | 6 | 33 | 35 | 42 | 4 | 16 | 14 | 23 | 8 | 51 | 20 | 77 | 7 | 4 | |
| 2. Nuisances detected without complaint | 82 | 290 | | 18 | 59 | 785 | 375 | ... | 87 | 60 | 161 | 162 | 60 | 342 | 184 | 382 | 107 | 135 | |
| 3. Nuisances abated | 91 | 281 | | 36 | 63 | 691 | 271 | 260 | 76 | 58 | 92 | 162 | 47 | 395 | 160 | 412 | 114 | 128 | |
| 4. Nuisances remaining unabated | 1 | 32 | | 22 | ... | 129 | 139 | ... | 11 | 2 | 83 | 64 | 13 | ... | 24 | ... | ... | ... | |
| 5. Formal Notices served | 22 | 153 | | 262 | 63 | 325 | 31 | 33 | 4 | 4 | 153 | 151 | 42 | 266 | 100 | 325 | 114 | 4 | |
| 6. Summonses issued | ... | ... | | ... | ... | 2 | 1 | ... | 1 | ... | ... | ... | ... | ... | 28 | ... | 1 | ... | |
| 7. Convictions obtained | ... | ... | | ... | ... | 2 | 1 | ... | 1 | ... | ... | ... | ... | ... | 14 | ... | 1 | ... | |
| 8. No. of cottages inspected | 296 | 362 | | 344 | 315 | 1020 | 214 | 1497 | 323 | 212 | 406 | 998 | 188 | 397 | 352 | 2295 | 209 | 345 | |
| 9. No. of cottages found unfit for human habitation | 60 | 9 | | 76 | 6 | 6 | 12 | ... | 6 | 7 | 10 | 6 | ... | 4 | 1 | 22 | 18 | 4 | |
| 10. No. of representations made with the view of Closing Orders being made | 14 | 9 | | 58 | ... | ... | 12 | ... | 6 | 7 | 10 | 6 | ... | 4 | 1 | 3 | 9 | ... | |
| 11. No. of Closing Orders made | 14 | 5 | | 30 | ... | ... | 11 | 2 | ... | 7 | 1 | 3 | ... | 4 | 1 | 3 | 5 | ... | |
| 12. No. of cottages in which defects were remedied without a Closing Order | 51 | 52 | | 59 | 38 | 210 | 77 | 57 | 39 | 24 | 74 | 3 | ... | 1 | 36 | 56 | 146 | ... | |
| 13. No. of cottages in which defects were remedied after making Closing Order | 3 | 5 | | 49 | ... | ... | ... | ... | ... | 7 | ... | 2 | ... | 3 | ... | 3 | ... | ... | |
| 14. No. of cottages closed | 8 | ... | | 4 | 6 | ... | 8 | 2 | 5 | ... | ... | 2 | ... | 2 | ... | ... | ... | 4 | |
| 15. No. of cottages demolished by Order | ... | ... | | ... | ... | ... | 1 | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | |
| 16. No. of common Lodging-houses in District | ... | ... | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| 17. No. of Slaughter-houses in District | 5 | 7 | | 20 | 2 | 17 | 16 | 8 | 5 | 5 | ... | 18 | 6 | 15 | 33 | 15 | 10 | 4 | |
| Frequency of inspection | ... | (e) | | (d) | 4 | (d) | 52 | 75 | (d) | 20 | 45 | (k) | ... | (e) | ... | (c) | (d) | 36 | |

| 36. Name of Inspector | (g) All houses. | | | | | | | | | | | | | (f) Half-yearly. | | | | |
|--|-----------------|------------------|--------------|----------------|-----------------|------------------|-----------------|-----------------|---------------------|-------------|-------------|-------------|-------------|------------------|-------------|-------------|-------------|-------------|
| | (a) Weekly. | (b) Fortnightly. | (c) Monthly. | (d) Quarterly. | (e) Frequently. | (f) Half-yearly. | (g) All houses. | (h) No. record. | (i) Taken by M.O.H. | (j) Yearly. | (k) Yearly. | (l) Yearly. | (m) Yearly. | (n) Yearly. | (o) Yearly. | (p) Yearly. | (q) Yearly. | (r) Yearly. |
| 18. No. of Bakehouses in District ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Frequency of inspection ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 19. No. of Dairies and Milk Shops ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Frequency of inspection ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 20. No. of Cowkeepers ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Frequency of inspection ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 21. No. of samples of milk taken for examination for cleanliness, etc. ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Filthy houses cleansed ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 22. Houses disinfected ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 23. Cases of Overcrowding abated ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 24. New houses ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| No. of Water Certificates applied for ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 25. No. of Certificates granted ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 26. Public Wells sunk ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 27. Privies. No. in district ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| No. abolished during the year ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 28. No. of pail closets ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| No. of W.C.'s with proper flushing arrangement ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 29. No. of hand-flushed W.C.'s ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 30. Animals improperly kept removed ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 31. Samples of water taken for analysis ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 32. Compensation paid for bedding, clothing, etc., destroyed ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 33. Seizures of unsound food ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 34. ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 35. ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 36. Name of Inspector | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

(f) Half-yearly.
(l) £11 16s. 5½d.(c) Frequently.
(k) Yearly.(d) Quarterly.
(i) Taken by M.O.H.

SANITARY IMPROVEMENTS CARRIED OUT DURING THE YEAR AND FURTHER IMPROVEMENTS REQUIRED.

Many Medical Officers of Health do not state distinctly or definitely what improvements have been effected in their districts during the year, and very many never mention that any improvements are required. The following statements, compiled from the reports, may therefore be far from complete.

| | | |
|----------------|-----|---|
| BARKING | ... | <i>Provided.</i> Recreation Ground opened. Administrative Block at Hospital completed. <i>Required.</i> Town Planning scheme (under consideration). More cottages wanted (26 in course of erection). Female Convenience. Better accommodation at the Isolation Hospital. |
| BURNHAM | ... | <i>Required.</i> Improved sewerage and sewage disposal. Conversion of privies into water closets. Hospital accommodation could be improved. |
| BRAINTREE | ... | <i>Provided.</i> A whole time Medical Officer of Health. Public Swimming Bath. <i>Required.</i> Abolition of uncovered ashpits and manure bins. More cottages. Flushing apparatus for water closets. |
| BRENTWOOD | ... | <i>Provided.</i> <i>Required.</i> More definite agreement with Billericay Rural about use of Isolation Hospital. Extension of boundaries. |
| BRIGHTLINGSEA | ... | <i>Provided.</i> <i>Required.</i> Definite arrangement with Colchester for isolation of all cases of infectious disease and for use of disinfectors. |
| BUCKHURST HILL | ... | <i>Required.</i> Forest pond near High Road requires cleaning. |
| CLACTON | ... | <i>Required.</i> Scavenging of cesspools. Increased water supply. Better method of disposing of house refuse. |
| COLCHESTER | ... | <i>Required.</i> Increased accommodation for Public Health Department. Improved administrative block at Hospital and additional wards, so that the Hospital may be made available for the surrounding districts. (In progress.) |
| CHELMSFORD | ... | <i>Provided.</i> A new bore-hole has been sunk at Galleywood to increase the water supply. <i>Required.</i> Still more water (in hand). Refuse destructor. Increased hospital accommodation. Sewerage system wants overhauling to prevent river pollution, etc. |
| EPPING | ... | <i>Required.</i> More cottages. Provision of covered ashbins and weekly collection of house refuse. Public mortuary. |

| | | |
|-----------------------|-----|--|
| GRAYS ... | ... | <i>Required.</i> More houses for working classes. Enlarged sewerage scheme (now in the hands of Joint Sewerage Board). |
| HALSTEAD | ... | <i>Provided.</i> Improved system of sewage treatment. <i>Required.</i> More cottages or better cottages. Re-sewering of High Street. Improved hospital accommodation (in hand). |
| HARWICH | ... | <i>Provided.</i> Additional beds at Isolation Hospital. <i>Required.</i> Hospital for Small-pox. |
| LEYTON | ... | <i>Required.</i> Arrangement with London County Council for disposal of sewage. Arrangement for isolating cases of small-pox. |
| MALDON | ... | <i>Required.</i> Borough Council should consider question of arranging for emptying cesspools. Revision of Building Bye-laws (in hand). |
| SHOEBURYNESS | ... | <i>Required.</i> Better housing accommodation. |
| SAFFRON WALDEN | ... | <i>Provided.</i> Increased supply of water to higher portions of town. Plans prepared for improving the Isolation Hospital. |
| TILBURY | ... | <i>Required.</i> More cottages (in hand), |
| WALTHAM HOLY CROSS | | <i>Provided.</i> Sewage works improved. Plant purchased for emptying cesspools. <i>Required.</i> Further consideration of disposal of sewage at Sewardstonebury. |
| WALTHAMSTOW | ... | <i>Required.</i> Arrangement with London County Council for disposal of sewage. |
| WANSTEAD | ... | <i>Provided.</i> New sewage works approaching completion. <i>Required.</i> More cottages. Improved dust carts. |
| WITHAM | ... | <i>Required.</i> Some better cottages. Improved Bye-laws. |
| BELCHAMP (R.) | ... | <i>Required.</i> An isolation hospital, preferably in conjunction with some adjacent district. |
| BILLERICAY (R.) | ... | <i>Provided.</i> Sewage works for Billericay completed. Plans for new Isolation Hospital approved by Local Government Board. Water mains extended to Little Warley and Childerditch. <i>Required.</i> More cottages. Water supply and sewerage at Ingrave and East Horndon. Sewering of Little Burstead hamlet. Increased sanitary staff. |

- BRAINTREE (R.) ... *Provided.* Water supply to Bocking.
- Required.* Building Bye-laws (in hand). More cottages (being undertaken). Scavenging of Kelvedon. Sewerage of Bocking, Coggeshall and Kelvedon. Water supply to Hatfield Peverel,
- CHELMSFORD (R.) ... *Provided.* Fourteen cottages in Danbury, Little Baddow and Sandon. Water supply to Broomfield.
- Required.* Water supply to Stock, Buttsbury and West Hanningfield. Drainage of Broomfield and Little Waltham. Filtration of spring water at Great Baddow Waterworks. Consideration of scavenging of Writtle.
- DUNMOW (R.) ... *Provided.* Sewerage scheme for Dunmow.
- Required.* Sewers and water supply for Thaxted. Scavenging of Thaxted and Dunmow. Prevention of river pollution at Great Bardfield and Hatfield Broad Oak. Better cottage accommodation. Building bye-laws.
- EPPING (R.) ... *Provided.* Connection of houses with new sewers, and provision of new sewers.
- Required.* More cottages. Sewering of Sheering. Water supply to Matching and Epping Green. Scavenging of Theydon Bois.
- HALSTEAD (R.) ... *Provided.* Water supply scheme for Earls Colne in progress.
- Required.* Prevention of pollution of River Colne by sewage from the villages through which it passes. Improved isolation hospital accommodation (in hand).
- LEXDEN & WINSTREE *Required.* Many additional cottages. Sewerage schemes for West Mersea, Rowhedge and Stanway. Improved water supplies to West Mersea, Wigborough, Abberton, etc. Isolation hospital accommodation (in hand).
- MALDON (R.) ... *Provided.* Water supply to Tollesbury, and to Tolleshunt D'Arcy advanced a stage. Improvement in Purleigh water system. Public water supply to Heybridge provided. Scavenging of Heybridge undertaken.
- Required.* Hospital accommodation for southern portion of the district. Cottages at Tolleshunt Major (in hand). Improved sewer outfall at Heybridge (in hand).
- ONGAR (R.) ... *Provided.* Water supply to High Ongar village. Arrangements with Romford and Waltham Joint Hospital Boards for isolating cases of infectious disease.

Required. Prevention of river pollution at High Ongar and Blackmore.

ORSETT (R.) ... *Provided.* New system of sewerage at Stanford-le-Hope.

Required. More cottages. Sewerage of Stifford and West Thurrock (now in hands of the Joint Sewerage Board).

ROMFORD (R.) ... *Provided.* Cottages being erected at Hornchurch. Weekly collection of house refuse in certain parishes.

ROCHFORD (R.) ... *Required.* Sewerage of Rochford (in hand) and Great Wakering. More efficient scavenging. More cottages (four are being provided in Great Stambridge).

TENDRING (R.) ... *Provided.* Lawford is being sewered. Water mains extended to Great and Little Oakley.

Required. Abolition of "filthy dirt-holes." Improved water supplies and sewerage arrangements in several parishes. Proper hospital accommodation (in hand).

SALE OF FOOD AND DRUGS ACT.

Dr. Bernard Dyer, the Public Analyst, has kindly furnished me with the following reports :—

Summary Report on samples analysed during the twelve months ending 30th November, 1913.

During the twelve months ending on the 30th November, 1913, 2,705 samples were submitted to the Public Analyst for the County under the Sale of Food and Drugs Act. Of these 143, or just over 5¼ per cent., were adulterated or deficient as compared with legal requirements.

The samples are summarised in the following tables :—

| | Samples Analysed. | Samples Unsatisfactory. | Percentage of Adulteration, 1912-13. |
|--|----------------------|----------------------------|--|
| Northern District of the County | ... 496 | ... 14 | ... 2·8 |
| Southern District of the County | ... 710 | ... 50 | ... 7·0 |
| Metropolitan Police District of the County | 1,341 | ... 69 | ... 5·1 |
| Chingford Urban District Council | ... 17 | ... 3 | } ... 6·3 |
| Romford Union Guardians | ... 6 | ... — | |
| Walthamstow Urban District Council | ... 120 | ... 7 | |
| Wanstead Urban District Council | ... 2 | ... — | |
| Woodford Urban District Council | ... 8 | ... — | |
| Public Institutions | ... 5 | ... — | |
| | <hr/> 2,705 <hr/> | <hr/> 143 <hr/> | <hr/> 5·3 <hr/> |

| | | | | Samples Analysed. | | Samples Unsatisfactory. |
|--|------|-----|-----|----------------------|-----|----------------------------|
| Acid Phosphate (for use in self-raising flour) | ... | | | 1 | ... | — |
| Arrowroot | ... | ... | ... | 3 | ... | — |
| Baking Powder | ... | ... | ... | 2 | ... | — |
| Butter | ... | ... | ... | 755 | ... | 18 |
| Cheese | ... | ... | ... | 69 | ... | 1 |
| Chocolate | | ... | ... | 2 | ... | 1 |
| Cocoa | ... | ... | ... | 4 | ... | — |
| Coffee | ... | ... | ... | 4 | ... | — |
| Coffee Mixture | ... | ... | ... | 2 | ... | — |
| Cream | ... | ... | ... | 3 | ... | 1 |
| Cream (preserved) | ... | ... | ... | 7 | ... | — |
| Custard Powder | ... | ... | ... | 3 | ... | — |
| Dripping | ... | ... | ... | 2 | ... | — |
| Flour | .. | ... | ... | 1 | ... | — |
| Golden Syrup | ... | ... | ... | 4 | ... | — |
| Jam | ... | ... | ... | 17 | ... | — |
| Lard | ... | ... | ... | 105 | ... | 1 |
| Margarine | ... | ... | ... | 115 | ... | 1 |
| Marmalade | ... | ... | ... | 2 | ... | 1 |
| Milk | ... | ... | ... | 1529 | ... | 109 |
| Milk (skimmed or separated) | ... | ... | ... | 22 | ... | 9 |
| Milk (condensed) | ... | ... | ... | 23 | ... | — |
| Mustard | ... | ... | ... | 7 | ... | — |
| Mustard Mixture | ... | ... | ... | 2 | ... | — |
| Olive Oil | ... | ... | ... | 1 | ... | — |
| Orange Quinine Wine | ... | ... | ... | 1 | ... | 1 |
| Pepper | ... | ... | ... | 13 | ... | — |
| Sausages | ... | ... | ... | 5 | ... | — |
| Vinegar | ... | ... | ... | 1 | ... | — |
| | | | | 2705 | | 143 |

Details of Unsatisfactory Samples.

MILK.

- 44 samples contained added water in the proportion of :—

In 10 cases from 3 to 5 per cent.

In 21 „ 6 to 10 „

In 9 „ 11 to 15 „

In 1 case 18 per cent.

In 2 cases 21 „

In 1 case 22 „

57 samples were deficient in fat to the extent of :—

| | |
|-------------|------------------------|
| In 23 cases | from 5 to 10 per cent. |
| In 7 | „ 11 to 15 „ |
| In 8 | „ 16 to 20 „ |
| In 8 cases | 23 per cent. |
| In 3 | „ 25 „ |
| In 1 | „ 26 „ |
| In 1 | „ 28 „ |
| In 1 | „ 30 „ |
| In 1 | „ 31 „ |
| In 1 | „ 33 „ |
| In 1 | „ 38 „ |
| In 1 | „ 50 „ |
| In 1 | „ 90 „ |

of the normal minimum as indicated in the statutory regulations of the Board of Agriculture.

Five samples were partially skimmed in addition to being watered to the extent of from 2 per cent. to 25 per cent.

Three samples contained preservative, namely, formaldehyde or formalin in the proportion of in one case 10 parts per million and in two cases 20 parts per million.

With the three last-mentioned exceptions no preservative was found in any of the samples of milk examined during the year.

SAMPLES SUPPLIED AS SKIMMED OR SEPARATED MILK.

Six consisted of skimmed or separated milk adulterated with added water in the proportion of :—

| | |
|------------|-------------|
| In 1 case | 6 per cent. |
| In 2 cases | 9 „ |
| In 1 case | 12 „ |
| In 1 case | 21 „ |
| In 1 case | 31 „ |

Three consisted of whole or unskimmed milk with 5, 7 and 12 per cent. of added water respectively.

BUTTER.

Nine consisted of margarine.

Two were mixtures of butter and margarine containing respectively 30 per cent. and 50 per cent. of fat foreign to butter.

Three contained excessive quantities of water, namely, 21, 21 and 24 per cent. respectively, the legal limit being 16 per cent.

Four contained excessive quantities of boracic preservative, namely, 0·8, 0·8, 0·9 and 1·0 per cent. respectively.

A number of the other samples of butter contained boracic preservative, but with the four exceptions just mentioned the quantity did not in any case exceed the limit of 0.5 per cent. suggested by the Departmental Committee of the Local Government Board on Food Preservatives in its Report issued in 1901.

CREAM.

Three samples of cream, purchased simply as such, were examined, of which one contained boracic preservative in the proportion of 0.25 per cent. of boric acid, and therefore consisted of what, under the present regulations of the Local Government Board, should be described as "Preserved Cream."

Seven samples of "Preserved Cream" were purchased, all of which were described by the vendors as containing not more than 0.5 per cent. of boracic preservative. In all cases the quantity of preservative present was within this limit.

CHEESE.

One sample consisted of "filled cheese" or "margarine cheese," that is to say, cheese made from skimmed milk and oil or fat from another source.

CHOCOLATE.

A sample sold under the name of "All Fools Chocolate," was found to consist of slabs of thick leather coated with a layer of chocolate. The leather constituted about 46 per cent. of the weight of the "chocolates." These "chocolates" were sold for the purpose of enabling the purchaser to indulge in a practical jest, but their sale appeared to be dangerous, for, if they fell into the hands of a small child, they might conceivably lead to its choking itself.

LARD.

One sample of Lard contained an admixture of water to the extent of 2 per cent. This lard was of American manufacture, and an attempt was made to trace its origin. A further sample of the same make, however, taken elsewhere, proved to be satisfactory.

MARMALADE.

