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STAFFORDSHIRE COUNTY COUNCIL.



ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

GEORGE REID, M.D., D.P.H.,

FOR THE YEAR 1894.



STAFFORD:

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STAFFORDSHIRE COUNTY COUNCIL.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH,

Presented to the Council at the Quarterly Meeting,
October 29th, 1895.

INTRODUCTORY.

IN this, my sixth Annual Report, I propose to adhere, so far as collating the reports of District Medical Officers of Health is concerned, to the general plan adopted originally, and deal with the various reports under subject headings, in place of devoting a special summary to each, as is done in some county reports.

Were it not for the fact that the Administrative County contains so many sanitary districts, the latter plan would possibly be the better, but to adopt it, under the circumstances, and at the same time give sufficient prominence to the more important features of each report under review, would necessitate needless repetition, many remarks being equally applicable to several districts.

While this is so, I feel it is desirable that Members of the Council, who may wish to see at a glance the leading features of certain districts, ought to have the means of doing so, and, in order to admit of this, I have again introduced a summary, in tabular form, and in alphabetical order, of the vital statistics and prominent characteristics of each report. These tables, one for urban and the other for rural districts, will be found at the end.

In addition to this, I have indexed the report, so that each question dealt with, whether of general or special significance, may at once be referred to.

The other general tables correspond exactly with those of last year's report.

I take this opportunity of thanking the Medical Officers of Health, who, almost without exception, have fallen in with my suggestions as to the introduction into their reports of certain details, which, from the point of view of the County Council, are of great value. There is still room, however, in some of the reports, for greater detail in the accounts given of the various outbreaks of infectious disease. It is also desirable that corrections should in all cases be made in the statistics of those districts where large public institutions, such as General Hospitals and Union Workhouses, affect the returns to an extent which materially interferes with accurate deductions being drawn from the figures of the districts which contribute to the institutions in question; in many cases these corrections are made, but in a few they are not.

It is satisfactory to be able to record that, in response to the appeals of the County Council, nearly all the annual reports of District Medical Officers of Health are now printed.

In my last Annual Report I gave a short summary of what had been accomplished since the County Council came into existence, more with the view of indicating the lines on which the Sanitary Committee had proceeded than with the hope that so condensed an account could convey an adequate idea either of the work which had been done or the good which had attended it. On this occasion it will not be necessary to make any reference to the work which preceded the year actually under review.

SUMMARY OF THE YEAR'S WORK.

As regards the summary of the sanitary work of the Council, I may point out that it embraces a period of twelve months, ending July, 1895, as the last summary covered the ground up to the end of July of the previous year. So far as that portion of the report which deals with the reports of District Medical Officers of Health is concerned, the period covered embraces 1894 only.

During the year an important step has been taken by the Sanitary Committee, which was rendered necessary by the continued growth of the work having taxed the time of the Committee to an undue extent. Sub-Committees have been appointed to deal provisionally with different branches of the work, and it has thus been possible to devote more detailed attention to matters which have come up for consideration either in my reports or in communications from local authorities. By this means the systematic work has been greatly simplified, while at the same time the Committee has not parted with any responsibility as regards the action it has been thought expedient to take in any given instance, the final decision as to such action resting wholly with the General Committee. The following are the three Sub-Committees which have been appointed:—Rivers Pollution and Sanitary, Isolation Hospitals, and Food and Drugs; they meet as occasion requires, and no matter comes under their notice which does not ultimately come before the General Committee.

The routine work under the Rivers Pollution Prevention Act has proceeded on former lines. The systematic inspection of the rural districts in the county has now been completed, and full reports have been presented as to the methods of sewage disposal and the pollutions which take place in the districts not previously reported upon, namely, the rural districts of Seisdon, Stourbridge (now Kingswinford), Tamworth, Burton-on-Trent (now Tutbury), Blore Heath, Shifnal, Gnosall,

and Walsall. Following the usual practice, these reports, which were the outcome of detailed inspections of the various districts, have been forwarded to the respective Authorities, with a request for categorical replies under each heading as to the steps they proposed to take to remedy the various pollutions recorded. Some have already replied, and others are undertaking enquiries on their own behalf in order to verify the accuracy of the reports previous to considering the steps it will be necessary to take to correct the pollution referred to. As regards the districts previously reported upon, both urban and rural, satisfactory progress has in most cases been made, and improvement either has or will result from the action the County Council have taken.

Among the urban districts where the question of sewage disposal has received special consideration may be mentioned, Lichfield, Perry Barr, Burton-on-Trent, Heath Town, Biddulph, Stoke-on-Trent, Fenton, Leek, Tipton, Willenhall, Rugeley, and the County Boroughs of Hanley, Walsall, and Wolverhampton. In some instances, deputations from Authorities have waited upon the Sanitary Committee or myself in order to discuss proposals either for improving existing methods of sewage disposal or adopting new schemes. In other cases, for example Fenton and Rugeley, I have, by request, attended meetings of the Authorities, with a view of assisting them in arriving at a solution of their difficulties, and in the two instances mentioned I have prepared special reports with that object in view.

As regards the systematic work of inspecting existing sewage disposal works, and the collection of samples of sewage effluents and of river water at fixed points on streams, it has been conducted almost uninterruptedly during the year. In all, 143 analyses have been made, of which 86 were sewage effluents, and the remainder samples of river water. It has been the custom to call the Sanitary Committee's attention to any irregularities which were noted in the management of works, or to exceptionally bad effluents, as shown by analysis, and the responsible authorities in such cases were

invariably communicated with. This has had a salutary effect in keeping those in charge of the works up to the mark, in order that the best results might be obtained by the means at their disposal.

In addition to the work above recorded, the canals in the County have been inspected, and the pollutions met with have been pointed out to the respective canal companies, in order that they might assist the County Council by bringing pressure to bear on defaulting authorities. The canal authorities, on the whole, have taken the matter up warmly, and no doubt considerable good will result from this new departure.

During the year I prepared a summary, for the information of the Committee, of the negotiations which had taken place with local authorities with reference to sanitary matters since the work of the Council began. The Committee were thus able to communicate with the respective authorities with reference to matters which had not been satisfactorily settled hitherto, pointing out, for example, that their specific undertaking to remedy the defects noted in previous reports had not yet resulted in the work being done. By this process the authorities have become aware that when the Council have once taken up a question they are not likely to allow it to drop until some good has been effected, and this knowledge cannot but tend to stimulate local efforts and strengthen the hands of those members of local authorities who are doing their best to bring about sanitary progress.

The Council are aware that their appeal to the Warwickshire County Council to assist in obtaining the necessary information regarding the pollution of the river Tame during its course through that County before it re-enters Staffordshire, resulted in failure. As, however, the river is so seriously polluted after it leaves this County, and returns in such a foul condition, the Sanitary Committee have instructed me to take the necessary steps to arrive at the facts, notwithstanding the refusal of the Warwickshire Council to join in the work. In this work, which involves an inspection not

only of the river itself, but also of its tributaries, I am at present engaged, and as it is likely that a considerable amount of analytical work will be necessary, it will be some time before I shall be in a position to report fully as to the proportionate responsibility attachable to the Warwickshire Authorities through whose districts the streams pass.

As regards the general sanitary work, I am pleased again to be able to record that the occasions on which local authorities and their officers seek my advice when questions of an exceptional nature arise, are becoming more frequent. Among the more important inquiries during the year may be mentioned the water-supplies of Salt and Hopton in the Stafford Rural District, and Cinder Hill in the Coseley Urban District, the former of which involved analysis of no fewer than 88 samples of well water, and the latter 12 samples.

During the year, assisted by the Medical Officers of the West Riding of Yorkshire, Derbyshire, and Stafford Borough, I conducted certain experimental tests with Reck's new disinfecting apparatus, the results of which were embodied in a report copies of which were sent to sanitary authorities throughout the County.

At the request of the Trent Conservancy Board, and with the authority of the Sanitary Committee, I conducted an inquiry into the cause of a serious destruction of fish in the Trent, and, as a result, proceedings were taken by the Conservancy Board against a chemical manufacturer in North Staffordshire, about thirty miles above the point where the fish were destroyed. Unfortunately, the case fell through, owing to a technical objection raised by the defendant to its being heard in the Stipendiary Magistrate's Court. The Sanitary Committee are now considering whether it is desirable that the Council should be asked to sanction steps being taken with a view to an action under the Rivers Pollution Prevention Act.

The question of the provision of an isolation hospital at the County Asylum, Stafford, has been the subject of lengthened communications with the Commissioners in

Lunacy, with whom I differed as to the construction of the building, and I have twice had occasion to interview the Commissioners in London on the subject. I regret to say that we have not yet arrived at an understanding, and the Lunacy Committee, on my advice, have, I understand, decided to postpone the consideration of the question for the present. The following is an extract from my final report to the Lunacy Committee on the subject, from which it will be seen that the question is one which affects the new asylum which is to be erected in North Staffordshire:—

“In the face of this unfortunate disagreement between the Commissioners and myself, it becomes a difficult matter to advise as to the best course to be followed by the Lunacy Committee. On the one hand there is the admitted necessity of providing isolation accommodation, and on the other hand, there are the requirements of the Commissioners to whom the plans have to be submitted, and who, it would appear, are opposed to the erection of a building of modern design. If the difference of opinion involved matters of minor importance only, the Committee might very well give way to the views of the Commissioners, but, as the question is one which involves the principles of isolation hospital construction as laid down by the chief public health authority in the country—the Local Government Board—and in accordance with which every isolation block which has been erected with the sanction of that Board within the last 10 or 15 years has been constructed, I am strongly of opinion that it would not be wise to spend a large sum in the erection of such a hospital as the Commissioners desire, especially in view of the fact that it would not be possible to re-construct the building at any future time so as to bring it up to date.

“I would also point out to the Committee that the difficulty which has arisen is not confined to the Asylum at Stafford, as I find on examining the plans of the Asylum which is about to be built at Cheddleton that the isolation block it is intended to erect there is open to the same objection.

“After carefully considering the question, I have come to the conclusion that under the circumstances it would be wise to delay for the present the erection of a permanent building at Stafford, in the hope that the recently-erected temporary building may meet any requirement that may arise. As regards Cheddleton Asylum, I am also of opinion that the wise course to adopt would be to substitute a temporary building for the permanent one which is shown in the plans.”

Among other matters which have engaged my attention during the year may be mentioned the ventilation and warming and sanitary condition of the prisoners' accommodation at the Shire Hall; the ventilation and warming of the new Technical Instruction Buildings at Stafford; the disposal of sewage at Willenhall Small-pox Hospital and at Burntwood Asylum; enteric fever outbreak in Walsall Rural District, and the drainage of certain houses in the district, the latter on the request of the Aldridge Parish Council; the drainage of certain houses in the Stafford Rural District in consequence of anticipated legal proceedings, and the general sanitary condition of certain houses in the city of Lichfield for a similar reason. I have also attended two Local Government Board Inquiries—one at Stafford, and the other at Wolverhampton—in connection with sewage disposal, and various Boundary Inquiries in which sanitary questions were involved.

In addition to the work shortly detailed above, I have been called in or consulted by Medical Officers of Health and other officers of local authorities on 55 occasions.

In my last Annual Report I published a detailed account of the existing isolation hospital accommodation in the County, in order that the Council might be informed of the requirements of the County in that respect, in view of the extensive powers which had been entrusted to them by the new Isolation Hospitals Act. It was intended that a conference of local authorities should have been held ere now, in order to discuss the general question, in the hope that some

understanding might be arrived at upon which a scheme for establishing hospitals throughout the County might ultimately be framed. Circumstances have interfered with this conference taking place, but it is now likely that it will meet at an early date.

AREA AND POPULATION.

I have no alteration to record, this year, in the area of the Administrative County. Certain Orders of Council have been passed and will soon come into operation which will alter slightly the northern boundary of the county, but this report deals only with existing conditions.

Some alterations of district boundaries have taken place, but I am happy to say that these are of such a character as will not seriously interfere with the continuity of statistics in districts having sufficiently large populations to allow of conclusions being drawn from the mortality and other returns.

The estimated aggregate population is shown in the following table, which also distinguishes the urban from the rural populations, and gives the comparative figures according to the 1891 Census :—

	Census, 1891.	Estimated to middle of 1894.	Increase.	Decrease.
Urban.....	546,700	570,704	24,004	...
Rural	222,796	226,397	3,601	...
Total.....	769,496	797,101	27,605	...

BIRTHS.

The average birth-rate of the whole Administrative County, and of the urban and rural districts respectively, for the six years 1889-94, is shown in the following table, in which corresponding rates for England and Wales, and

for the large towns in England, taken from the Registrar-General's returns, are included:—

DISTRICTS.		BIRTH-RATE PER 1000 OF POPULATION.					
		1889.	1890.	1891.	1892.	1893.	1894.
Staffordshire	Combined Urban and Rural	33·5	32·7	35·7	35·1	35·7	34·3
	Urban.....	35·2	34·5	37·3	36·3	36·6	35·4
	Rural	29·5	28·6	31·6	32·2	33·3	31·6
England and Wales		31·1	30·2	31·4	30·5	30·8	29·6
Large Towns in England		30·9	30·4	32·5	31·8	31·8	30·6

The relatively high birth-rate of Staffordshire, as compared with the rest of England, is undoubtedly to be accounted for, as I have explained in former reports, by the large artisan population of the county, and the consequent predominance of young adults.

The Urban Birth-rates are shown in the statistical tables at the end of this Report, and little need be said about them here beyond pointing out that in six instances—namely, Audley, Brownhills, Cannock, Fenton, Short Heath, and Tunstall—the rates exceed 40 per 1,000 of the population. It will be noticed that in all these cases the populations are made up of artisans.

The Medical Officer of Health for Handsworth gives the following figures showing the rapidity with which the town has grown:—

1871—	Population, 14,947 ;	Houses, 2,790.
1881	„ 22,896 ;	„ 4,801.
1891	„ 32,756 ;	„ 6,771.
1894	„ (estimated) 38,000 ;	„ 7,863.

He states that the birth-rate of this year is 25 per cent. below the rate of twenty years ago, and says that “it has

been pointed out by Dr. Reid that while the persistent low birth-rate in this district for the time helps to keep down the death-rate, owing to the smaller proportion of fragile lives in the population, it will in a few years to come tend to increase the rate of mortality owing to the then greater proportion of the aged, the ratio of deaths at the two extremes of life greatly exceeding those at intermediate periods." This as a general proposition is perfectly correct; but it must be remembered that although during the past twenty years the birth - rate of Handsworth has been distinctly low, the population has increased enormously, a fact which can only be explained by the immigration of families into the district. This being the case, and as Handsworth is largely a residential town, if the population continues to increase at the same rate and by the same process the probability is that a low death-rate will be maintained.

In Stafford, where the birth-rate was 33·7, the Medical Officer of Health points out that it is above the average for the previous ten years, and higher than any year since 1887.

In Tunstall, the Medical Officer of Health states that this year's rate of 40·6 is the highest during the past ten years, whereas in Stoke-on-Trent, where the rate was 30·1, it is said to be the lowest since 1890, a circumstance which is accounted for by depression of trade and a consequent decrease in the number of marriages.

In Seisdon Rural District, where the rate was 24·1, it is said to have been the lowest recorded during the past ten years.

DEATHS.

The number of deaths registered in the Administrative County in 1894 amounted to 12,948, as compared with 14,728 in 1893, 14,746 in 1892, and 15,614 in 1891. This enormous reduction is highly satisfactory, although there are causes which have contributed to it which are exceptional.

The chief of these is the fact that the death-rates of the three previous years were abnormally high, owing to the prevalence of influenza, which was so fatal among all classes of the community, but especially among the aged. This had the effect not only of raising the standard of comparison, but also of greatly reducing the number of the aged and feeble, whose lives might otherwise have been prolonged to swell the death returns of subsequent years. Another cause which has contributed to the decline in the death-rate is the remarkably low mortality from summer diarrhoea which is usually so fatal among infants.

In the following table comparative figures for the past six years are given, together with corresponding figures for the country as a whole, and for town and country districts throughout England.

Death-rate per 1000 population.						
Staffordshire.				England.		
	General.	Urban.	Rural.	General.	Large Towns.	Country Districts*
1889	18·0	18·9	15·4	17·9	19·2	16·5
1890	19·8	20·0	16·3	19·5	21·6	17·5
1891	19·9	20·7	18·1	20·2	22·4	18·5
1892	18·8	19·2	17·9	19·0	20·6	18·1
1893	18·6	19·5	16·3	19·2	21·5	17·4
1894	16·2	16·5	15·4	16·6	18·0	15·6

* Certain proportion of Urban residents included.

The apparent marked increase in the rural death-rate of Staffordshire in 1891, as compared with previous years, is to a large extent accounted for by the fact that the rates for 1889-90 were calculated upon an erroneously high estimate of the population, owing to the long interval since the 1881 Census, a mistake, however, which does not apply to the same extent in the case of the urban districts.

Death-rates in Urban Districts.—These, together with the figures upon which they are based, are shown in the tables at the end of the report. In the following table the figures are given for those districts in which the rates may be said to be very high, together with figures and remarks bearing on the influences that causes, preventable and more or less non-preventable, have had on the results. The districts are placed in order, in accordance with the death-rates, the highest being placed first.

DISTRICT.	Death-rate per 1000 of Population.	Population estimated to middle of 1894.	Number of persons to the Acre.	Deaths in children, under 1 year, per 1000 births.	Zymotic death-rate per 1000 of population.	Occupation, &c.	Increase over average of entire districts from the undermentioned diseases, affecting appreciably the general rate.				Position as regards average death-rate of former years.
							Measles.	Whooping Cough.	Diarrhoea.	Diseases of respiratory organs.	
Willenhall	22·9	17,684	14·1	223	6·10	Working class.	Slight.	Considerable.	..	..	Average for 10 years, 20·3.
Darlaston	21·9	14,777	18·4	174	4·80	..	Slight.	Slight.	Slight.	Slight.	Average for 6 years, 22·9.
Fenton	21·3	19,000	11·8	251	2·00	..	..	Slight.	..	Considerable.	Average for 5 years, 21·2.
Longton	21·1	35,874	17·9	238	2·03	..	..	..	Slight.	..	Average for 5 years, 22·3.
Heath Town.....	20·0	7,326	9·9	143	5·32	..	Considerable.	Considerable.	..	Slight.	Average for 5 years, 19·7.
Tunstall	19·9	16,065	19·4	173	0·93	..	..	..	..	Slight.	Average for 5 years, 21·6.
Bilston	19·2	23,500	12·5	175	1·53	..	..	..	..	..	Average for 5 years, 22·5.
Burslem	19·0	33,367	12·8	190	1·67	..	..	..	Slight.	Slight.	Average for 19 years, 22·7.

As regards Willenhall, the Medical Officer of Health points out that the rate is the highest on record since 1877. It would appear from an analysis of the figures that measles to a slight extent, and whooping cough to a considerable extent, are responsible for this, but the chief cause was undoubtedly the serious epidemic of small-pox which prevailed, an account of which will be found later on in this report.

The Medical Officer of Health for Darlaston points out that the rate in that town was lower than “in any previous year in this Census decade.” It will be seen from the above table that the mean death-rate for the previous years amounted to 22·9—a figure which is certainly far from satisfactory.

In the report of the Medical Officer of Health for Fenton no special mention is made of the high rate, but it will be seen from the above table that it is not an exceptional one in that district.

The Tunstall Medical Officer of Health refers to this year's rate as being the lowest for the past five years. I would point out that there is not much cause for congratulation in this, as the rate is still much higher than might reasonably be expected.

As regards Heath Town, Longton, Bilston, and Burslem, the respective reports do not contain any special reference to the rates.

In Handsworth, where the death-rate only amounted to 10·7, it is said to be the lowest on record with one exception (1888) during the past 22 years, and the Medical Officer of Health says "the saving is chiefly due to the small mortality from diseases of the lungs and from gastrointestinal disorders.

The Medical Officer of Health of Smethwick, where the death-rate was 15·4, points out that on one occasion only during the past 13 years was the rate lower—namely, in 1882, when it was 14·8—notwithstanding sufferings and privations through want of employment.

In Stafford, where the exceptionally low rate of 12·4 was recorded, the Medical Officer of Health states that it was lower than in any previously recorded year, and 3·6 lower than the average of the eight preceding years.

Death-rates in Rural Districts.—In the reports of the Medical Officers of Health of Cannock, Walsall, Lichfield, and Gnosall Rural Districts, special attention is directed to the exceptionally low death-rates. On the other hand, in the case of Cheadle Rural District, the Medical Officer of Health points out that the death-rate (18·4) exceeds the average of the previous five years by 1·4.

UNCERTIFIED DEATHS.

Among the reports which contain special reference to the question of uncertified deaths may be mentioned Bilston, Coseley, Sedgley, and Tipton Urban Districts, and Wolstanton, Cannock, and Cheadle Rural Districts.

The Medical Officer of Health of Sedgley says:—"It is worthy of comment that a child aged ten months should die of measles and pneumonia without being seen by a qualified medical practitioner, and without an inquest."

INFANT MORTALITY.

The excessive infant mortality in many of the urban districts of the county, which has received such prominent notice in previous reports, is still maintained, although a considerable reduction in the rate has taken place in the county as a whole, owing chiefly to the diminished deaths from summer diarrhoea.

In the Administrative County the infant death-rate per 1000 births exceeds 200 in four urban districts. In the following table the figures are given for the past six years in the case of those towns, together with comparative figures for the urban districts in the county, as a whole, and for the larger towns in England:—

Deaths in children under one year per 1000 registered births.						
	Fenton.	Kidsgrove	Longton.	Willenhall	Urban Districts in County	Large Towns in England.
1889	162	163	216	178	161	161
1890	192	94	231	156	176	171
1891	193	142	224	179	175	167
1892	186	153	231	189	174	163
1893	193	166	225	207	179	181
1894	251	226	238	223	163	152
Aver.	196	157	227	188	171	166

It must not be supposed, because prominence is given to these towns which have exceptionally high infant death-rates, that therefore other towns have favourable records ; this is far from being the case, as a glance at the six columns of the death-rate table at the end of this report will show.