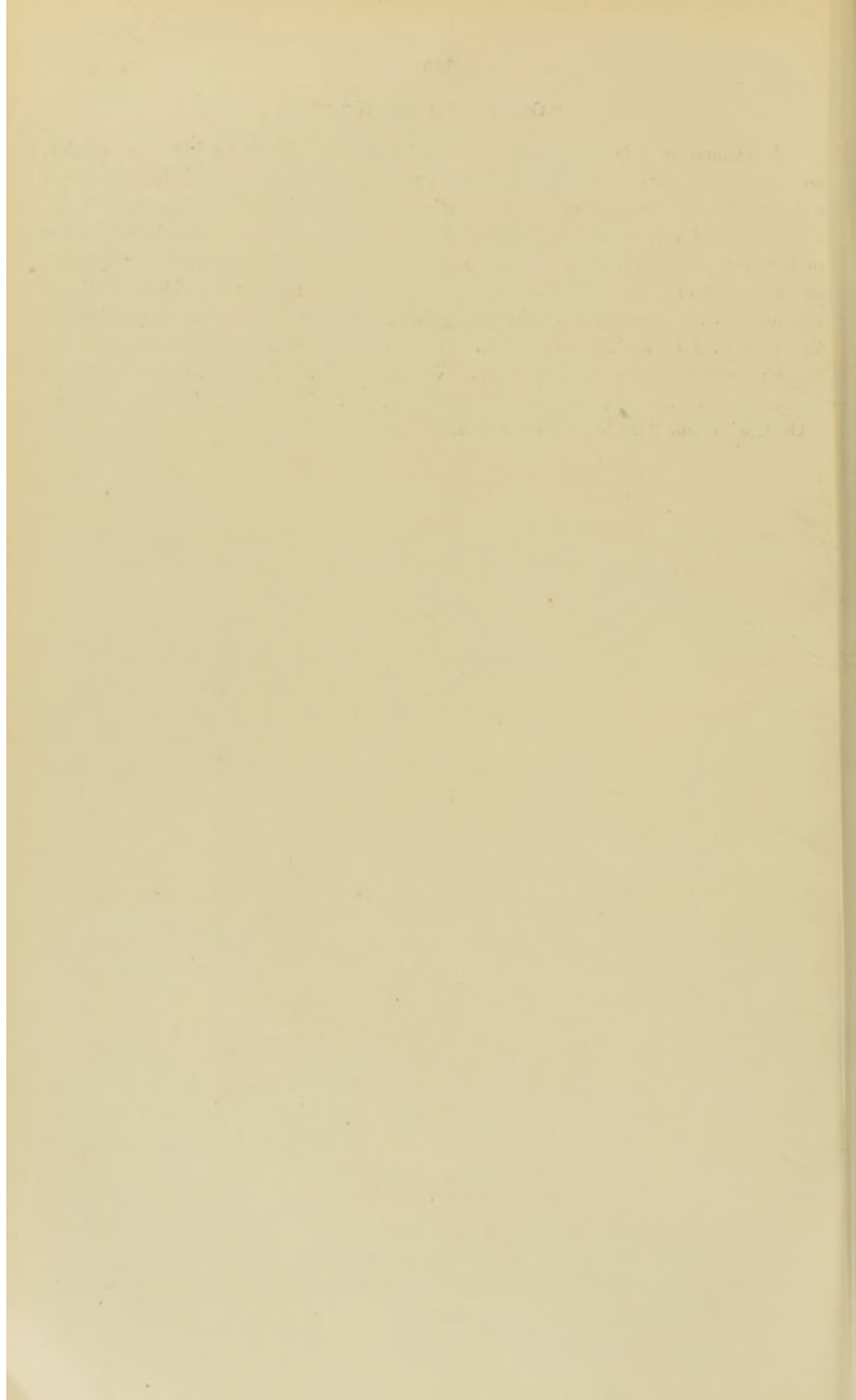
A sample of Marmalade was found to contain $1\frac{3}{4}$ grains of salicylic acid per pound. The Departmental Committee on Food Preservatives, in its Report referred to above, recommended that salicylic acid, if present in solid food, should not be allowed to exceed 1 grain per pound.

MARGARINE.

One sample, described as Margarine, was improperly sold as such, inasmuch as its fat contained at least 35 per cent. of butter fat, whereas, under the Sale of Food and Drugs Act, 1899, not more than 10 per cent. of butter fat is allowed in margarine.

“ORANGE QUININE WINE.”

A sample of “Orange Quinine Wine,” purchased from an itinerant vendor, consisted of a non-alcoholic preparation containing little more than three grains of quinine salt per pint. The “Quinine Wine” of the British Pharmacopœia is an alcoholic fluid containing 20 grains of quinine salt per pint, so that this article was of less than one-sixth of the strength of what is properly described as “Quinine Wine.” It appeared, however, that the bottle was labelled “Non-Alcoholic,” and the mixture was described as “Orange Quinine Wine,” so that it was not sold under the title used in the Pharmacopœia. But the sale of such an inferior article under the name of “Orange Quinine Wine” is, nevertheless, deceptive to the public, as the Quinine Wine of Pharmacopœia is also flavoured with orange, although the word “Orange” is not used in its official title.



APPENDIX.

SUMMARY OF REPORTS OF MEDICAL OFFICERS OF HEALTH.

I. PORT SANITARY AUTHORITIES.

PORT OF COLCHESTER.

Medical Officer of Health ... C. A. S. LING, M.R.C.S.

The Medical Officer of Health reports that no infectious disease occurred in the port during the year and that all the vessels inspected were in a satisfactory condition.

PORT OF HARWICH.

Medical Officer of Health ... H. GURNEY, M.R.C.S.

Number of vessels entering the port during 1913 :—

| | | | |
|--------------------|-----|-----|-------|
| From foreign ports | ... | ... | 1,504 |
| Coastwise | ... | ... | 2,833 |

The health of the crews, with one exception, was good and the sanitary condition of the vessels satisfactory.

The case of illness was one of enteric fever on board a steamship from Karachi. He was promptly removed to the hospital ship and placed in charge of two trained nurses. A second case of enteric fever occurred in a steamer bound for Ipswich and it was dealt with there.

A large number of vessels were inspected, but few defects were found.

The bulk of the report deals with the inspection of imported food and shews that very thorough supervision is exercised. Ninety-six tons of unsound food was seized and destroyed.

An Incinerator has been erected capable of consuming a ton of condemned food stuff in a day of 10 hours.

The number of vessels arriving at Parkeston Quay with foodstuffs was 1,378 and the number of seizures of unsound food was 1,930. Out of 88,000 carcasses of pigs only 120 had to be rejected.

In consequence of the quantity of offal (liver, lungs, heads, kidneys, etc.) condemned which came from Holland, the President and Secretary of the Dutch Meat Trade Exporters' Association visited Parkeston and after investigation expressed themselves satisfied with the fairness of the examination.

PORT OF MALDON.

Medical Officer of Health ... H. REYNOLDS BROWN, M.A., M.D.

No passengers, cattle, meat or rags have entered the port.

There has been no case of illness during the year.

The vessels entering the port during the year were :—

| | | | |
|---------------|-----|-----|-----|
| Coastwise ... | ... | ... | 856 |
| Foreign ... | ... | ... | 18 |

All were inspected. Seven nuisances were detected and all were abated.

II. URBAN DISTRICTS.

BARKING.

Medical Officer of Health ... R. J. EWART, M.D., F.R.C.S., D.P.H.

| | | | | |
|-----------------------------------|-----|------------|-----|---------------|
| Area in acres | ... | ... | ... | 3,805 |
| Population, 1911 census | ... | ... | ... | 31,302 |
| „ 1913 estimated | ... | ... | ... | 33,551 |
| Deaths registered in the District | ... | ... | ... | 376 |
| Corrections | ... | Additions | ... | 98 |
| „ | ... | Deductions | ... | — |
| Nett deaths | ... | ... | ... | 474 |
| | | | | 1913. |
| Nett death-rate | ... | ... | ... | 14.1 |
| | | | | Mean 1903-12. |
| Infantile Mortality | ... | ... | ... | 113. |
| | | | | 114. |
| Birth-rate | ... | ... | ... | 30.4 |
| | | | | 30.6 |

The question of planning the outlying districts of the town under the Town Planning Act is receiving consideration, and a special Committee to deal with the matter has been formed.

Water supply is from the South Essex Water Company's mains. Analysis of the water gives satisfactory results. There are some wells in use in the outskirts of the district.

Owing to the rapid increase of the town, the whole question of sewerage and sewage disposal is receiving attention.

Eight hundred and fifteen houses have been inspected under the Housing and Town Planning Act.

House refuse is collected weekly; a more frequent collection during the summer months from the smaller houses is advocated.

The Notification of Births Act is in force, and 96 per cent. of the number of births registered receive a visit from the Health Visitor. A Baby-Feeding Depôt has been established and prepared milk is supplied at 1d. per pint. Milk in a dried form is also supplied. The School Clinic rooms are utilized weekly for the "Babies Welcome." The average attendance was 18.

Four hundred and seventy-seven cases of infectious disease were notified 36 diphtheria, 31 erysipelas, 136 scarlet fever, 4 enteric fever, 4 puerperal fever, 2 cerebro-spinal meningitis, 9 poliomyelitis, 179 pulmonary tuberculosis, 65 non-pulmonary tuberculosis, and 11 ophthalmia neonatorum.

The administrative block at the Isolation Hospital was completed during the year. The old dining-room and kitchen have been converted into a discharge block for scarlet fever patients.

BRAINTREE.

Medical Officer of Health ... E. BERTRAM SMITH, M.B., B.S., D.P.H.

| | |
|---------------------------------------|---------------------|
| Area in acres | 2,224 |
| Population, 1911 census ... | 6,168 |
| „ 1913 estimated ... | 6,373 |
| Deaths registered in the District ... | 83 |
| Corrections ... Additions ... | 22 |
| „ ... Deductions ... | — |
| Nett deaths | 105 |
| | |
| | 1913. Mean 1908-12. |
| Nett death-rate | 16·5 .. 13·3 |
| Infantile mortality | 53· ... 49· |
| Birth-rate | 20·9 ... 20·6 |

The district is intersected by the shallow valley of the river Brain. The subsoil is a mixture of gravel, loam and clay, lying on the London clay. There are engineering and silk works in the town.

Water supply is from two deep wells sunk into the chalk and owned by the Council.

The district is well sewered and the sewage works now give a satisfactory effluent. Most houses are provided with water closets of a satisfactory type. There are a few privies in the rural parts of the district; these are being converted into pail closets as occasion arises.

Movable ashbins are scavenged once a week, fixed ashpits fortnightly, by the Council's men.

The Public Bath, which was erected by the Council, was opened at the commencement of the summer and has been well patronised.

Premises under the control of the Council are efficiently inspected. Model bye-laws for slaughterhouses are to be adopted.

Two hundred and twenty-eight houses have been inspected under the Housing and Town Planning Act. Fourteen were found to be unfit for human habitation. No closing orders were made. More cottages to let at a low rent are required.

Twenty-nine cases of infectious disease were notified, 12 diphtheria, 3 scarlet fever, 1 enteric fever, 8 pulmonary tuberculosis, and 5 non-pulmonary tuberculosis.

The district is served by the Braintree Joint Hospital.

BRENTWOOD.

Medical Officer of Health ... SAMUEL FRAZER, L.R.C.P., L.R.C.S.

| | | | | |
|-----------------------------------|-----|------------|-------|---------------|
| Area in acres | ... | ... | ... | 460 |
| Population, 1911 census | ... | ... | ... | 6,923 |
| „ 1913 estimated | ... | ... | ... | 7,025 |
| Deaths registered in the District | ... | ... | ... | 67 |
| Corrections | ... | Additions | ... | 17 |
| „ | ... | Deductions | ... | 17 |
| Nett deaths | ... | ... | ... | 67 |
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | ... | 9·5 | 8·5 |
| Infantile Mortality | ... | ... | 50· | 65· |
| Birth-rate | ... | ... | 17· | 16· |

The district, which consists of the old parish of Brentwood, is situated on an elevated position on the main road from London to Chelmsford. Subsoil chiefly clay. Many residents have their occupations in London.

A Local Government Committee has recently been appointed by the Council to consider the question of extending the area of the district.

Water supply is provided by the South Essex Waterworks Company. There are nineteen houses in the district which are unconnected with the mains.

The new sewage works act satisfactorily. Water closets predominate. There are only two privies and two pail closets in the district.

Scavenging is undertaken by a contractor, and the work is carried out satisfactorily.

Premises controlled by the Council are periodically inspected, and, with the exception of one workplace in which case proceedings were taken, were found to be in good order.

Eighty-three houses were inspected under the Housing and Town Planning Act. None were found unfit for human habitation.

Fifteen cases of infectious disease were notified, 5 diphtheria, 4 erysipelas, 2 scarlet fever, and 4 pulmonary tuberculosis.

BRIGHTLINGSEA.

Medical Officer of Health ... E. P. DICKIN, M.D.

| | | | | |
|-----------------------------------|-----|------------|-----|-------|
| Area in acres | ... | ... | ... | 2,867 |
| Population, 1911 census | ... | ... | ... | 4,404 |
| „ 1913 estimated | ... | ... | ... | 4,382 |
| Deaths registered in the District | ... | ... | ... | 48 |
| Corrections | ... | Additions | ... | 5 |
| „ | ... | Deductions | ... | 1 |
| Nett deaths | ... | ... | ... | 52 |

| | | | | | |
|---------------------|-----|-----|-------|-----|---------------|
| | | | 1913. | | Mean 1908-12. |
| Nett death rate | ... | ... | 11·8 | ... | 12·6 |
| Infantile mortality | ... | ... | 87· | ... | 64· |
| Birth rate | ... | ... | 15·7 | ... | 18·6 |

The central part of the district is a table-land of glacial sand and gravel resting on the London clay. The marsh land is composed of alluvium. The chief occupations are fishing and seafaring.

The water supply in the rural part of the district is from shallow wells, which are liable to pollution. The water supply to the urban area is from the Council's works. The water is derived from two bores, 200 feet deep, reaching the chalk. The water is hard and makes a bulky deposit in cooking utensils, consequently some of the inhabitants still use water from shallow wells which does not cause this deposit. No steps have yet been taken to soften the public supply.

Sewage works are on the alumino-ferric precipitation system. The effluent, which is stated to be a very good one, is stored until it can be discharged with the ebb tide within two hours of high water. In this way the effluent is carried directly out to sea, and none of it reaches Brightlingsea Creek where there are oyster beds. The outfall is 800 yards from the nearest oyster laying. The lawsuit relating to these works was withdrawn during the year.

The majority of the closets are hand flushed. In the rural part pail closets and privy cesspits are in general use.

The house refuse is removed weekly in the urban area, and a few houses in the rural area are also scavenged.

Premises under the control of the Council are well supervised.

A long report is given regarding oysters. Two cases of enteric fever were attributed to Brightlingsea oysters, but it appears doubtful whether these were the cause.

Two hundred and fifty-nine houses were inspected, and one closing order was made.

Eleven cases of infectious disease were notified, 4 erysipelas, 2 enteric fever, 1 pulmonary tuberculosis, and 4 non-pulmonary tuberculosis.

BUCKHURST HILL.

Medical Officer of Health ... CHAS. R. DYKES, M.B.C.S., L.R.C.P.

| | | | |
|-----------------------------------|-----|-----|-------|
| Area in acres | ... | ... | 873 |
| Population, 1911 census | ... | ... | 4,887 |
| „ 1913 estimated | ... | ... | 4,910 |
| Deaths registered in the District | ... | ... | 55 |
| Corrections ... Additions | ... | ... | 10 |
| „ ... Deductions | ... | ... | 5 |
| Nett deaths | ... | ... | 60 |

| | | | 1913. | | Mean 1908-12. |
|---------------------|-----|-----|-------|-----|---------------|
| Nett death rate | ... | ... | 12·2 | ... | 10·5 |
| Infantile mortality | ... | ... | 66· | ... | 87· |
| Birth rate | ... | ... | 21·3 | ... | 18·7 |

This district is situated on a ridge of land between the valleys of the Roding and Ching. The subsoil is clay with here and there patches of gravel. The district is principally a residential one.

The water supply is from the Metropolitan Water Board's wells at Waltham Abbey and Chingford Mills. It is hard, but constant and adequate.

The Council's sewage works take the sewage from the eastern slope of the hill, the western slope is treated at the Woodford Western Works. The Medical Officer again calls attention to the condition of the Forest Pond on the High Road.

House refuse is collected by the Council's men once a week.

Premises under the control of the Council are regularly inspected and are kept in a satisfactory condition.

Twenty-nine houses were inspected under the Housing and Town Planning Act, 3 were found unfit for human habitation and 3 closing orders were made.

Twenty-four cases of infectious disease were notified, 6 diphtheria, 4 erysipelas, 3 scarlet fever, 1 enteric fever, 2 puerperal fever, 5 pulmonary tuberculosis, and 3 non-pulmonary tuberculosis.

The district is served by the Waltham Joint Isolation Hospital.

BURNHAM-ON-CROUCH.

Medical Officer of Health ... T. D. WHITE, L.S.A.

| | | | | |
|-----------------------------------|-----|------------|-------|----------|
| Area in acres | ... | ... | ... | 4,517 |
| Population, 1911 census | ... | ... | ... | 3,190 |
| „ 1913 estimated | ... | ... | ... | 3,255 |
| Deaths registered in the District | ... | ... | ... | 22 |
| Corrections | ... | Additions | ... | 6 |
| „ | ... | Deductions | ... | 0 |
| Nett deaths | .. | ... | ... | 28 |
| Nett death-rate | ... | ... | 1913. | 1908-12. |
| Infantile Mortality | ... | ... | 8·6 | 11·45 |
| Birth-rate | ... | ... | 16·4 | ? |
| | ... | ... | 18·7 | 19·2 |

Housing. Out of the 800 houses in the district not 50 possess baths. Few houses have been erected recently.

Water Supply. The quality of the water is excellent. The quantity pumped averages 1,100,000 gallons monthly.

Scavenging. House refuse is removed and cesspools emptied by a contractor and "the arrangement appears to work satisfactorily."

Sewerage. A scheme for improving the sewerage is under consideration. The treatment of the sewage will also be improved. This should result in great benefit to the town.

Food Production, etc. Inspections of dairies, bakehouses, etc., are made at frequent intervals.

CHELMSFORD.

Medical Officer of Health ... H. W. NEWTON, M.R.C.S., L.R.C.P., D.P.H.

| | | | | |
|---------------------------------------|-----|-----|--------|----------------|
| Area in acres ... | ... | ... | 3,015 | |
| Population, 1911 census ... | ... | ... | 18,008 | |
| " 1913 estimated ... | ... | ... | 18,500 | |
| Deaths registered in the District ... | ... | ... | 237 | |
| Corrections ... Additions ... | ... | ... | 13 | |
| " ... Deductions ... | ... | ... | 34 | |
| Nett deaths ... | ... | ... | 216 | |
| Nett death-rate ... | ... | ... | 11·7 | 1913. 1908-12. |
| Infantile Mortality ... | ... | ... | 58· | 10·4 68·5 |
| Birth-rate ... | ... | ... | 21·45 | 20·2 |

The Medical Officer of Health gives the death-rate as 10·9, having omitted to add the deaths of residents not registered in the district.

The borough continues to increase in population, but no new works have recently been established.

House Accommodation. The Council is completing a further lot of cottages, making 104 in all. The Rectory Estate is being rapidly developed, and other estates are to follow. The house accommodation should therefore soon be adequate, and may be more than adequate if the large factories reduce the number of hands employed. Courts, yards and defective houses are continually receiving attention. Only 9 cases of overcrowding were discovered and all were promptly abated.

Water Supply. The new bore-hole at Galleywood has been brought into use, but the supply is not too abundant. Much of the supply is derived from two subsoil springs, which require constant supervision. Analyses of the water from the various sources are made periodically.