As regards Kids Grove, which for the first time is in the unenviable position of being introduced into the above special table, it is a little place, and, therefore, one would not be justified in coming to any conclusion upon figures covering a few years only. In all probability the high rate this year is an exceptional one. The Medical Officer of Health in his report offers no explanation of the exceptional rate, and from the returns in my possession I have no means of arriving at an opinion regarding it beyond this, that the zymotic death-rate does not explain it, neither does the death-rate from diseases of the respiratory organs.

As regards the other three towns, the Medical Officer of Health of Fenton in referring to the high rate in his district attributes it to ignorance as to the proper diet for infants, and urges the importance of making the elementary teaching of hygiene compulsory in schools. To a similar cause, and general want of care as regards the exposure of infants to cold, the Medical Officer of Health of Longton attributes the persistently high rate in that town. In Willenhall the Medical Officer of Health attributes the excessive mortality to the prevalence of measles, whooping cough, and small-pox, and the returns bear out this. At the same time, it is the second occasion in six years that Willenhall has appeared in this table, and with one exception (1890) during the period the rate in that district each year must be considered excessive.

The Medical Officer of Health of Burslem seems to have made a beginning in obtaining information with reference to the question of infant mortality in that town as will be seen by the following extract from his report :—

“ As regards the mortality in infants, I made enquiries in the cases of 73 deaths in children under two years of age, in all

classes of the community, reported in Sept., Oct., Nov., and Dec., 1894. Of these—

22	mothers	worked in	Factories
51	„	„	as Housewives only.
30	fathers	„	as Potters.
8	„	„	as Labourers.
11	„	„	as Colliers.
24	„	„	as various artificers, &c.

“As to the diet of infants:—

Breast milk only was given in	...	...	...	30 cases.
Breast milk for a short time, followed by artificial food, and cows' milk	...	...	...	18 „
Bottle fed, various artificial foods	...	...	...	20 „
Spoon fed, „ „ „	...	...	...	5 „

“Of the mothers of this group of children—

51	did not work in factories.
10	went to work under 3 months after confinement (2 in 4 wks. time, 1 in 5 wks., 2 in 6 wks. & 1 in 7 wks.)
12	went to work over 3 months from birth of child.

“All these children were in burial clubs but 16, it being the rule to enter all infants soon after birth. In two cases neglect and drunkenness were found in the parents.

“In the above 73 deaths—

20	were caused by diseases of Respiratory organs.
18	„ „ „ Mal-nutrition.
9	„ „ by Diarrhœa.
16	„ „ by Convulsions.
10	„ „ by various other diseases.”

The figures are, of course, too small to allow of any conclusion being drawn from them, but it is to be hoped the inquiry will be continued. I venture to suggest that the inquiry should be confined to deaths occurring among infants under one year, and, in classifying the causes of death, it would be well to specify the proportion in each class of infants whose mothers were engaged in work which takes them away from

home during the day, as well as the numbers in each class which were fed—(a) on breast-milk only; (b) partly breast-milk and partly artificial food, and (c) entirely artificial food. If such figures could be obtained for some years, not only in Burslem but in other pottery towns, material would be available, which—with further information, to be obtained from other sources, as to the practice as regards the feeding of infants which prevailed in the districts contributing to the returns—would allow of valuable conclusions being arrived at concerning this important question.

The Medical Officer of Health of Rowley Regis writes :—
 “The death-rate of infants under one year is 169·9 per 1000 births registered. This fact forces the question very prominently before us. What is the cause of this high infant mortality? In reply, I can only recapitulate my former statements, viz.—The comfortless houses in which many of the poor live, ignorance, and in some cases neglect of parents in rearing children, early marriages, premature births, improper feeding, poverty, especially in times of trade depression, and neglect of ordinary precautions against infection. These are some of the causes of infant mortality in this parish.

“This abnormal condition cannot but awaken a feeling that steps must be taken to remedy the evil. The amount of ignorance displayed in sanitary and hygienic matters leads one to the conclusion that the introduction of domestic economy into the school curriculum, and the establishment of free nursing classes for the public at large would tend to produce early and beneficial results.”

In discussing the question as regards Sedgley, the Medical Officer of Health says :—“The employment of married women in brickyards accounts for the undue proportion of infant deaths in Lower Gornal, where 48 infants died, for the mothers of these infants must leave their children for many hours daily without proper care or nourishment.”

With reference to the infant mortality of Tipton, which amounted this year to 161, the Medical Officer of Health says :—

“A large proportion of the women in this district only marry after they have become pregnant, in reality not until they are obliged, and we find, in consequence, that the mortality amongst very young infants is very high. In the year 1894, there were 177 deaths under 1 year of age, to 1095 births. The anxiety for concealing their condition during the early months of pregnancy, and after marriage, the knowledge that the child will be born before the regulation period must influence the vital condition of the mother and of the coming offspring, and tend to cause its premature death. Only a very small percentage of married women here do any commercial work. Some few girls work in the brickyards, and a very few on breeze and pit banks; as a rule here the women only do housework, and are seldom away from home, and fortunately it is considered a point of honour with them to suckle their own offspring. This gives us an infantile mortality rate comparing rather favourably with other artisan districts, where women work away from home, and in consequence can only half suckle their infants.”

As regards other urban districts where Medical Officers of Health give more or less prominence in their reports to the question of infant mortality, in Bilston some satisfaction is expressed at the rate in 1894 being 175, as against 202 in 1893, and 219 in 1892.

In the Leek report attention is called to the fact that the rate, which this year amounted to 166, is much higher than in recent years.

In Newcastle, where the rate amounted to 150, it is said to be the lowest with one exception (1887) during the past 13 years.

In Tamworth the rate amounted only to 111, compared with 184 in 1893, and 140 in 1892, and the Medical Officer of Health says:—“This considerable decrease is more due, in all probability, to the absence of any severe epidemic disease, such as measles or diarrhoea, than to any very great improvement

in the matters relating to infant rearing, a subject to which I have frequently referred in previous reports."

Among the other reports which contain special reference to this subject, may be mentioned those of Biddulph, Cannock, Perry Barr, Smethwick, Stafford, Tunstall, and Wednesfield Urban Districts, and Cheadle, Gnosall, and Walsall Rural Districts.

The Council will remember that I conducted an inquiry three years ago into the effect of factory labour on the infant mortality. I give in the following table the original figures for the artisan towns, classified in accordance with the relative proportion of married women engaged in factory work, together with corresponding figures for the past six years :—

Deaths in Children Under One Year in Three Classes of Artisan Towns in Staffordshire.

	CLASS I. Many women engaged in work.	CLASS II. Fewer women engaged in work.	CLASS III. Practically no women engaged in work.
10 years, 1881-90	195	166	152
6 years, 1889-94	201	173	164

These figures speak for themselves. It will be noticed that although there has been a general increase in the infant death-rate, practically very much the same relative proportion has been maintained between the three classes of towns.

ZYMOTIC DEATH-RATE.

The death-rate from zymotic diseases, including under this heading, according to the Registrar-General's classification, the seven principal ones—namely, small-pox, measles, scarlatina, diphtheria, fevers, whooping cough, and diarrhœa—is lower this year than it has been since it has been my duty to collate the reports. In the following table the comparative figures are given for the past six years, together with similar figures for England and Wales, and for the large towns in England.

Zymotic mortality per 1000 of population.

	Districts in Administrative County.			England and Wales.	Large towns in England.
	Urban.	Rural.	Urban & Rural combined.		
1889	2.36	1.17	1.99	2.40	2.72
1890	2.06	1.15	1.77	2.05	2.77
1891	2.00	1.36	1.82	1.83	2.41
1892	2.03	1.10	1.77	1.90	2.63
1893	2.41	1.58	2.17	2.47	3.17
1894	1.68	0.97	1.47	1.76	2.43

It will be noticed that the falling off in the zymotic death-rate has taken place in both the urban and rural districts. Undoubtedly the chief cause is the greatly diminished number of deaths from diarrhoea which have occurred in both urban and rural districts. Whereas no fewer than 632 deaths from this disease were registered in the urban districts of the Administrative County in 1893, the number this year only amounts to 210, and in the rural districts the respective numbers were 129 and 60, the totals being 761 in 1893 as compared with 270 in 1894. Another point which calls for mention in connection with this year's zymotic rate is the fact that small-pox has contributed in no small measure towards it, no fewer than 89 deaths from that disease having been registered, of which number 47 occurred in Willenhall.

In most of the reports attention is called to the decline in the death-rate. In Bilston, where it amounted to 1.67, it is said that it would have been much lower had it not been for diarrhoea and whooping cough. In Burslem it is said to be the lowest of any year since 1879, when it was exactly the same—namely, 1.67. In Newcastle Urban District it is the lowest recorded for thirteen years. In Stone Urban District it is pointed out that for the first time on record no deaths have been recorded from zymotic disease. This is partly attributed to improved sanitary conditions, and especially

to the fact that whereas five years ago only shallow wells existed in the town, now 50,000 gallons of pure water from the public supply are consumed daily. In Brownhills the zymotic deaths are said to have been conspicuous by their absence.

As regards Stafford, the Medical Officer of Health writes :—" Compared with previous years, there has been a marked decrease in the number of cases of infectious diseases. There have been only 47 notified, as against 236 in the preceding year; and 114 and 146 in the years 1892 and 1891. If we deduct the 23 erysipelas cases, we have the remarkably low number of 24 for the infectious fevers. Diphtheria has been entirely absent, and it is worthy of note that there has been only one case of diphtheria during the past three years."

In the Handsworth report the Medical Officer of Health states :—" I have much satisfaction in again directing attention to the very remarkable decrease in the death-rates from scarlet fever and typhoid fever, and to a less degree from diphtheria. The death-rate from diarrhœa, comparing the average of the last four years with the average of previous periods, also shows a satisfactory decline."

In Smethwick the zymotic death-rate (1·39) is said to be highly satisfactory, " considering the prevalence of zymotic diseases which has obtained."

In Fenton it is said that but for the prevalence of whooping cough during the first half of the year there would have been a remarkable freedom from zymotic deaths.

The Medical Officer of Health of Wednesbury points out that although the zymotic death-rate in that town (2·33) cannot be regarded as high, it is not so low in proportion as that from all causes, a circumstance which is explained principally by deaths from scarlet fever and whooping cough.

Willenhall stands alone among the urban districts where the zymotic death-rate is exceptionally high, a circumstance for which a calamitous epidemic of small-pox is mainly responsible, although whooping cough contributed largely towards it.

As regards rural districts, it is pointed out that in Ashbourne only one zymotic death occurred during the year, the cause of which was whooping cough.

In Cheadle the noticeable feature in the zymotic mortality is the absence of a single death from enteric fever.

In Lichfield the zymotic death-rate (0·74) is said to have been the lowest on record with one exception, the striking feature being the low mortality from diarrhoea, from which disease only three deaths occurred.

In Walsall the rate (1·21) is said to have been the lowest during the past 12 years.

As regards Patshull, where the rate (4·1) appears to be very high, the Medical Officer of Health points out that it simply means one death from whooping cough. This illustrates the absurdity, to which I have frequently called attention, of drawing conclusions from rates in small districts.

SPECIAL ZYMOTIC DEATH-RATE.

Small-pox. Throughout the year under review, small-pox, which had made its appearance two years ago after several years of almost complete absence from the county, occurred in almost every district, and in a few instances it assumed serious proportions.

To comment upon the particulars given in the various reports of the outbreaks which occurred would occupy a considerable space, without serving any very useful purpose; I propose, therefore, only to notice a few examples, partly for the purpose of illustrating how the disease is conveyed from one district to another, and partly to show how much trouble and anxiety it gives rise to in districts which do not possess the means of dealing with it, as compared with other districts where isolation accommodation of some sort is available.

As regards Brierley Hill, the Medical Officer of Health writes:—"From the commencement of this epidemic of small-pox in May, 1893, to its close in March and June, 1894, the total number of cases notified was 56. Looking back over the

history of this epidemic, and comparing it with previous epidemics of small-pox in this district, I think there is ample proof of the great benefit and protection which the adoption of the Notification Act, the establishment of an isolation hospital and disinfecting apparatus has secured to the inhabitants, completely justifying the late Board in the expenditure which such measures involved. Many of you, doubtless, recollect the disastrous results of the epidemic of 1872. I believe the same thing would have happened again if we had not had the means at hand to promptly isolate the cases as they occurred.

“Before leaving this subject, I would like to state my experience of the nursing. When we first commenced isolating the cases in tents, before the hospital was ready for the reception of patients, an inexperienced nurse was engaged (inexperienced in hospital work), and the consequences were anything but satisfactory. After giving this plan a fair trial, I secured the services of a well-trained and experienced hospital nurse. The advantage of this step was immediately apparent—the discipline improved, and the patients were not only much more manageable, but their comfort was much better attended to. In any future epidemic, I would most strongly recommend that the services of a trained and experienced nurse should be secured. The isolation of infectious diseases is an immense advantage to the general public; but, to make it successful, every possible effort should be made to ensure confidence in its administration.

“In his Annual Report for 1893 the County Medical Officer draws attention to this subject, and advises his Council to establish a system by which the difficulty of obtaining properly trained nurses in infectious diseases would be overcome. Knowing the great difficulty I had in obtaining the services of a properly qualified nurse for the small-pox cases, I think some such plan as the County Medical Officer suggests very desirable.”

Concerning cases which occurred at Bilston, the Medical Officer of Health writes:—“It is satisfactory to note that the wave of infection in passing over the district produced com-

paratively slight results, more particularly when we remember how the disease had existed for a considerable period in many of the neighbouring towns, and to a very formidable extent in some. Indeed the visitations have been in the nature of local outbreaks, more or less distinct, due to some definite importation, rather than such an infection of the district as is usually understood by the term epidemic. This gratifying result has been largely due to the prompt removal of all the cases—with one exception—to the hospital, the disinfection of bedding, clothes, &c., and the comparatively well protected condition of the community (as will be shewn further on) from vaccination.”

The Medical Officer of Health of Burslem, where only four cases occurred, mentions one as illustrating the efficacy of revaccination. It appears that one case occurred in a large family, the infection having been contracted out of the district. The patient was at once removed to the isolation hospital, and with one exception—a brother of the patient—the whole family were revaccinated, with the result that the brother who refused revaccination was the only one who contracted the disease.

The Medical Officer of Health of Darlaston writes:—“There were in all 85 cases from 62 infected houses; 79 were treated in the hospital and 6 at home. There were seven deaths all occurring in hospital. Giving credit to the man who said he had been vaccinated, six out of the seven deaths were in the unvaccinated. There were only ten unvaccinated cases out of the 85 attended. Stronger evidence of the protective power of vaccination than the particulars I have given cannot be afforded.

“To be in a position to isolate the early cases was of very great importance to us, and if people would have submitted to revaccination we should have had very few cases, for I believe after an experience of 45 years that it is almost impossible for a properly vaccinated person to take small-pox. Early in the outbreak a case occurred and I revaccinated the whole family, seven in number, and all escaped the disease; on the other hand, where the operation was refused, four out of the same

family were attacked. The failure of the Darlaston doctors to prevail upon people to be revaccinated is most surprising to me, whilst at Willenhall the medical men succeeded so admirably in this respect—the result must be that in a future visitation we shall suffer most.”

As regards the nursing of the patients, he says :—“ During the whole time (that is from April 25th to the end of the year) no nurse was engaged—the housekeeper, her daughter, and son aged 14 years (the latter receiving no remuneration) were the only persons engaged in looking after the patients at the hospital ; the females who were recovering were prevailed upon to assist in the laundry and do other general work, so that on the score of economy your Council will be well satisfied.”

As is suggested, the Local Authority might congratulate themselves on the ground of economy, but it is a question at what cost to the patients, as regards comfort, this economy was purchased. The remarks quoted above in the case of Brierley Hill may throw some light on this.

As regards the value of vaccination and revaccination, the Medical Officer of Health of Handsworth writes :—“ Altogether 148 cases have been notified since the commencement of the outbreak in 1893, and only three deaths, all unvaccinated or doubtfully vaccinated, have resulted.

“ The mildness of the outbreak is without doubt due chiefly to the fact that Handsworth has so far been well protected by vaccination, and it would be deplorable if from any laxity on the part of the proper Authorities to enforce the law with regard to vaccination, or from any general opposition on the part of the people, the district should ever become less well protected.

“ Thorough vaccination in infancy, with three or four good marks, and not one minute spot only, as is done to my knowledge by some medical practitioners—not in this district I am glad to say—is the only protection against fatal forms of small-pox, and this again needs reinforcement by revaccination at or about the age of fourteen.

“Revaccination has this year under the stimulus of the small-pox outbreak been actively carried on in private and public practice; to this also and to the fact that persons who have been exposed to actual infection have as a rule readily complied with our advice and that of their medical attendants must be ascribed the small number of secondary cases which occurred.

“Two cases have come under my notice which illustrate the protection afforded by revaccination, and are worth giving.

“In January, a girl had for some nights slept with a sick neighbour, and the illness proved to be small-pox. The woman was sent to the hospital; the girl was at once revaccinated, but she had already carried infection to her own home a few doors off. The father, mother, and four children sickened and were removed; the girl alone escaped.

“In November small-pox broke out in a well-to-do family; the case was treated at home. All were revaccinated except the servant, who refused to be done. She alone took the disease.”

In Smethwick, where 132 cases occurred, the Medical Officer of Health points out that among the unvaccinated, one in every four died, while among the vaccinated the proportion was one in twenty-seven.

The Medical Officer of Health of Tipton points to the benefit which results from efficient vaccination, and again, as in former reports, calls attention to the inefficient manner in which the operation is frequently conducted. He says:—
“During the year 13 cases have been under treatment in the Infectious Diseases Hospital; these had all been vaccinated in infancy, and we found them, as we have almost universally found before, that the severity of the cases was in proportion to the efficacy of the primary vaccination. Those who had been vaccinated in four places in early infancy, with the result of four well-defined and foveated marks, had the disease but slightly; those who had one or more marks suffered in proportion to their number; the fewer and less defined marks

resulted in severe forms of small-pox. It has never been my lot to have seen any case of small-pox in a revaccinated person where the revaccination has 'taken.' Unfortunately in this district, as will be noted, the majority of the vaccination is ineffectually performed, the women being satisfied with having only one mark placed on their infants' arms. This is a feeble protection, and practically evades the law. The two public vaccination medical officers rigidly adhere to the recommendations of the Local Government Board, and vaccinate in four places, and at each biennial inspection they have gained the first-class government grant."

As regards Wednesbury, where (including one case which occurred in November, 1893) 51 cases occurred, the Medical Officer of Health points out that all the fatal cases, four in number, occurred in unvaccinated persons, and he gives the following interesting summary, which shows the saving in cost in the isolation of vaccinated cases as compared with non-vaccinated. I would remind those who examine these figures, however, that the total saving is in no way represented, as the number of persons saved from attack, and therefore from the necessity for hospital treatment, must also be taken into account:—

Treated in Hospital	...	...	...	45 cases of small-pox.	
Vaccinated cases	...	38.	Unvaccinated cases	...	7
Deaths, 4	...	...	...	all in unvaccinated subjects.	
Total vaccinated 38, all recovered.			Average stay in hospital, 21½ days.		
Total unvaccinated 7, 3 recovered.			Average stay in hospital, 42 days.		

The Medical Officer of Health of Willenhall gives an exhaustive and valuable account of the epidemic of small-pox which prevailed to such an alarming extent in that town. The Authority had no means of isolation available when the disease made its appearance, and it was not until 137 cases had occurred that temporary provision was made. From the report in question I extract the following:—

“Of the 842 cases, 830 have been traced, and it is known none of the other 12 were fatal. Of the 830 traced, 89 had never been vaccinated, and 30 of these died; whilst 739 had been vaccinated and only 17 died. The death-rate among the unvaccinated was therefore 33·7 per cent. of all attacked, whilst that among the vaccinated was 2·3 per cent.—in other words, the death-rate was more than $14\frac{1}{2}$ times greater in the former than the latter.

“Whilst the death-rate among all the vaccinated was 2·3 per cent., among those who had 1 primary vaccination scar it was 4·1 per cent., among those who had 2 primary vaccination scars it was 3·3 per cent., among those who had 3 primary vaccination scars it was 2·4 per cent., among those who had 4 primary vaccination scars it was 1·0 per cent., and among the re-vaccinated it was 0·0 per cent. Let these figures speak for themselves to all who are devoid of prejudice and bias!

“With regard to the suffering inflicted by the disease, the Council will note that whilst the severe cases among the unvaccinated were 95·5 per cent. of all attacked, they were 26·6 per cent. among all the vaccinated, and 22·4 per cent. among those who had four primary vaccination scars. Let these figures again speak for themselves to all devoid of bias and prejudice, and whilst they speak with no uncertain sound as to the immense protective power of vaccination, let me say candidly that the more or less severe cases among those who had been vaccinated once only in four places was greater than from my previous experience of small-pox I should have expected.

“In further elucidation of the protection conferred by vaccination, a summary of the history of vaccination in this town may be of service, and the Council will conclude that but for the protection thus conferred, on the basis of 842 persons attacked with small-pox the deaths therefrom instead of numbering 47 would have been at least 285; whilst it is not unlikely they would have been six times that number

because it is certain a much larger number would have been attacked by the disease."

Following this is an instructive history of vaccination in the town since 1860, together with the detailed tables upon which the conclusions were based.

As regards rural districts, special mention is made of outbreaks in Cannock, Leek, Lichfield, Seisdon, Tamworth, Walsall, and Wolstanton. In all these districts the authorities acted promptly in providing hospital accommodation for first cases, with the result that the disease was kept in check. As an example of the precautions adopted in a district not provided with means of isolation or disinfection, the following extract from the report of the Medical Officer of Health of Seisdon Rural District is given:—

"I have to report two cases of this formidable disease, which has been very prevalent in the vicinity of this district. The first case occurred in a young woman at a public-house in the centre of the village of Kinver. The notification came late on one Saturday evening, and we wired at once to the Sergeant of Police to caution the landlord against allowing persons into his house. Early next morning we were in the village, and succeeded, with the greatest difficulty, in obtaining permission to remove the case to a distance, to be nursed by the occupant of a dwelling which was fairly isolated, giving the necessary directions, which were properly carried out. In a few days the mother took the disease and was nursed in the same dwelling. With the exception of a few strong protestations against our proceedings, all went well, no other case occurred, and, after recovery, the bed, bedding, and clothes were burnt, and compensation made for the same. I should mention that only a few weeks before, at my suggestion, the Sanitary Authority had given to the Inspector and myself, with the Guardians of the Parish, power to act as any urgent case might require."

As regards the Administrative County as a whole, with a few exceptions the reports do not contain sufficiently full

information to enable me to prepare as full a statement as I should wish showing the incidence of the disease among the vaccinated and unvaccinated; the following partial statement, however, is instructive.

Of 1,356 cases, 1,183 occurred among vaccinated, and 173 among unvaccinated persons. The deaths numbered 77, of which 23 occurred among vaccinated, and 54 among unvaccinated persons, so that the case mortality in the various classes was as follows:—

General case mortality	...	...	...	5·6 per cent.
Case mortality among vaccinated persons	...	1·9	„	
„ „ „ unvaccinated „	...	31·2	„	

Measles.—This disease, which appears each year in most districts, has not, judging by the death returns, been so prevalent either in the urban or rural districts, taken as a whole, as in 1893.

The following table shows the number of deaths, and the death-rate per 1000 of the population from this disease, in the urban and rural districts of the county, for the past six years:—

MEASLES.		1889.	1890.	1891.	1892.	1893.	1894.
Urban	{ Number of deaths...	347	221	368	187	283	183
	{ Rate per 1000	0·64	0·40	0·67	0·33	0·50	0·32
Rural	{ Number of deaths...	66	37	106	20	111	39
	{ Rate per 1000	0·26	0·14	0·44	0·08	0·48	0·17

As regards urban districts, the following seem to have suffered most—namely, Audley, Brierley Hill, Darlaston, Handsworth, Rowley Regis, Smethwick, Stafford, Tipton, and Willenhall. In Audley all the schools were closed for six weeks in the autumn, after which the disease rapidly subsided. In Brierley Hill, where an extensive epidemic prevailed during the summer months, two schools were closed. Schools were also closed in most of the districts mentioned above.

In Rowley Regis, where 33 deaths occurred, every effort seems to have been made to limit the spread of the disease, and where it was known to exist bedding and clothing were disinfected. This precaution was carried out in the case of no fewer than 656 families. Concerning the influence of school attendance, the Medical Officer of Health of Tipton writes:—
 “I found many children attending school from infected houses where the disease had been concealed; these of course were notified and warned.

“On my report as to the frequency with which school-bred diseases were spread by undue haste being shewn by teachers in having children at school, 1st, too soon after an infectious illness, and without a medical note certifying as to their fitness, and 2nd, by pressing parents to send their children to school near an examination from infected houses, the Sanitary Committee communicated with the School Board, who sent out a circular note embodying my suggestions, and instructing all their teachers to exercise care with regard to all cases of infectious disease. In all infectious cases where parents have no medical attendant, or are too poor to pay their own medical man, I have for nine years been in the habit of supplying sanitary certificates gratuitously, so as to prevent any possibility of excuse on the part of parents or teachers. I am, however, very seldom asked for such a certificate. . . . ”

Among the urban districts which suffered least from measles may be mentioned Bilston, where no deaths were registered, an event which had not been experienced since 1888; Rugeley, where for some years the disease has not been prevalent; and Stone.

As regards rural districts, the reports for Cannock, Cheadle, Uttoxeter, and Tutbury contain references to outbreaks.

The Medical Officer of Health of Cannock Rural District, where (on the ground of expense) it has been decided to discontinue the notification of measles, refers to a report which he presented to his Authority, from which he quotes the following paragraphs:—

1. "That I could not regard the notifying of measles on the same grounds of urgency as scarlet fever or typhoid fever, and the like, as isolation was not practicable, and as the existence of insanitary conditions were not so prevalent, or so conducive to the spread of the disease.

2. "For two reasons I felt bound to report in favour of a notification scheme, seeing that the mortality from measles was great, that a law of notifying was useful in educating the public more fully to the dangers of measles, and that the closure of schools, where necessary, could be more effectually controlled.

3. "At the same time, I admitted in my report that the requirements of the situation would be met by the notification of the *first case* in any one household, this holding good for ten days. If the Local Government Board could sanction such a scheme, thereby reducing the expense very materially, I think the Sanitary Authority might reasonably reconsider their decision."

Scarlet Fever.—This disease caused 130 deaths in the Administrative County.

The following table shows the number of deaths and the death-rate per 1000 of the population in the urban and rural districts for the past six years :—

SCARLET FEVER.		1889.	1890.	1891.	1892.	1893.	1894.
Urban	Number of deaths	108	145	144	105	119	101
	Rate per 1000.....	0·20	0·26	0·25	0·18	0·21	0·17
Rural	Number of deaths	30	51	63	29	27	29
	Rate per 1000.....	0·12	0·19	0·26	0·12	0·11	0·12

Among the urban districts where the highest mortality occurred may be mentioned Brierley Hill, Darlaston, Sedgley, Wednesfield, and Wednesbury. As regards Brierley Hill, the Medical Officer of Health states that the disease has been

prevalent with varying intensity for a little over two years. In Darlaston it is said the disease, although not so prevalent as in 1893, was more fatal. In Sedgley the epidemic occurred during the first three months of the year, the notified cases being 148. In Wednesfield it is said that the cases occurred throughout the year, but that owing to the fact that the Notification Act is not in force it is impossible to say how many. In the Wednesbury report no special reference is made to the outbreak, which caused 13 deaths.

The Medical Officer of Health of Bilston, where eight deaths occurred among 94 cases, says "it would be a great help to the sanitary officials if, when cases of infectious disease are treated at home, the medical practitioner would forward a certificate on the termination of his attendance, stating that the patient was entirely free from infection and the premises were ready for disinfection."

In Coseley, where 87 cases occurred, no deaths were registered.

In Handsworth it is said fewer cases were notified than in former years, and the type of the disease continued as mild as for many years past.

The Medical Officer of Health of Lichfield writes:—"The decreased prevalence of this disease is satisfactory, and it is to be attributed to the prompt removal to hospital of all cases where efficient isolation could not be relied upon at home."

The Medical Officer of Health of Rowley Regis writes:—"Scarlet fever has been endemic in the parish for the last twelve years, and I do not see much probability of its being otherwise unless a system of isolation can be carried out. The difficulties of disinfecting all the clothing of children attending school from houses that have been infected, the inability to prevent the mixing of healthy and infected children at their homes, and the disbelief in and consequent indifference of the patients to all sanitary matters, renders it an almost hopeless task to check this scourge."

As a contrast to the state of things at Rowley Regis the following paragraph from the report of the Medical Officer of Health of Stafford, where isolation is carried out, is instructive:—
 “There were only 13 notifications of this fever, compared with 170 in the previous year. This low figure is accounted for partly by the fact that, through the epidemic of the preceding two years, a large number of children had become protected, but chiefly because prompt isolation was adopted in every case, with disinfection of premises and clothing. As evidence of the advantage of early isolation, I would mention that the removal of the patient in all instances saved the other members of the family from contracting the disease. There was not a single instance during the year of a second member of a household having scarlet fever; and such a result could not, I feel sure, be brought about by any other line of treatment.”

As regards Willenhall, where 18 cases were notified, the Medical Officer of Health says:—“This makes the second year and the 117th case in succession without a death from this cause.”

Among the rural districts where the disease was most prevalent may be mentioned Seisdon and Wolstanton.

In Seisdon it prevailed most in the villages of Bradmore, Pattingham, and Codsall.

The Medical Officer of Health of Wolstanton writes as follows:—“Scarlet fever has been prevalent throughout the greater part of the district, but especially in the Silverdale, Chesterton, and Newchapel portions. At Knutton, the schools were closed by your order, and remained closed for six weeks, owing to the disease having appeared in the schoolmaster’s house. At Silverdale the disease appeared also in the schoolmaster’s house, and the same thing occurred in Chesterton; the schoolmaster’s child at Silverdale was removed to the fever hospital, and the master did not attend school during the illness of the other children and while there was any danger of infection. The master at Chesterton attended the school, but lodged away from home, and had no communication with the infected house for six weeks.

“It appears that some parents have allowed their children to go to Sunday schools and ‘charities’ when in an infectious condition, and in several cases the carelessness and utter disregard of the instructions of your officers is very evident, and is no doubt the cause of scarlet fever being so prevalent for so long a time. I would recommend that in future prosecutions be more general as a warning to others.”

In addition to the above recommendations, I venture to suggest that more systematic use should be made of the isolation hospital. I find that of 336 cases of scarlet fever notified in this district during the year, only 112 were isolated in hospital, or 33 per cent.

Diphtheria. In the Administrative County 81 deaths occurred from diphtheria, as compared with 42 in 1893, equal to a rate per 1000 of the population of 0·10, as against 0·05. Of these deaths 47 occurred in the urban districts, or 0·08 per 1000, and 34 in the rural districts, producing a rate of 0·15 per 1000. In the following table corresponding figures are given for the past six years:—

DIPHTHERIA.		1889.	1890.	1891.	1892.	1893.	1894.
Urban	{ Number of deaths...	27	23	37	32	24	47
	{ Rate per 1000	0·05	0·04	0·06	0·05	0·04	0·08
Rural	{ Number of deaths...	28	14	25	21	18	34
	{ Rate per 1000	0·11	0·05	0·10	0·09	0·08	0·15

In Bilston, out of nine cases of diphtheria and membranous croup, eight were fatal. Compared with this, it is somewhat remarkable that in Handsworth, where 19 cases were reported, only three proved fatal. In the latter district the cases are said to have been scattered, and with the exception of two cases in children attending the same school, there seemed to be no connection between the different outbreaks. In two instances the disease was probably contracted outside the district; in some sanitary defects were found, while in others no possible cause could be discovered.

Concerning the possible cause of 15 cases which occurred in 12 houses in Newcastle, and caused four deaths, the Medical Officer of Health writes as follows :—

“At nine of these there were local defects, such as cess-pools, back-pounding of sewage into cellars, defective drains and imperfect disconnection from sewers. At one there was an old well five feet from kitchen door, acting as a cesspool, and which had stored up sewage from one or two drains for many years.

“Two of the dwellings were in sanitary condition, but were situated exactly opposite to manhole ventilators of main sewer. There had been complaints of nuisance caused by smell from these manholes.

“At one dwelling there was no obvious cause.

“In one of these houses there had been three previous cases of diphtheria in 1893, and at another typhoid fever had occurred twelve months before.”

As regards Darlaston, where three cases occurred, one of which was fatal, the Medical Officer of Health points out that only five deaths from this disease had occurred in six years.

In Smethwick, where eleven cases were notified, the Medical Officer of Health states that “there was nothing discovered that could be deemed responsible for the outbreak in any case.” On the other hand, in Tettenhall, where twelve cases occurred, it is said that sanitary defects were found in connection with most of them.

In Stafford there were no cases, and the Medical Officer of Health says “it is worthy of note that there has been only one case of diphtheria during the past three years.”

As regards rural districts, cases which occurred in Cannock, Eccleshall, Leek, Seisdon, Walsall, and Wolstanton, are said as a rule to have been associated with sanitary defects. Of 16 cases reported in Seisdon, five were connected with scarlet fever.

Whooping Cough.—This disease caused 290 deaths, as against 204 in 1893, equal to a rate of 0·31 as compared

with 0.25. Of these, 252 occurred in urban, and 38 in rural districts, equalling a rate respectively of 0.44 and 0.16. In the following table corresponding figures are shown for the past six years:—

WHOOPING COUGH.		1889.	1890.	1891.	1892.	1893.	1894.
Urban	{ Number of deaths...	261	211	222	420	171	252
	{ Rate per 1000	0.48	0.38	0.40	0.75	0.30	0.44
Rural	{ Number of deaths...	39	68	39	90	33	38
	{ Rate per 1000	0.11	0.26	0.16	0.39	0.14	0.16

As regards urban districts, in Bilston there were 12 fatal cases, all in children under five years. In Coseley the disease was prevalent in a severe form during the last quarter of the year, and caused 11 deaths. In Darlaston the disease was quite epidemic and caused 16 deaths. In Fenton the Medical Officer of Health says that "but for the prevalence of whooping cough during the first half of the year, 1894 would have been remarkable for the freedom from deaths from infectious diseases." In Short Heath the disease prevailed to an unusual extent, and was very fatal among the very young. In Willenhall, also, a fatal epidemic occurred.

Handsworth, Newcastle, and Tamworth may be mentioned among the urban districts where the disease was not very prevalent.

Among the rural districts it is said that the disease was very prevalent in Stretton and Branstone, in the Tutbury district.

Enteric Fever.—This disease, which must be looked upon as entirely preventable, caused 95 deaths, as against 149 in 1893, equal to a rate of 0.11 as compared with 0.25. Of these, 77 occurred in urban, and 18 in rural districts, equalling a rate, respectively, of 0.13 and 0.08. In the following table corresponding figures are shown for the past six years:—

ENTERIC FEVER.		1889.	1890.	1891.	1892.	1893.	1894.
Urban	{ Number of deaths...	106	74	111	85	117	77
	{ Rate per 1000	0·20	0·13	0·21	0·15	0·20	0·13
Rural	{ Number of deaths...	26	34	35	24	32	18
	{ Rate per 1000	0·10	0·13	0·12	0·10	0·13	0·08

It will be seen by reference to the tables at the end of this report, that according to the mortality returns the urban districts that suffered most are the following, enumerated in order, the highest being placed first:—Heath Town, Darlaston, Perry Barr, Fenton, Longton, and Tunstall. As regards Perry Barr, however, it appears in this list in consequence of one death only having occurred, which in so small a population represents a high rate, and under the circumstances no significance can be attached to the fact.

In those reports in which the causation is discussed, polluted water and defective drainage, as a rule, are credited with it. As the accounts of such outbreaks indicate pretty well the sanitary conditions met with in the respective districts, I propose to quote fairly fully from the remarks of the Medical Officers of Health in discussing the probable origin of the disease in their districts.

In discussing the origin of certain cases in Audley, the Medical Officer of Health states that they formed part of an epidemic of the disease which prevailed in the neighbouring rural district of Wolstanton, and that the infection was probably conveyed by the milk supply from a farm where the fever existed. It would have been interesting had the report in question contained an account of the facts upon which this opinion was based, and as the Infectious Diseases Prevention Act is in force at Audley, every facility for obtaining the necessary information, so far as milk supplies from outside districts are concerned, was available. Possibly such steps may have been taken, although the report contains no account

of them, but in that case one would have expected to have found some notice of the infected dairy in the report of the Medical Officer of Health of Wolstanton; whereas, instead of this, it is expressly stated by him, in discussing the origin of the fever in his district, that he had been unable to attach the infection to any milk supply.

As regards Leek, the Medical Officer of Health writes:—
 “Thirteen cases of enteric fever were notified, and two deaths resulted; one of these was a tramp who developed the disease when admitted to the casual ward at the workhouse, and the other was a young man living in a newly-built house, where the drains and other surroundings were satisfactory and in good condition, where the milk and water supply were beyond suspicion, and where the source of the infection remains a mystery, notwithstanding persistent efforts to discover it. Unfortunately, the case was not removed to the hospital, and four other members of the family subsequently contracted the disease. These were taken to the hospital, and all recovered. No like cases had previously been known in the locality, and none have been observed since.” This account illustrates two points—first, the difficulty often experienced in tracing the origin of enteric fever cases, and, secondly, the importance of hospital isolation of such cases—a point which is by no means generally recognised. It is only by means of skilled nursing that the essential precautions in the way of disinfection of discharges can be carried out.

In his report to the Sedgley District Council, the Medical Officer of Health writes:—

“In eight months out of the twelve, cases have been notified, ten being from January to April. The households attacked number ten, and at Castle Street, Gate Street, and Tudor Place, where the water has been analysed, the County Analyst has pronounced it unfit for domestic use. In Humphrey Street, where a husband and wife were both seized with the disease in February, there was no drinking water, but it is now to be laid on, as tap water is available. There were three households attacked in Castle Street and one in Gate Street,

where the water was condemned, as was also the well at Tudor Place, to which two cases could be traced. The cases in Castle Street occurred in January, March, and May, but tap-water is now laid on. There was only one case in Gornal Wood during the year, the remaining three cases being at Bath Street, Cinderhill.

“It cannot be too often nor too strongly asserted that typhoid fever is filth begotten, and, therefore, a preventible disease. Bad drinking water is its chief cause, and there is in almost every case a struggle for life and weary weeks or months of prostration and misery which the sufferers endure. Cinderhill, for two or three years, has been one of the worst fever centres in Sedgley, although situated just on your boundary. The new reservoir at the Beacon, the highest point in Staffordshire, is little more than a stone’s throw from Cinderhill, and yet pipes have not been laid to the houses. I beg strongly to recommend that this Council should exert its influence to remedy this defect. Much has been done during the past year to extend a public water-supply, for your surveyor (Mr. B. Hughes) informs me that 261 houses have been supplied with tap-water during the year 1894, making a total of 1,354 with a public water-supply, out of about 3,000 houses in your district. I would strongly recommend that your surveyor should take steps forthwith to have tap-water laid on to those houses which at present *have no supply whatever*, although tap-water is available, and that, if necessary, he have assistance to make a house-to-house visitation, beginning with the streets just supplied by the South Staffordshire Waterworks Company.”

Too often, Authorities are inactive until disease arises in consequence of their inaction. It is to be hoped that energetic steps will now be taken to provide each house with a pure and plentiful supply of water. The dangers which at present exist in consequence of the numerous surface-wells in the district have not only been pointed out to the Authority by their own officer, but the County Council have directed their attention to the matter. The following is an extract from a report by me

on the sanitary circumstances of the district, copies of which were sent to members of the Sedgley Local Board (now District Council) two years ago:—

“WATER SUPPLY.—With the exception of the higher parts of the district, the South Staffordshire Waterworks Company’s water is generally available, although in many instances it is not laid on to houses. I have no facts in my possession to enable me to state, even approximately, the number of houses in the district which have no water-supply of their own or are still dependent upon local wells for their supply, the Local Authority having thought fit not to respond to my appeal for such information; as regards this and other matters, therefore, I have had to depend upon the reports of Dr. Biggam, the Medical Officer of Health, and my own observation on the various occasions when I have inspected the district. Dr. Biggam annually alludes in strong terms to the deficient water-supply, and the Committee will remember that I previously called their attention to the subject in my monthly report dated July 15th, 1891. From the information I possessed at that time it appeared that the defective supply was entirely accounted for by the fact that certain parts of the district were not within reach of the water-mains. This defect is now being remedied by the Water Company, as the following extract from Dr. Biggam’s report for the year 1892 indicates:—‘A public water-supply seems at last about to be provided to the very considerable portion of your district which at present has no waterworks supply. . . . It is to be hoped that a public water-supply will be available before the expected advent of cholera, which proved such a scourge in this district in former epidemics.’

“It would seem then that the Water Company have accepted their share of the responsibility, and it will rest with the Authority to insure that the extended supply shall be available for all the inhabitants who are at present without a proper supply. From what I have observed in the district—and this is borne out by Dr. Biggam’s reports—it does not appear that the inhabitants have derived the full benefit from the public supply where it has been available.

“The following extract from the report for 1891 shows that it required the stimulus of an outbreak of enteric fever to bring about the closure of a well, the surroundings of which pointed to the probability that the water was impure:—‘At No. 10, Kent Street, a well was polluted from a privy about ten feet distant, and when the privy was pulled down a spring was found almost underneath it, and helping to feed the polluted well. This water was used by all the houses in Kent Street, where there were typhoid cases, and was considered pure and good by those drinking it. The well has been closed on the Analyst’s report, and tap-water supplied. Again, in his report for 1892, under the heading Enteric Fever, Dr. Biggam says:—‘Five cases occurred in the In hedge, Upper Gornal, where the well-water was found, on the report of the County Analyst, to be unsafe for drinking purposes, and has been replaced by tap-water. This well-water had a great reputation for purity in the neighbourhood. In all cases where only well-water is available for drinking, it should be boiled every morning, and, after cooling, should be filtered, care being taken that any water left from the previous day should be thrown away.’ From what follows, in the next paragraph of the same report, it is evident that this recommendation is justified, for it states that six samples of drinking water had been submitted to the County Analyst during the year, with the result that all were condemned ‘in more or less strong terms.’

“As a test case, when recently visiting the district, I obtained a sample of water from a well at Five Ways, Lower Gornal, which was the only supply available for a number of cottages, all of which might be supplied from the public mains. Upon analysis, this well-water also proved to be unfit for drinking purposes. In addition to this, however, it had to be fetched, in some instances, from a distance of about 100 yards—a fact which, in itself, would justify the Authority in calling upon the owners of the property to supply the houses with tap-water.”

It is true some effort has been made to remedy matters, but the Authority still seems lukewarm in taking steps

to substitute the public water-supply for the local well-water.

The Medical Officer of Health of Brierley Hill writes:—
 “Of the notified cases, two occurred at Dudley Street. One of these houses was stated to be in the habit of using ‘Goodman’s Well.’ In my report for 1893 I attributed two cases of enteric fever to the use of this water, which I had examined and condemned.” It does not appear from the report whether the Authority had taken steps, upon the previous representations of their Medical Officer of Health, to close the well in question, but if they have done so, either the substituted supply must be inaccessible to the houses in question, or the people, from ignorance, may prefer the well-water. Steps should be taken to prevent its being used in future.

The Medical Officer of Health of Handsworth, in discussing the origin of 19 cases which occurred in 18 houses in that district, suggests shell-fish as a possible explanation of two of them. He says:—“Considerable discussion has appeared of late in the public and medical press as to whether the disease is ever produced through eating oysters or other shellfish, and the opinion is gaining ground that such may be the case when these have been taken from sewage polluted water. As bearing on this point, two cases were notified on November 1st and November 7th, in which the patients attributed their illness to eating mussels. Two men, aged 37 and 35 years, on the night of October 13th, while in a public house in Crompton Road, eat a quantity of mussels. On October 24 the first and on October 27 the second began to get ill, and passed through severe attacks. There were thirteen other inmates in the two houses, but none of these had partaken of mussels and remained well. We found the man who sold the mussels, but could not trace the source from whence they came. Although sanitary defects were discovered on the premises these men occupied, the evidence in favour of the disease being produced by the mussels is suspicious, and further than this it was given voluntarily by the patients or their friends before the discussion appeared in the press.”