River Pollution. The River Chelmer is said to be so polluted that even after partial filtration it is not fit for use in the Swimming Bath. The Medical Officer of

Health is not aware that any work has been done since his last report to reduce any pollution of the river from within the Borough.

Sewerage and Drainage. The Surveyor is preparing a report on the sewerage of the Borough, which is admittedly defective, due to the rapid increase of population in recent years. The matter is important and should be dealt with without further delay.

House Refuse Disposal. The Medical Officer of Health gives a somewhat detailed account of Huillard's Dessicating Apparatus, which appears to be designed to deal with house refuse by converting a portion of it into manure. Another patent method for accomplishing the same object is referred to. A sub-committee has been appointed to consider the question of refuse disposal. Scavenging is only done once a week, twice a week is strongly recommended.

Dairies, Cowsheds, Milkshops, etc. A Veterinary Inspector examines all milch cows in the Borough, all cattle offered for sale in the Market, and he inspects the slaughterhouses. He also collects and examines samples of milk. The meat inspection, he thinks, can never be effective until a public abattoir is provided.

Isolation Hospital. The Medical Officer of Health again urges the enlargement of the Joint Hospital. Still no provision has been made for the reception of cases of enteric fever, cerebro-spinal fever, or acute antero-poliomyelitis. Only 21 beds are available for a population of 40,000.

General Inspection. The Medical Officer of Health speaks highly of the work done by the Sanitary Inspector, and a report by this officer is given in an appendix. The number of hand-flushed water closets is being rapidly reduced. Sinks and separate supplies of water have been provided to 225 houses. Yards and passages are being paved or concreted. Sixty-eight houses were found so dangerous as to be unfit for human habitation, and apparently all were put into a fit state without a Closing Order having to be made.

[*Sewage Disposal* The sewage farm is under the control of a Joint Committee of the Urban and Rural Councils and is managed by the Borough Surveyor. It is not mentioned in the present report, but the increased amount of sewage now discharged on to the farm more than fully taxes the land. The Committee are endeavouring to extend the area available for irrigation.]

CHINGFORD.

Medical Officer of Health ... T. STANBURY BROOK, M.R.C.S., L.R.C.P.

| | | | |
|-----------------------------------|-----|-----|-------|
| Area in acres ... | ... | ... | 2,808 |
| Population, 1911 census ... | ... | ... | 8,186 |
| „ 1913 estimated | ... | ... | 9,265 |
| Deaths registered in the District | ... | ... | 79 |
| Corrections ... Additions | ... | ... | 23 |
| „ ... Deductions | ... | ... | 16 |
| Nett deaths ... | ... | ... | 86 |

| | | 1913. | | Mean 1908-12. |
|---------------------|-----|-------|-----|---------------|
| Nett death rate | ... | 9.2 | ... | 8.4 |
| Infantile mortality | ... | 88. | ... | 59. |
| Birth rate | ... | 20.8 | ... | 21.6 |

This district may be divided into two parts, the north lies on a plateau 60—200 feet above sea level, the south lies in the Lea valley.

The inhabitants consist of professional and business men, engaged locally and in London.

The water supply is from the Metropolitan Water Board's wells in the Lea Valley. It is hard, but perfectly pure.

The drainage and sewerage are satisfactory, only about one dozen houses have cesspools. There are only six closets in the district which are not provided with proper flushing cisterns.

House refuse is collected weekly by a contractor. 219 houses were inspected under the Housing and Town Planning Act. No closing orders were made.

Premises under the control of the Council are kept in a satisfactory condition.

Seventy-two cases of infectious disease were notified, 33 diphtheria, 2 erysipelas, 16 scarlet fever, 1 enteric fever, 14 pulmonary tuberculosis, 6 non-pulmonary tuberculosis.

The district is served by the Waltham Joint Hospital.

CLACTON-ON-SEA.

Medical Officer of Health ... J. W. COOK, M.D.

| | | | |
|-----------------------------------|-----|-----|-------|
| Area in acres | ... | ... | 4,069 |
| Population, 1911 census | ... | ... | 9,777 |
| „ 1913 estimated | ... | ... | 9,887 |
| Deaths registered in the District | ... | ... | 124 |
| Corrections ... Additions | ... | ... | 15 |
| „ ... Deductions | ... | ... | 22 |
| Nett deaths | ... | ... | 117 |

| | | 1913. | | Mean 1908-12. |
|---------------------|-----|-------|-----|---------------|
| Nett death rate | ... | 11.8 | ... | 11.0 |
| Infantile mortality | ... | 56. | ... | 89. |
| Birth rate | ... | 17.9 | ... | 20. |

This is a popular health resort. The district stands on the London clay, but there are several large gravel patches. During the season the population largely increases—from 9,887 to nearly 70,000.

The water supply is good and abundant. It is pumped from the Council's well at Great Bentley about 12 miles off and passes through filter beds. During the year a new well in the gravel has been sunk at Lamb Farm, St. Osyth. The supply is meant chiefly for the village of St. Osyth, but the water will also come to Clacton.

Sewage is conveyed well out to sea, and there is no return of offensive matter to the beach. At Bocking's Elm and Castle Hill some houses are not connected to the sewers and the Medical Officer of Health suggests that the Council should undertake the emptying of the cesspools.

Except for a few privies and pail closets in the older and rural parts of the district all houses have water closets.

Scavenging is undertaken by the Council. The refuse is carted out of the town and part is burned. A proper destructor is advocated.

In the last year's report it was suggested that an additional lady health visitor should be appointed to act under the Notification of Births Act. This, however, has not been done.

One hundred and seventy-three houses were inspected under the Housing and Town Planning Act. Two were considered to be unfit for human habitation and 2 Closing Orders were made.

Premises under the control of the Council are well supervised and are kept in a satisfactory sanitary condition.

Sixty-eight cases of infectious disease were notified, 9 diphtheria, 33 scarlet fever, 22 pulmonary tuberculosis, and 4 non-pulmonary tuberculosis.

COLCHESTER.

Medical Officer of Health ... WALTER F. CORFIELD, M.D., D.P.H., B.S.

| | | | | |
|-----------------------------------|-----|------------|--|----------|
| Area in acres | ... | ... | 11,333 | |
| | | | (with inland waters) | |
| Population, 1911 census | ... | ... | 43,452 | |
| „ 1913 estimated | | ... | 44,700 | |
| | | | (including persons living in Institutions) | |
| Deaths registered in the District | | ... | 564 | |
| Corrections | ... | Additions | ... | 19 |
| „ | ... | Deductions | ... | 83 |
| Nett deaths | ... | ... | ... | 500 |
| | | | 1913. | 1908-12. |
| Nett death-rate | ... | ... | 11.1 | 11.7 |
| Infantile Mortality | ... | ... | 60. | 85. |
| Birth-rate | ... | ... | 19.7 | 22.4 |

The deaths of "non-residents" in institutions are deducted from the total deaths registered, but the number of the "non-residents" living in the institutions do not

appear in all cases to be deducted from the population, hence the above death-rates are probably a little too low. Attention is called to the difficulty, in all cases, of ascertaining the actual cause of death. "Few practitioners," says the Medical Officer of Health, under prevailing conditions, care to certify that a contributory cause of death was alcoholism, delirium tremens, or other disease that appears to cast a moral reflection upon the life of the deceased."

The work done by the Lady Health Visitor is believed to be very beneficial, and the Notification of Births Act has worked smoothly, and has given rise to no difficulties.

In the Borough there are a number of clothing factories and a great many persons in the Borough (and in the villages around) are engaged in the making of clothing in their own homes.

Water Supply. The supply from the deep well and from the Lexden springs continues to be ample in quantity and excellent in quality. Some of the outlying parts of the Borough, though sewered, have not been provided with water from the mains. There is actually a school in the Borough with no water supply of its own. All the water has to be carried from a well 80 yards away.

Drainage and Sewerage. No important change is recorded.

House Refuse Disposal. An increasing difficulty is found in providing suitable "tips" and it is pointed out that the drawbacks of "tips" can only be avoided by the erection of a refuse destructor. There still remain about 35 cesspools in the outlying parts of the Borough. House refuse is collected once a week.

Offensive Trades. The placing of fish frying amongst the offensive trades has been of decided utility.

Milk Supply. The system of having all milking herds examined twice yearly by a Veterinary Surgeon has been given up since farmers are now bound to notify cases of tuberculosis. The milk is examined by inoculation and no sample was found tuberculous. Some interesting information is given as to the way in which milk is produced, leading to the general conclusion "that milk, the beverage of infants and invalids, is by far the dirtiest thing we drink."

Housing. Only 50 new houses were erected during the year yet the population is estimated to be increasing at the rate of 500 per annum. Is the population being overestimated or is the want of housing accommodation becoming serious, or is there some other explanation?

During the year 853 houses were inspected, 22 were found damp and dilapidated, 18 had choked or defective drains, 40 had defective water closets, 160 had outside water closets not supplied with water, 6 were overcrowded, 173 had no covered ashbins and in over 250 various other nuisances were discovered. Twenty insanitary houses were demolished.

Isolation Hospital. The enlargement of the hospital is under consideration and it is proposed to enter into formal agreement with surrounding districts for the

reception of cases therefrom. During the year 120 Borough cases were admitted, 12 garrison cases, and 43 cases from districts around. The provision of a ward block for phthisical patients is also contemplated.

This Annual Report embodies reports prepared by the Waterworks Superintendent, the Acting Borough Surveyor, and the Sanitary Inspector.

EAST HAM.

Medical Officer of Health ... W. BENTON, M.R.C.S., L.R.C.P., D.P.H.

| | | | |
|-----------------------------------|-----|-------|---------------|
| Area in acres ... | ... | ... | 3,324 |
| Population, 1911 census ... | ... | ... | 133,504 |
| „ 1913 estimated | ... | ... | 142,467 |
| Deaths registered in the District | ... | ... | 1,044 |
| Corrections ... Additions | ... | ... | 425 |
| „ ... Deductions | ... | ... | 18 |
| Nett deaths ... | ... | ... | 1,451 |
| | | | |
| | | 1913. | Mean 1908-12. |
| Nett death rate | ... | 10·2 | 11·1 |
| Infantile mortality | ... | 63· | 96· |
| Birth rate | ... | 25·2 | 26·9 |

It will be observed that about one-third of the inhabitants of this Borough die in institutions outside the district.

The Borough has excellent transport facilities conveying a large portion of the population, chiefly clerks, warehousemen, mechanics, postal and telephone officials, to and from the City of London.

The industries of the district are the manufacture of gas, of wearing apparel, butter substitute, food products, chemicals, &c., and the Royal Albert Docks employ a large number of labourers and clerks.

The highest point is only 50 feet above O.D., but the subsoil is sand and gravel save in the southern portion of the Borough where it is alluvium.

The water supply is from the works of the Metropolitan Water Board. It is constant and of good quality.

Housing. The density of the population varies greatly in the different Wards. In Plashet Ward West there are 113 persons to the acre, whilst in the Beckton and North Woolwich Ward there are only 18. The Council owns 220 artizan dwellings in the latter ward. The Medical Officer of Health says, "The borough is well supplied with houses and tenements, and, being chiefly of modern construction, they are in a satisfactory condition." From the Table of "Building Plans Approved" the rate of growth appears to be rapidly decreasing. The maximum growth occurred in 1898 when no less than 3,018 plans for houses, shops, &c., were approved. Since then it

has gradually declined, until last year (1913) when only 320 plans were approved. The increase in population, therefore, is probably over estimated by the Registrar-General. He gives the population for 1913 as being 4,000 in excess of 1912. This would give about 12 persons per house erected.

Open Spaces. There are nine public parks and playing grounds with a total area of 196 acres. There is provision for cricket, football, bowling, tennis, &c., and during the summer months band music and entertainments are given.

Sewerage and Sewage Disposal. All surface water is kept out of the sewers. The sewage is purified chemically and bacteriologically and the effluent produced gives rise to no complaints.

Swimming Baths. There is a covered swimming bath and also an open air swimming pool. In connection with the covered bath various other kinds of baths have recently been provided, shower baths, foot baths, slipper baths, and vapour baths.

Refuse Disposal. House refuse is removed once weekly and carted to the destructor at the sewage works, 50 to 60 tons being burned daily. Refuse from tradesmen's premises is removed twice weekly.

Isolation Hospital. During the outbreak of Diphtheria in the autumn the resources of the hospital were over-taxed and the Medical Officer of Health recommends that it should be considerably enlarged. There is very little doubt that this advice will be acted upon and provision made also for advanced cases of tuberculosis. The Medical Officer of Health shows how infection may be spread by referring to a case which he has recently had in the Hospital. This youth had been travelling daily on the District Railway to and from business in town desquamating after a mild attack of Scarlet Fever.

There is included a long and interesting report by Mr. Banks, the Sanitary Inspector, dealing with nuisances and their abatement, results of house to house inspection, yards and forecourts, van dwellers, disinfectants, food inspection, premises over which the Authority has control, contagious diseases of Animals Act, Shops Act, Employment of Children Act, &c.

EPPING.

Medical Officer of Health ... TREVOR FOWLER, L.R.C.P. & S., D.P.H.

| | | | |
|-----------------------------------|-----|------------|-------|
| Area in acres | ... | ... | 1,420 |
| Population, 1911 census | ... | ... | 4,253 |
| " 1913 estimated | ... | ... | 4,356 |
| Deaths registered in the District | ... | ... | 77 |
| Corrections | ... | Additions | 7 |
| " " | ... | Deductions | 39 |
| Nett deaths | ... | ... | 45 |

| | | | 1913. | | Mean 1908-12. |
|---------------------|-----|-----|-------|-----|---------------|
| Nett death-rate | ... | ... | 10·7 | ... | 10·8 |
| Infantile Mortality | ... | ... | 48· | ... | 66· |
| Birth-rate | ... | ... | 19·2 | ... | 19·8 |

The population includes 155 aliens in the Workhouse. The nett population is 4,201, and the statistics are calculated on this figure.

Epping stands at an elevation of 360 feet above O.D. The soil is chiefly clay, with patches of gravel. The district is gradually becoming more residential.

The water supply is from wells sunk into the chalk at Sawbridgeworth, belonging to the Herts and Essex Water Co. It is abundant and of excellent quality, but somewhat hard. Several houses are dependent on shallow wells and springs and one house is supplied from a pond.

There are two sewerage systems, one for the north part of the town and one for the south, and practically all the houses are connected. The sewage is treated by precipitation, bacteria tanks, and irrigation. The effluent is of good quality.

House refuse is removed by a contractor fortnightly. More frequent removal is desirable during the summer months. Many houses require to have a portable covered dustbin provided.

Premises controlled by the Council have been generally found to be satisfactory.

Eighty-eight houses were inspected under the Housing and Town Planning Act and seven were found to be unfit for human habitation. One of these was closed and six were made habitable without a closing order. The need for new cottages for the working classes is emphasized.

Fifty-eight cases of infectious disease were notified, 18 diphtheria, 1 erysipelas, 28 scarlet fever, 10 pulmonary tuberculosis, and 1 non-pulmonary tuberculosis.

FRINTON-ON-SEA.

Medical Officer of Health ... H. W. GODFREY, M.D.

| | | | |
|-----------------------------------|-----|------------|-------|
| Area in acres | ... | ... | 422 |
| Population, 1911 census | ... | ... | 1,510 |
| „ 1913 estimated | ... | ... | 1,600 |
| Deaths registered in the District | ... | ... | 11 |
| Corrections | ... | Additions | 2 |
| „ | ... | Deductions | 2 |
| Nett deaths | ... | ... | 11 |

| | | | 1913. | | Mean 1908-12. |
|---------------------|-----|-----|-------|-----|---------------|
| Nett death-rate | ... | ... | 6·9 | ... | 4·9 |
| Infantile Mortality | ... | ... | 0· | ... | 54· |
| Birth-rate | ... | ... | 18·1 | ... | 16·2 |

The district lies on the London clay, there are patches of sand and gravel in places. Population is chiefly a residential one.

The water supply is obtained from the Tendring Hundred Waterworks Company. The supply is plentiful and uniformly good. The mains in certain portions of the district have been enlarged during the year.

The drainage and sewerage is said to be good in every respect. The main sewer discharges well out to sea, and there is no return of offensive matter on the beach. All the houses are provided with water closets.

House refuse is removed by contractors. Complaints have been made regarding its disposal, also as to insufficient removal. The Medical Officer of Health suggests that it might be burnt.

Premises under the control of the Council are regularly inspected.

The housing accommodation is adequate. Sixteen houses were inspected under the Housing and Town Planning Act.

Four cases of infectious disease were notified, 2 scarlet fever, 1 pulmonary tuberculosis, and 1 non-pulmonary tuberculosis.

GRAYS THURROCK.

Medical Officer of Health ... J. A. WARD, M.D.

| | | | | |
|-----------------------------------|-----|------------|-------|---------------|
| Area in acres | ... | ... | ... | 1,359 |
| Population, 1911 census | ... | ... | ... | 16,003 |
| „ 1913 estimated | ... | ... | ... | 16,520 |
| Deaths registered in the District | ... | ... | ... | 131 |
| Corrections | ... | Additions | ... | 33 |
| „ | ... | Deductions | ... | — |
| Nett deaths | .. | ... | ... | 164 |
| Nett death-rate | ... | ... | 1913. | Mean 1908-12. |
| Infantile Mortality | ... | ... | 9·9 | 10·4 |
| Birth-rate | ... | ... | 81· | 81· |
| | ... | ... | 26·8 | 25·9 |

The inhabitants of this district belong chiefly to the labouring classes, and are largely employed at Tilbury Docks, and at the cement works.

The water supply is from the South Essex Water Company's mains. The supply has been constant and plentiful. Cloudiness of the water occurred at intervals, and on examination this was found to be due to chalk and oxide of iron. An improvement occurred towards the end of the year.

Practically every house in the district has a water closet. The sewage is treated by a system of septic tanks. The Joint Sewage Board, representing Grays and adjoining parishes, have held regular meetings, but so far the new sewerage scheme has not been commenced.

House refuse is collected weekly by the Council's staff and is destroyed in a destructor at the electrical station.

The demand for houses suitable for the labouring classes is said to be not so acute as it was a year ago. The Council have decided not to erect any houses at present, as houses are being erected at Little Thurrock, and the Tilbury Council contemplate erecting a large number in their district.

Two hundred and forty-six houses have been inspected under the Housing and Town Planning Act. None were found unfit for human habitation.

Premises under the control of the Council are frequently inspected, and several defects have been remedied.

Two hundred and fifteen cases of infectious disease were notified, 1 small-pox, 50 diphtheria, 8 erysipelas, 97 scarlet fever, 4 enteric fever, 46 pulmonary tuberculosis, 8 non-pulmonary tuberculosis, and 1 anthrax.

HALSTEAD.

Medical Officer of Health ... E. BERTRAM SMITH, M.B., S.B., D.P.H.

| | | | |
|---------------------------------------|-----|-------|---------------|
| Area in acres ... | ... | ... | 647 |
| Population, 1911 census ... | ... | ... | 6,265 |
| „ 1913 estimated ... | ... | ... | 6,309 |
| Deaths registered in the District ... | ... | ... | 114 |
| Corrections ... Additions ... | ... | ... | 3 |
| „ ... Deductions ... | ... | ... | 14 |
| Nett deaths ... | ... | ... | 103 |
| | | | |
| | | 1913: | Mean 1908-12. |
| Nett death rate ... | ... | 16.3 | 13.6 |
| Infantile Mortality ... | ... | 65. | 98. |
| Birth rate ... | ... | 19.5 | 16.9 |

This district lies on the slopes of the river Colne which divides it into two halves. It is nearly all urban in character. The subsoil is chiefly gravel with patches of loam and lies upon the London Clay. The chief industries are an iron foundry and a large textile factory.