In Bilston, where 14 cases occurred in 14 houses, it is said that, although every inquiry was made, in no case could any possible cause be discovered.

In Newcastle, with one exception all the cases, nine in number, are said to have occurred in houses with "abominable" privies, and in six instances there was a history of previous cases in the same or neighbouring houses.

In Rowley Regis, where 23 cases occurred in 19 families, either defective drainage arrangements or contaminated water are mentioned as possible causes.

Concerning cases which occurred in Wednesbury, where the Notification Act is not in force, the Medical Officer of Health writes as follows:—"It will be seen that five deaths resulted from enteric fever, a disease which year by year claims its victims, although the number of such is not large. When the disease arises, as I have before remarked, its source is frequently obscure, and the premises where the case arise are not infrequently clean and sanitary. Such circumstances point to the conclusion that the typhoid poison is contained in some article or articles of diet, and such conclusion is probably correct. In certain instances observers have traced the poison to such articles of food as watercress, oysters, or milk; but in all probability the poison is associated with a number of other food-stuffs hitherto unsuspected. Water, of course, is the common vehicle; but, as shewing the obscure origin of the disease in some cases, I may say that during the year under review, my friend Dr. Herbert Manley, in the adjoining township of West Bromwich, traced an outbreak of enteric fever of almost epidemic violence to a vender of icecream, whose wife had had the disease. As the disease became arrested in one quarter of the town it broke out in another, to which it was found the icecream vendor had migrated shortly before the outbreak occurred."

Among the other urban districts, mention may be made of Rugeley and Smethwick, where the disease seemed to be associated with privy-midden nuisances.

As regards rural districts, in Cannock four cases are attributed either to defective drainage or impure water.

In discussing the probable causes of the cases in Cheadle Rural District, the Medical Officer of Health writes:—"As an example of such I may mention in one instance the close proximity of a privy-cesspool to the wall of a dairy, in which the milk was kept for private consumption. This cesspool was, as I suspected, in a leaky condition, the wall-plaster of the dairy in consequence being quite damp. I had little doubt from further enquiry that the disease originated from this source. . . ." At Kingsley, in this district, there were four cases, in three of which impure water is said to have been the cause. I would point out that the water supply of Kingsley is a serious question which should at once receive the attention of the Authority.

One of these cases in the Eccleshall Rural District occurred at a milk-seller's, and on the strength of this the Medical Officer of Health advises his Authority to adopt the Infectious Diseases Prevention Act.

The Medical Officer of Health of Wolstanton writes:—" . . . it would appear that improper nursing and inefficient disinfection would account for the spread of the disease to a great extent, especially as your officers were unable to show that either the milk or water supply was at fault. In my opinion these cases undoubtedly show the necessity of having typhoid fever cases removed at once to the fever hospital from similar small houses where practically isolation and proper disinfection is almost impossible."

I cannot too strongly emphasize the opinion of the Medical Officer of Health as to the desirability of isolating such cases as the thorough disinfection of the discharges is an essential precaution which can only be entrusted to a thoroughly reliable trained nurse.

Typhus Fever.—The only mention of this disease appears in the report of the Medical Officer of Health of Tunstall, who says:—"One case of typhus fever was reported

at the beginning of the year, but I was unable to trace its origin, as the premises wherein the patient lived were in a very wholesome condition, and no other cases were reported within the district." Owing to the extreme rarity of the disease, and in the absence of any previous case, or of conditions which might be likely to give rise to it, I venture to suggest that it is quite a question whether the illness in question was really typhus fever."

Diarrhœa.—In the Administrative County 270 deaths occurred from diarrhœa, as compared with 761 in 1893, equal to a rate of 0·33 as compared with 0·93. Of these, 210 occurred in urban and 60 in rural districts, equalling a rate respectively of 0·36 and 0·26. In the following table corresponding figures are shown for the past six years :—

DIARRHŒA.		1889.	1890.	1891.	1892.	1893.	1894.
Urban	{ Number of deaths..	431	454	208	301	632	210
	{ Rate per 1000	0·82	0·82	0·38	0·54	1·12	0·36
Rural	{ Number of deaths...	98	91	65	65	129	60
	{ Rate per 1000	0·40	0·35	0·27	0·28	0·56	0·26

Diarrhœa is a disease which is very variable as regards its prevalence, as the temperature in the summer months is intimately associated with its causation. At the same time, although climatic conditions are intimately associated with the ailment, its prevalence is largely influenced by the presence or absence of insanitary surroundings, and the amount of discretion shown in the feeding of infants, for it is essentially an infantile affection. In most of the reports attention is called to the exceptional absence of the ailment, and the cool weather in the late summer months is credited with this.

Cholera. It is satisfactory to note that no cases of cholera occurred in the Administrative County during the year. Suspicious cases occurred at Rowley Regis, but on investigation by Dr. Klein the disease was pronounced not be cholera.

Erysipelas.—Little reference is made to this disease in the reports under review. In referring to 27 cases, of which 3 proved fatal, which occurred in Handsworth, the Medical Officer of Health again expresses doubt as to the value of retaining this disease among the list of those which must be notified under the Act.

As regards Newcastle Rural District, I have previously referred to the prevalence of erysipelas there. This year again there were 56 cases notified in that district, and, strange to say, no fewer than 49 of them occurred in the parish of Madeley. There are seven parishes in the district, of which Madeley is the most populous, comprising nearly one-half the inhabitants. The estimated population of Madeley parish for 1894 is 3,101, and it would appear from the returns that for every case of erysipelas which occurs in the other rural districts in the county, 22 cases occur in the parish of Madeley. It must also be remembered that this is habitually the case.

Puerperal Fever. In the Administrative County 29 deaths were attributed to puerperal fever, as against 59 in 1893. In a few only of the reports is any special reference made to the circumstances attending the cases.

In Handsworth, where four deaths occurred, each is said to have been totally unconnected. In Sedgley, where two deaths occurred, the sanitary surroundings of one were unsatisfactory, but in the other case no insanitary conditions were discovered. Both cases were quite distinct.

In Stafford, where one case occurred, which did not prove fatal, the midwife who attended was suspended from attending other cases and her clothing was disinfected.

In discussing this disease the Medical Officer of Health of Tipton writes:—"We have had one death registered as fatal from puerperal fever: a young woman who lived in Bridge Road, and died in August. I carefully investigated the cause, but could not satisfy myself about it; the house was a clean and tidy one, with very fair sanitary surroundings. We had no

erysipelas or scarlet fever in the district. The patient had been carefully and skilfully attended and nursed, and there was no possible means of infection. Probably it was a case of "auto infection" or "self poisoning," no case spread from it and there was not more than an average amount of illness amongst lying-in women at the time.

"About three out of every five women delivered in the district are attended by untrained and very often most ignorant midwives, who only know by rule of thumb how to manage an ordinary confinement, and are quite unable to do so if there is anything wrong. Of the modern antiseptic treatment (which has so lowered our mortality rate after childbed) they know nothing, and I am pleased that a Bill is suggested, 'the Midwives Registration Bill, which suggests that it be compulsory for midwives to receive some sort of organised instruction, both theoretical and practical, for 12 months, that they pass an examination and be registered, the County Council for each County being responsible for the details of arrangements to be carried out. As we had 5 fatal cases from preventible childbed diseases last year, and all of them were lives lost at the most valuable period of their existence, I consider that such a Bill will be of the greatest service in improving childbed sanitation in this district."

Influenza. In my last year's report I was able to state that this disease, which in previous years had prevailed to such a serious extent, was less prevalent and less fatal. This year, almost without exception, the Medical Officers of Health report a still greater decline in the number of cases, and it would appear, also, that the cases which did occur were milder even than those of 1893.

Diseases of the Respiratory Organs. The decline in the death-rate from this class of disease to which attention was directed last year, in consequence, it was suggested, of the subsidence of influenza, is still maintained—in fact a still greater reduction has taken place, the number being 2511, as compared with 2,853 in 1893.

Phthisis and Tubercular Diseases. In 1894 the number of deaths from phthisis amounted to 798 as compared with 733 in 1893.

The Medical Officer of Health of Handsworth again calls attention to the decline in the death-rate from phthisis which has taken place since the sewerage of the district in 1885.

Under this heading, the Medical Officer of Health of Sedgley writes :—" There have been only 10 fatal cases of consumption this year, as against 17 in each of the three preceding years. As I pointed out in my last year's report, damp walls are conducive to phthisis, rheumatism, and other diseases, and in this district damp walls are very common. This is often due to the absence of spouting from the houses, and I would recommend that in all plans passed by the Council for erection of new or alteration of old buildings, spouting be insisted on. A properly constructed " damp-course " is also very necessary to check damp in new buildings." I note later on in this report that one of the Medical Inspectors of the Local Government Board, who recently visited Sedgley, recommended the Authority to adopt new Bye-laws. I would also point out that I called attention to the same point in a report on the sanitary circumstances in Sedgley, dated May 13th, 1893, in the following terms :—" The Bye-laws at present in force in the district were adopted previous to the passing of the Public Health Act, 1875, and are of little practical use. The requirements as regards new buildings are meagre and indefinite, and many points are entirely omitted." I may also add that I directed special attention, in the same report, to defective spouting in many parts of the district.

As regards Stafford, the Medical Officer of Health says :—" Last year I reported a mortality from phthisis of 26, which was lower than had been recorded for many years. This year it is still lower, 24 deaths (corrected) having occurred, which is equal to a rate of 1.25 per 1000."

ZYMOTIC DISEASE PREVENTION.

Notification.—I regret to say I can only add one district—namely Tutbury (rural)—to the list of those where the

Compulsory Notification of Infectious Diseases Act is in force. The addition of Tutbury to the list adds 9,197 to the population which is now under the Act, and brings it up to 697,820. In the following districts, with a total population of 99,281, the Act has not been adopted :—

Short Heath, Urban.	Wednesfield, Urban.
Smallthorne, „	Leek, Rural.
Tipton, „	Mayfield, „
Wednesbury „	Uttoxeter „

It is needless again to discuss fully the arguments that can be adduced in favour of compulsory notification, as this has already been done in previous reports. In addition to this also, special appeals have been made to Authorities who have not adopted the Act, pointing out the desirability of their doing so; for the information of those Authorities, however, who look upon expense as a deterrent, I give the following figures, which show the average cost per 1,000 of the inhabitants for each of the past five years in districts where the Act has been in force :— 1890, 18s. 6d.; 1891, £1 8s. 9d.; 1892, 18s. 4d.; 1893, £1 5s. 10d.; 1894, £1 1s. 7d.

Tables with reference to the working of this Act are introduced at the end of this report.

In those districts where the Act is in force, the expression of opinion is unanimous in its favour. In former annual reports I have quoted many of the favourable comments on its working. On this occasion I propose only to call attention to the opinions of the Medical Officers of Health of districts in which the Act is not yet in force in those cases where such are expressed.

As regards Short Heath, the Medical Officer of Health writes :—“ The need for the Council adopting the Notification Act has been frequently demonstrated. Nearly all the Authorities in the County have adopted it. Why does Short Heath still hesitate? The Medical Officer of Health of Tipton writes :—“ I must again refer with regret to the fact that we have not yet adopted the Compulsory Notification of Infectious Diseases Act. In the county of Stafford, out of 61 Sanitary

Authorities, rural and urban, I find that only nine do not adopt it, representing a population of 1,082,839 who are protected by the Act, against 126,055 who are not protected, out of a total population of 1,208,893. It is quite true that the medical men in the district, as a matter of personal courtesy, often acquaint me of infectious disease when it appears, but it is not done systematically, and I often think that it is rather unfair to ask them to give me information gratuitously for which there is a proper legal statutory payment. The advantages to be gained by compulsory notification are briefly :—1st, early notice of an outbreak allows of immediate removal of the patients to the hospital and of isolation there, or for such sanitary precautions to be taken by the officers of the Council as will minimise the danger of spreading. 2nd, the acquaintance of school teachers with infected houses, so as not to allow children from infected houses to mix with the other scholars. 3rd, the systematic tabulating of infectious sickness and being able to communicate with the officers of other sanitary authorities in case of removal. 4th, the possibility of disinfecting every house where an infectious case has broken out ; and 5th, bringing under our notice premises where there is infectious disease, so that at a very early date such sanitary defects as may have caused the disease may be remedied.

“Every week, as Medical Officers of Health, we send to Dr. Reid, our County Medical Officer, a tabulated statement of the number of cases of infectious disease as far as we can ascertain in our districts ; these he collates, and on Wednesday morning we have a statement from him of all the cases of infectious disease known to exist in the County. The information thus gained is useful as telling us from what quarter any infectious disease may be expected.”

The Medical Officer of Health of Wednesfield writes :—
 “The Council has now the use of a very suitable hospital, and I would strongly urge them to adopt the provisions of the Notification Act, so that infectious cases may be immediately isolated from the healthy. Were this done I feel sure the zymotic rate would soon very much decrease. . . . ”

The Medical Officer of Health of Mayfield (formerly Ashbourne Rural District) says in urging his Authority to adopt the Act:—"Without it preventive measures must, in most cases, be impossible, for if the Medical Officer of Health only becomes aware of cases of infectious disease some weeks after the first fatal case has been registered, isolation is practically impossible."

The Medical Officer of Health of Smethwick points out the value of the Act as follows:—"The population incidence and mortality rates of infectious diseases for the past five years is as follows:—

YEAR.	ATTACKS PER 1000 LIVING.	CASE MORTALITY.	DEATH-RATE PER 1000 LIVING.
1890	12·5	7·9	0·99
1891	6·95	6·59	0·5
1892	7·36	5·47	0·4
1893	9·35	4·70	0·41
1894	8·4	6·3	0·53

"It is only necessary to see these figures to apprehend the invaluable aid this Notification Act affords to the sanitary authority by promptly bringing to light all cases of infectious disease, and so enabling them to act promptly in their endeavours to control infectiveness—without it we could never have dealt with the outbreak of small-pox as we have. Its moral influence becomes more apparent each year—for home isolation is, generally speaking, being more and more efficiently and universally observed—and there are practically no attempts made to conceal any outbreak of infectious disease—the people on the contrary evincing considerable zeal in acquainting the sanitary staff of suspicious cases of illness. The reliable information it affords the Medical Officer of Health facilitates the adoption of the precautionary measures he has to take, and furnishes

him with a foundation of accurate premises for the elaboration of those statistical conclusions by means of which he is in a position to show how far infectious diseases affect the health and lives of the people committed to his charge."

The Medical Officer of Health of Leek Rural District writes:—"The Notification of Infectious Diseases Act has not yet been adopted in the district.

"At present the means by which the officers of the sanitary authority obtain information of the presence of dangerous infectious disease in the district are:—

"1. By the goodwill of the medical men who practise in the district.

"2. From the District Registrar (from the latter only, as a rule, after a death has occurred).

"3. By the observation of the School Attendance Officer, who is also the Sanitary Inspector."

Isolation and Disinfection.—In most of the reports, both for urban and rural districts, this question is very fully dealt with.

In the table at the end of this report, headed "Result of the Working of the Compulsory Notification of Infectious Diseases Act," figures are given showing to what extent isolation hospitals are made use of in districts where they exist. It will be noticed that the use made of them varies very considerably, and in most cases it is evident that they can be of little practical value in curtailing epidemics—the chief purpose for which they are intended. In some instances it would appear that patients object to go to them, on the ground that the accommodation provided is not satisfactory. In other cases the authorities themselves seem to be responsible, owing to the fact that they take a limited view of their responsibilities, and impose a hindrance to the isolation of infectious cases by making a charge for the admission to hospital of all persons who are not paupers.

The percentage of infectious cases isolated in urban districts where hospitals are available, and have been available during the whole year, varies very much, from 1·3 in Tunstall to 90·3 in Tamworth.

The aim of sanitary authorities should be to isolate all cases where isolation cannot efficiently be carried out at home, and these constitute nearly the whole. A glance at the first column of the table referred to will show the position of each district as regards percentage of cases isolated in hospital to total cases, both in urban and rural districts, where the Notification Act is in force.

I am pleased to say there is every prospect of a conference of the various authorities in the County being held to discuss the general question of hospital accommodation, in the hope that, in accordance with provisions of the recent Isolation Hospitals Act, some comprehensive scheme may ultimately be decided upon which would be beneficial to all districts concerned. Considerable, though unavoidable, delay has occurred in the holding of this conference, but the various authorities have been kept informed as to the interruption and progress of the arrangements, and it is to be hoped that no decisive steps have been taken in any of the districts which may add to the difficulty of arriving at a general understanding as to the best policy to adopt.

I have previously presented a detailed statement of the existing hospital accommodation, but the following summary of the views of the Medical Officers of Health in the Administrative County will indicate the pressing necessity there is for extended and improved accommodation. The Medical Officer of Health of Bilston writes:—

“As previously stated, 39 patients suffering from scarlet fever were admitted to the temporary cottage hospital during the year, four of whom remained under treatment on December 31st, one had died, and 34 had been discharged. In the iron building 31 cases of small-pox were received, out of a total of 32, one of whom died, and one still remained at the end of the year under treatment.

“From the above it will at once be seen how extremely valuable the iron structure has been in dealing with the invasion of small-pox. Ample justification has been shown for its erection in the previous year when the disease first appeared in the neighbourhood. Had it not been for this building, wherein the first cases were promptly isolated, no one can calculate what the result might have been, both in the loss of life and in the impaired health and disfigurement of the persons attacked, had the epidemic spread here, as it probably would have done, and as it actually did in some adjoining places. Trade, too, would have been interfered with to such an extent that years would have elapsed before it recovered. At the same time, I must remind the Council that this arrangement was proposed as a temporary expedient, and I cannot advise the continued use of two buildings, the one for the treatment of small-pox, and the second for other infectious diseases, in such close proximity to one another. At the time the iron building was put up there was really no option—isolation for small-pox must be provided on this site or not at all—and to show the need for prompt action then, I may state that the work was done in six days. Since the Council came into existence, a committee has been appointed to consider this question, and I am informed that it has been decided to alter the cottage (fever) hospital, erect a fence around and between the two buildings, &c., at an estimated cost of £200. While these things are all necessary—if both buildings are to be used as at present—I would suggest some further consideration be given to the question before the work is commenced. The fever hospital simply consists of old converted cottages, and in reporting upon them in my Annual Report for 1887, I stated, ‘They are inadequate for this purpose, being old, badly arranged, and without proper means of ventilation.’ Further, in last year’s annual report by the County Medical Officer—Dr. George Reid—he states, referring to this subject: ‘iron building within 27 yards of general block: old building in dilapidated condition.’ This statement is made in connection with a report on the Isolation Hospitals Act, 1893, which Act

gives power to County Councils to combine, subject to appeal to the Local Government Board, various sanitary districts into 'hospital areas,' for which properly-equipped hospitals would be provided. I believe the County Council some time ago intimated to the late Board that it was intended to invite representatives from the different Authorities in the county to a conference on the subject, and as it is most probable Bilston will be joined with some other district or districts under this Act, it would at least seem desirable to spend no more money on the present buildings until it is known whether they will be allowed to be used in the future. When this subject is dealt with, I trust a complete disinfecting apparatus, ambulance, and proper public mortuary will be provided for the town."

In Biddulph it is said that an outbreak of small-pox led the Authority to provide good premises for the isolation of cases.

The Medical Officer of Health of Brierley Hill, in discussing an outbreak of small-pox in that district, points out how valuable the Notification Act and the recently-erected isolation hospital and disinfecting apparatus had proved to be, and he made very strong reference to the necessity for providing well-trained nurses. He says:—"From the commencement of this epidemic of small-pox in May, 1893, to its close in March and June, 1894, the total number of cases notified was 56. Looking back over the history of this epidemic, and comparing it with previous epidemics of small-pox in this district, I think there is ample proof of the great benefit and protection which the adoption of the Notification Act, the establishment of an isolation hospital and disinfecting apparatus have secured to the inhabitants, completely justifying the late Board in the expenditure which such measures involved. Many of you, doubtless, recollect the disastrous results of the epidemic of 1872. I believe the same thing would have happened again if we had not had the means at hand to promptly isolate the cases as they occurred.

“Before leaving this subject I would like to state my experience of the nursing. When we first commenced isolating the cases in tents, before the hospital was ready for the reception of patients, an inexperienced nurse was engaged (inexperienced in hospital work), and the consequences were anything but satisfactory. After giving this plan a fair trial, I secured the services of a well trained and experienced hospital nurse. The advantage of this step was immediately apparent—the discipline improved, and the patients were not only much more manageable, but their comfort was much better attended to. In any future epidemic I would most strongly recommend that the services of a trained and experienced nurse should be secured. The isolation of infectious diseases is an immense advantage to the general public, but to make it successful every possible effort should be made to ensure confidence in its administration.

“In his annual report for 1893 the County Medical Officer draws attention to this subject, and advises his Council to establish a system by which the difficulty of obtaining properly trained nurses in infectious diseases would be overcome. Knowing the great difficulty I had in obtaining the services of a properly qualified nurse for the small-pox cases, I think some such plan as the County Medical Officer suggests very desirable.”

The Medical Officer of Health of Burslem writes:—“That the prejudice against sending children to the hospital is less than formerly.” Notwithstanding this, however, I would point out that the isolation of infectious cases in that district is still only very partially carried out, for, taking scarlet fever cases alone, 20 patients were sent to hospital out of 157 cases.

The Medical Officer of Health of Coseley points out the need of a hospital for that district.

In Darlaston it is stated that additions have been made to the present hospital in the shape of improved laundry and closet accommodation.

The Medical Officer of Health of Handsworth says, that as the Local Government Board will not now sanction the erection of scarlet fever and small-pox wards on the same site, “it may

be found advisable to combine with some neighbouring authority and build separate hospitals for each disease." He then adds that he understands the County Council is going to move in the matter.

The Medical Officer of Health of Leek, in remarking upon the deaths from scarlet fever, five in number, says:—"When it is remembered that 92 notifications of the second-named disease were received during the year, the small record of deaths therefrom, and even one of those more than doubtful, is remarkable, and shows, as often previously remarked, the invaluable benefit resulting from the isolation hospital.