The water supply is from two deep wells sunk into the chalk and owned by the Council. The water is of excellent quality.

The district is thoroughly sewered, there being only six cesspools. Many of the sewers are old and are not properly ventilated. The sewage works, which were constructed on the "Dibden" slate bed system, do not give as good results as the Council expected. The great majority of the houses have a separate water closet, many, however, are of poor construction and are constantly getting out of order.

Dust bins are scavenged weekly and ashpits fortnightly by the Council's staff. A large number of fixed ashpits have been done away with during recent years.

A new public swimming bath is being constructed at a cost of £1,800 and it is hoped that it will be ready for use during the summer.

Premises supervised by the Council are not in an altogether satisfactory condition.

Eight cottages were inspected under the Housing and Town Planning Act, 3 were found to be unfit for human habitation and 3 Closing Orders were made. This only represents the cottages where records have been taken, 345 other visits have been paid to cottages.

Owing to increase in the amount of work, the Council are considering the question of providing the Surveyor, who is also Sanitary Inspector, &c., with assistance.

Sixty-nine cases of infectious disease occurred, 48 diphtheria, 1 erysipelas, 3 scarlet fever, 1 puerperal fever, 10 pulmonary tuberculosis, and 6 non-pulmonary tuberculosis.

An epidemic of diphtheria during the summer accounts for the large number of cases reported. A special report of the epidemic is given.

The Council have entered into an agreement with the Halstead Rural District Council, and application has been made to the Local Government Board for an Order constituting the Halstead Joint Hospital Board.

HARWICH.

Medical Officer of Health ... H. GURNEY, L.R.C.P., L.R.C.S.

| | | | | |
|-----------------------------------|-----|------------|---------------|-----------------------|
| Area in acres | ... | ... | 1,541 | |
| | | | (land only) | |
| Population, 1911 census | ... | ... | 13,623 | |
| „ 1913 estimated... | ... | ... | 14,323 | |
| Deaths registered in the district | ... | ... | 124 | |
| Corrections | ... | Additions | ... | 22 |
| „ | ... | Deductions | ... | 0 |
| Nett deaths | ... | ... | ... | 146 |
| Nett death-rate | ... | ... | 1913. 10·1 | Mean 1908-12. 12·6 |
| Infantile Mortality | ... | ... | 81· | 101· |
| Birth-rate | ... | ... | 25·1 | 29· |

The population of the Borough appears to be increasing.

Housing Conditions. The accommodation is so limited that Closing Orders are not as yet enforced as the people turned out would either overcrowd other houses or go into the Workhouse. The housing question is said to be a difficult one, but it is obvious from the report that more houses are very urgently needed and that many of the existing houses are very old and insanitary. Inspection is proceeding apace and some improvements are chronicled.

Sewerage. Certain sewers have been relaid and the outfall pumping station will soon be completed.

Dairies and Cowsheds. A veterinary surgeon inspects cows and cowsheds and reports to the Council every quarter.

Slaughterhouses. These are being inspected with the view of getting them improved or closed. The advantage of a public abattoir is commented upon. On 22 occasions diseased carcasses or organs were found in slaughterhouses.

Offensive Trades. More control is required and the Local Government Board has been asked under Sec. 51 Public Health (Amendment) Act, 1907, to declare the following trades "offensive" :—

1. That of a dealer in rags, and in bones, fat, and other putrescible animal products.
2. That of a fish fryer.

Such sanction has not yet been received.

Isolation Hospital. This was so overtaxed during a portion of the year that a new wood and iron ward had to be erected. A question has arisen whether the position of the hospital is not a menace to the health of the neighbourhood. The Medical Officer of Health thinks not. There is no steam disinfecter.

An outbreak of typhoid which occurred here was investigated by a Local Government Board Inspector, and is referred to in another section of this report.

ILFORD.

Acting Medical Officer of Health ... G. E. OATES, M.D., B.S., M.R.C.P., D.P.H.

| | | |
|---------------------------------------|-----|---------------|
| Area in acres ... | ... | 8,496 |
| Population, 1911 census ... | ... | 78,188 |
| „ 1913 estimated ... | ... | 82,379 |
| | | (78,581 nett) |
| Deaths registered in the District ... | ... | 920 |
| Corrections ... Additions ... | ... | 154 |
| „ ... Deductions ... | ... | 331 |
| Nett deaths ... | ... | 743 |

| | | | 1913. | | Mean 1908-12. |
|---------------------|-----|-----|-------|-----|---------------|
| Nett death-rate | ... | ... | 9.45 | ... | 8.7 |
| Infantile Mortality | ... | ... | 68 | ... | 73 |
| Birth-rate | ... | .. | 19.15 | ... | 21.7 |

The deaths occurring in the Claybury Asylum, West Ham Asylum, are not included in the nett deaths, and the Medical Officer of Health, rightly, also deducts the population of these institutions from the total population to obtain the nett population for calculating the death-rate, etc.

Ilford is one of the largest Urban Districts in the County, and the population is largely concentrated in the south-western portion. This portion, therefore, is Urban in character, while the remaining and larger portion is still Rural. Being within seven miles of London, a large proportion of the population earns its living in the City. The inhabitants mainly belong to the lower-middle classes, occupying houses of from £20 to £40 a year.

There is at present in Ilford very little unlet property and signs are everywhere manifest of an increased activity in the building trade.

Water Supply. The district is supplied in part by the Metropolitan Water Board and in part by the South Essex Company, and as their mains are extended the few existing wells are being abandoned.

Milk Supply. Premises are regularly inspected to maintain as good a condition as possible.

Bakehouses. Two have been closed during the year. The advantages of outside stoking are referred to.

Slaughterhouses. These are frequently inspected and two of the assistant Inspectors are specially qualified as meat inspectors. A comparatively small quantity of unsound food was seized during the year.

Workshops, etc. There are 388 workshops on the register, and 75 factories. The few defects observed upon inspection were remedied.

Housing Acts. Two hundred and sixty-nine houses were inspected and three found unfit for habitation.

Sewerage, Drainage, etc. There is no record of any changes. At present there are in the outlying areas 61 cesspools, 36 privies, and 71 pail closets.

Inspector's Report. Mr. King, the Chief Sanitary Inspector, gives details of the work in his department, and especially refers to the trouble caused by the influx of Hungarian gipsies in October. The colony numbered about 80 persons. They apparently occupied three houses, and within a few days the premises were in a filthy condition. They had no idea of the use of the various sanitary arrangements. They had no furniture but were well supplied with feather mattresses. They took their food squatted on the floor and appeared to help themselves from a common dish placed in their midst. Three children died from pleurisy and pneumonia whilst they were at Ilford, and at their work as coppersmiths they received so little encouragement that they left the district. All the rooms had to be swept out, refuse removed, and thoroughly cleansed and disinfected.

LEYTON.

Medical Officer of Health ... J. F. TAYLOR, M.R.C.S., D.P.H.

| | | | |
|-----------------------------------|-----|-------|--------------|
| Area in acres ... | ... | ... | 2,594 |
| Population, 1911 census ... | ... | ... | 124,736 |
| „ 1913 estimated | ... | ... | 129,366 |
| Deaths registered in the district | ... | ... | 2,120 |
| Corrections ... Additions | ... | ... | 208 |
| „ ... Deductions | ... | ... | 992 |
| Nett deaths ... | ... | ... | 1,335 |
| Nett death-rate ... | ... | 1913. | Mean 1908-12 |
| Infantile Mortality ... | ... | 10·3 | 10·45 |
| Birth-rate... .. | ... | 83·3 | 83· |
| | ... | 22·4 | 24· |

Housing Accommodation. Practically the whole of the Leyton area is now covered with buildings. Only 97 new houses were erected during the year, but the number of houses occupied by two or more families is steadily increasing. The number of uninhabited houses was 1,213 in 1911, but has now dropped to 545. The Medical Officer of Health fears that in the future a poorer class of London worker will select Leyton for its home and that overcrowding with its attendant evils will be an important problem ere long. 1,912 dwelling houses were inspected during the year and only 4 were found unfit for habitation.

Sewerage and Sewage Disposal. Certain sewers have been relaid and at the sewage works a circular tank, capable of holding 500,000 gallons, is being constructed. No progress is being made with the scheme for discharging the Leyton sewage into the Metropolitan sewers. The effluents of both the Leyton and Walthamstow works enter the Dagenham Brook and pollute it.

House Refuse and Scavenging. There is a bi-weekly removal of house refuse, open carts being used. The refuse is burnt in a destructor. The dumping of house refuse at the sewage works has been discontinued. A market has been found for the pressed sludge at these works.

Offensive Trades. Fish frying is included in the list of offensive trades, and in the exercise of their discretion the Council refused to allow such a business to be established in Hainault Road.

Water Supply. This is from the Metropolitan Water Board's mains, and is satisfactory in all respects.

Milk Supply. Very few cows are kept in the district. The sale of milk by the small general dealer is discouraged.

Slaughterhouses. The Council licensed as a slaughterhouse premises which the Medical Officer of Health considered "unsuitable, in view of their proximity to dwellings and the dark and badly designed lairage." A large quantity of unsound food was seized in various parts of the district and destroyed.

Isolation Hospital. This is a temporary structure which, up to the present, is said to have adequately served the needs of the district. A dining room and recreation room for nurses was provided during the year, and a portable operating table has been purchased.

A report by Mr. Miller, the Chief Sanitary Inspector, is included.

LOUGHTON.

Medical Officer of Health ... A. BUTLER HARRIS, M.A., M.B.

| | | | | |
|-----------------------------------|-----|------------|---------------|----------------------|
| Area in acres | ... | ... | ... | 3,961 |
| Population, 1911 census | ... | ... | ... | 5,433 |
| „ 1913 estimated | ... | ... | ... | 5,500 |
| Deaths registered in the District | ... | ... | ... | 53 |
| Corrections | ... | Additions | ... | 10 |
| „ | ... | Deductions | ... | — |
| Nett deaths | ... | ... | ... | 63 |
| | | | | |
| Nett death-rate | ... | ... | 1913. 11·3 | Mean 1908-12. 9·7 |
| Infantile Mortality | ... | ... | 166· | — |
| Birth-rate | ... | ... | 16·1 | 20·1 |

A residential, hilly, and well-wooded district. The subsoil is clay; patches of gravel occur on several of the hills.

The water supply is from the Metropolitan Water Board's wells in the Lea Valley, and which are sunk into the chalk. It is pure but hard.

The River Roding flows through the district and receives the effluent from the sewage works, but is not polluted thereby. The sewerage and drainage of the district is particularly satisfactory. The effluent from the sewage works continues to give satisfaction. All the houses in the district, with the exception of about eight in the outlying parts, are provided with water closets connected to the sewers.

House refuse is collected once a week by the Council's men.

Forty-two houses were inspected under the Housing and Town Planning Act. The defects found were in the great majority of instances remedied, without much trouble.

Premises under the control of the Council are well supervised.

Seventeen cases of infectious disease were notified, 7 diphtheria, 3 scarlet fever, 2 enteric fever, 2 pulmonary tuberculosis, and 3 non-pulmonary tuberculosis.

MALDON.

Medical Officer of Health ... H. R. BROWN, M.A., M.D.

| | | | |
|-----------------------------------|-----|------------|---------------|
| Area in acres | ... | ... | 3,028 |
| Population, 1911 census | ... | ... | 6,248 |
| „ 1913 estimated | ... | ... | 6,405 |
| Deaths registered in the District | ... | ... | 95 |
| Corrections | ... | Additions | 3 |
| „ | ... | Deductions | 25 |
| Nett deaths | ... | ... | 73 |
| | | | |
| Nett death-rate | ... | 1913. | Mean 1908-12. |
| Infantile Mortality | ... | 11·4 | 13·7 |
| Birth-rate | ... | 60· | 86· |
| | ... | 18· | 20·1 |

The central portion of the town is on a hill overlooking the Blackwater Estuary; the lower portion of the town has to be protected from high tides by a sea wall.

The chief occupations are connected with ironworks, saw mills, flour mills, fishing, and sea-faring. The pea fields in the neighbourhood attract an annual influx of vagrant pickers.

Water Supply. Water is derived from two deep wells owned by the Borough, and there are very few houses not connected with the mains. The supply is ample and of good quality.

Sewerage and Drainage. The sewage from about 1,000 houses is connected with a sedimentation tank, and the effluent flows into the Blackwater estuary. About 230 houses are connected to short lengths of sewer discharging into the river near. On the north side of the river the houses are too low to drain therein. These houses have pail closets and cesspools. There is no doubt that the crude sewage entering the river affects the shell fish near.

Scavenging. Nearly every house has a sanitary dustbin. These are emptied weekly by the Council's men. Pail closets are emptied twice weekly, and the few brick dust bins at the request of the tenants. The authority does not undertake the emptying of cesspools.

Housing. There are many unsatisfactory houses, and the Medical Officer of Health says that the only remedy for the existing state of things "lies in the provision of new houses at a rental which will make them available for the relatively low wages of the district." The building bye-laws are being revised.

Trades and Premises under Supervision. Inspections are made half-yearly. The conditions generally were found satisfactory.

Isolation Hospital. An arrangement has been made for receiving cases from Witham. Shelters have been erected in the hospital grounds for 8 tuberculosis cases. The hospital belongs to a Joint Board, representing the Borough and the

northern half of the Maldon Rural District. Tents and an enclosed area of land are available for use should small-pox be introduced. A case occurred during the year and was at once isolated. No other person became infected.

ROMFORD.

Medical Officer of Health ... A. WRIGHT, M.R.C.S.

| | | | |
|---------------------------------------|-----|-----------|--------------------|
| Area in acres ... | ... | ... | 5,630 |
| Population, 1911 census ... | ... | ... | 16,972 |
| " 1913, estimated ... | ... | ... | 17,850 |
| Deaths registered in the District ... | ... | ... | 283 |
| Corrections ... Additions ... | ... | ... | 29 |
| " ... Deductions ... | ... | ... | 101 |
| Nett deaths ... | ... | ... | 211 |
| | | | |
| Nett death-rate ... | ... | 1913. ... | Mean 1908-12. 10·8 |
| Infantile Mortality ... | ... | 54 ... | 88· |
| Birth-rate ... | ... | 21·8 ... | 23·9 |

The district comprises the town of Romford, and the outlying parts known as Collier Row, Squirrels Heath, Romford Common, and part of Noak Hill. The soil is chiefly clay, with patches of gravel.

The water supply is from the South Essex Water Company's mains. The supply is constant and of good quality. The number of private wells is gradually diminishing.

The whole of the district, with the exception of Noak Hill, is sewered. The sewage is treated by broad irrigation on a large farm. Water closets are general but many are hand-flushed. A proper cistern is provided as occasion offers.

House refuse is removed by the Council's men, weekly in summer and fortnightly in winter. During this year a weekly collection both in summer and in winter will be provided.

Premises under the control of the Council are well supervised.

Three hundred and seventy houses were inspected under the Housing and Town Planning Act, and three were found unfit for human habitation. No Closing Orders were made. Cottages suitable for the working classes are required, especially at Squirrels Heath and Collier Row.

Three hundred and eighty-four cases of infectious disease were notified, 31 diphtheria, 28 erysipelas, 30 scarlet fever, 3 enteric fever, 2 puerperal fever, 1 poliomyelitis, 37 pulmonary tuberculosis, 25 non-pulmonary tuberculosis, and 227 measles.

SAFFRON WALDEN.

Medical Officer of Health ... WILLIAM ARMISTEAD, M.B.

| | | | |
|---------------------------------------|-----|-------|---------------|
| Area in acres ... | ... | ... | 7,502 |
| Population, 1911 census ... | ... | ... | 6,311 |
| „ 1913 estimated ... | ... | ... | 6,394 |
| Deaths registered in the District ... | ... | ... | 93 |
| Corrections ... Additions ... | ... | ... | 2 |
| „ ... Deductions ... | ... | ... | 20 |
| Nett deaths ... | ... | ... | 75 |
| | | | |
| | | 1913. | Mean 1908-12. |
| Nett death-rate ... | ... | 11·7 | 11·6 |
| Infantile Mortality ... | ... | 50· | 77· |
| Birth-rate ... | ... | 15·6 | 16·5 |

The Borough is in the Cam Valley on the chalk; boulder clay occurs on the higher ground. The district is undulating, varying in level from 150 to 400 feet above O.D.

The water supply is from a well bored 350 feet into the chalk, and owned by the Council. The water is softened and filtered before distribution. Nearly all the houses in the town are supplied from this source, but 71 in the rural area are supplied from wells, and a few from ponds.

As the pressure afforded by the service reservoir was not sufficient to give an adequate supply to the houses in the higher part of the town, a new cast iron tank has been constructed at a level of 353 feet above O.D., at a cost of £2,469, which gives an increased pressure of 20 lbs. per square inch.

The majority of the houses in the town have been connected to the new sewerage system. Sanction has been given to the borrowing of £1,250 for additional work in connection with the sewerage and sewage disposal works.

Most of the houses have water closets with proper flushing cisterns. There are 5 pail closets and 88 privies, chiefly in the rural part of the district.

House refuse is removed weekly by the Council's men. In most cases sanitary dustbins are provided.

Premises under the control of the Council are well supervised.

One hundred and twenty houses have been inspected under the Housing and Town Planning Act. One closing order was made.

Thirty-one cases of infectious disease were notified, 1 diphtheria, 6 erysipelas, 6 scarlet fever, 1 poliomyelitis, 5 pulmonary tuberculosis, 8 non-pulmonary tuberculosis, and 4 chicken-pox.

SHOEBURYNESS.

Medical Officer of Health ... M. H. RAPER, M.D., D.P.H.

| | | | | |
|-----------------------------------|-----|------------|-------|---------------|
| Area in acres | ... | ... | 1,039 | |
| Population, 1911 census | ... | ... | 5,006 | |
| „ 1913 estimated | ... | ... | 5,200 | |
| Deaths registered in the District | ... | ... | 49 | |
| Corrections | ... | Additions | ... | 8 |
| „ | ... | Deductions | ... | 0 |
| Nett deaths | ... | ... | ... | 55 |
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | .. | 10·9 | ... 9·5 |
| Infantile Mortality | ... | ... | 115·3 | ... 82·6 |
| Birth-rate | ... | ... | 30· | ... 33·8 |

The birth-rate is very high in this district and in part accounts for the high infantile mortality. The chief occupations are navigation, agriculture, brick-making, work on the War Department's works, and on the Tilbury branch of the Midland Railway.

Sewerage System. This is being overhauled and one of the outfalls has been improved. The two main sewers are each connected with a receiving reservoir, which discharges at certain states of the tide. The main sewer wants extending along the Wakering Road.

Scavenging. This is said to be satisfactorily performed. There are still 41 pail closets and 18 pit privies in this district.

Water Supply. The new pumping plant is proving satisfactory. Sand is no longer drawn up with the water.

Housing Accommodation. There are few houses to let but the sanitary condition of the cottages generally is satisfactory. [Although not mentioned by the Medical Officer of Health there is a want of cottages here and the subject is being considered by the Council.]

Holiday Children. About 1,000 children from London were staying in the district during the summer, but only one case of infectious disease occurred amongst them.

Dairies, Bakehouses, etc. All said to be satisfactory.

SOUTHEND-ON-SEA.