"I thoroughly endorse the remarks in the report of the sanitary inspector as to the inability in most cases to secure real isolation in the homes of the people, and consequently the great difficulty of getting rid of the disease."

In reference to hospital accommodation in Lichfield, where a converted farm-building is available for the joint use of the urban and rural districts, it would seem that considerable difficulty was experienced in consequence of an outbreak of small-pox. The Medical Officer of Health writes as follows:—"Although there were only 23 cases isolated, the hospital was occupied during the greater part of the year, and small-pox and scarlet fever were, by its aid, prevented from gaining an epidemic footing in the district.

"In May last, the house being occupied by small-pox patients, temporary accommodation had to be provided for the scarlet fever cases in a marquee which was erected in a field some distance from the hospital. Communication was cut off between the two, separate nursing, &c., being provided. Favoured by the season of the year, the patients in the tent did remarkably well, and returned to their homes in excellent health. For the want of a disinfecting apparatus, the provision of which is now engaging the attention of your Council, the bedding and clothing used by the patients at home and at the hospital, which could not be satisfactorily disinfected, were burnt, reasonable compensation for the same being allowed.

The only means of disinfection of infected clothing, bedding, &c., which it has been possible to adopt, has been put in practice, viz., boiling, stoving, fumigation, and exposure to air and light. I am in hopes that, in another year, an arrangement for disinfection by steam will be provided, which continues to be much needed.

“A portion of the farm buildings has been converted into two good cottages, which, it is hoped, may serve for the separate isolation of a few cases of small-pox should they occur, pending the possibility of larger areas being established for dealing with this disease by itself, apart from ordinary isolation. Of the cases isolated, eight were sent from the urban district, which included one from the workhouse and 15 from the rural district. There were no fatal cases.

“The principle of gratuitous maintenance and medical attendance has hitherto been adopted by your joint Authorities, and I hope this may be continued.”

The Medical Officer of Health of Longton writes:—“I must again remind you of the necessity for providing a contagious diseases hospital. You have the land now in your hands, the tenancy having expired, and I ask you to consider this necessity as an urgent one.”

The Medical Officer of Health of Perry Barr says:—“I would again point out that the only means of disinfection is by sulphur fumigation, and that this is of little service for the disinfection of bedding.”

The Medical Officer of Health of Short Heath, in discussing an outbreak of small-pox in the district says:—“I therefore advised the Council to petition the County Council to get their district associated with a larger area for which, under the Isolation Hospitals Act, 1893, a hospital for joint use by several Councils for small-pox may be erected; and I further advise the Council to provide—say for a start—six beds within their own district for the treatment of the earlier cases of other infectious diseases, especially scarlet fever. General isolation during a large epidemic, I am perfectly satisfied, is unattain-

able in a district so small and so poor as Short Heath. The value of even a small hospital can be estimated by the fact that the last case of small-pox was taken to a hospital direct from the public streets."

As regards isolation in Tunstall, the Medical Officer of Health says:—"Only the case of typhus was removed to the infectious hospital, as I still find it difficult to overcome the prejudices of parents with respect to the removal of their sick children."

The Medical Officer of Health of Wednesbury writes:—"Another year has gone by without any further progress being made in the matter of isolation. I have, however, reasons for thinking that the question is exercising the minds of at any rate some members of the Council, and although so far nothing has been done, I am not without hope that we are approaching the time when some decided steps shall be taken to place us in a position to deal with infectious disease, as may at the moment appear advisable. Given a pure water supply, such as we for the most part possess, and the means when necessary of isolating infectious cases, and it may safely be felt by the Health Authority that the health of the people is adequately safeguarded. Of course I take it that together with means for isolation shall go the notification of infectious disease, so that the Authorities shall be kept aware of the cases as they arise, in so far as they are of a character which admits of their isolation."

The Medical Officer of Health of Willenhall writes:—"I would ask the Council earnestly to consider the desirability of obtaining a hospital—say of 18 beds—for the isolation and treatment of general infectious diseases—especially scarlet fever—on a suitable site, and where the permanent building could be added to by temporary erections, if there should be need; and further, to decide whether, when the present temporary small-pox hospital is no longer available, they will provide another hospital themselves or petition the County Council to provide one for joint use by Willenhall and

neighbouring Authorities, under the powers conferred by the Isolation Hospitals Act, 1893."

As regards a disinfecting apparatus for this district, he says:—"I advised the Board to purchase a disinfecting apparatus, and preferably Washington Lyon's steam disinfecter with patented improvements, with separate chambers for receiving infected articles and discharging disinfected articles. This advice was not acted upon, but an apparatus supposed to disinfect has been erected without consultation with me. The value of it has not yet been fully tested."

In a highly technical matter of this importance it is difficult to conceive what could have led the Authority to provide an apparatus without asking the advice of their Medical Officer of Health. I may state that I have seen the apparatus in question, and it in no way complies with modern requirements; indeed, I very much doubt whether it is of the slightest use for the purpose for which it is intended. This being the case, in place of its being the means of checking the spread of infection by clothing, by affording a false security it is likely to have an exactly opposite effect.

Among other urban districts where Medical Officers of Health urge their Authorities to provide hospitals, or disinfectors, or ambulances, or all three, may be mentioned Rugeley, Sedgley, Smallthorne, Smethwick, Stoke-on-Trent, Stone, Tamworth, and Tipton.

As regards rural districts, the Medical Officer of Health of Newcastle Rural District says:—"The Rural District Council, I may say, has not yet taken any steps to provide an isolation hospital for Madeley parish (the most populous in the district), nor is there any building available that can be converted into a temporary hospital in times of epidemic. This matter has been referred to in my last year's Report, and the memo. of Local Government Board, dated August 25, 1892, quoted. In all populous districts it is well known that cases of measles, scarlatina, and other infectious diseases incidental to childhood are continually being spread about, and while the Notification

Act is a step in the right direction, I would remind the Council that we have absolutely no means of insuring isolation."

The Medical Officer of Health of Seisdon Rural District writes:—"The long-wished-for isolation hospital is at last in existence. Its situation at the Bratch, in the parish of Wombourne, is very central in the union. It will accommodate eight adults, or ten or twelve children. It is well isolated, and the grounds can be made suitable for healthy exercise of the patients, and garden produce. We have, however, no means of isolating the different diseases, and, there being plenty of room for enlargement, I would suggest for your consideration, one or two detached wards at the rear of the present building.

"Although only a period of six weeks has elapsed since its establishment, twelve children suffering from scarlet fever have been admitted; and even now its capacity is not sufficient to supply the wants required by the present epidemic. The disinfecting chamber, just completed, will be invaluable."

In Stone Rural District it is said there is great need for a disinfecting apparatus. The Medical Officer of Health says:—"At present we have either to burn everything, or depend upon the effect of exposing infected bedding and clothing to sulphur fumes, which is of but little real use." The Medical Officer of Health of Lichfield Rural District points out, that for a similar reason, he has to adopt the same course in that district.

The Medical Officer of Health of Cheadle Rural District writes:—"I wish to draw the attention of the Sanitary Authority to the necessity of providing isolation accommodation in the district for infectious cases. The necessity of such a provision is of frequent occurrence, as outbreaks of infectious diseases commonly occur in small dwellings, in which thorough isolation is impossible. As a suggestion, I would recommend the acquiring of cottage accommodation in the more populous districts, sufficient for the requirements of such local areas."

The Medical Officer of Health of Walsall Rural District, in calling his Authority's attention to the want of isolation hospital accommodation in that district, gives a summary of the Isolation Hospitals Act, and concludes as follows:—"In any scheme which may be adopted, it is laid down as a principle that small-pox cases may not be isolated in the same hospital or under the same administration as other cases. Already intimation has been given you that this question is under the consideration of the County Council, and the various Authorities in the County have been communicated with, with a view to the calling of a conference at which the position of matters will be explained.

"As it is the primary duty of Sanitary Authorities to protect the public from infectious diseases, and in view of the powers recently conferred on County Councils under the above-mentioned Act, it is certain that this question will come before us very soon. I would, however, respectfully recommend that no immediate action be taken by the Walsall Rural District Council till after the ventilation of the subject at the proposed conference, when you will have an opportunity of considering how far it will be to your interests to co-operate in a comprehensive scheme."

Among other rural districts where Authorities are reminded of the absence of such accommodation may be mentioned Mayfield and Uttoxeter.

Vaccination.—In many of the reports figures are given showing the percentages of successful vaccination—a practice which might usefully be followed in all where possible. In many districts, for dishonest motives, the operation is very imperfectly performed—a practice which may be attended with serious consequences, not only to the persons who are imperfectly vaccinated, but to their neighbours also.

The Medical Officer of Health of Tipton states that, as a rule, in that district only in the case of those infants who are vaccinated by the public vaccinator is the operation conducted in accordance with the recommendations of the Local Government Board, and he estimates that over 50 per cent. are vaccinated in one place only.

The Medical Officer of Health of Wednesfield, who is also public vaccinator, finds that fewer and fewer people avail themselves of the operation.

The Medical Officer of Health of Willenhall writes:—"It is an anomaly that the duty of enforcing the Vaccination Acts remains with the Guardians. I am of opinion that it would be a mistake to remove that duty from the Guardians to small Urban Authorities, but I would like to suggest for consideration whether an officer might not be appointed by the County Council, whose sole duty it should be to see that these Acts are enforced in every part of the county. It is necessary also that some steps be taken, either by the Government or the medical corporations, to check the tendency to inefficient vaccination."

INSANITARY DWELLINGS and OVERCROWDING.

In the Housing of the Working Classes Act of 1890, and the Public Health Act, 1875, a remedy exists for the various defects of which all districts, both urban and rural, have examples. In the latter districts the new Act has not as yet been very actively administered, although evidence is not altogether wanting that rural Authorities are now more inclined to move in the matter.

In Audley action was taken under the 1890 Act in six cases, in four of which repairs were carried out, and in the other two the property ceased to be occupied. In this district, it is said, there is less overcrowding owing to many new cottages having been built during the year.

As regards Brownhills, it would seem that the Authority do not support their officers in the action they recommend in the case of insanitary property.

In Leek seven dwellings were reported as unfit for habitation, and through the action of the Authority have been rendered habitable.

In Burslem 24 cases of overcrowding were abated without legal proceedings.

In Coseley 14 houses were closed as unfit for habitation.

The Medical Officer of Health of Handsworth writes :—
 “ There is need of the strictest supervision to prevent houses being run up in the flimsiest way, and to ensure that the drainage and other sanitary provisions are properly carried out. I have, during the year, reported on the defects found in the drains of some recently built houses. I regret to note an evil tendency to increase in the number of back houses. Not only do these tend to depreciate the value of neighbouring properties, but they also lessen the self respect and sense of cleanliness, neatness, and order on the part of their occupants. Further than this they interfere with that free sweep of air which is so desirable between the rows of houses in adjoining streets. The plans committee have fully recognised the evil, and with the view of discouraging as far as possible the building of back-houses, resolved to enforce the bye-law requiring that in all cases the entry to such houses should be at least 20 feet in width, or if the roadway exceed 100 feet in length then of 42 feet in width. The bye-laws in force with regard to new buildings are in some respects defective, and require revision.”

The Medical Officer of Health of Longton writes :—“ The work of condemning houses no longer fit for human habitation goes on as is required ; a wholesale dealing with seemingly unfit habitations in this borough is not necessary ; they are more disagreeable to the eye than insanitary, in a great many cases, and to shut up such habitations from mere sentiment would, in my opinion, be very cruel, besides depriving some of the owners of a livelihood. I condemn all that are unfit either for the occupants or are a nuisance to the neighbourhood. I may here observe that this class of property furnishes comparatively very few cases for notification of zymotic diseases, and again, the class of people inhabiting them would, in the large centres, be hidden away in garrets, or a room or two in a flat infinitely worse, sanitarily, than these cottages which have, in the majority of cases, plenty of air-space about them.”

It would seem from the following extract from the report of the Medical Officer of Health of Newcastle, that the Council

of that borough are not very active in taking steps to improve the house accommodation in that town :—“ On 26th January, 1894, I reported 25 and 27, Penkhull Street as unfit for habitation, and recommended proceedings under this Act ; also No. 23, Union Street.

“ Resolved by the Sanitary Committee—“ that the question be referred to a sub-committee to inspect, consider, and report to next meeting.

“ At a meeting of Sanitary Committee, held April 20th, 1894, I reported—‘ so far the sub-committee appointed for the purpose of dealing with these dwellings (25, 26, and 27, Penkhull Street), have taken no steps.’ ”

The report further states that no proceedings were taken under the 1890 Act during the year.

In Stafford seven houses were reported as unfit for habitation. Of these four were closed and the others were rendered habitable.

In Willenhall 21 houses belonging to two proprietors were condemned. Of these, nine were converted into six, and are in process of being made habitable, whilst four are still unoccupied. As regards the other eight, a closing order under the 1890 Act was obtained. In Wednesfield there are said to be many dilapidated houses, and the Medical Officer of Health says some of them will have to be condemned.

The following interesting account, the outcome of work which is worthy of imitation, appears in the report of the Medical Officer of Health of Short Heath :—

“ For the first time in the history of the Board, a systematic house-to-house inspection was made by your Inspector of Nuisances, acting under my guidance, and for the first time your Inspector was more in touch with your Medical Officer, because he now calls upon him for suggestions once in each week. From this inspection it appears that out of 519 houses only three were unoccupied ; the source of the water supply to 452 houses was the public mains, to 58 houses

private wells, to one house a spring, whilst five appear to have no supply. With regard to the houses supplied from wells and spring, as most of the wells are shallow and liable to pollution, water from them should frequently be submitted to me for examination. The houses with no supply of water are in Hunt's Lane and Ashmore Lake, to both of which the mains are conveniently near, and I therefore advise notice be given for a service from the mains. In the house-to-house inspection book I have underlined in red ink 157 bedrooms in which 670 persons sleep—an average of over $4\frac{1}{2}$ to each room. This suggests a probability of serious overcrowding, to which the Council should direct serious attention, and as a preliminary step to this it appears to me more houses must be built. There can be no doubt 25 new houses for artisans would be immediately let. The following particulars are also interesting, as showing the social condition of the people, and of the need for more efficient disposal of the sewage. Out of 519 houses, 311 have two bedrooms, 57 only one bedroom, 97 have no back doors, 47 have neither back doors nor other ventilation at the back, and 10 have no back yard or garden. The drainage of 343 houses passes into the street channels, of 26 into public drains, of 52 on to fields near, of 30 into canal, of 16 into water-courses, of 48 into ditches, whilst that of 4 is provided for in other ways. The number of houses using privies connected with open ashpits is 354; using privy cesspits not connected with ashpit, 49; having water-tight privies connected with covered and ventilated ashpits, 90; having water-closet, 1; having open ashpits separate from privies, 24; having covered ashpit separate from privy, 1. The 35th section of the Public Health Act, 1875, gives the Council power to cause proper coverings to ashpits and privies to be provided, and as decomposition leading to nuisance proceeds much more rapidly in the presence of wet, I have always held that such conveniences should be water-tight above and below, and be well ventilated. Otherwise the ashpits and privies are in good order, and the night-soil contractor is said to have done his work well."

Both in Quarry Bank and Rowley Regis cases of overcrowding are mentioned which have been remedied by the action of the respective Authorities.

Among the rural district reports in which references to the closure of houses and overcrowding appear, may be mentioned Cheadle, Leek, Stone, and Gnosall.

EXCREMENT AND REFUSE DISPOSAL.

The question of excrement and refuse removal has already been frequently referred to in discussing the zymotic death-rate and in the immediately preceding section of this report; at the same time, it is one of such extreme importance that it cannot be passed over without some special mention being made of any changes, for good or evil, which may have taken place during the year, and which are notified and commented upon in the reports under review.

With reference to this subject, in my Annual Report for last year I wrote as follows:—"The chief reason why this is one of the most difficult questions with which sanitary authorities have to contend, is that towns have been rapidly extending in area having systems of disposal, the objectionable features of which have multiplied with, and in consequence of, that extension. This being the case, it is of the utmost importance that a stand should at once be made against perpetuating a system which is radically wrong in principle and in practice, in place of adding to the trouble in the future by allowing it to continue. It should be generally recognised that the privy system in the case of urban districts must, sooner or later, be discontinued, and Authorities should endeavour to establish bye-laws enabling them to refuse their sanction to all plans of new buildings in which such a system is provided for. By this means existing troubles will not continue to multiply, and the thin end of the wedge, leading to more radical changes for the better, will have been introduced.

"Unfortunately, the question as to the best substitute for the system is not one which can easily be answered, but it

appears to resolve itself into a water-carriage, as against the conservancy method of which the privy and pail systems are examples.

“By the introduction of slop-closets, it was thought that a comparatively easy way out of the difficulty had been found, but I regret to say that that system has by no means established its claim to general favour, as will be seen from the special report on the subject which is included in the introduction to this report.

“Under certain conditions such a system, if generally adopted, might possibly answer, but in this county few towns can lay claim to the possession of the necessary conditions.” *

The following is a summary of the remarks under this heading which appear in some of the reports in which the question receives more special notice.

In Audley it is said that the work of removal is regularly carried out, but that the system might be arranged in a manner that would lead to less inconvenience.

The Medical Officer of Health of Brierley Hill says:—
“There are still many ashpits which remain uncovered. There is no reason why this should continue.”

The Medical Officer of Health of Brownhills says:—“As regards refuse disposal, it seems to me that the time has now come when it is imperative that you should take the matter into your own hands, do away with contractors, and see that there is a systematic and regular cleansing of ashpits, &c., and, coupled with this, the provision of some suitable place for the disposal of the refuse.”

As regards Burslem, the substitution of slop-closets for privies appears to be steadily proceeding. I have no desire to check excellent sanitary progress in abolishing an offensive system, but in face of the fact that the method of sewage disposal at Burslem is very far from satisfactory, and will, sooner or later, have to be taken in hand, I venture to suggest that on

* A few copies of the Report referred to are still left.

that ground it may be well for the Authority to consider whether it would not ultimately be in the town's interest to limit the introduction of slop-closets as far as possible, and to encourage ordinary water-closets. The reason for this suggestion will be found in my report on slop-closets and sewage disposal, which has already been referred to. As indicating the importance of the question in Burslem, I quote the following from the Medical Officer of Health's report:—

“ We have about 800 waste-water closets in the borough, a large number having been fixed during the past year, especially to houses with no back entrances, thus doing away with the emptying of privies through the dwelling-house, a very great sanitary improvement. There are now only five houses in the borough where the contents of privies and ashpits are taken through, and they are likely to be shortly improved. About 50 hand-flushed W.C's. and 167 waste-water closets have been fixed during 1894; these latter work as a whole satisfactorily with proper supervision, and when well laid at first.

“ The old cesspools in the borough continue to be a fertile source of nuisance, and require much supervision on the part of your sanitary officials. W.C's. or waste-water closets are substituted for them as often as possible.”

In Coseley some improvement in this department has taken place by reason of an increase in the scavenging staff, and it is said that further improvements will be effected.

As regards Fenton, the Medical Officer of Health says:—

“ The most prominent insanitary state of the district is the number of leaky and dilapidated privies. The sooner they are abolished the better it will be for the public health; the escape of their contents, doubtless sometimes laden with disease germs, renders the surrounding soil horribly offensive, and causes it to give off a most sickening effluvium, highly prejudicial to health, and well calculated to spread infectious diseases.”

From the report of the Medical Officer of Health of Handsworth it would appear that good work is being done in that district in this department. He says:—“ The abolition

of privy-middens goes on steadily. One hundred and sixty-two have been converted into water-closets during the year at the instigation of the inspector, and many others have been altered by owners either for their own comfort or that of their tenants, most educated persons now rightly objecting to the disgusting nuisance of the midden. I have heard it urged against outdoor water-closets, more especially by owners of small house property, that the pipes and cisterns freeze in winter, and that there is frequent expense from the bursting of pipes. It may be so, but too often they have been satisfied to put in the cheapest of fittings and to allow the poorest of plumbing. The freezing can to a great extent be prevented at a trifling cost by casing and packing the pipes and boxing the cisterns, and even if they do freeze, hand flushing can for the time be substituted for the flush cistern. In some instances waste-water closets have been put in, and appear to answer very fairly. They require a certain amount of care, but there are no fittings to get out of order, and there is no freezing of the cistern. The better class, the more intelligent and educated owners of small property, readily fall in with our suggestion to do away with the midden and to substitute water-carriage. I reported last year I had persuaded the owner of large blocks of houses in Baker Street to take this action, and the work has this year been completed, to the great improvement in the cleanliness and healthiness of the property. Early in the year I met the agent for a block of sixteen houses with as many midden-closets in Victoria Road, and though the houses had only been built five or six years, the owner fell in with my suggestion, and the work was completed. Again, I have been in correspondence with and have met the agents for a terrace of 26 houses in Grove Lane, built within the last eight or nine years, and I hold a written promise that the work shall be done. I am absolutely certain that privy-middens should not be tolerated in the district."

The Medical Officer of Health of Leek writes :—" In connection with this subject I may mention that in all the factories in the town except one the objectionable system of cesspools

has been abolished and water-closets substituted, and this has been accomplished by persuasion without having resort to the annoying process of legal proceedings. The number of water-closets in the town amount now to 2,000, and their adoption, wherever possible, is being gradually carried out."

The Medical Officer of Health of Lichfield writes:—"In my annual report for 1892 I called attention to the present objectionable mode of depositing this unwholesome filth, which was becoming an offensive nuisance, and that the provision of a refuse-destructor was much needed to obviate the same. Since then many old ashpits have been got rid of, and the consequence is that the quantity collected weekly by the scavengers has greatly increased, and is still deposited at the same spot. In order to remedy this most unsanitary proceeding, I would again point out that the necessity for a destructor becomes greater than ever."

In Longton it is said that insanitary privies are rapidly being replaced by water-closets, and that all new houses are supplied with water-closets.

In Newcastle 96 faulty privies were abolished during the year, and it is said that the scavenging is being better done.

In Quarry Bank there are still many open ashpits, and it is said that the contractor does his work badly.