Medical Officer of Health ... C. GRANT PUGH, M.D., B.SC., D.P.H.

| | | | |
|-----------------------------------|-----|--------|-------------------|
| Area in acres ... | ... | 7,083 | |
| Population, 1911 census ... | ... | 70,676 | |
| „ 1913 estimated | ... | 80,968 | |
| | | | (including Leigh) |
| Deaths registered in the District | ... | 788 | |
| Corrections ... Additions | ... | 121 | |
| „ ... Deductions | ... | 73 | |
| Nett deaths ... | ... | 836 | |
| | | | |
| | | 1913. | Mean 1908-12. |
| Nett death-rate ... | ... | 10·3 | 10·65 |
| Infantile mortality ... | ... | 82· | 86·4 |
| Birth-rate... .. | ... | 18·3 | 20· |

This Borough may be considered as an aggregate of five small towns, Leigh, Westcliff, Southend, Southchurch, and Thorpe Bay. The latter and most recently developed portion of the Borough promises to become as popular as Westcliff. During the summer months there is an average of 30,000 temporary visitors, and on some days there may be 90,000 day trippers. The town has become a favourite place of residence for persons retiring from business, the short railway journey to London rendering the latter easy of access for elderly men who may require to visit the city on one or two days only a week.

House Accommodation, etc. The building bye-laws of this progressive and up-to-date town are now antiquated and their alteration has been under consideration since 1909. The Medical Officer of Health says: "It is to be regretted that more rapid progress has not been made in the matter." Owing to the high price of land few houses are erected to let at a rental of less than £28 to £32 per annum. The result is that houses are let to two or more families, and there is an absence of satisfactory sanitary accommodation for the extra family or families. The demand for smaller houses is minimised by the desire of the artizan class to have a house large enough to permit of rooms being let to visitors in the summer. The forty cottages owned by the Corporation leave a deficiency of about 1s. per week per house. There is a house famine at the present time, and the Council is asked to consider the desirability of providing more houses for the working classes, especially as there is some land available forming part of the area acquired when the first forty were erected.

House Refuse and Scavenging. Collection is bi-weekly in all parts save Leigh. At this place the scavenging has been done by a contractor, but when his contract expires (March, 1914) all the work will be done by the Council's own men. At present the refuse is "tipped," but the destructor at the site of the new sewage works is completed and will be brought into use early this year. The common type of ashbin is so flimsy that the Council has obtained powers to insist upon stronger and more serviceable bins being provided.

Sewerage, etc. "The new sewage treatment works, the construction of which was sanctioned by the Southend-on-Sea Corporation Act, 1909, are nearing completion and will be ready for use before the commencement of the summer season. The effluent, which will be of great chemical purity will be discharged into the Thames Estuary through a new outfall, the mouth of which will be $1\frac{1}{2}$ miles below high water mark, and 150 yards below low water mark."

Offensive Trades. The Council are seeking the approval of the Local Government Board to an Order extending largely the list of offensive trades. The Board has refused to allow brick-making to be scheduled as an offensive trade.

Slaughterhouses. A committee appointed to consider the question of providing a public abattoir made enquiries amongst the butchers, and concluded that such a building was not required.

Water Supply. This is furnished by the Southend Water Co. and the service throughout the year has been constant and no complaint of any kind has been received.

Food Supply. All articles of food of a perishable nature are subject to inspection and as a rule anything unsound is voluntarily surrendered. The amount of chilled meat sold in the Borough increases each year, and as such meat has already been subject to skilled examination at the London markets, unsound meat is now rarely exposed for sale in the Borough. The making of ice cream can be controlled by the Southend-on-Sea Corporation Act, 1913, and during the coming season an improvement will be effected in the conditions under which the trade is carried on.

Dairies and Cowsheds. No arrangements have been made for the veterinary inspection of cows. No samples of milk have been examined for the tubercle bacillus.

Isolation Hospital. The new nursing home and administrative block was completed in the autumn, and the erection of an 18-bed pavilion is now being proceeded with. The land upon which the temporary small-pox hospital stands will shortly be needed for cemetery purposes.

TILBURY.

Medical Officer of Health ... A. H. FOWLER, M.R.C.S.

| | | | |
|-----------------------------------|-----|------------|-------|
| Area in acres | ... | ... | 1,855 |
| Population, 1911 census | ... | ... | 6,432 |
| " 1913 estimated | ... | ... | 7,588 |
| Deaths registered in the District | ... | ... | 68 |
| Corrections | ... | Additions | 16 |
| " " | ... | Deductions | 8 |
| Nett deaths | ... | ... | 76 |

| | | | 1913. | Mean 1908-12. |
|---------------------|-----|-----|-------|---------------|
| Nett death-rate | ... | ... | 10·1 | ... No record |
| Infantile Mortality | ... | ... | 72· | ... „ |
| Birth-rate | ... | ... | 32·6 | ... „ |

This district, which was formed in 1912, comprises the Parish of Chadwell St. Mary and is divided into two wards. The South Ward, or Tilbury proper, is practically marsh land, below high water level. The North Ward is on a higher level.

Water supply in South Ward and part of North Ward is from the South Essex Water Company's mains. The cottages belonging to the London, Tilbury and Southend Railway are supplied from a spring belonging to the Company. There are several shallow wells in the North Ward.

The sewage from the South Ward is treated at the Grays Sewage Works. Cesspools in the North Ward are emptied by a contractor.

Many of the closets are fitted with long hopper pans. These are being replaced by good type closets as opportunity occurs.

House refuse is removed by a contractor, once a week from dwelling houses, twice a week from eating houses, etc., and four times a week from the model dwellings.

Premises under the control of the Council are regularly inspected.

Many of the houses are in a more or less insanitary condition and several of them have been improved during the year.

The Council contemplate erecting 234 houses, 204 in the South Ward and 30 in the North Ward.

Fifty-eight cases of infectious disease have been notified, 4 diphtheria, 4 erysipelas, 26 scarlet fever, 1 puerperal fever, 13 pulmonary tuberculosis, and 10 non-pulmonary tuberculosis.

WALTHAM HOLY CROSS.

Medical Officer of Health ... J. DAMER-PRIEST, M.R.C.S., D.P.H.

| Area in acres | ... | ... | ... | 11,070 |
|-----------------------------------|-----|------------|-------|---------------|
| Population, 1911 census | ... | ... | ... | 6,796 |
| „ 1913 estimated | ... | ... | ... | 6,850 |
| Deaths registered in the District | ... | ... | ... | 68 |
| Corrections | ... | Additions | ... | 10 |
| „ | ... | Deductions | ... | 5 |
| Nett deaths | ... | ... | ... | 73 |
| | | | | |
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | ... | 10· | ... 11·1 |
| Infantile Mortality | ... | ... | 84· | ... 85· |
| Birth-rate | ... | ... | 18·9 | ... 20·2 |

The water supply is from the East London Water Works Company. During the year the supply, which was originally derived from a deep well in Lea Road, has been mixed with a second supply from a boring at Ramney Marsh Lock. Complaint is made regarding this water, it is stated to be unpalatable, deficient in aeration, not of the same organic purity as the original unmixed supply, and contains a large quantity of iron in suspension and solution. It is, however, bacteriologically, very pure.

Three hundred and thirty houses have been inspected under the Housing and Town Planning Act, and 2 were found unfit for human habitation. No closing orders were made.

The sewage disposal works continue to act satisfactorily and the effluent obtained is of an average degree of purity. Owing to the increased quantity of sewage a third filter bed may be required. Several improvements have been carried out at the works.

Premises under the control of the Council are regularly inspected.

The removal of house refuse is satisfactory, but it appears that a destructor would be of service.

One hundred and eighty-six cases of infectious disease have been notified, 5 diphtheria, 3 erysipelas, 23 scarlet fever, 2 enteric fever, 2 poliomyelitis, 14 pulmonary tuberculosis, 38 non-pulmonary tuberculosis, 40 chicken-pox, and 59 measles.

The provision of a tuberculosis dispensary at Waltham Abbey is advocated.

WALTHAMSTOW.

Medical Officer of Health ... J. J. CLARKE, L.R.C.P., D.P.H.

| | | | |
|-----------------------------------|-----|------------|---------------|
| Area in acres | ... | ... | 4,343 |
| Population, 1911 census | ... | ... | 124,580 |
| „ 1913 estimated | ... | ... | 131,636 |
| Deaths registered in the District | ... | ... | 943 |
| Corrections | ... | Additions | 408 |
| „ | ... | Deductions | 17 |
| Nett deaths | ... | ... | 1,334 |
| | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | 10·1 | 10·45 |
| Infantile Mortality | ... | 78·5 | 91·6 |
| Birth-rate | ... | 24·8 | 26·8 |

In this, as in other areas near London, nearly one-third of the total deaths belonging to the district occur in institutions beyond its border.

The area actually built upon is 1442½ acres, and 1,680 acres remain for development. Marsh land, forest, reservoirs, etc., constitute the remainder of the area. The subsoil is mainly gravel. The surface is undulating, varying from + 18 O.D. to + 230 O.D.

Of the six wards into which the district is divided, Hoe Street is chiefly residential, whilst St. James Street and Wood Street Wards contain the poorest section of the community. The district is one of London's dormitories, and is well served by electric trams, motor buses, trains, etc.

Housing Accommodation. This appears to be adequate. The houses occupied by the working classes are mostly modern and convenient, and there is very little overcrowding. Under the Housing Acts 1,326 dwellings were inspected, but not one was found unfit for human habitation.

Water Supply. The supply is from the Metropolitan Water Board and is constant. The public baths are appreciated and the Medical Officer of Health says: "It is difficult to overestimate the good effect on the public health."

Cowsheds, Slaughterhouses, etc. During the year the Medical Officer of Health and a veterinary surgeon visited all the cowsheds in the district. Very little of the milk sold in the district is produced within it. The slaughterhouses are maintained in good order and the times of slaughtering are arranged with the Inspector. This enables more efficient supervision of the animals killed.

House Refuse and Scavenging. There is a bi-weekly collection of house refuse, whilst shop refuse is collected three times a week. The work is done by men employed by the Council.

Offensive Trades. New bye-laws regulating these came into force in October; they include those of glue-maker and gut-scraper besides the six enumerated in the Public Health Act. Under the Public Health (Amendment) Act of 1907 the trades of rag and bone dealing, fish frying and fish curing have been declared offensive.

Sewage Disposal. A joint application by the Walthamstow and Leyton Urban Councils for the reception of the sewage of these districts into the Metropolitan system is under the consideration of the London County Council. The sewage farm has given rise to no complaints.

Isolation Hospital. This institution, known as the "Sanatorium," is in the Chingford district. It has been enlarged by the addition of a ward block for consumptive patients. The "cubicle" block is found to answer every expectation. The Medical Officer of Health says: "Without this block it would have been impossible during the year to deal with the same numbers as were actually sent in, as many of them were complicated with measles, whooping cough or chicken-pox, whilst others sent in as doubtful cases of scarlet fever proved to be diphtheria and vice versa." The question of the adequacy of the present accommodation is discussed and the Medical Officer of Health concludes that "if every parent has a right to treatment and removal of his children in hospital when suffering from scarlet fever, and this right is not denied, the present accommodation will directly prove inadequate."

An appendix contains useful information of local interest from the 1911 census returns.

The report of the Chief Sanitary Inspector, Mr. West is also given in full.

WALTON-ON-THE-NAZE.

Medical Officer of Health ... J. C. BROCKWELL, M.R.C.S., L.R.C.P.

| | | | | |
|-----------------------------------|-----|------------|-------|---------------|
| Area in acres | ... | ... | ... | 2,046 |
| Population, 1911 census | ... | ... | ... | 2,172 |
| „ 1913 estimated | ... | ... | ... | 2,209 |
| Deaths registered in the District | ... | ... | ... | 19 |
| Corrections | ... | Additions | ... | 7 |
| „ | ... | Deductions | ... | 4 |
| Nett deaths | ... | ... | ... | 22 |
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | ... | 9·9 | 10·9 |
| Infantile Mortality | ... | ... | 47· | 103· |
| Birth-rate | ... | ... | 19· | 19·7 |

The district is one of the driest and sunniest in the United Kingdom. The soil is mostly clay; a large gravel bed occurs.

The housing accommodation for the working classes is good. There is a demand for houses of a larger type.

The sewage is collected in storage tanks, and is discharged into the sea on the night ebb tide. There have been occasional complaints of smells from the sewer.

The water supply is from the Tendring Hundred Waterworks Co. It is of good quality and ample in amount.

House refuse is removed by a contractor. The Medical Officer of Health thinks an improvement would result if the Council employed their own staff.

One case of diphtheria, 1 of pulmonary tuberculosis, and 1 of non-pulmonary tuberculosis have been notified.

Cases can be removed to Colchester Isolation Hospital when required.

WANSTEAD.

Medical Officer of Health ... F. ARGLES, M.R.C.S., L.R.C.P.

| | | | | |
|-----------------------------------|-----|------------|-------|---------------|
| Area in acres | ... | ... | ... | 1,679 |
| Population, 1911 census | ... | ... | ... | 13,813 |
| „ 1913 estimated | ... | ... | ... | 15,469 |
| Deaths registered in the District | ... | ... | ... | 119 |
| Corrections | ... | Additions | ... | 24 |
| „ | ... | Deductions | ... | 4 |
| Nett deaths | ... | ... | ... | 139 |
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | ... | 8·9 | 7·8 |
| Infantile Mortality | ... | ... | 61·7 | 52·4 |
| Birth-rate | ... | ... | 15·7 | 16·7 |

The extraordinary low death-rate for this Urban District is in a great measure due to the fact that there are large orphanages and cottage homes within the area and it seems possible also that the population is over-estimated. Under normal conditions a death-rate averaging for a series of years so low a figure as 7·8 is impossible.

Housing Conditions. This is a better class residential district and building operations are confined to the erection of good class houses. Whether more houses for the working classes are required causes a conflict of opinion, but it appears to be receiving the consideration of the Urban Council. In the development of estates roads of ample width are being laid out.

Sewerage and Sewage Disposal. The erection of Webb's sewer ventilation lamps in various parts of the district has considerably minimised the number of complaints concerning sewer gas. The new bacterial installation at the sewage works approaches completion.

Scavenging. House refuse is collected weekly by a contractor. The work does not appear to be done in a satisfactory manner, and the Council is urged to consider the question of effecting improvements when the contract expires, (March, 1914.)

Improvements are chronicled as the result of the Sanitary Inspector's energy, but the Medical Officer of Health says the many additional duties recently put upon him "must of necessity curtail greater progress in this important direction" (housing inspection).

WITHAM.

Medical Officer of Health ... KARL C. GIMSON, M.B., B.C.

| | |
|---------------------------------------|---------------------|
| Area in acres | 3,713 |
| Population, 1911 census | 3,480 |
| „ 1913 estimated | 3,485 |
| Deaths registered in the District ... | 52 |
| Corrections ... Additions ... | 6 |
| „ ... Deductions ... | — |
| Nett deaths | 58 |
| | 1913. Mean 1908-12. |
| Nett death-rate | 16·6 ... 12·5 |
| Infantile Mortality | 134· ... 64· |
| Birth-rate | 19·2 ... 18·7 |

The water supply is from deep wells and continues to be satisfactory in every way.

The sewers have occasionally been known to overflow at one point in wet weather. The sewage is treated by broad irrigation on a farm which consists of about 40 acres of land. Some sewage may get into the River Blackwater during heavy floods.

No houses have been inspected under the Housing and Town Planning Act. The Inspector of Nuisances not having been appointed inspector under the Housing and Town Planning Act has not kept any records. The question of erecting cottages has been considered by the Council, but as they could not be maintained without creating a burden on the rates the matter has not been proceeded with.

House refuse is removed weekly by the Council's men. Ash pits are emptied as required.

New bye-laws are required for Nuisances, Cowsheds, and Slaughterhouses.

Nine cases of infectious disease have been notified, 1 diphtheria, 1 erysipelas, 2 enteric fever, 4 pulmonary tuberculosis, and 1 non-pulmonary tuberculosis.

WIVENHOE.

Medical Officer of Health ... G. T. KEVERN, M.R.C.S., L.R.C.P.

| | | |
|--|-------|---------------|
| Area in acres | ... | 1,564 |
| Population, 1911 census | ... | 2,376 |
| „ 1913 estimated | ... | 2,500 |
| Deaths registered in the District | ... | 29 |
| Corrections ... Additions | ... | 14 |
| „ ... Deductions | ... | — |
| Nett deaths | ... | 43 |
| | 1913. | Mean 1908-12. |
| Nett death-rate | 17·2 | 10·1 |
| Infantile Mortality | 79· | 99· |
| Birth-rate | 15·2 | 15·9 |

The water supply, which is from a deep well in the chalk, is excellent and plentiful.

Pail closets are in general use, and these and the house refuse are scavenged by the Council's men. No mention is made as to disposal of sewage.

Dairies and milk shops have been periodically inspected.

Eight cases of infectious disease have been notified, 2 diphtheria, 2 erysipelas, 1 enteric fever, 2 pulmonary tuberculosis, and 1 non-pulmonary tuberculosis.

Cases of infectious disease can be sent to Colchester Isolation Hospital.

WOODFORD.

Medical Officer of Health ... R. F. VERE HODGE, M.D.

| | | | |
|-----------------------------------|-----|------------|---------------|
| Area in acres | ... | ... | 2,161 |
| Population, 1911 census | ... | ... | 18,497 |
| „ 1913 estimated | ... | ... | 19,555 |
| Deaths registered in the District | ... | ... | 158 |
| Corrections | ... | Additions | 50 |
| „ | ... | Deductions | 4 |
| Nett deaths | ... | ... | 204 |
| | | | |
| Nett death-rate | ... | 1913. | Mean 1908-12. |
| | ... | 10·4 | 8·7 |
| Infantile Mortality | ... | 70· | 69· |
| Birth-rate | ... | 19·5 | 21· |

The greater part of this district is on a ridge between the valleys of the Lea and Roding. The soil and subsoil are both of clay, with patches of gravel here and there. The majority of the inhabitants follow their employment in London.

The water supply is from the Metropolitan Water Board's mains, and is both constant and of good quality.

The sewerage system is divided into two, one on each side of the ridge on which the district lies. Both works give a very satisfactory effluent.

House refuse is removed weekly by a contractor.

Housing accommodation is on the whole satisfactory. Three hundred and sixty-eight houses were inspected under the Housing and Town Planning Act. The defects found were chiefly of a minor nature. A closing order was made in respect of four cottages.

The practice of spraying the ponds in the district with paraffin was continued during the year. The number of mosquitoes was found to be markedly diminished.

One hundred and fifty-two cases of infectious disease were notified, 46 diphtheria, 11 erysipelas, 26 scarlet fever, 42 pulmonary tuberculosis, 27 non-pulmonary tuberculosis. Woodford is in the area served by the Waltham Joint Hospital.

III. RURAL DISTRICTS.

BELCHAMP.

Medical Officer of Health ... J. SINCLAIR HOLDEN, M.D.

| | | | |
|-----------------------------------|-----|-------|---------------|
| Area in acres ... | ... | ... | 26,500 |
| Population, 1911 census | ... | ... | 4,676 |
| „ 1913 estimated | ... | ... | |
| Deaths registered in the District | ... | ... | 53 |
| Corrections ... Additions | ... | ... | 12 |
| „ ... Deductions | ... | ... | 2 |
| Nett deaths ... | ... | ... | 63 |
| | | 1913. | Mean 1908-12. |
| Nett death-rate ... | ... | 13·4 | 14·1 |
| Infantile Mortality ... | ... | 94· | 65· |
| Birth-rate ... | ... | 15·8 | 18·4 |

The district is on the chalk, covered on the higher ground with boulder clay, and in the valleys with drift sand and gravel or brick earth. The occupation of the inhabitants is entirely agricultural.

The water supply is exclusively from wells and springs. There are 10 public supplies. One of these at Belchamp Otten was found to be occasionally impure. A new well is therefore to be sunk.

Privy cesspits are gradually being abolished and pail closets substituted. There is no pollution of any of the streams in the district. Sewers exist in a few of the larger villages; they are used for slop and storm water only. The Foxearth Brewery sewage is treated chemically with satisfactory results.

Eighty-seven houses have been inspected under the Housing and Town Planning Act; 60 were considered to be unfit for human habitation. Fourteen closing orders were made.

Several parishes require better class cottages, these are Foxearth, Borley, Belchamp Walter, Gestingthorpe, and Pentlow.

Premises controlled by the Council are regularly inspected, and are found to be maintained in a satisfactory sanitary condition.

Sixteen cases of infectious disease were notified, 2 scarlet fever, 1 diphtheria, 11 pulmonary tuberculosis, and 2 non-pulmonary tuberculosis.

BILLERICAY.

Medical Officer of Health ... J. DOUGLAS WELLS, M.B.

| | | | |
|-----------------------------------|-----|------------|---------------|
| Area in acres | ... | ... | 49,394 |
| Population, 1911 census | ... | ... | 21,557 |
| „ 1913 estimated | ... | ... | 21,557 |
| Deaths registered in the District | ... | ... | 531 |
| Corrections | ... | Additions | 8 |
| „ | ... | Deductions | 337 |
| Nett deaths | ... | ... | 202 |
| | | | |
| | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | 11.6 | 10.8 |
| Infantile Mortality | ... | 56.4 | 64.6 |
| Birth-rate | ... | 17.2 | 22.4 |

There are 23 public institutions in this district with a population of 4,057 and as the Medical Officer of Health deducts the deaths of persons occurring therein he, very properly, deducts the institutional population in calculating the death-rate. The residential population he estimates at 17,500.

Housing Accommodation. There is a lamentable lack of good cottages throughout the district and additional cottages are wanted in Ingrave, East Horndon, Mountnessing, Little Warley, Hutton, Great Burstead, Ramsden Bellhouse, Laindon, North Benfleet, Downham, and Wickford. The Council has erected 7 cottages in Great Burstead and 6 in Ramsden Bellhouse, and lets them at 4s. 6d. per week. The Medical Officer of Health thinks that 2s. 6d. per week is as much as a labourer should be called upon to pay. Of 166 houses inspected under Sec. 17 of the Housing of the Working Classes Act 14 were reported to be unfit for human habitation.

Water Supply. The district is fortunate, very fortunate, in having the mains of two important water companies ramifying therein and supplying an efficient and continuous service. The mains have been extended during the year to supply Little Warley and Childerditch. Water is urgently needed in the parishes of Ingrave and East Horndon. These parishes depend upon shallow wells, some of which are polluted and some of which fail in dry seasons. They can be supplied by the South Essex Company if terms could be arranged.

Sewerage. The scheme for Billericay and part of Mountnessing is completed and is a great boon. The sewerage of Ingrave and East Horndon has been under consideration. It is agreed that the present condition is most unsatisfactory, grossly polluted ditches abounding. The Medical Officer of Health says that a complete scheme estimated to cost £2,000 has been dropped in favour of "additional piping of some of the ditches at a cost of £140." "The best that can be said for this idea is that it carries the nuisance a little further away in most cases, but it does not abate it."

Certain new roads in Billericay want sewerage and the Private Street Works Act has been adopted for the purpose. The hamlet of Little Burstead requires attention.

Inspections. The increasing duties devolving upon the Inspectors seem to necessitate an increased staff or some time saving arrangement to enable the present Inspectors to cope more easily with the work they are called upon to perform.

BRAINTREE.

Medical Officer of Health ... E. BERTRAM SMITH, M.B., B.S., D.P.H.

| | | | | |
|---------------------------------------|-----|-------|--------|---------------|
| Area in acres ... | ... | ... | 62,348 | |
| Population, 1911 census ... | ... | ... | 18,463 | |
| „ 1913 estimated ... | ... | ... | 18,544 | |
| Deaths registered in the District ... | ... | ... | 270 | |
| Corrections ... Additions ... | ... | ... | 10 | |
| „ ... Deductions ... | ... | ... | 23 | |
| Nett deaths ... | ... | ... | 257 | |
| | | 1913. | | Mean 1908-12. |
| Nett death-rate ... | ... | 13·8 | ... | 14· |
| Infantile Mortality ... | ... | 65· | ... | 84· |
| Birth-rate ... | ... | 17·5 | ... | 18·3 |

The subsoil varies, chiefly gravel and loam. In the north-west of the district a good deal of boulder clay exists. Below the subsoil is the London clay.

The chief occupation is agriculture. At Bocking there is a textile factory and an engineering works.

The new waterworks at Bocking were opened during the year. The water is obtained from a deep bore into the chalk.

There are public supplies at Coggeshall, Feering and Kelvedon, at Terling, and at Stisted. The question of a water supply to Hatfield Peverel remains in abeyance. Twenty-six supplies from shallow wells are maintained by the Council.

Several parishes have sewers. At Bocking these discharge almost directly into the river. At Kelvedon the sewerage scheme, which was prepared in 1908, has not been carried out. Pollution of the river occurs there.

Cesspit privies are gradually being converted into pail closets throughout the district.

There is public scavenging at Bocking and Coggeshall. Scavenging is urgently required at Kelvedon.

Premises under the control of the Council are efficiently supervised.

Eighty-two houses were inspected under the Housing and Town Planning Act, 76 were considered unfit for human habitation, and 30 closing orders were made.

Cottages are to be erected by the Council at Bocking, and at White Notley.

The Surveyor and Sanitary Inspector has been provided with extra assistance, so that the housing inspections may be carried out more expeditiously.

One hundred and one cases of infectious disease have been notified, 9 diphtheria, 11 erysipelas, 30 scarlet fever, 2 enteric fever, 1 cerebro-spinal meningitis, 28 pulmonary tuberculosis, and 20 non-pulmonary tuberculosis.

BUMPSTEAD.

Medical Officer of Health ... WILLIAM ARMISTEAD, M.B.

| | | | | |
|-----------------------------------|-----|------------|---------------|--------|
| Area in acres | ... | ... | ... | 11,874 |
| Population, 1911 census | ... | ... | ... | 2,594 |
| „ 1913 estimated | ... | ... | ... | 2,604 |
| Deaths registered in the District | ... | ... | ... | 41 |
| Corrections | ... | Additions | ... | 8 |
| „ | ... | Deductions | ... | — |
| Nett deaths | ... | ... | ... | 49 |
| | | | | |
| | | 1913. | Mean 1908-12. | |
| Nett death-rate | ... | 18·8 | ... | 15·2 |
| Infantile Mortality | ... | 100· | ... | 116· |
| Birth-rate | ... | 23· | ... | 21·9 |

This small Rural District lies in the valley of the Colne and the Stour. The geological formation is chalk, covered on the higher ground with boulder clay, and in the valleys with gravel and alluvium.

There are public water supplies in five out of the six parishes in the district. In no instance is the supply piped.

There is no regular system of sewerage in any of the six villages in the district. At Sturmer there is a short sewer which terminates in tanks, which are periodically cleaned out. At Steeple Bumpstead some of the houses are drained into a sewer which terminates in a filter bed. At Birdbrook the sewer which takes the drainage from several houses has been repaired and partly relaid. Most of the cottages have sufficient gardens for the disposal of slop water.

There is no public scavenging of any kind.

Ninety-one houses were inspected under the Housing and Town Planning Act, and six were considered unfit for human habitation, but are not occupied.

Eleven cases of infectious disease were notified, 6 diphtheria, 2 erysipelas, 2 pulmonary tuberculosis, and 1 non-pulmonary tuberculosis.

CHELMSFORD.

Medical Officer of Health ... J. C. THRESH, M.D., D.SC., D.P.H.

| | | | |
|-----------------------------------|-----|-------|---------------|
| Area in acres ... | ... | ... | 83,045 |
| Population, 1911 census ... | ... | ... | 22,791 |
| „ 1913 estimated | ... | ... | 23,223 |
| Deaths registered in the District | ... | ... | 239 |
| Corrections ... Additions | ... | ... | 36 |
| „ ... Deductions | .. | .. | 14 |
| Nett deaths ... | ... | ... | 261 |
| | | | |
| | | 1913. | Mean 1908-12. |
| Nett death-rate ... | ... | 11.2 | 12.1 |
| Infantile Mortality ... | ... | 59. | 79. |
| Birth-rate ... | ... | 22.6 | 21.4 |

This is a prosperous agricultural district in the centre of the County. There are public waterworks at Great Baddow, Ingatestone, Danbury, Writtle, Great and Little Waltham. At Great Baddow during the autumn the water was found to contain bacillus coli in 1 c.c., and it has been decided to put in a mechanical sand filter. The new waterworks at Broomfield are nearing completion.

The various sewage works have acted satisfactorily during the year. The coke beds at Writtle were cleaned out and one has been converted into a sedimentation tank.

Pollution of the River Chelmer takes place at Broomfield and Little Waltham. The question of sewerage of the latter village was considered by a special committee, but they considered that it would be too costly. The question of sewerage, however, of these two places will have to be faced in the near future. Several pollutions from private houses, etc., have been dealt with.

Pail closets are in general use, but there are many water closets in areas with a proper water supply. Privies with large cesspits are "converted" as occasions offer.

House refuse is scavenged in Great Baddow, Ingatestone, and Widford. Pail closets in Broomfield, Great and Little Waltham.

The scavenging of the populous part of Writtle parish was considered by a Committee, who reported that it was not necessary. This opinion is not endorsed by the Medical Officer of Health.

Premises under the control of the Council are well supervised.

Four hundred and nineteen houses were inspected under the Housing and Town Planning Act, six houses were considered to be unfit for human habitation. Four were voluntarily demolished, two continue to be occupied.

Cottages are being erected by the Council in Danbury, Little Baddow, and Sandon parishes, to the number of 6, 6 and 4 respectively.

Sixty-eight cases of infectious disease were notified, 3 diphtheria, 4 erysipelas, 17 scarlet fever, 1 enteric fever, 1 poliomyelitis, 28 pulmonary tuberculosis, and 14 non-pulmonary tuberculosis.

DUNMOW.

Medical Officer of Health ... E. BERTRAM SMITH, M.B., B.S., D.P.H.

| | | | |
|-----------------------------------|-----|-------|---------------|
| Area in acres ... | ... | ... | 73,503 |
| Population, 1911 census ... | ... | ... | 16,084 |
| „ 1913 estimated | ... | ... | 16,170 |
| Deaths registered in the District | ... | ... | 191 |
| Corrections ... Additions | ... | ... | 10 |
| „ ... Deductions | ... | ... | 2 |
| Nett deaths ... | ... | ... | 199 |
| | | 1913. | Mean 1908-12. |
| Nett death-rate ... | ... | 12·3 | 13·7 |
| Infantile Mortality ... | ... | 60· | 73· |
| Birth-rate ... | ... | 18·5 | 20·7 |

Most of the district lies on the London clay, which covers the chalk. Boulder clay exists in certain areas, and patches of gravel and sand occur. The district drains into the Rivers Chelmer, Blackwater and Roding. The greater part of the population is engaged in agriculture. There is a bacon factory in Dunmow, which is the largest town in the district.

The water supplies at Dunmow and Felstead belong to the Council. Hatfield Broad Oak is supplied by a company obtaining its supply from the Herts and Essex Waterworks. The remaining parts of the district depend upon public and private wells and springs for a supply. No progress has been made with regard to the water supply for Thaxted. The Medical Officer of Health considers the present state of affairs very unsatisfactory.

The Council has accepted a tender for the construction of new sewerage works at Great Dunmow at a cost of £7,150.

At Thaxted the sewerage scheme has been delayed owing to the difficulty in obtaining a site for the disposal works, but as a provisional agreement has just been entered into regarding a piece of land suitable for the purpose, it is hoped rapid progress will now be made. At Hatfield a sewerage scheme is to be carried out; this is due to the fact that pollution of the Pinsey Brook, which is under the jurisdiction of the Lee Conservancy Board, occurred in this parish, and a conviction was obtained against the Council. In several parishes road drains have been converted into sewers.

Privy cesspits are the prevalent type of closet. Forty-six have been "converted" during the year. At Stebbing, owing to the difficulty experienced in getting rid of the pail contents, a scheme was suggested for public scavenging. The Parish Council did not, however, consider that this was necessary.

There is no public scavenging in the district.

Premises under the control of the Council are efficiently supervised.

One hundred and thirty-two houses were inspected under the Housing and Town Planning Act, 12 were considered unfit for human habitation, and 11 closing orders were made. The subject is receiving attention.

New cottages are urgently needed in Felstead and Stebbing. There are no building bye-laws in force in the district, and houses were built during the year without damp courses. The subject is receiving attention.

The Medical Officer considers that the Isolation Hospital should be enlarged.

Eighty-four cases of infectious disease occurred, 6 diphtheria, 9 erysipelas, 39 scarlet fever, 2 enteric fever, 2 poliomyelitis, 22 pulmonary tuberculosis, and 4 non-pulmonary tuberculosis.

EPPING.

Medical Officer of Health ... TREVOR FOWLER, L.R.C.P., D.P.H.

| | | | |
|-----------------------------------|-----|-------|---------------|
| Area in acres ... | ... | ... | 36,705 |
| Population, 1911 census ... | ... | ... | 13,959 |
| „ 1913 estimated | ... | ... | 14,288 |
| Deaths registered in the District | ... | ... | 135 |
| Corrections ... Additions] | ... | ... | 28 |
| „ ... Deductions | ... | ... | 4 |
| „ ... Nett death | ... | ... | 160 |
| | | 1913. | Mean 1908-12. |
| Nett death-rate ... | ... | 11.1 | 11.3 |
| Infantile Mortality ... | ... | 49. | 66. |
| Birth-rate ... | ... | 22.6 | 19.7 |

An agricultural and residential district containing a considerable proportion of forest land. Sub-soil chiefly clay, covered in parts by patches of boulder clay and gravel.

The greater part of the district is supplied by the Metropolitan Water Board and the Herts and Essex Co. The mains of the latter company are shortly to be extended to Netteswell Cross and Burnt Mill. The Parishes of Matching and Epping Green require an improved supply.

New sewerage works are to be constructed at Netteswell Cross and Burnt Mill. The drainage of Sheering Street requires attention. A large number of houses have been connected with the new sewers at Roydon, Potter Street, Thornwood, and North Weald, for each of which districts sewerage works were established during 1912.

House refuse is periodically removed at Harlow, Netteswell, Potter Street, and Chigwell. Public scavenging is required at Theydon Bois.

Premises under the control of the Council are efficiently supervised.

Sixty-one houses were inspected under the Housing and Town Planning Act and two closing orders were made.

One-hundred-and-forty cases of infectious disease were notified, 44 diphtheria, 4 erysipelas, 54 scarlet fever, 2 enteric fever, 1 poliomyelitis, 15 pulmonary tuberculosis, and 20 non-pulmonary tuberculosis.

There is an isolation hospital owned by the urban district and used also by this district.

HALSTEAD.

Medical Officer of Health ... E. BERTRAM SMITH, M.B., B.S., D.P.H.

| | | | | |
|-----------------------------------|-----|------------|-------|---------------|
| Area in acres | ... | ... | ... | 38,712 |
| Population, 1911 census | ... | ... | ... | 10,332 |
| „ 1913 estimated... | ... | ... | ... | 10,367 |
| Deaths registered in the District | ... | ... | ... | 92 |
| Corrections | ... | Additions | ... | 24 |
| „ | ... | Deductions | ... | 2 |
| Nett deaths | ... | ... | ... | 114 |
| | | | | |
| Nett death-rate | ... | ... | 1913. | Mean 1908-12. |
| Infantile Mortality | ... | ... | 11· | 11·7 |
| Birth-rate | ... | ... | 51· | 61· |
| | ... | ... | 16·9 | 20· |

This district used formerly to be divided into two sub-districts, but this year, owing to the district being part of the newly combined north-east Essex combined area, there is only one report.

The area comprises the watershed of the River Colne, subsoil chiefly clay; gravel and sand patches occur in places.

The water supply is from springs and shallow wells; 52 of these are controlled by the Council. The work in connection with a public water supply for Earls Colne has been commenced.

Several parishes have sewers. These in most instances are old road drains or piped-in ditches. At Great Yeldham a portion of the sewer has been relaid and improved. A nuisance, caused by the effluent from a suction-gas plant, has given rise to complaint, and steps have been taken to rectify the matter as far as possible.

The predominating type of closet is the cesspit privy. During the year 19 of these have been converted into pail closets.

There is no public scavenging. The Medical Officer of Health does not think it is required at present in any parish.

Premises controlled by the Council are kept in a fairly satisfactory condition.

Three hundred and thirty-nine houses were inspected under the Housing and Town Planning Act, 13 were considered unfit for human habitation and 7 closing orders were made.

The Council have made application to the Local Government Board for an Order to form a Joint Hospital area for the Halstead Urban and Rural Districts.

Forty-eight cases of infectious disease were notified, 3 diphtheria, 11 erysipelas, 13 scarlet fever, 19 pulmonary tuberculosis, and 2 non-pulmonary tuberculosis.

LEXDEN AND WINSTREE.

Medical Officer of Health ... J. W. COOK, M.D.

| | | | | |
|-----------------------------------|-----|-------------|-------|---------------|
| Area in acres | ... | ... | ... | 69,485 |
| Population, 1911 census | ... | ... | ... | 19,686 |
| „ 1913 estimated | ... | ... | ... | 19,986 |
| Deaths registered in the district | ... | ... | ... | 251 |
| Corrections | ... | Additions | ... | 22 |
| „ | ... | Deductions | ... | 15 |
| „ | ... | Nett deaths | ... | 258 |
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | ... | 12·9 | 12· |
| Infantile Mortality | ... | ... | 82· | 54· |
| Birth-rate | ... | ... | 17·5 | 20·8 |

The district lies on the London clay. There are patches of sand and gravel in certain parishes. Most of the inhabitants are engaged in agriculture but there are seafaring people at Donyland and Mersea.

Rowhedge has a public water supply and this is the only one belonging to the Council. Part of Stanway is supplied from the Colchester mains. The remainder of the district is supplied by shallow wells, some of these are not properly constructed. The scheme which was under the consideration of the Council for the supply of Abberton, Langenhoe, Messing, Salcot, Virley, and West Mersea, appears to be abandoned.

The Village of Dedham is the only place in the district which is properly sewered. There are sewers in several other parishes discharging into ditches or tidal water.

At Rowhedge and West Mersea scavenging is done by a Contractor.

Three-hundred-and-three cottages were inspected under the Housing and Town Planning Act, 10 were found unfit for human habitation and 1 closing order was made.

Premises under the control of the Council are well supervised and kept in a satisfactory sanitary condition.

Seventy-four cases of infectious disease were notified, 1 diphtheria, 9 erysipelas, 12 scarlet fever, 2 enteric fever, 1 puerperal fever, 25 pulmonary tuberculosis, and 24 non-pulmonary tuberculosis.

Cases of infectious disease can by arrangement be sent to the Colchester Isolation Hospital.

MALDON.

Medical Officer of Health ... J. C. THRESH, M.D., D.SC., D.P.H.

| | | | |
|-----------------------------------|-----|-------|---------------|
| Area in acres | ... | ... | 82,342 |
| Population, 1911 census | ... | ... | 16,164 |
| „ 1913 estimated | ... | ... | 16,408 |
| Deaths registered in the District | ... | ... | 160 |
| Corrections ... Additions | ... | ... | 33 |
| „ .. Deductions | ... | ... | 8 |
| Nett deaths | ... | ... | 185 |
| | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | 11·3 | 12·7 |
| Infantile Mortality | ... | 50· | 67· |
| Birth-rate | ... | 19·3 | 22· |

There are a few populous parishes in the district, but a good deal of the area is thinly populated. Most of the inhabitants are engaged in agriculture. At Tollesbury and Bradwell there are fishermen and yachtsmen, and at Heybridge there are large ironworks.