The Medical Officer of Health of Rowley Regis writes:—"The Local Board deemed it advisable to renew for one year the system of removing night-soil by contract, as they were in doubt whether there would be time after the termination of the contracts existing at the time of making up my last report, to obtain the loan and build the stables and offices before the District Council came into power, and therefore it was almost unanimously decided that the matter was one which the new District Council should deal with. The work of night-soil removal is not satisfactory. Complaints are frequently made to me of delay in emptying the closets, and also that the closets are not always thoroughly cleaned out. The scavengers will occasionally tip the contents of the middens on improper

sites, either to suit their own convenience or the desire of some of the land occupiers. These evils I feel sure would not occur if the work were directly under the supervision of the Board officials."

The Medical Officer of Health of Rugeley writes:—"The district has never been so free from accumulation of ashes and refuse as at the present time, but I am desirous to call the attention of the Authority to the unnecessarily large size of many of the ashpits, the capacity of which the bye-laws restrict to eight cubic feet in the case of ashpits connected with privies, and not more than 30 cubic feet in those containing only ashes and dry refuse; also that they be raised one foot above the ground level. I think that these conditions ought now to be enforced. I will here add that I think the time has arrived when some better means of dealing with excrement than that now provided by open privies should be adopted and enforced, and I think that for a district like Rugeley a good form of hopper or wash-out closet would be found most suitable. I would suggest that a committee be appointed to deal with this question."

As regards Short Heath, reference to this question appears under house accommodation earlier in this report.

The Medical Officer of Health of Stoke-on-Trent writes:—"The number of privies and cesspools in the borough, 4,380; ashpits, 3,719; W.C's. with cisterns, 278; wash-out closets, 221; duckets, 30; automatic flushers, 3 for public streets, 6 for schools, and 1 for 16 houses in Cotton's Hole.

"The following letter has been received:—

‘Local Government Board,

‘Whitehall, S.W.

‘17th October, 1893.

‘Sir,

I am directed by the Local Government Board to state that they have had under their consideration the annual report for 1893 of the Medical Officer of Health to the Stoke-upon-Trent Urban Sanitary Authority, a copy of which has been

forwarded to the Board pursuant to their General Order, and I am to state that the Board hope to find in the next annual report that progress has been made in the abolition of the numerous privies, middens and cesspools in the district, reported as giving rise to nuisances, and that a more cleanly system has been substituted.

‘ I am, Sir,

‘ Your obedient Servant,

‘ ALFRED D. ADRIAN,

‘ Assistant Secretary.’

“ I most strongly recommend the Committee to insist upon the introduction of the water-carriage system in all new and altered property. It would not only be the most important sanitary measure which could be adopted in the borough, but would ultimately be a great saving to the ratepayers.

“ A cesspool of any kind is a dangerous barbarism.”

In Stone it appears that the scavenging throughout the whole town is now undertaken by the Authority. Owing to constant supervision, it is said that there has been less nuisance from the tub system. A more general adoption of the water-carriage system is anticipated.

The Medical Officer of Health of Tamworth writes:—
“ There are still a number of old privy ashpits which ought to be abolished. Their contents have to be emptied on to the roads before carting away, thus causing a most horrid smell and offensive nuisance. Besides which some of them are leaky and dilapidated, and are difficult to empty, owing to the amount of water they contain.”

The Medical Officer of Health of Tipton writes:—“ In many cases there is only one privy to three houses, and one ashpit to a row of houses. There are still complaints as to the manner in which the work is carried out, and at nearly every Sanitary Committee meeting one or more of the members report cases of non-removal and consequent nuisance. The work cannot, however, be properly done with the present staff, which, as far as I can ascertain, is less than last year. On the whole

there have been fewer complaints, the men have done their work rather better, and I can only reiterate my recommendations of last year."

In another part of the same report reference is made to certain recommendations of one of the Medical Inspectors of the Local Government Board, who had inspected the district. It appears that he recommended the abolition of privy-middens, where ashes are not applied to the excreta. The Medical Officer of Health seems to think that such a system is not suitable for Tipton at present, and he states that it had been tried without success some time previously. It is to be hoped that he will reconsider this opinion, as there are other towns in the County where the conditions do not differ from those in Tipton, in which the suggested system, even accompanied by weekly removal, is successfully and economically carried out.

The Medical Officer of Health of Tunstall writes:—"From a regular inspection I have made of the backyards of the houses throughout the town, I am pleased to report that the contractor has performed his work very efficiently, so far as the actual removal of excreta and ashes is concerned. An objectionable part of his work, however, is that the greater part of the night-soil is removed during the day, in contravention of the bye-laws. The contractor has promised a more careful observance of the bye-laws with respect to this matter for the future.

"Wherever practicable, slop-closets are being substituted for the old cesspits, and during the year 44 cesspits have been converted into water-closets."

As regards rural districts, the Cannock Authority have now followed the advice of their Medical Officer of Health, and undertaken (by contract) the removal of refuse at Bushbury.

In the Leek Rural District it is said that the privy accommodation has been improved in many cases, and that the pail system has been extended in Norton, where the plan of removal by contract is much appreciated by the inhabitants.

In the Stone Rural District it is found that owners and tenants can generally arrange for the removal of refuse, but

the Medical Officer of Health suggests that the Authority should provide for the removal at Hanford, where there are many complaints.

The Medical Officer of Health of Walsall Rural District writes:—"Complaints continue to be made that in the emptying of middens the solids are taken and the liquids too frequently left. I confess I wish your Council could see their way to undertake this important work on their own account."

The Medical Officer of Health of Lichfield Rural District calls attention to the insanitary conditions which exist at Chase Town and Chase Terrace in consequence of ashes, &c., being deposited in back yards and on roads, a matter to which the attention of the Authority had also been directed by the Sanitary Committee of the County Council through a report from myself.

As regards Tamworth Rural District it is said that a great improvement has been effected at Fazeley and Bonehill since the night-soil removal had been undertaken by the Authority.

SEWERAGE AND SEWAGE DISPOSAL.

It is a remarkable fact that the question of sewerage and sewage disposal, which, in the early days of the County Council rarely found any place in the reports of the Medical Officers of Health, now receives prominent notice in most of the reports.

The following summary of the remarks under this heading will serve to show that the work of the County Council under the Rivers Pollution Prevention Act is bearing fruit. As regards Biddulph, it is said that "the County Council having found fault with the sewage effluent, an additional lease of land is now being negotiated for the purpose of sewage irrigation and purification."

The Medical Officer of Health of Bilston writes:—"The disposal of sewage has been a most difficult subject, and has

occupied the attention of the late Board for a long time past. The difficulty has now reached a critical stage, and various schemes have been suggested for consideration. At the present time the effluent is being turned into the Birmingham Canal, and it is of the highest importance that, under the guidance of your Surveyor, some definite plan should be adopted, not only to avoid this evil, but also to provide a proper intercepting sewer from the district of Ettingshall."

In Burslem it is said that during the year the Pinnox estate has been connected with the sewage system, thus doing away with a serious pollution of the Scotia Brook. The separate system of surface drainage, it appears, has also been extended.

The Medical Officer of Health of Rowley Regis writes:—"The joint Board has taken some important steps since my last report. They have settled by arbitration the cost of the large site which they are intending to use for their sewerage outfall. The loans have been sanctioned by the Local Government Board, and several contracts have been entered into and various works connected with the construction of the main sewer are being carried out.

"The Sanitary Authority of this locality will soon be able to take up the work of the internal sewerage which has to be connected with the main sewer before named."

The Medical Officer of Health of Rugeley writes:—"With regard to sewage disposal, it is a subject which must be dealt with, and settled this year, in view of the termination of the Council's lease of the sewage land. I advise the consultation of a skilled sanitary engineer on the question, which is a somewhat complex one, and I feel sure both efficiency and economy will be more certain from such a course, which equally applies to the best way of ventilating the town sewers, a subject the Council will have before them this year."

As regards the sewerage of Smethwick, the Medical Officer of Health writes:—"The work in connection with this important undertaking has been uninterruptedly carried on during the

year, and numerous connections have been made. The West Smethwick end of the district is now being drained through the West Bromwich sewers, and the sewage being dealt with there under a satisfactory arrangement with the Drainage Board and the West Bromwich Corporation. The Bearwood district is being drained to the outfall works at Saltley by means of the Birmingham sewers under a fair and equitable arrangement made by the Council with the Corporation of Birmingham. The remaining part of Smethwick is now being drained through Handsworth and Aston to the outfall works at Saltley."

In Stone it is said that considerable progress has been made with the new sewerage scheme, and that the precipitation tanks are being constructed.

The Medical Officer of Health of Tamworth writes:—
 "It must be detrimental to the health of the borough to have in such close proximity a river so much polluted with sewage as the Tame is. It is to be hoped that your Authority will join in the representations which the Rural Authority has already made to the County Councils of Stafford and Warwick, as to the present polluted state of the river, mainly due to the enormous amount of sewage poured into it by Birmingham. The steps you are now taking to stop pollution in your own district will give weight to your representations."

In Tunstall it is said that the new scheme contemplated by the Authority will probably be completed in the course of the present year.

The Medical Officer of Health of Willenhall writes:—
 "Connections of house drains with the sewers have been made in numerous instances, and I anticipate the connection of most properties with the sewers in the course of this year. I would again warn the Council the precipitation tanks at the sewage farm should be regularly used, and chemical precipitants also; otherwise, crude sewage passing on to the land will spoil it as a filter-bed, and the sewage-effluent will be foul enough to cause you to incur penalties under the Rivers Pollution Acts."

The Medical Officer of Health of Cannock Rural District devotes considerable space to the subject of river pollution. He discusses the pollution at Brewood, and at Penkridge, and points out that the Authority will have to take up the question seriously.

In Leek Rural District it is said that drains which previously discharged into streams no longer do so.

The Medical Officer of Health of Stone Rural District points out that the scheme of sewerage and sewage disposal at Hanford has been delayed in consequence of some difficulty having arisen in the completion of the purchase of the land, but it is hoped the work will soon be started. With regard to the rest of the district, he says:—"In other villages, such as Oulton, Milwich, Hilderstone, and Blyth Bridge, where main drains are necessary, a system of broad irrigation might be adopted. In some hamlets, where streams are polluted, sewage might be dealt with individually, as in the case of a row of houses at Tittensor, where the sewage has recently been diverted from the Trent on to land suitable for the purpose. Sewage works at Trentham, including the Hall and village, on an extensive scale are about to be carried out."

As regards Uttoxeter, the Medical Officer of Health writes:—"I regret I cannot report that anything has yet been done to permanently improve the arrangement for receiving the sewage from the south side of the town; I do not wish to insist upon any very extensive sewerage scheme, but something must be done to remove the nuisance so frequently complained of. There are many other places in the district which require attention under this head."

In Wolstanton it is said that no drainage work of importance has been carried out, and that the scheme for Chell is still under consideration.

The Medical Officer of Health of Burton-on-Trent Rural District writes:—"With regard to Barton, the County Medical Officer seems to think that the system of filtering through the gravel strainers in the tanks is practically useless. As regards

soluble impurities this may probably be the case, but they undoubtedly hold back the solid portion of the sewage, and in the absence of any analysis of the effluent it is difficult to determine their utility or inutility. The ditch on the Branstone Road near to the boundary of the borough is referred to as causing a nuisance. Into this ditch the sewage from the newly-built houses on this portion of the road is carried, and as it has no outlet, this ditch seems in a fair way to establish itself as a permanent nuisance. This at one time was part of a brook course that ran directly through the borough, one part of its channel passing under a brewery where there is a large culvert. Unfortunately, this culvert has been placed on a higher level than the ditch at Branstone, making it impassable for the sewage in that direction, and being below the level of the borough drains, connection with them is impracticable, therefore some separate scheme for dealing with this constantly increasing nuisance is essential.

“In the other localities adverted to by Dr. Reid I am of opinion that pollution would be reduced to a minimum if more attention were directed to the disposal of sewage upon land.”

I would point out, with reference to Barton, that the Authority can very easily obtain an analysis of the effluent if they should be in doubt as to its quality.

As regards the sewerage of Tutbury proper, the question was referred to the Parochial Committee, who suggested that its consideration should be postponed until the election of the District Council. It is to be hoped that some definite step will soon be taken in this matter, as it is now about three years since the Authority's attention was called to it by the County Council.

The Medical Officer of Health of Gnosall Rural District points out that most of the sewage of Gnosall proper is discharged into a ditch, which is so obstructed that it is practically a long cesspit.

WATER-SUPPLY.

As the Council are aware, the mass of the population in the County are within reach of various excellent public water-

supplies. In this respect we are more fortunate than some counties, but, I regret to say, the Authorities do not in all cases avail themselves to the fullest extent of these supplies.

The following is a summary of the remarks with reference to water-supply in those urban districts where the subject receives most notice in the reports.

The Medical Officer of Health of Bilston writes:—"It is very gratifying to know, that under the new scheme, there is every prospect of the town having an abundant supply of pure water. The reservoir is almost completed, and the works at the Bratch will, I understand, be pushed forward with as little delay as the weather will allow. In this district it is particularly desirable to have the sewers well and regularly flushed, and the new supply will, I trust, provide for this being done."

The Medical Officer of Health of Brownhills writes:—"I think the Board should take steps to have many of the existing wells analysed, especially those—alas! too many—in close proximity to privies, and other sources of contamination, and where found faulty, let them be closed, and the public water-supply laid on."

It appears that in Cannock 120 connections with the mains of the South Staffordshire Waterworks Company have been made during the year.

The Medical Officer of Health of Coseley writes:—"In a large proportion of the houses infected with enteric fever, as well as two of the houses in which diphtheria appeared, there is no supply of 'tap' water.

"I am glad to see that during the year 50 houses have had 'tap' water laid on to them.

"With regard to Cinderhill, the following extract from last year's report unfortunately still applies:—"Negotiations with the South Staffordshire Waterworks Company, with a view to supplying the higher portions of the district with water, have been attended with success in so far that a pumping engine has been erected at Shaver's End, and mains laid to a new reservoir at the 'Beacon,' the highest point in Staffordshire. Seeing how

seriously the hamlet of Cinderhill suffered from enteric fever last year, I trust no time will be lost in placing the inhabitants in possession of a wholesome supply of water now that it is within their reach.' "

In Newcastle 30 houses have been supplied with water from the mains, "thus reducing the number of houses with a doubtful water-supply to 70."

In Quarry Bank the surface well-water is said to be most unsafe, and that three samples which were analysed were condemned.

In Rowley Regis, out of 37 well-waters which were analysed, 36 were found to be contaminated. The public supply has been laid on to 540 houses during the year. Regarding one part of the district the Medical Officer of Health writes as follows:—
 "The water-supply of Turner's Hill and district still remains unchanged, although further very special efforts have been made to procure a proper supply from the South Staffordshire Waterworks Company for this area. It is a matter of deep regret to the board and to myself that these efforts have been unsuccessful, notwithstanding the engagement by the Board of an eminent Water Engineer, with the hope of effecting the required supply. The Waterworks Company have considered several schemes suggested by the said engineer, but have not accepted any of them, nor does it seem possible to get the company to lay on their water without the payment of a very considerable sum of money, which it is feared could not be met by a rate on the locality. This particular area is rural in character, but is nevertheless within that covered by the Company's Act of Parliament. It is a great pity that the service reservoir for the parish of Rowley Regis was not constructed on this highest point of the parish, so that all parts could have been supplied from it."

The Medical Officer of Health of Rugeley writes:—"Ten years have elapsed since I first advised the Local Sanitary Authority to look to its water-supply, and eight years since I deemed the question an urgent one, and made a report to the

Local Government Board showing the supply to be both deficient in quantity and inferior in quality. The Local Government Board sent down an order for the contaminated wells to be cleaned out. This was done in many instances, but they very soon became again contaminated. This I reported to a committee of the Local Board, who agreed that the water-supply was unsatisfactory, yet neither could it or the whole Board pass a resolution in favour of providing a proper supply. The result was, however, that the County Council took the matter up, and in consequence of its communication the Local Board determined to itself provide a water-supply. For this purpose it obtained the advice of Mr. Boyd Dawkins, as to site, and appointed Mr. W. H. Radford, engineer, to carry out the work, with the result that an ample supply has been secured by gravitation from a site near Fair Oak. . . .

I feel confidence in saying that the supply has been obtained none too soon, as may be inferred from the fact that prior to 1889 cases of enteric fever were rare, but since that date they have averaged 10 a-year. The Surveyor tells me that already 207 houses have been connected with the mains, but there remain nearly three times that number to be connected, and it becomes the duty of the District Council to see that every house has its proper supply, and a survey of the district should be made for this purpose."

In Tamworth 33 houses have been connected with the public supply, and it is said that "for every house in the borough there is an ample supply of pure water."

In Tipton 10 samples of well-water were analysed, and all were condemned. The Medical Officer of Health writes:—"During the past 20 years I must have analysed between 250 and 300 wells of water, and in no case have I found the water to be of sufficient purity as to be safe for drinking purposes." It appears that during the year 113 houses were connected with the public supply, but there are still 638 houses dependent upon local wells.

As regards rural districts, the Medical Officer of Health of Cannock Rural District says, with reference to the water-

supply at Cheslyn Hay and Great Wyrley:—"The existing supplies are, in many cases, bad. There are wells containing polluted and suspicious water. The supplies at any time are liable to fall short, and the distance travelled in getting water is great."

The Medical Officer of Health of Cheadle Rural District congratulates his Authority on the good water-supply which has been provided for Dilhorn Common. He points out that the supply is defective at Kingsley, Werrington, Wetley Rocks, and Cellar Head, and says the Authority have now various schemes under consideration which he hopes will be attended with success.

The Medical Officer of Health of Eccleshall points out that although the water-supply in many parts of the district has been improved, it is still very defective in some.

As regards Leek Rural District, there was scarcity of water at Longnor for three months during the summer, but the supply has since been supplemented by springs and a new well.

The Medical Officer of Health of Seisdon Rural District writes:—"The Bilston Township Commissioners are sinking a well at the Bratch, and have been pumping to keep their workings dry to that extent that the wells in the surrounding district have been exceedingly short of water, and in many instances quite dry. To what level the water may rise again in the future remains to be proved. The only means of obtaining water left to the inhabitants is from a brook course which flows through the village. This stream is subject to pollution, and, to protect a portion of its course, about 100 yards of six-inch sewer have been laid down in Mill Lane. The Sanitary Authority also, at a cost of £5, laid pipes to convey the brook-water to a convenient spot in the village, to enable the inhabitants to obtain a supply from a dipping hole."

In the Stone Rural District the public water-supply has been extended to the village of Barlaston, where, however, there are still some houses which have to be connected with it.

Also, at Trentham, Hanford, and Walton, houses have been connected with public supplies. At Oulton the supply is said to be deficient and polluted, and the Medical Officer of Health is of opinion that the Stone urban supply should be extended to that village. Throughout other parts of the district there are defective supplies, which can only be improved by expensive well sinking.

The Medical Officer of Health of Uttoxeter Rural District writes:—"I have examined samples of water taken from private wells in various parts of the district, and have had to condemn several as being unfit for domestic purposes; and I have given directions accordingly. I mentioned in my last annual report that, as it was shown that the town of Uttoxeter was not efficiently supplied with water, the Authority had decided to proceed with the further powers which were incorporated in the 'Uttoxeter Water Act, 1892,' and obtain an additional supply from several springs at Somersal Herbert.

"As the work was proceeding, I called your attention to a trench at the top of the field, which evidently for many years had received the sewage from a large farm, and had been used for flooding the field in which your wells were being made, and I expressed an opinion that the ground must be thoroughly saturated with sewage, and as the springs were below the trench, I considered it not only necessary to divert the sewage, but that a large quantity of the impregnated earth should also be removed. I wrote to your Engineer about it, but from the tone of his reply he evidently did not think it of such vital importance as I did. I again visited the springs on Dec. 8th and found that the trench had been cleansed, a certain amount of earth removed, and the sewage diverted. I took samples of water from the wells, and as my examination showed as nearly as possible the same qualities as the analysis of the water taken on Jan 22nd, 1891, and which was then approved, and as I did not wish to keep the town longer without the supply, I wrote to your Engineer that if he could guarantee that the necessary precautions had been taken to prevent future contamination of the springs, I could not object to the water being turned on.

The water was turned on to the town mains Dec. 17th ; since then I have had many complaints respecting the hardness of the new water-supply. I might mention that it is not what strictly speaking would be called hard water, but relatively it is very much harder than the supply from Bramshall, which the inhabitants of the town have been so long accustomed to use. I am sorry your Engineer did not consider the quantity sufficient which could have been obtained from similar strata as the Bramshall spring."

The Medical Officer of Health of the Tutbury Rural District calls attention to the unsatisfactory supply at Hanbury, where he says local conditions make it difficult to obtain a supply.

In the Lichfield Rural District the public mains have been laid through the village of Alrewas, where the work of connecting the houses is in progress. The difficulty at Brereton has been overcome by an agreement with the Rugeley District Council to supply the village.

The Medical Officer of Health of Newcastle Rural District says:—"With regard to the water-supply of Madeley and Leycett, which has so long been before the Council, and which has so frequently been referred to as unsatisfactory by myself as well as by the County Medical Officer, and Dr. Fletcher (Local Government Board Inspector), nothing definite has been done. The subject has been fully discussed by the Council at several meetings, and, I believe, has also been referred to at the Parish Council Meetings for Madeley.

"As you are aware, two Schemes have been mentioned—one to utilize the wells or springs within the parish, and the other to obtain a supply from the Staffordshire Potteries Waterworks Co., whose mains are carried to Silverdale, a distance of about $2\frac{1}{2}$ miles from Madeley village.

"No decision has yet been come to, but I trust that, in a matter so vitally important to the inhabitants, the Council will be able to obtain an adequate supply without further delay."

In the Stoke Rural District the public supply has been extended, the mains having been carried to Stockton Brook and Bagnall. In the rural districts of Kingswinford and Walsall, the public supplies have been extended, in the former case to 81 houses, and in the latter to 56 houses.

NUISANCE REMOVAL.