There are three public waterworks with mains ramifying through 12 parishes. In other parts of the district there are deep wells with pumps owned and maintained by the Council. A Local Government Board Inquiry was held in October regarding the Tollesbury water supply, and the scheme has been approved. The Tiptree waterworks mains are to be extended into Tolleshunt D'Arcy parish. In the Purleigh system an overhead tank and other works are to be constructed at Latchingdon, in order to improve the supply to Althorne and Mayland. At Heybridge the waterworks have been completed and a large number of houses connected up.

The sewage works at Tollesbury, Tillingham, and Tolleshunt D'Arcy have given satisfactory results. At Latchingdon the pump is not used as often as it should be. New sewers are to be laid at Southminster.

Pail closets are in general use, and privy cesspits are "converted" as occasion arises.

Public scavenging is carried out by contractors at Tolleshunt D'Arcy, Heybridge Basin, Southminster, and Tollesbury. A scavenger has been appointed for Heybridge.

Premises under the control of the Council are fairly well supervised.

Nine hundred and eighty-eight cottages were inspected, but only a very few of these had proper records taken. Six were found unfit for human habitation and six closing orders were made.

Cottages are badly needed at Little Totham, and in Purleigh parish. It is proposed to erect three pairs of cottages at Tolleshunt Major.

The Surveyor has now control of the waterworks, and as there are several large schemes on hand, the services of an additional officer are urgently needed. Until this is done satisfactory progress with the housing inspection cannot be accomplished.

A water supply for Little Totham is required.

Seventy-three cases of infectious disease were notified, 5 diphtheria, 7 erysipelas, 24 scarlet fever, 23 pulmonary tuberculosis, and 14 non-pulmonary tuberculosis.

About half the district is in the area of the Maldon Joint Hospital Board. The other half has no hospital accommodation.

ONGAR.

Medical Officer of Health ... A. S. DAVID, M.R.C.S., L.R.C.P., D.P.H.

| | | | | |
|-----------------------------------|-----|------------|--------|---------------|
| Area in acres | ... | ... | 47,236 | |
| Population, 1911 census | ... | ... | 10,647 | |
| „ 1913 estimated | ... | ... | 10,750 | |
| Deaths registered in the District | ... | ... | 99 | |
| Corrections | ... | Additions | ... | 17 |
| „ | ... | Deductions | ... | 1 |
| Nett deaths | ... | ... | ... | 115 |
| | | 1913. | | Mean 1908-12. |
| Nett death-rate | ... | 10·7 | ... | No returns |
| Infantile Mortality | ... | 38· | ... | 69· |
| Birth-rate | ... | 21·8 | ... | 20·6 |

This is a purely agricultural district. The Herts. and Essex Water Company supply the parishes of Chipping Ongar, Bobbingworth, Greensted, Lambourne and parts of Stanford Rivers and Theydon Mount. The Company's mains have recently been extended to High Ongar village. Shallow wells and occasionally ponds are utilized elsewhere.

There are sewers and sewage works at Chipping Ongar and Abridge. The effluent flows into the Roding. Toot Hill is sewered. The sewerage of High Ongar village has been decided on. Plans for the sewerage of Blackmore are now before the Local Government Board.

The only place scavenged in the district is Chipping Ongar, the refuse being destroyed in a kiln at the sewage works.

Premises under the control of the Council are efficiently supervised.

One hundred and nine houses were inspected under the Housing and Town Planning Act. None were considered to be unfit for human habitation.

Forty-six cases of infectious disease have been notified, 3 diphtheria, 5 erysipelas, 19 scarlet fever, 11 pulmonary tuberculosis, and 8 non-pulmonary tuberculosis.

Arrangements have been made by the Council with the Romford and Waltham Hospital Boards whereby cases of infectious disease can be admitted into these hospitals when necessary.

ORSETT.

Medical Officer of Health ... W. ALLINGHAM, M.R.C.S., L.R.C.P.

| | | | | |
|-----------------------------------|-----|------------|-------|---------------|
| Area in acres | ... | ... | ... | 37,948 |
| Population, 1911 census | .. | ... | ... | 18,445 |
| „ 1913 estimated | ... | ... | ... | 18,445 |
| Deaths registered in the district | ... | ... | ... | 188 |
| Corrections | ... | Additions | ... | 20 |
| „ | ... | Deductions | ... | 29 |
| Nett deaths | ... | ... | ... | 179 |
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | ... | 9.7 | 11.2 |
| Infantile Mortality | ... | ... | 62.7 | 86.8 |
| Birth-rate | ... | ... | 25.0 | 26.0 |

Most of the district is flat and low-lying but at Langdon Hills the elevation is + 385 ft. O.D. Chalk outcrops at the southern boundary.

Housing. According to the table given over 110 new houses have been erected during the year. Such being the case the population is now about 19,000. Cottages are needed at West Thurrock and Aveley. Most development appears to be taking place in the riverside parishes of Little Thurrock and Stanford-le-Hope. About 200 houses have been inspected during the year, but only four were reported as unfit for human habitation. These were closed. There is a difficulty in dealing with defective cottages on account of the want of cottages in some villages. The Medical Officer of Health thinks that if Tilbury and other parishes were properly provided with houses there would be "less, if any, need for increased accommodation in the outside parishes."

Sewerage. A new system of sewage disposal has been completed at Orsett. The sewage passes through a screening chamber, two septic tanks and a humus tank, and then over 6 acres of land. The disposal of the sewage at West Thurrock and South Stifford remains to be dealt with by the Joint Board.

Scavenging. Public scavenging is undertaken at Aveley, North and South Ockendon, West Thurrock, Little Thurrock, and South Stifford. The Council now employ two men to empty cesspools and pail closets.

Hospital. This is about to be enlarged. Patients are only removed when proper isolation at home is impossible or when the condition of the homes is such that proper nursing cannot be obtained.

Water Supply. Most of the area is supplied by the South Essex and the Southend Water Companies. Sixty-four water certificates were granted during the year.

Trades and Premises under supervision. The Inspector visits frequently and the premises generally are found in a cleanly condition.

ROCHFORD.

Medical Officer of Health ... M. H. RAPER, M.D., D.P.H.

| | | | |
|-----------------------------------|-----|------------|---------------|
| Area in acres | ... | ... | 55,386 |
| Population, 1911 census | ... | ... | 18,399 |
| „ 1913 estimated | ... | ... | 19,000 |
| Deaths registered in the district | ... | ... | 314 |
| Corrections | ... | Additions | 28 |
| „ | ... | Deductions | 64 |
| Nett deaths | ... | ... | 278 |
| | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | 14·6 | 11·2 |
| Infantile Mortality | ... | 74· | 79· |
| Birth-rate | ... | 20·5 | 24· |

The district includes a large area of marsh land and a number of islands, separated by creeks of tidal water. The subsoil is mainly clay.

Benfleet, Rayleigh, Hadleigh, Rochford, and the villages of Hawkwell and Hockley are supplied from a deep well owned by the Council at South Benfleet. Great Wakering is supplied by the Southend Water Company. Water mains have been laid in Hadleigh and 38 houses have been connected up, the old wells have been closed.

[These works have now been taken over by the Southend Water Co.]

A scheme has been prepared for the sewerage of the Parish of Rochford. The estimated cost is £9,000.

The scavenging contracts remain as in previous years.

The Council propose erecting four houses in the parish of Great Stambridge.

Premises under the control of the Council are inspected regularly.

Fifty-two houses were inspected under the Housing and Town Planning Act and one was closed.

One hundred and twenty-eight cases of infectious disease were notified, 44 diphtheria, 23 scarlet fever, 6 enteric fever, 3 puerperal fever, 33 pulmonary tuberculosis, and 19 non-pulmonary tuberculosis.

ROMFORD.

Medical Officer of Health ... A. WRIGHT, M.R.C.S.

| | | | | |
|-----------------------------------|-----|------------|-------|---------------|
| Area in acres | ... | ... | ... | 32,245 |
| Population, 1911 census | ... | ... | ... | 25,287 |
| „ 1913 estimated | ... | ... | ... | 26,840 |
| Deaths registered in the District | ... | ... | ... | 193 |
| Corrections | ... | Additions | ... | 54 |
| „ | ... | Deductions | ... | 13 |
| Nett deaths | ... | ... | ... | 234 |
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | ... | 8·7 | 10·25 |
| Infantile Mortality | ... | ... | 60· | 86· |
| Birth-rate | ... | ... | 21·8 | 24·8 |

This district includes several large and populous parishes almost of an urban character. Market gardening is the chief industry, but there are numerous manufactories of various kinds, and on the river side a great deal of house refuse from London is tipped.

Housing. There is need of cottages for work people employed in the district. The better class artizan dwellings are chiefly occupied by people who do not work in the locality. The Council is erecting 18 cottages at Hornchurch, close to the village, and if the experiment is successful others may be erected elsewhere. The rental will probably be 5s. 3d. per week. For some reason cottage building has decreased. A company proposed erecting 200 at Dagenham, but so far only 12 are being erected, and the rental is beyond the means of the ordinary labourer. Twenty-two houses were represented as being unfit for human habitation and three were closed.

Water Supply. Practically the whole of the district is supplied by the South Essex Water Co. The supply is good and constant. Havering village, however, requires a supply.

Sewerage and Drainage. The Dagenham system of sewers drains Chadwell Heath, Beacontree Heath and Dagenham village. At the outfall works the sewage is filtered and passed over land before being discharged into the Thames.

There are three systems of sewers in Hornchurch parish. Harold Wood sewage is treated on bacteriological lines and is discharged into the Ingrebourne near

Upminster. A high level system of sewers drains Hornechurch village, and a low level the north-west part of the parish. The sewage from both gravitates to one outfall at Primrose Wood, where it is bacteriologically treated.

There are sewers and a sewage works at Upminster, but the building of better class houses will necessitate the enlargement of the system.

Great Warley and Rainham each have their sewerage system and sewage purification works.

Excrement Disposal Most of the houses have w.c.s connected to the sewers. Where there are cesspools these are emptied by a motor engine. Such pail closets as exist are emptied by the Council's contractors.

House Refuse Removal. House refuse is removed by contractors, weekly in summer, fortnightly in winter. The Council has recently decided to scavenge weekly both in summer and winter, save in Upminster parish.

Trades and Premises under supervision. The premises upon which an offensive trade was carried on have been burnt down and are to be rebuilt "with all the necessary safeguards against causing such a nuisance as has existed for a long time past." The deposit of house refuse on land adjoining Rainham Road has caused a serious nuisance. The huge accumulation constantly fires and gives off a foul smelling smoke. Steps are being taken to put an end to the nuisance. The Inspector's report for No. 2 District is not so full as it should be.

Hospital Accommodation. The Isolation Hospital belongs to a Joint Board; it is modern, commodious and well managed. A pavilion for 8 tuberculosis patients was erected during the year. The notification of measles does not appear to be a success, 602 cases were notified during the year, but none were removed to the hospital.

SAFFRON WALDEN.

Medical Officer of Health ... WILLIAM ARMISTEAD.

| | | | | |
|---------------------------------------|-----|-------|--------|---------------|
| Area in acres ... | ... | ... | 59,975 | |
| Population, 1911 census ... | ... | ... | 10,812 | |
| „ 1913 estimated ... | ... | ... | 10,820 | |
| Deaths registered in the district ... | ... | ... | 119 | |
| Corrections ... Additions ... | ... | ... | 24 | |
| „ ... Deductions ... | ... | ... | 1 | |
| Nett deaths ... | ... | ... | 142 | |
| | | 1913. | | Mean 1908-12. |
| Nett death-rate ... | ... | 13.1 | ... | 14.4 |
| Infantile Mortality ... | ... | 72. | ... | 69. |
| Birth-rate ... | ... | 19.1 | ... | 20.2 |

This district is underlain by the chalk which is covered by boulder clay on the high ground and gravel in the valley. The chief occupation is agriculture.

The water supply is chiefly from the chalk and a short summary is given of the water supply to each parish. Pond and surface water supplies are fairly numerous.

Pollution of the Cam occurs at Newport and Great Chesterford.

At Rickling and Quendon there is a pipe sewer with settling tank. Newport and Great Chesterford also have sewers. There are many privy cesspits in the district, but they are gradually being converted into pail closets.

There is public scavenging in the village of Great Chesterford.

Premises under the control of the Council are regularly inspected.

Fifty-two cottages were inspected under the Housing and Town Planning Act, 18 were considered unfit for human habitation and 5 closing orders were made.

Cottages are required in the following parishes, Great Chesterford, Chrishall, Clavering, Debden, Hempstead, Langley, Great and Little Sampford, and Hadstock, and the Council are prepared to proceed with a scheme for the erection of cottages provided that it does not cost more than a halfpenny rate.

Application has been made to the Local Government Board for sanction to borrow £3,355 for the purpose of enlarging the Isolation Hospital, providing proper disinfecting apparatus, providing water supply from the town's main, and laying new drains.

Twenty-seven cases of infection disease were notified, 1 small pox, 3 diphtheria, 3 erysipelas, 8 scarlet fever, 2 poliomyelitis, 9 pulmonary tuberculosis, and 1 non-pulmonary tuberculosis.

STANSTED.

Medical Officer of Health ... R. A. DUNN, M.D., D.H.Y., D.P.H.

| | | | |
|-----------------------------------|-----|------------|---------------|
| Area in acres | ... | ... | 22,954 |
| Population, 1911 census | ... | ... | 7,066 |
| „ 1913 estimated | ... | ... | 7,100 |
| Deaths registered in the District | ... | ... | 74 |
| Corrections | ... | Additions | 21 |
| „ | ... | Deductions | 1 |
| Nett deaths | ... | ... | 94 |
| | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | 13.2 | 12.7 |
| Infantile Mortality | ... | 80. | 71. |
| Birth-rate | ... | 19.3 | 20.3 |

Stansted is supplied with water by a private water company. At Elsenham a new well, 200 ft. deep into the chalk has been provided, to take the place of four shallow wells which were giving a polluted water. At Birchanger a deep well has also been provided, as the two shallow wells there were found to be polluted. All the other villages are supplied by wells chiefly of the shallow variety.

Stansted is the only village which is sewered. The Liernur system has been adopted, and a satisfactory effluent has been obtained.

The scavenging of Stansted is undertaken by the Parochial Committee.

Two hundred and fifty-four houses were inspected under the Housing and Town Planning Act, four were found unfit for human habitation, but no Closing Orders were made.

Cowsheds, bakehouses, etc., are fairly well kept.

Nine cases of infectious disease were notified—three scarlet fever, one enteric fever and five pulmonary tuberculosis.

There is an isolation hospital, which also serves four Hertfordshire districts.

TENDRING.

Medical Officer of Health ... J. W. COOK, M.D.

| | | | |
|-----------------------------------|-----|------------|--------|
| Area in acres | ... | ... | 73,131 |
| Population, 1911 census | ... | ... | 21,957 |
| „ 1913 estimated | ... | ... | 22,295 |
| Deaths registered in the District | ... | ... | 268 |
| Corrections | ... | Additions | 24 |
| „ | ... | Deductions | 19 |
| Nett deaths | ... | .. | 273 |

| | | | | |
|---------------------|-----|-----|-------|---------------|
| | | | 1913. | Mean 1908-12. |
| Nett death-rate | ... | ... | 12·2 | 12·3 |
| Infantile Mortality | ... | ... | 74·7 | 82·6 |
| Birth-rate | ... | ... | 20·4 | 21· |

The district is chiefly agricultural, malting is largely carried on, and on the coast there is a large sea-faring population.

Housing Accommodation. House inspection has been proceeding for the last three years, but the Inspector has declined to go on with the work, and a special Inspector is to be appointed. Cottages are urgently needed in many parishes. Of 293 examined during the year 19 were reported unfit for human habitation.

Water Supply. The Tendring Hundred Water Company have extended their mains through Great and Little Oakley, but the owners have not laid it on to their property. The main through Weeley has not yet been laid. Clacton is obtaining a supplementary supply for St. Osyth and can supply this parish. Great Bentley is insufficiently supplied from the Clacton works in that parish.

Sewers and Sewerage. Some scheme is being carried out at Lawford and the sewerage of Thorpe and Great Bentley is under consideration. These are the most urgent requirements and should be undertaken without delay. Many polluted ditches drain into the Holland Brook, and sewage is discharged directly into the Stour. There are many old-fashioned privies in the district, and where w.c.s have been provided many are hand-flushed.

Scavenging. A contractor scavenges Lawford, Manningtree, Mistley and Parkeston. Ashbins are not much used. The "filthy dirt-hole placed as near the house as possible is the favourite" means of refuse disposal.

Premises controlled by Bye-laws, etc. Cows are well kept and drainage and water supply of cowsheds looked after. The Medical Officer of Health has power to call in the assistance of a veterinary surgeon whenever required. Bakehouses are in good order. Only one workshop was found in an insanitary condition.

Isolation Hospital. By arrangement infectious cases are sent to Colchester, and a more permanent arrangement is under consideration whereby the Isolation Hospital at Colchester, after enlargement, can be more fully utilized.

1. The first thing I noticed when I stepped
out of the train was the cold air. It was
a sharp contrast to the warm weather of
the South. I had heard that the North was
cold, but I didn't realize how cold it would be.

2. The second thing I noticed was the
noise. It was a constant hum of activity
that I had never experienced before. The
city was alive with the sounds of industry
and commerce.

3. The third thing I noticed was the
people. They were different from the
people I had known in the South. They
were more reserved, more formal, and more
polite.

4. The fourth thing I noticed was the
architecture. The buildings were grand
and imposing, with many stories and
ornate details.

TABLE A.
DEATHS IN EACH DISTRICT CLASSIFIED ACCORDING TO DISEASES.
Corresponding to Table III. of the Local Government Board.
1913.

[illegible]

TABLE B.
DEATHS IN EACH DISTRICT CLASSIFIED ACCORDING TO AGES.
AREA, POPULATIONS 1901 CENSUS, 1911 CENSUS, & 1913 MID-YEAR, & NO. OF BIRTHS.

AREA. POPULATIONS 1901 CENSUS, 1911 CENSUS, 1921 CENSUS, 1931 CENSUS, 1941 CENSUS, 1951 CENSUS, 1961 CENSUS, 1971 CENSUS, 1981 CENSUS, 1991 CENSUS, 2001 CENSUS, 2011 CENSUS, 2021 CENSUS, 2031 CENSUS, 2041 CENSUS, 2051 CENSUS, 2061 CENSUS, 2071 CENSUS, 2081 CENSUS, 2091 CENSUS, 2101 CENSUS, 2111 CENSUS, 2121 CENSUS, 2131 CENSUS, 2141 CENSUS, 2151 CENSUS, 2161 CENSUS, 2171 CENSUS, 2181 CENSUS, 2191 CENSUS, 2201 CENSUS, 2211 CENSUS, 2221 CENSUS, 2231 CENSUS, 2241 CENSUS, 2251 CENSUS, 2261 CENSUS, 2271 CENSUS, 2281 CENSUS, 2291 CENSUS, 2301 CENSUS, 2311 CENSUS, 2321 CENSUS, 2331 CENSUS, 2341 CENSUS, 2351 CENSUS, 2361 CENSUS, 2371 CENSUS, 2381 CENSUS, 2391 CENSUS, 2401 CENSUS, 2411 CENSUS, 2421 CENSUS, 2431 CENSUS, 2441 CENSUS, 2451 CENSUS, 2461 CENSUS, 2471 CENSUS, 2481 CENSUS, 2491 CENSUS, 2501 CENSUS, 2511 CENSUS, 2521 CENSUS, 2531 CENSUS, 2541 CENSUS, 2551 CENSUS, 2561 CENSUS, 2571 CENSUS, 2581 CENSUS, 2591 CENSUS, 2601 CENSUS, 2611 CENSUS, 2621 CENSUS, 2631 CENSUS, 2641 CENSUS, 2651 CENSUS, 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TABLE C.
(Corresponding to Table II. of the Local Government Board.)
**NUMBER OF CASES OF DISEASE NOTIFIED IN EACH DISTRICT AND
NUMBER REMOVED TO HOSPITAL.**
1913.

| NAMES OF LOCALITIES. | CASES NOTIFIED IN EACH LOCALITY. | | | | | | | | | | | NUMBER OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY. | | | | | | | | | | | | | | |
|----------------------------|----------------------------------|--|-------------|----------------|---------------|----------------|------------------|------------------|--------------------------|-----------------|----------------------------|---|---------|------------|--|-------------|----------------|---------------|----------------|------------------|------------------|--------------------------|-----------------|----------------------------|---------------------------------|---------|
| | Small-pox. | Diphtheria and Membranous Croup. | Erysipelas. | Scarlet Fever. | Typhus Fever. | Enteric Fever. | Continued Fever. | Puerperal Fever. | Cerebro-Spinal Fever. | Polio-myelitis. | Pulmonary Tuberculosis. | Other forms of Tuberculosis. | TOTALS. | Small-pox. | Diphtheria and Membranous Croup. | Erysipelas. | Scarlet Fever. | Typhus Fever. | Enteric Fever. | Continued Fever. | Puerperal Fever. | Cerebro-Spinal Fever. | Polio-myelitis. | Pulmonary Tuberculosis. | Other forms of Tuberculosis. | TOTALS. |
| URBAN. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BARKING | ... | 36 | 31 | 136 | ... | 4 | ... | 4 | 2 | 9 | 179 | 65 | 466 | ... | 32 | ... | 114 | ... | 4 | ... | ... | ... | 3 | ... | 153 | |
| BRAINTREE | ... | 12 | ... | 3 | ... | 1 | ... | ... | ... | ... | 8 | 5 | 29 | ... | 12 | ... | 3 | ... | 1 | ... | ... | ... | 4 | 1 | 21 | |
| BRENTWOOD | ... | 5 | 4 | 2 | ... | ... | ... | ... | ... | ... | 4 | ... | 15 | ... | 2 | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 4 | |
| BRIGHTLINGSEA | ... | ... | 4 | ... | ... | 2 | ... | ... | ... | ... | 1 | 4 | 11 | ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| BUCKHURST HILL | ... | ... | 1 | 3 | ... | 1 | ... | 2 | ... | ... | 5 | 3 | 24 | ... | 2 | ... | 2 | ... | 1 | ... | ... | ... | ... | ... | 8 | |
| BURNHAM | ... | 1 | 1 | 4 | ... | ... | ... | ... | ... | ... | 6 | 4 | 16 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| CHELMSFORD | ... | 46 | 7 | 16 | ... | 2 | ... | 1 | ... | ... | 40 | 15 | 127 | ... | 40 | ... | 14 | ... | 1 | ... | ... | ... | 14 | 8 | 78 | |
| CRINGFORD | ... | 33 | 2 | 16 | ... | 1 | ... | 1 | ... | ... | 14 | 6 | 72 | ... | 17 | ... | 11 | ... | 1 | ... | ... | 1 | 4 | 5 | 38 | |
| CLACTON | ... | 9 | ... | 33 | ... | ... | ... | ... | ... | ... | 22 | 4 | 68 | ... | 8 | ... | 33 | ... | ... | ... | ... | ... | 5 | ... | 46 | |
| COLCHESTER | ... | 52 | 32 | 98 | ... | 8 | ... | 2 | 3 | ... | 107 | 61 | 363 | ... | 46 | ... | 90 | ... | 6 | ... | ... | ... | ... | ... | 142 | |
| EAST HAM | ... | 258 | 119 | 526 | 1 | 19 | ... | 8 | 6 | 8 | 492 | 196 | 1623 | ... | 219 | 15 | 417 | 1 | 19 | ... | 4 | 3 | 5 | ... | 683 | |
| EPFING | ... | 18 | 1 | 28 | ... | ... | ... | ... | ... | ... | 10 | 1 | 58 | ... | 14 | ... | 25 | ... | ... | ... | ... | ... | 6 | 1 | 46 | |
| FRINTON | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | 1 | 1 | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| GRAYS | ... | 1 | 50 | 8 | 97 | 4 | ... | ... | ... | ... | 46 | 8 | 214 | 1 | 36 | ... | 68 | ... | 4 | ... | ... | ... | 16 | 1 | 126 | |
| HALESTAD | ... | 48 | 1 | 3 | ... | ... | ... | 1 | ... | ... | 10 | 6 | 69 | ... | 42 | ... | 3 | ... | ... | ... | ... | ... | 4 | 2 | 51 | |
| HARWICH | ... | 21 | 5 | 52 | ... | 41 | ... | ... | ... | ... | 14 | 13 | 146 | ... | 18 | ... | 45 | ... | 33 | ... | ... | ... | 6 | ... | 102 | |
| ILFORD | ... | 125 | 32 | 231 | ... | 3 | ... | 4 | ... | ... | 143 | 105 | 643 | ... | 84 | 2 | 191 | ... | 1 | ... | 2 | ... | ... | ... | 280 | |
| LEYTON | ... | 147 | 98 | 537 | ... | 11 | ... | 11 | 2 | 6 | 288 | 195 | 1093 | ... | 106 | 35 | 235 | ... | 9 | ... | 9 | 2 | 2 | 59 | 58 | 515 |
| LOUGHTON | ... | 7 | ... | 3 | ... | 2 | ... | ... | ... | ... | 2 | 3 | 17 | ... | 6 | ... | 2 | ... | 1 | ... | ... | ... | ... | 1 | 11 | ... |
| MALDON | ... | 1 | 2 | 5 | 32 | ... | ... | ... | ... | ... | 23 | 14 | 77 | ... | 1 | ... | 30 | ... | ... | ... | ... | ... | 9 | ... | 42 | |
| ROMFORD | ... | 31 | 28 | 30 | ... | 3 | ... | 2 | ... | ... | 37 | 25 | 157 | ... | 19 | ... | 26 | ... | 2 | ... | ... | ... | ... | ... | 41 | ... |
| SAFFRON WALDEN | ... | 1 | 6 | 6 | ... | ... | ... | ... | ... | ... | 1 | 5 | 27 | ... | ... | ... | 4 | ... | ... | ... | ... | ... | ... | ... | 4 | ... |
| SHOEBURYNESSE | ... | 5 | 2 | 4 | ... | 2 | ... | ... | ... | ... | 7 | 12 | 33 | ... | 3 | ... | 4 | ... | 1 | ... | ... | ... | ... | ... | 8 | ... |
| SOUTHBEND-ON-SEA | ... | 57 | 41 | 110 | ... | 20 | ... | 7 | 2 | 2 | 269 | 169 | 617 | ... | 48 | ... | 85 | ... | 16 | ... | ... | ... | ... | ... | 149 | |
| TILBURY | ... | 4 | 4 | 26 | ... | ... | ... | 1 | ... | ... | 13 | 10 | 58 | ... | 3 | ... | 25 | ... | 1 | ... | ... | ... | ... | ... | 29 | ... |
| WALTHAM HOLY CROSS | ... | 5 | 3 | 23 | ... | 2 | ... | ... | ... | ... | 2 | 14 | 38 | ... | 5 | ... | 23 | ... | 2 | ... | ... | 1 | ... | ... | 31 | ... |
| WALTHAMSTOW | ... | 355 | 80 | 450 | ... | 12 | ... | 10 | ... | 9 | 285 | 189 | 1390 | ... | 251 | 21 | 358 | ... | 11 | ... | 7 | ... | 1 | ... | 649 | ... |
| WALTON-ON-THE-NAZE | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| WANSTED | ... | 1 | 5 | 5 | 29 | ... | ... | ... | ... | 1 | 25 | 22 | 88 | ... | 3 | ... | 17 | ... | ... | ... | ... | ... | 9 | ... | 29 | ... |
| WITHAM | ... | ... | 1 | 1 | ... | 2 | ... | ... | ... | ... | 4 | 1 | 9 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... |
| WIVENHOE | ... | 2 | 2 | ... | ... | 1 | ... | ... | ... | ... | 2 | 1 | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4* | ... |
| WOODFORD | ... | 46 | 11 | 26 | ... | ... | ... | ... | ... | ... | 42 | 27 | 152 | ... | 28 | ... | 17 | ... | ... | ... | ... | ... | ... | ... | 45 | ... |
| TOTAL | 3 | 1389 | 535 | 2326 | 1 | 141 | ... | 54 | 15 | 39 | 2118 | 1151 | 7772 | 2 | 1049 | 73 | 1838 | 1 | 114 | 1 | 22 | 6 | 9 | 140 | 77 | 3336 |
| RURAL. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BELCHAMP | ... | 1 | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 2 | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| BILLERICAY | ... | 27 | 15 | 29 | ... | 1 | ... | 2 | ... | ... | 28 | 10 | 112 | ... | 22 | ... | 27 | ... | 1 | ... | ... | ... | ... | ... | 50 | ... |
| BRAINTREE | ... | 9 | 11 | 30 | ... | 2 | ... | ... | 1 | ... | 28 | 20 | 101 | ... | 8 | ... | 24 | ... | 1 | ... | ... | ... | 10 | 5 | 48 | ... |
| BUMPSTEAD | ... | 6 | 2 | ... | ... | ... | ... | ... | ... | ... | 2 | 1 | 11 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| CHELMSFORD | ... | 3 | 4 | 17 | ... | ... | ... | ... | ... | ... | 1 | 28 | 14 | 68 | ... | 2 | ... | 13 | ... | ... | ... | ... | 5 | 3 | 23 | ... |
| DUMFRIES | ... | 6 | 9 | 39 | ... | 2 | ... | ... | ... | ... | 2 | 22 | 4 | 84 | ... | 5 | ... | 25 | ... | 1 | ... | ... | ... | ... | 38 | ... |
| EPFING | ... | 44 | 4 | 54 | ... | 2 | ... | ... | ... | ... | 15 | 20 | 140 | ... | 40 | ... | 56 | ... | 1 | ... | ... | ... | 7 | ... | 104 | ... |
| HALESTAD | ... | 3 | 11 | 13 | ... | ... | ... | ... | ... | ... | 19 | 3 | 49 | ... | 3 | ... | 8 | ... | ... | ... | ... | ... | 2 | ... | 13 | ... |
| LEXDEN & WINSTREE | ... | 1 | 9 | 12 | ... | 2 | ... | 1 | ... | ... | 25 | 24 | 74 | ... | ... | ... | 6 | ... | 1 | ... | ... | ... | 8 | 9 | 24 | ... |
| MALDON | ... | 5 | 7 | 24 | ... | ... | ... | ... | ... | ... | 23 | 14 | 73 | ... | 4 | ... | 4 | ... | ... | ... | ... | ... | 7 | 3 | 18 | ... |
| ONGAR | ... | 3 | 5 | 19 | ... | ... | ... | ... | ... | ... | 11 | 8 | 46 | ... | 2 | ... | 5 | ... | ... | ... | ... | ... | ... | ... | 17 | ... |
| ROCHFORD | ... | 19 | 5 | 36 | ... | 2 | ... | 3 | ... | ... | 20 | 12 | 97 | ... | 17 | ... | 26 | ... | 2 | ... | 1 | ... | ... | ... | 46 | ... |
| ROMFORD | ... | 44 | ... | 22 | ... | 6 | ... | 3 | ... | ... | 33 | 19 | 128 | ... | 26 | ... | 13 | ... | 3 | ... | ... | ... | ... | ... | 42 | ... |
| SAFFRON WALDEN | ... | 10 | 28 | 64 | ... | 1 | ... | ... | ... | ... | 53 | 28 | 187 | ... | 6 | ... | 50 | ... | 1 | ... | ... | ... | ... | ... | 57 | ... |
| STANSTED | ... | 1 | 3 | 3 | ... | ... | ... | ... | ... | ... | 9 | 1 | 27 | 1 | 2 | ... | 5 | ... | ... | ... | ... | 1 | ... | ... | 9 | ... |
| TENDRING | ... | ... | ... | 3 | ... | 1 | ... | ... | ... | ... | 5 | ... | 2 | ... | ... | ... | 3 | ... | 1 | ... | ... | ... | 2 | ... | 6 | ... |
| TOTAL | 1 | 186 | 115 | 385 | ... | 48 | ... | 9 | 1 | 9 | 356 | 203 | 1313 | 1 | 138 | ... | 276 | ... | 30 | ... | 1 | ... | 1 | 45 | 21 | 513 |

* Disease not given.

TABLE D.
INFANT MORTALITY.
Nett Deaths from stated causes at various Ages under One Year of Age.
1913.

1913

| CAUSE OF DEATH. | URBAN DISTRICTS. | | | | | | | | | | | | RURAL DISTRICTS. | | | | | | | | | | | | |
|----------------------------------|------------------|------------|------------|------------|----------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|----------------------------|---|----------------------------------|------------------|------------|------------|------------|----------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|----------------------------|---|----------------------------------|-------|
| | Under 1 week. | 1-2 weeks. | 2-3 weeks. | 3-4 weeks. | Total under 4 weeks. | 4 weeks and under 3 months. | 3 months and under 6 months. | 6 months and under 9 months. | 9 months and under 12 months. | Total deaths under 1 year. | Percentage of total deaths due to each cause. | Mortality rate per 1,000 Births. | Under 1 week. | 1-2 weeks. | 2-3 weeks. | 3-4 weeks. | Total under 4 weeks. | 4 weeks and under 3 months. | 3 months and under 6 months. | 6 months and under 9 months. | 9 months and under 12 months. | Total deaths under 1 year. | Percentage of total deaths due to each cause. | Mortality rate per 1,000 Births. | |
| Small-pox ... | ... | ... | ... | ... | ... | ... | 1 | 2 | 3 | 21 | 16 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 29 | 19 | | |
| Chicken-pox ... | ... | ... | ... | ... | ... | 1 | 2 | 6 | 19 | 28 | 1.97 | 1.48 | ... | ... | ... | ... | ... | ... | ... | 2 | 1 | 3 | 89 | 56 | |
| Measles ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | .07 | .05 | ... | ... | ... | ... | ... | ... | 5 | 3 | 3 | 8 | 19 | 5.64 | 3.60 | |
| Scarlet Fever ... | ... | ... | ... | ... | ... | 8 | 3 | 11 | 15 | 37 | 2.60 | 1.94 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| Whooping Cough ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 | .14 | .10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| Diphtheria and Croup ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 2 | .14 | .10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| Erysipelas ... | ... | ... | ... | ... | ... | 1 | 3 | 7 | 9 | 20 | 1.41 | 1.05 | ... | ... | ... | ... | ... | ... | ... | 2 | 1 | ... | 3 | 29 | 56 |
| Tuberculous Meningitis ... | ... | ... | ... | ... | ... | 2 | 4 | 1 | 2 | 9 | .63 | .47 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 29 | 19 | |
| Abdominal Tuberculosis ... | ... | ... | ... | ... | ... | 1 | 2 | 4 | 3 | 10 | .70 | .52 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 29 | 19 | |
| Other Tuberculous Diseases ... | ... | ... | ... | ... | ... | 1 | 2 | 4 | 9 | 3 | 20 | 1.41 | 1.05 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 29 | 19 | |
| Meningitis (not Tuberculous) ... | 10 | 7 | 5 | 4 | 26 | 13 | 9 | 11 | 8 | 47 | 4.72 | 3.53 | 7 | 3 | 2 | 2 | 14 | 1 | 4 | 3 | 3 | 25 | 7.43 | 4.73 | |
| Convulsions ... | ... | ... | 1 | 1 | 2 | ... | 2 | 1 | 1 | 6 | .42 | .32 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 29 | 19 | |
| Laryngitis ... | ... | ... | ... | ... | ... | 19 | 19 | 15 | 14 | 30 | 5.93 | 4.22 | ... | 1 | 1 | 2 | 4 | 9 | 5 | 7 | 5 | 30 | 8.91 | 5.68 | |
| Bronchitis ... | 1 | 5 | 1 | 6 | 13 | 34 | 27 | 26 | 38 | 136 | 9.57 | 7.18 | ... | 1 | 1 | ... | 2 | 2 | 8 | 10 | 11 | 33 | 9.79 | 6.24 | |
| Pneumonia (all forms) ... | 1 | 7 | 1 | 2 | 11 | 25 | 41 | 19 | 17 | 104 | 7.31 | 5.49 | ... | ... | ... | ... | ... | 3 | 3 | 2 | 4 | 12 | 3.57 | 2.27 | |
| Diarrhoea ... | ... | ... | 1 | 1 | 2 | 20 | 35 | 16 | 17 | 95 | 6.68 | 5.01 | ... | ... | 1 | ... | 1 | 2 | 3 | 1 | 1 | 8 | 2.37 | 1.51 | |
| Enteritis ... | 3 | 1 | 1 | ... | 2 | 4 | 6 | 1 | 2 | 15 | 1.05 | .79 | ... | ... | ... | ... | ... | 3 | 1 | ... | ... | 1 | 5 | 1.48 | .94 |
| Gastritis ... | 1 | ... | 1 | ... | ... | 9 | 5 | ... | ... | 21 | 1.47 | 1.11 | ... | ... | 1 | ... | 1 | ... | ... | ... | 2 | ... | 2 | .59 | .38 |
| Syphilis ... | 1 | 1 | 2 | 3 | 7 | 2 | ... | 1 | 1 | 4 | .28 | .21 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | 1.48 | .94 | |
| Rickets ... | ... | ... | ... | ... | ... | 9 | 5 | 3 | 1 | 22 | 1.55 | 1.16 | 3 | ... | ... | ... | 3 | 1 | 1 | ... | ... | 3 | .89 | .56 | |
| Suffocation, overlying ... | 1 | 2 | ... | 1 | 4 | ... | ... | ... | ... | 11 | .78 | .58 | 3 | ... | ... | ... | 3 | ... | ... | ... | ... | 7 | 2.08 | 1.32 | |
| Injury at Birth ... | 10 | ... | 1 | ... | 11 | ... | ... | 1 | ... | 15 | 1.05 | .79 | 7 | ... | ... | ... | 7 | ... | ... | ... | ... | 1 | 23 | 6.83 | 4.34 |
| Atelectasis ... | 12 | 2 | ... | ... | 14 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 13 | 3 | 4 | 2 | 1 | 86 | 25.53 | 16.27 |
| Congenital Malformations ... | 45 | 15 | 4 | 4 | 63 | 10 | 9 | 6 | 1 | 94 | 6.61 | 4.96 | 10 | 2 | ... | ... | 1 | 78 | 3 | 4 | ... | 1 | 39 | 11.58 | 7.38 |
| Premature Birth ... | 223 | 22 | 20 | 12 | 277 | 26 | 4 | ... | 1 | 308 | 21.66 | 16.27 | 67 | 6 | 4 | ... | 3 | 14 | 15 | 6 | 1 | 3 | 39 | 11.58 | 7.38 |
| Atrophy, Debility & Marasmus ... | 47 | 28 | 30 | 10 | 115 | 55 | 34 | 12 | 9 | 225 | 15.82 | 11.88 | 8 | 3 | ... | ... | 7 | 2 | 9 | 8 | 2 | 28 | 8.31 | 5.29 | |
| Other causes ... | 24 | 13 | 5 | ... | 42 | 18 | 8 | 11 | 8 | 87 | 6.12 | 4.58 | 5 | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total ... | 379 | 104 | 73 | 47 | 603 | 260 | 232 | 165 | 172 | 1422 | 100.0 | 75.00 | 110 | 16 | 12 | 9 | 147 | 49 | 53 | 43 | 45 | 337 | 100.0 | 63.7 | |