The experiment, started four years ago, of obtaining returns of work done in the nuisance removal department from the various sanitary inspectors in the Administrative County, tabulated on a uniform basis, still proves most successful. The tables I have compiled from these returns will well repay some study, as they show at a glance the amount of work which is being done in the various districts, and the activity of the respective authorities.

BYE-LAWS.

The Medical Officer of Health of Rugeley points out that some amendments in the bye-laws are necessary owing to the introduction of the public water-supply and the use of water for closets.

The Medical Officer of Health of Sedgley points out that new bye-laws are necessary for that district.

In Short Heath it is said that new bye-laws are soon likely to be in force.

The Medical Officer of Health of Tipton writes:—"I trust that one of the first efforts on the part of our District Council will be to reconstruct our bye-laws, so as to make them of more use for our guidance as sanitary officers, and for the general transaction of the business of the council. The existing bye-laws were framed in 1855, and of course are now obsolete; there are model bye-laws which are given under the sanction of the Local Government Board; these can be altered to meet the requirements of our district, and such bye-laws, if amended with the consent of the Local Government Board, become practical laws. The trouble of framing is thus minimised, and the practical advantage to us will be very great indeed."

As regards Seisdon Rural District, where, it would appear, the consideration of the question had been postponed until the election of the District Council, the Medical Officer of Health again calls the Authority's attention to the need for bye-laws.

DAIRIES, COWSHEDS, AND MILKSHOPS.

In my last annual report I called attention to the fact that the reports did not, as a rule, give any information as to the inspection of these premises. This year the question receives attention in most of the reports under review.

SLAUGHTER-HOUSES AND BAKE-HOUSES.

Under this section, also, fuller information is given this year than formerly.

The Medical Officer of Health of Fenton writes:—"Public slaughter-houses would be a great boon to the district; nuisances now existing in the vicinity of the present ones would then be done away with, and opportunities would be afforded for the successful inspection of meat, either in the living animal or in the carcase."

The Medical Officer of Health of Handsworth writes:—"I have inspected the twelve slaughter-houses in the district, and the Inspector of Nuisances has made 194 inspections of the same. They are kept generally in a satisfactory manner. Applications made for the opening of two others were refused, the premises being in unsuitable positions. Before any new slaughter-houses are sanctioned, it would be advisable to adopt the model bye-laws of the Local Government Board, and to obtain power, by adopting the Public Health Acts Amendment Act, 1891, to limit their license to a specified period, so that they might then be closed in case they proved a nuisance, or immediately in case of conviction of the occupier for the possession of diseased meat. The question of public slaughter-houses will also require your consideration."

It would seem that the slaughter-houses at Stone are not under proper supervision. The Medical Officer of Health writes:—"No register appears to have been kept, or, if so, it

has been lost. I have on many occasions called the attention of the Sanitary Authority to this matter. Copies of bye-laws are not exhibited. Lime-washing of walls and ceilings at stated intervals is sadly neglected, and the paving of floors is not properly looked after."

I may mention that the attention of the Stone Authority was called to this and other matters in a report by myself, dated March, 1894, and from my own observation I can indorse the remarks of their Medical Officer of Health.

The Medical Officer of Health of Tamworth writes:—"The Public Health Acts Amendment Act, 1890, sec. 29, enables the Town Council to license slaughter-houses for a limited time, not being less than one year. I should recommend that these licenses be granted annually.

"It is a very important sanitary matter that the regulations for the proper management of slaughter-houses as at present existing should be thoroughly carried out. This can only be done by constant supervision and inspection."

MEAT INSPECTION.

The following satisfactory paragraph appears in the report of the Medical Officer of Health of Burslem:—"Three prosecutions for the sale of diseased meat were carried out during 1894. In one case the defendant absconded, and up to the present time has not been heard of. In the second case a sentence of three months' imprisonment with hard labour was imposed, and in the third, one of two months' imprisonment, on the vendor."

The following account which appears in the report of the Medical Officer of Health of Smethwick, is also satisfactory in the sense that one of the culprits at any rate was discovered and punished:—"Complaints having been made of a nuisance occasioned by bad smells on premises in Wills Street, I visited the place with the Inspector, who had previously been there, and found the tenant engaged in gut-scraping—a most offensive trade process. The appearance of the house at once excited my suspicion that something

besides gut-scraping was going on; the blinds were closely drawn, and the back ground-floor windows pasted over with brown paper inside so that no one could see into the house. A reluctant consent was given when I asked to see what the nature of the man's occupation was, and on gaining admission the peculiar sickening odour of putrifying flesh was immediately perceptible. In the front room I found the remains of a large ox or cow, consisting of a large heap of bones on the floor, from which every particle of flesh had been thoroughly removed, and on a table half-a-side of the carcase in a state of decomposition. There were two large tubs full of meat, cut up in small pieces, in brine, and some half-dozen tins containing cooked brawn, which the man acknowledged had been made from this meat. I at once told him that I considered the meat unfit for the use of man, and that it would be my duty to have the whole lot of meat seized. By my instructions the Inspector seized it, and conveyed it away, and submitted it to the inspection of a Justice of the Peace, who condemned it, and ordered it to be forthwith destroyed. Proceedings were instituted against the man, and the case was heard in Petty Sessions. The defendant did not appear, but the Justices convicted him, and imposed a sentence of two months' imprisonment with hard labour, and commented strongly on the enormity of the offence. I have reason to believe that another individual was concerned in the business, and that it was intended to dispose of the brawn in the Dudley market. Without a doubt the persons engaged in this abominable trade were 'old parliamentary hands,' and long practiced in the art of deception, for the tinned brawn looked nice and tempting, and had, by the aid of chemical deoderants, been deprived of smell, and yet how disgustingly filthy it really was."

CANAL BOATS.

In the reports for most of the districts where canal boat inspection is necessary, mention is made of the fact that the visits of the Inspectors have been regularly made. Nothing calls for special notice under this heading.

LODGING-HOUSES.

The reports do not contain much information of the results of lodging-house inspection in the various districts.

It appears that the Medical Officer of Health of Stafford presented a special report to his Authority, making certain recommendations which are not re-produced in his annual report.

In Tamworth it is said that a detailed report is in course of preparation.

FACTORY AND WORKSHOPS ACT.

In Handsworth there were 152 inspections made of 92 workshops, and a register has been made with reference to cubic space, nature of work, &c.

In Newcastle, the workshops, of which there are 69, employing 1300 hands, are said to be in a satisfactory condition. A return of workers under 18 years (310 in number) has been forwarded to the local Inspector under the Act.

The Medical Officer of Health of Stone writes:—"The new duty imposed on the Sanitary Authority has not been as efficiently carried out as I could have wished. A list of nearly 200 persons, employed as outworkers in various workshops in different parts of the town, are entered on the registers kept by the different manufacturers of boots and shoes and other wearing apparel, and which, by order of the Home Secretary, are included under this Act. I called the attention of the late Local Board to the matter in September, 1893, requesting an addition to my salary if I am to be responsible for this in addition to my other duties. The matter was carefully considered and, I believe, adjourned until the order came into fuller operation. The Factory Inspector has again directed my attention to the neglect of this work."

In Tipton it is said that the Act was practically a dead letter until the Government Inspector of Factories called the Medical Officer of Health's attention to some insanitary conditions, when the Authority gave instructions to carry out what was required under the Act.

As regards Wednesfield, the Medical Officer of Health says there are in that district "a number of small, badly-lighted, and ill-ventilated workshops, which, together with the damp subsoil consequent on insufficient drainage, are, I believe, conducive to the prevalence of this disease (phthisis) which is continually with us."

At Willenhall 400 visits have been paid to 331 workshops, and although many nuisances were discovered in and near the shops, it is said that they are cleaner and more cheerful than they have ever been before. The Medical Officer of Health says:—"At the Albion Factory the atmosphere of the polishing shop has been wonderfully improved by one of Scott's centrifugal fans, which makes 700 revolutions per minute, and carries dust and even pieces of paper into the outer air without creating any draught disagreeable to the workmen. A similar contrivance has also materially improved the air in their enamelling shop. All workpeople engaged in enamelling are now examined by a medical man once a month, and I have suggested that, as far as practicable, they should be employed in alternate weeks or months in this and other shops in the factory, so as to reduce the risk of lead poisoning to a minimum."

Among other reports in which mention is made of work under the Act are Bilston, Burslem, Leek, Rugeley, and Smethwick.

OFFENSIVE TRADES.

Under this heading little or nothing appears in the reports under review. In Tipton, mention is made of fish-frying, soap-boiling, and candle-making.

In Leek Rural District it is said that an oil, bone, and chemical manure works has been visited from time to time.

SMOKE NUISANCES.

The question of smoke nuisances does not receive that amount of attention in the reports which one would expect, considering the large manufacturing interests in the north and south of the county.

The Medical Officer of Health of Burslem writes :—" One prosecution was instituted during 1894, against a manufacturer for permitting dense smoke from hovel, said to be insufficiently high. It failed on technical grounds ; the magistrate looking upon the hovel as a chimney ; the oven was regarded as the cause of the nuisance, and it was considered that the method of remedy should be applied to the oven whence the smoke was emitted, rather than the hovel. The raising of the hovel was the object sought by the prosecution.

" A conference on the smoke question between the masters and firemen took place during the year, but I am not aware that any practical issue has followed, the nuisance still remaining to a great extent unabated."

The Medical Officer of Health of Stoke-on-Trent again refers to this question, and says that " the smoke nuisance is a very grave matter in Stoke, Basford, Harpfields, and Trent Vale, and a certain amount of it might be avoided by more careful firing—it certainly should be reduced to a minimum."

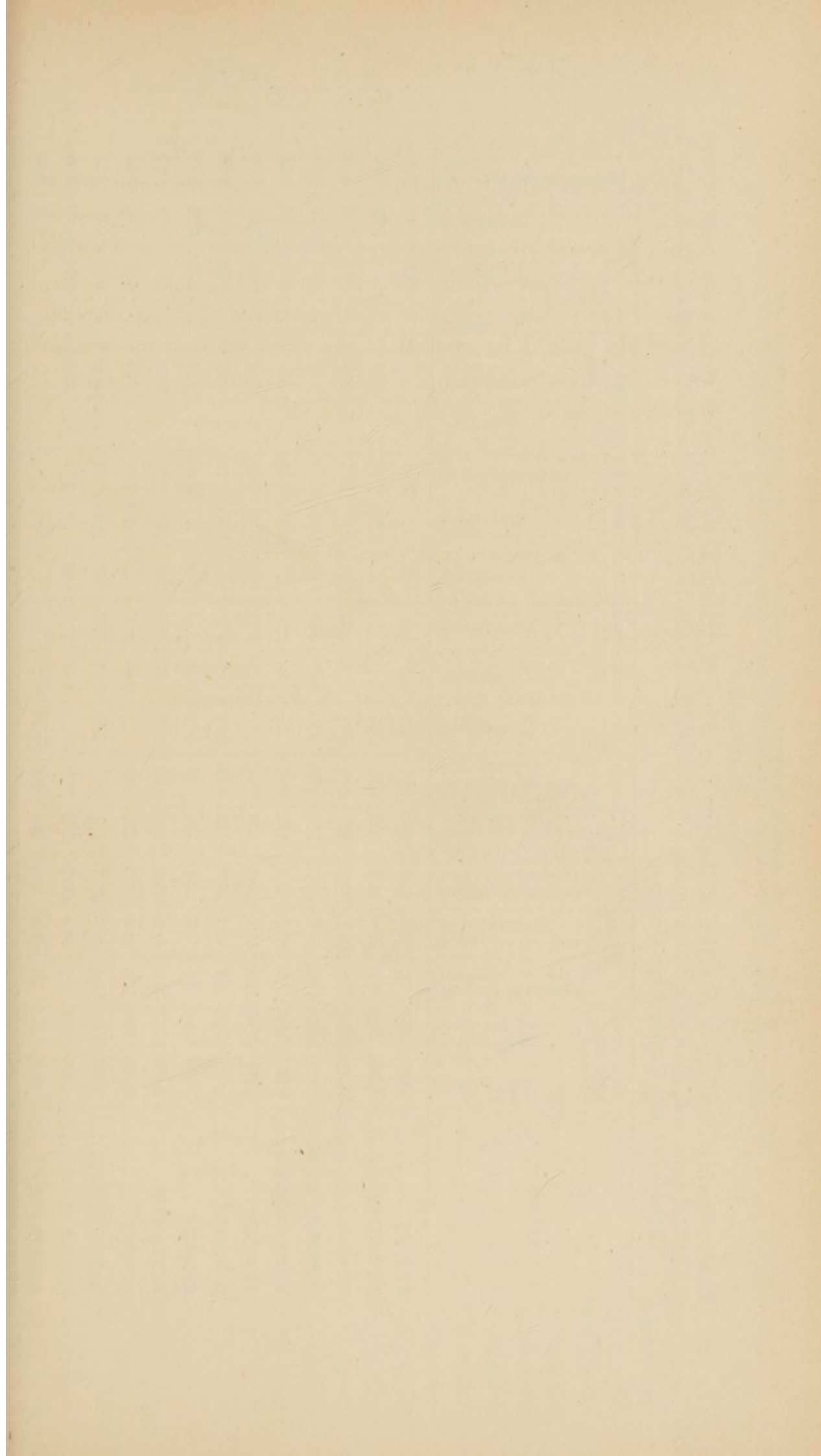
PRINTING OF REPORTS.

I am pleased to say that nearly all the Annual Reports of Medical Officers of Health in the County are now printed. The Authorities of Audley and Kidsgrove Urban Districts, and those of Cheadle, Eccleshall, Gnosall, Patshull, and Stone Rural Districts, have not yet followed the example of the others in this respect.

GEORGE REID,

County Medical Officer.

Stafford, October, 1895.



URBAN.

Deaths registered during the year 1894, classified according to Diseases, Ages, and Localities, together with Births registered during the year.

DISTRICT.	Registered Births.			Registered Deaths.			Deaths from all causes at subjoined ages.					Deaths from subjoined causes.																					
	Males.	Females.	Total.	Males.	Females.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Fevers.					Cholera.	Erysipelas.	Whooping Cough.	Diarrhoea or Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy.	Heart Disease.	Injuries.	All other Diseases.
																		Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.											
AUDLEY.....	273	269	542	93	89	182	61	20	7	17	43	34	..	1	1	1	1	2	4	1	19	35	17	4	97	
BIDDULPH	*	*	171	*	*	77	27	8	3	3	18	18	1	3	1	1	1	2	17	9	1	41	
BILSTON.....	474	445	919	239	214	453	161	61	21	16	99	95	1	4	4	4	1	1	1	..	12	10	1	17	84	16	35	259	
BRIERLEY HILL	209	207	416	100	100	200	71	22	12	10	44	41	2	8	5	1	1	1	1	1	5	14	32	8	1	119	
BROWNHILLS.....	*	*	571	100	94	194	81	23	6	7	50	27	2	2	4	4	9	37	30	10	98	
BURSLEM	630	608	1238	344	296	640	236	90	20	23	182	89	..	2	6	2	5	5	1	1	18	27	2	38	140	43	27	328	
CANNOCK	438	402	840	193	138	331	131	36	8	13	70	73	2	..	4	..	1	1	1	..	..	3	8	1	..	..	12	93	32	11	163
COSELEY	419	428	847	159	153	312	113	45	9	11	72	62	3	1	..	2	..	..	3	..	..	1	11	7	..	..	12	64	17	7	184
DARLASTON	*	*	585	165	159	324	102	79	8	11	68	56	7	16	13	1	1	1	6	..	..	1	16	12	1	..	11	67	21	1	150
FENTON.....	*	*	764	202	204	406	192	54	11	19	83	47	..	2	1	..	..	..	7	..	1	19	9	..	..	..	19	96	27	4	220
HANDSWORTH	483	464	947	196	213	409	96	40	15	23	137	98	2	9	3	2	1	1	2	4	..	3	8	4	3	..	37	81	29	8	213		
HEATH TOWN	148	137	285	*	*	c136	41	36	10	5	30	14	..	18	..	1	..	..	5	..	..	..	11	2	2	..	8	29	5	1	54
KIDSGROVE.....	70	49	119	32	28	60	27	7	2	1	14	9	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	13	3	4	37

a Including 5 deaths which occurred within the district among persons not belonging thereto.

b Including 13 deaths which occurred without the district among persons belonging thereto.

c Not " 11

* Not sub-divided.

DISTRICT.	Population at all ages.		Number of persons per acre.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.														
	Census, 1891.	Estimated to middle of 1894.						Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Whooping Cough.	Fevers.			Typhus.	Enteric or Typhoid.	Continued.	Diarrhoea and Dysentery.	Phthisis.	Diseases of Respiratory Organs.
LEEK	14128	14573	9.9	29.4	216.4	165	0.34	0.27	0.07	0.95	3.63			
LICHFIELD	7864	7864	2.3	27.5	15.5	92	0.38	..	..	..	..	..	0.25	..	..	0.12	2.03	2.28
LONGTON	34327	35874	17.9	39.3	21.1	238	2.03	..	0.11	0.11	..	0.02	0.69	0.02	0.33	0.75	1.50	3.67				
NEWCASTLE	18452	19300	29.6	33.7	17.0	150	1.08	..	0.10	0.10	0.20	..	0.25	..	0.10	0.31	1.19	5.07				
PERRY BARR	2310	2500	0.6	29.2	15.6	164	3.60	..	..	1.6	0.8	..	0.8	..	0.4	..	Nil.	2.4		
QUARRY BANK	6732	7000	7.1	38.2	13.8	130	1.85	..	1.14	..	0.14	0.14	0.42	..	..	0.14	0.85	1.57		
ROWLEY REGIS	30791	32700	8.9	35.2	15.7	169	2.01	..	1.00	0.30	0.06	0.24	0.21	..	0.15	0.27	0.33	2.99				
RUGELEY	4181	4500	7.5	32.2	10.8	103	1.11	..	..	..	..	..	1.11	..	..	..	Nil.	1.11
SEDGLEY	14961	15000	3.9	38.0	16.6	149	1.80	0.13	0.13	0.40	..	0.20	0.40	..	0.13	0.60	0.66	3.00				
SHORT HEATH	2514	2667	4.8	44.6	16.1	142	5.62	2.24	..	..	..	0.37	2.99	..	..	0.37	Nil.	2.99
SMALLTHORNE	5279	5519	10.4	38.0	12.8	161	0.72	..	0.18	..	..	..	0.18	..	..	0.36	0.36	3.44
SMETHWICK	36170	39500	20.9	35.3	15.4	148	1.39	0.22	0.37	0.05	0.07	0.05	0.27	..	0.15	0.22	1.16	3.08				
STAFFORD	*18732	*19056	18.8	33.7	12.4	115	0.36	..	0.10	..	..	..	..	..	0.10	0.15	1.20	1.99

d Not including 11 deaths which occurred within the district among persons not belonging thereto.

<i>e</i>	"	9	"	"	"	"	"	"	"
<i>f</i>	Including	2	"	"	without "	"	"	"	"
	not including	6	"	"	within "	"	"	"	"
<i>g</i>	Including	1 death	"	"	without "	"	"	"	"
<i>h</i>		5 deaths	"	"	without "	"	"	"	"
<i>i</i>	Not including	4	"	"	within "	"	"	"	"
	including	1 death	"	"	without "	"	"	"	"
<i>j</i>	Not including	25 births	"	"	in Union Workhouse, the parents not belonging to district.	"	"	"	"
<i>k</i>		73 deaths	"	"	within the district among persons not belonging thereto.	"	"	"	"
<i>l</i>	"	163	"	"	"	"	"	"	"

* Excluding Public Institutions.

URBAN—continued.

DISTRICT.	Registered Births.			Registered Deaths.			Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																				
	Males.	Females.	Total.	Males.	Females.	Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Fevers.					Cholera.	Erysipelas.	Whooping Cough.	Diarrhoea or Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy.	Heart Disease.	Injuries.	All other Diseases.
																		Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.											
STOKE-on-TRENT	409	402	m811	225	185	n410	144	48	16	17	113	72	..	..	6	6	1	..	5	..	..	2	..	1	6	4	1	..	29	77	33	13	226
STONE	79	82	161	43	35	o78	17	1	1	6	27	26	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	17	18	13	1	27
TAMWORTH	114	84	198	47	62	109	22	13	7	8	35	24	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	6	14	9	4	69
TETTENHALL	79	63	142	31	38	69	11	10	3	5	16	24	..	3	1	5	1	..	..	..	1	..	..	1	1	1	1	..	4	13	..	2	35
TIPTON	555	540	1095	254	232	486	177	73	23	21	94	98	..	20	3	2	4	..	1	..	..	1	..	1	8	21	2	..	25	104	26	13	255
TUNSTALL	323	330	653	164	156	320	113	40	11	16	88	52	..	..	2	2	..	..	5	..	..	2	..	2	3	3	4	..	22	63	18	5	189
WEDNESBURY ..	399	426	825	210	192	402	111	75	14	18	91	93	4	8	13	3	5	..	5	..	..	..	..	1	16	10	..	..	24	66	34	6	207
WEDNESFIELD ..	76	76	152	44	29	73	21	14	2	4	21	11	..	8	3	1	1	..	..	1	..	..	..	..	1	4	..	..	7	10	3	..	34
WILLENHALL ..	352	316	668	203	203	406	149	86	18	15	99	39	47	20	..	1	1	..	1	..	..	..	..	..	30	9	..	..	21	63	10	11	192
Totals	*	*	20235	*	*	9440	3306	1343	347	391	2329	1724	86	183	101	47	47	..	77	2	..	21	..	21	252	210	28	..	560	1869	604	275	5057

m Including 27 births which occurred in Union Workhouse, the parents not belonging to district.

n Not including 197 deaths which occurred within the district among persons not belonging thereto.

o " " in case of general death-rate only 6 deaths which occurred within the district among persons not belonging thereto.

* Additions not given owing to want of uniformity in returns.

RURAL—continued.

DISTRICT.	Registered Births.			Registered Deaths.			Deaths from all causes at subjoined ages.						Deaths from subjoined causes.																				
	Males.		Total.	Males.		Total.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea or Dysentery.	Rheumatic Fever.	Ague.	Phtisists.	Bronchitis, Pneumonia, & Pleurisy.	Heart Disease.	Injuries.	All other Diseases.
	Males.	Females.		Males.	Females.												Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.												
BLORE HEATH	22	23	45	7	12	19	6	0	1	0	6	6	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	4	3	..	10
CANNOCK	286	264	550	127	119	246	56	10	15	7	66	92	..	3	2	3	..	..	..	..	..	1	1	..	..	..	..	6	49	33	11	137
CHEADLE	380	391	771	193	219	412	98	42	21	20	105	126	..	2	6	5	..	..	..	2	..	10	..	2	..	..	..	33	53	39	6	254
ECCLESHALL	89	70	159	38	28	66	15	5	1	6	17	22	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	16	10	..	33
GNOSALL	*	*	131	*	*	255	10	4	..	3	9	29	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	6	11	6	..	31
KIDDERMINSTER Staffs. portion. }	*	*	12	*	*	10	1	1	0	0	4	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	7
KINGSWINFORD	332	346	678	210	196	406	107	51	12	12	78	136	1	2	..	1	..	..	1	1	22	1	14	1	..	..	24	54	31	11	239	
LEEK	261	214	475	157	99	256	68	18	13	14	68	75	..	2	4	..	..	..	1	..	..	3	1	3	..	..	20	54	20	7	140	
LICHFIELD	375	355	730	157	155	312	92	30	8	19	82	81	..	..	1	1	..	..	..	2	8	5	3	3	..	..	19	47	36	8	180	
MAYFIELD	56	39	95	*	*	52	14	3	..	5	10	20	..	..	..	..	..	..	..	..	1	..	..	..	..	..	4	9	8	3	27	
NEWCASTLE	94	93	187	57	43	100	20	12	5	7	25	31	..	..	2	2	..	..	3	..	..	..	2	2	1	..	6	19	9	8	48	

a. Not including 1 death which occurred without the district, a person belonging thereto.

b. Including 9 deaths " " " " " " among persons belonging thereto.

[illegible]

* Not sub-divided.

RURAL—continued.

DISTRICT.	Population at all ages.		Mean area per person in acres.	Birth-rate per 1000 of population.	General mortality per 1000 of population.	Mortality in children under one year per 1000 registered births.	General zymotic mortality per 1000 of population.	Individual zymotic mortality per 1000 of population.										Pththisis.	Diseases of Respiratory Organs.	
	Census, 1891.	Estimated to middle of 1894.						Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not Spasmodic).	Whooping Cough.	Fevers.						Diarrhoea and Dysentery.
														Typhus.	Enteric or Typhoid.	Continued.				
PATSHULL	234	234	7.7	21.3	12.8	Nil	4.27	..	..	..	..	..	4.27	..	..	0.95	1.90
Portion of Seisdon Rural. }																				
SEISDON	12137	12480	2.8	24.1	13.6	96	1.12	0.08	0.24	0.32	0.35	0.17	0.35	0.08	..	0.71	1.92			
STAFFORD	10320	10520	4.9	27.1	11.4	66	Nil	..	..	..	..	..	..	..	..	0.95	1.71
STOKE-ON-TRENT	5122	5557	1.0	34.5	14.7	145	0.89	..	..	0.35	0.17	0.35	0.35	..	0.35	0.71	2.51	
STONE	8174	8422	2.7	25.4	14.3	135	0.47	0.11	..	..	..	0.11	..	..	0.35	0.71	2.49
TAMWORTH..... }																				
Staffs. portion.	4770	4937	4.7	24.5	16.4	157	1.21	..	0.20	0.20	0.20	0.20	..	0.40	0.40	1.21	4.05			
TUTBURY	9031	9197	2.8	28.9	12.3	131	0.97	..	0.10	0.10	0.21	..	0.43	..	0.10	0.86	1.84			
UTTOXETER	12027	..	3.9	28.8	15.0	106	0.41	..	0.08	0.08	0.08	0.08	..	..	0.16	1.49	2.82	
Staffs. portion. }																				
WALSALL	9319	9869	1.2	33.4	14.3	142	1.21	0.20	..	0.20	0.10	..	0.30	..	0.30	0.70	3.14			
WOLSTANTON	32773	32252	0.3	39.3	17.3	144	1.86	..	..	0.31	0.27	0.24	0.43	..	0.34	1.11	4.55	
Totals and Averages	222796	225397	2.6	31.6	15.4	127	0.97	0.01	0.17	0.12	0.15	0.10	0.16	..	0.08	1.05	2.83			

d Including 1 death which occurred without the district, a person belonging thereto.

e " " 9 deaths " " " among persons belonging thereto, and not " 4 " " " within " " " not belonging thereto.

f " " 1 death " " " a person belonging thereto, and not " 12 deaths " " " among persons not belonging thereto.

g not " 2 " " " " among persons not belonging thereto. " " " not belonging thereto.

h Including 6 " " " " " belonging thereto. " " " not belonging thereto.

i Not " 24 " " " " " not belonging thereto. " " " not belonging thereto.

* In those cases in which the population is not estimated for 1894, the 1891 population has been taken to give the total.

Table showing Result of the Working of the Compulsory Notification of Infectious Diseases Act.

NOTE.—Cases of Measles and Whooping Cough are only given when these are included in the diseases compulsorily notified. Smallpox, Scarlet Fever, Diphtheria, and Fevers alone are included in the percentage calculation of hospital cases. In cases in which the Act was not in force during the whole year, the cost has been estimated for the year on the basis of the cost during the period when in force.

Hospitals exist in those districts against which an asterisk is placed.

URBAN.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
AUDLEY. 13,000. 5/10 Nil.	Houses infected ....	..	7	3	..	..	1	..	..	3	..	8		
	Cases	Under 5 5 & upwards	8 4	1 2	..	..	5	..	..	3	..	8		
	Deaths	Under 5 5 & upwards	..	1	..	..	..	..	..	2	..	..	1	4
	Cases treated in hos- pital	Under 5 5 & upwards												
	Deaths occurring in hospital	Under 5 5 & upwards												
BIDDULPH.* 5,400. 18/- Nil.	Houses infected ....	..											
	Cases	Under 5 5 & upwards	18	12	2	2	..	3	..	..	..	2		
	Deaths	Under 5 5 & upwards	1	..	..	2	..	1	..	..	..	..	..	1
	Cases treated in hos- pital	Under 5 5 & upwards												
	Deaths occurring in hospital	Under 5 5 & upwards												

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
	Houses infected	23	89	5	4	4	14	..	..	2	..	19		
BILSTON.*	Cases	Under 5 5 & upwards	32 94	5	4	..	14	..	..	2	..	19		
23,500.	Deaths	Under 5 5 & upwards	.. 6 2 2	2	4	..	..	..	..	..	..	..	..	12
18/-	Cases treated in hos- pital	Under 5 5 & upwards	4 18	..	..	..	..	..	..	..	..	..	..	..
48.2.	Deaths occurring in hospital	Under 5 5 & upwards	27 21	..	..	..	..	..	..	..	..	..	..	..
	Houses infected †.....	..	..	..	..	..	..	..	..	..	..	..	..	..
BRIERLEY HILL.*	Cases	Under 5 5 & upwards	1 11	..	..	..	18	..	..	..	..	3	..	..
11,922.	Deaths	Under 5 5 & upwards	15 63	2	1	..	..	..	..	1	..	10	..	..
£1 6s. 2d.	Cases treated in hos- pital	Under 5 5 & upwards	1 1	1	1	..	..	..	..	..	..	1	..	..
14.5.	Deaths occurring in hospital ..	Under 5 5 & upwards	1 4	1	1	..	2	..	..	1	..	..	..	..
	Houses infected .....	..	5 3	1	..	..	..	..	..	..	..	3	..	2
BROWNHILLS.*	Cases	Under 5 5 & upwards	11 5	2	..	..	1	..	..	..	..	8	..	..
13,967.	Deaths	Under 5 5 & upwards	.. ..	..	2	..	..	..	..	..	..	..	..	4
3/-	Cases treated in hos- pital	Under 5 5 & upwards	3	..	..	..	..	..	..	..	..	..	..	..
15.7.	Deaths occurring in hospital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.	Houses infected	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
BURSLEM.*	Houses infected	2	97											
33,367.	Cases Under 5 5 & upwards	4	65	3	7	..	5	..	..	..	..	2		
16/6	Deaths Under 5 5 & upwards	..	92	1	..	..	23	1	..	1	..	14		
10.2.	Cases treated in hos- pital Deaths occurring in hospital .....	..	4	2	5	..	1	..	..	1				
	Cases treated in hos- pital Deaths occurring in hospital	4	14											
CANNOCK.* †	Houses infected	14												
21,000.	Cases Under 5 5 & upwards	2	17	..	..	..	3	..	..	..	..	1		
17/1.	Deaths Under 5 5 & upwards	1	40	..	..	..	1	..	..	..	..	11		3
27.3.	Cases treated in hos- pital .. Deaths occurring in hospital	2												
	Cases treated in hos- pital .. Deaths occurring in hospital	21	1											
COSELEY.	Houses infected	33	53	6	1	..	20	..	..	..	..	18		
21,980.	Cases Under 5 5 & upwards	52	87	6	2	..	22	..	..	..	..	18		
£1 1s. 3d.	Deaths Under 5 5 & upwards	3	..	1	..	..	3	..	..	..	..	1	1	10
Nil.	Cases treated in hos- pital Deaths occurring in hospital													

† Date of introduction, June 1st, 1894.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.	Houses infected	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
DARLASTON.*	Houses infected	62	30	3	1	..	12	..	..	..	..	9		
14,777.	Cases Under 5 5 & upwards	3 82	33 21	3 ..	1 ..	..	2 10	..	..	..	..	6 3		
£1 7s. 9d.	Deaths Under 5 5 & upwards	2 5	13 ..	1 ..	..	..	6	..	..	..	..	1		
51·3.	Cases treated in hos- pital Under 5 5 & upwards	79												
	Deaths occurring in hospital..... Under 5 5 & upwards	2 5												
FENTON.*	Houses infected † ..	..											
19,000.	Cases Under 5 5 & upwards	68	11	..	..	..	18	..	..	1	..	30		
16/9.	Deaths Under 5 5 & upwards	..	1 ..	..	..	..	17	..	..	1	..	..	2	19
11·3.	Cases treated in hos- pital Under 5 5 & upwards	..	2 9											
	Deaths occurring in hospital..... Under 5 5 & upwards													
HANDSWORTH.*	Houses infected	89	73	16	1	..	18	..	..	4	..	27	9	8
38,000.	Cases Under 5 5 & upwards	6 100	34 67	5 14	1 ..	..	1 18	..	..	..	..	3 24		
18/2.	Deaths Under 5 5 & upwards	..	1 2	2 1	1 ..	..	..	..	..	..	..	1 2	7	8
40·8.	Cases treated in hos- pital Under 5 5 & upwards	3 77	8 12											
	Deaths occurring in hospital..... Under 5 5 & upwards	1												

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.				Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
HEATH TOWN.* 7,326. £1 8s. 3d. 9·7.	Houses infected ....	..	..	9	36	4	..	..	16							
	Cases	Under 5 5 & upwards	1	53	4	1	..	..	16							
	Deaths	Under 5 5 & upwards	..	1	1	..	..	..	6	..	..	..	..	..	18	11
	Cases treated in hos- pital	Under 5 5 & upwards	..	1	1	..	..	..					
	Deaths occurring in hospital	Under 5 5 & upwards	..	1	1	..	..	..	1							
	Houses infected † ..	..	..											
KIDSGROVE. 3,841. 8/6. Nil.	Cases	Under 5 5 & upwards	..	6	..	..	..	..	..	..	..	..	..	..	7	
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	1	
	Cases treated in hos- pital ..	Under 5 5 & upwards														
	Deaths occurring in hospital	Under 5 5 & upwards														
	Houses infected ....	..	..	1	82	2	..	..	9	..	..	2	..	1		
	Cases	Under 5 5 & upwards	..	30	..	..	..	..	1	..	..	2	..	1		
LEEK.* 14,573. 19/2. 70·6.	Deaths	Under 5 5 & upwards	..	4	1	..	..	..	2	..	..	1				
	Cases treated in hos- pital ..	Under 5 5 & upwards	..	18	48	1	..	..	8							
	Deaths occurring in hospital	Under 5 5 & upwards	..	1	1	..	..	..					
	Houses infected ....	..	..											
	Cases	Under 5 5 & upwards	..	2	62	2	..	..	12	..	..	2	..	1		
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	2	..	..	1				

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
LICHFIELD.* 7,864. 7/7. 46·6.	Houses infected	1	12	..	..	..	2	..	..	..	..	6	2	
	Cases Under 5 5 & upwards	1	11	..	..	..	2	..	..	..	..	1	2	
	Deaths Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	2
	Cases treated in hos- pital 5 & upwards	..	1	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital 5 & upwards	..	6	..	..	..	..	..	..	..	..	..	..
LONGTON. 35,874. 15/3. Nil.	Houses infected ....	..	67	7	1	..	52	3	..	3	..	28		
	Cases Under 5 5 & upwards	..	112	11	1	..	62	3	..	3	..	28		
	Deaths Under 5 5 & upwards	..	4	..	1	..	12	1	..	..	..	1	4	25
	Cases treated in hos- pital 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..
NEWCASTLE.* 19,300. £1 2s. 4d. 40·6	Houses infected	2	101	12	..	..	8	..	..	2	..	11		
	Cases Under 5 5 & upwards	4	132	15	..	..	9	..	..	2	..	11		
	Deaths Under 5 5 & upwards	..	2	1	..	..	..	..	..	..	..	..	2	5
	Cases treated in hos- pital 5 & upwards	4	61	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital 5 & upwards	..	1	..	..	..	..	..	..	..	..	..	..

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.	Houses infected †....	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
PERRY BARR.* 2,500. £4 8s. 0d. 42·3.	Houses infected †....	..												
	Cases	Under 5 5 & upwards	.. 32 .. 46	2 1	..	..	4	..	..	..	..	3		
	Deaths	Under 5 5 & upwards	.. 3	2 ..	..	..	.. 1	..	..	..	..	..	..	2
	Cases treated in hos- pital	Under 5 5 & upwards	.. 12 .. 24											
	Deaths occurring in hospital	Under 5 5 & upwards												
QUARRY BANK.* 7,000. 11/5. 23·0.	Houses infected †....	..	6 10	3 1	1	..	1	..	..	..	..	5		
	Cases	Under 5 5 & upwards	.. 9 .. 6	.. 5 .. 5	1	..	1	..	..	..	..	5		
	Deaths	Under 5 5 & upwards	.. .. .. ..	.. .. .. ..	1	..	..	..	..	..	..	..	6 2	1
	Cases treated in hos- pital	Under 5 5 & upwards	6											
	Deaths occurring in hospital	Under 5 5 & upwards												
ROWLEY REGIS.* 32,700. £1 2s. 9d. 6·2.	Houses infected ....	..	8 131	11 8	..	19	..	..	..	3	1	44	656	7
	Cases	Under 5 5 & upwards	.. 1 70 .. 13 118	.. 1 7 .. 14 2	..	..	2 21	..	..	.. 3	..	3		
	Deaths	Under 5 5 & upwards	.. 6 .. 4	.. 1 1 .. 1 2	..	..	2 3	..	..	.. 1	..	1	32	7
	Cases treated in hos- pital	Under 5 5 & upwards	1 13	.. ..	..	..	1							
	Deaths occurring in hospital	Under 5 5 & upwards												

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
RUGELEY. 4,500. 17/9. Nil.	Houses infected ....	..	11	6	..	..	4	..	..	..	..	1		
	Cases	Under 5 5 & upwards	..	3 12	1 6	..	9	..	..	..	..	1		
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	4
	Cases treated in hos- pital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	1
	Deaths occurring in hospital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..
SEDGLEY.* 15,000. £2 1s. 1d. 3·5.	Houses infected † ..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards	28 148	6	16	..	14	..	..	5	..	30	..	..
	Deaths	Under 5 5 & upwards	2 6	6	..	3	2	..	..	2	..	..	2	6
	Cases treated in hos- pital ..	Under 5 5 & upwards	7 }	..	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital	Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..
SMETHWICK.* 39,500. £1 0s. 9d. 43·6.	Houses infected ....	..	96	96	10	1	22	..	..	2	..	23	..	..
	Cases	Under 5 5 & upwards	7 125	41 89	1 10	..	1 26	..	..	..	..	1 25	..	..
	Deaths	Under 5 5 & upwards	3 6	1 1	2 1	2	..	..	..	..	..	..	13 2	10 1
	Cases treated in hos- pital	Under 5 5 & upwards	6 125	..	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital	Under 5 5 & upwards	2 6	..	..	..	..	..	..	..	..	..	..	..

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
STAFFORD.* 19,056. 5/9. 60·0.	Houses infected ....	..	11	..	..	..	8	..	..	1	..	14		
	Cases Under 5 5 & upwards	..	12	..	..	..	8	..	..	1	..	23		
	Deaths Under 5 5 & upwards	..	..	..	..	..	2	..	..	..	..	3	2	
	Cases treated in hos- pital Under 5 5 & upwards	..	5	..	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital Under 5 5 & upwards	..	7	..	..	..	..	..	..	..	..	..	..	..
STOKE-ON-TRENT.* 26,000. £1 7s. 4d. 29·5.	Houses infected ....	..	190	20	1	..	41	4	..	2	..	28		
	Cases Under 5 5 & upwards	..	190	18	1	..	45	4	..	2	..	25		
	Deaths Under 5 5 & upwards	..	6	3	1	..	..	..	..	..	..	1	..	6
	Cases treated in hos- pital Under 5 5 & upwards	..	75	1	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital Under 5 5 & upwards	..	..	1	..	..	..	..	..	..	..	..	..	..
STONE.* 5,980. 7/1. 50·0.	Houses infected ....	..	2	4	2	..	..	..	..	1	..	6		
	Cases Under 5 5 & upwards	..	1	2	1	..	..	..	..	1	..	6		
	Deaths Under 5 5 & upwards	..	2	3	1	..	..	..	..	1	..	6		
	Cases treated in hos- pital Under 5 5 & upwards	..	3	2	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital Under 5 5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.	Houses infected	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
TAMWORTH.*	Houses infected	2	18	1	1	..	1	..	..	..	..	1	..	..
6,917.	Cases Under 5 5 & upwards	1 4 2	4 21	1	..	..	2	..	..	..	..	1	..	..
11/6.	Deaths Under 5 5 & upwards .....	.. 1 ..	.. .. 1	.. .. 1	..	..	..	..	..	..	..	..	..	5
90·3.	Cases treated in hos- pital Deaths occurring in hospital.....	1 2 1	4 21	..	..	..	..	..	..	..	..	..	..	..
	Houses infected† ..	..	..	..	..	..	..	..	..	..	..	..	..	..
TETTENHALL.*	Houses infected† ..	..	..	..	..	..	..	..	..	..	..	..	..	..
5,344.	Cases Under 5 5 & upwards .....	.. 12 34	.. 4 7	1 4 1	..	..	2	..	..	..	..	1	..	..
£1 8s. 6d.	Deaths Under 5 5 & upwards .....	.. 1 ..	.. 4 1	.. 4 1	..	..	..	..	..	..	..	..	2	1
35·5.	Cases treated in hos- pital Deaths occurring in hospital.....	.. 10 10	.. 10	..	..	..	1	..	..	..	..	..	1	1
	Houses infected ....	..	27	11	1	1	28	1	..	4	..	22	..	..
TUNSTALL.*	Houses infected ....	..	27	11	1	1	28	1	..	4	..	22	..	..
16,065.	Cases ... Under 5 5 & upwards .....	.. 9 22	.. 3 8	1 3 1	..	..	2	..	..	..	..	1	..	..
15/10.	Deaths Under 5 5 & upwards .....	.. .. 2	.. .. 1	1 1 1	..	..	2	..	..	..	..	1	..	3
1·3.	Cases treated in hos- pital Deaths occurring in hospital.....	.. .. ..	.. .. ..	.. .. ..	..	..	1	..	..	..	..	..	..	..

† Not specified.

URBAN—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
WILLENHALL.* 17,684. £6 4s. 8d. 29.2.	Houses infected ....	..	549	15	5	1	..	3	..	..	..	..	13		
	Cases	Under 5 5 & upwards	64 778	10 8	3 3	1 ..	..	3	..	..	..	..	13		
	Deaths	Under 5 5 & upwards	16 31	.. ..	1 ..	1 ..	..	..	..	..	..	..	..	17 3	29 1
	Cases treated in hos- pital	Under 5 5 & upwards	16 238												
	Deaths occurring in hospital	Under 5 5 & upwards	4 10												

RURAL.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
	Houses infected	3	64	4	4	4	3	..	..	2	..	13	13	
CANNOCK.*	Cases Under 5 5 & upwards	..	44 83	1 4	2 5	..	..	4	..	..	..	13	9 11	
16,076.	Deaths Under 5 5 & upwards	..	2 1	..	1 2	..	..	..	..	..	..	..	1	
£1 8s. 2d.	Cases treated in hos- pital Deaths occurring in hospital	2												
14.														
CHEADLE.	Houses infected +													
22,302.	Cases Under 5 5 & upwards	..	14 21	7 13	..	..	14	..	..	..	..	1 11		
9/3.	Deaths Under 5 5 & upwards	..	2 ..	4 2	2 3	..	..	..	..	..	..	..	7 3	
Nil.	Cases treated in hos- pital Deaths occurring in hospital ..													
ECCLESHALL.*	Houses infected ....	..	3	2	..	..	3	..	..	..	..	1		
5,921.	Cases Under 5 5 & upwards	..	1 5	2	..	..	3	..	..	..	..	1		
5/-	Deaths Under 5 5 & upwards	..	..	..	..	..	1							
9.0.	Cases treated in hos- pital Deaths occurring in hospital .....	..	1											

† Not specified.

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
KIDDERMINSTER.* 647. £1 3s. 2d. 40·0.	Houses infected † ..	..												
	Cases	Under 5 5 & upwards ..	..	1 4	1	..	..	..	..	..	..	..	1		
	Deaths	Under 5 5 & upwards ..	..											
	Cases treated in hos- pital	Under 5 5 & upwards ..	..	1 1											
	Deaths occurring in hospital.....	Under 5 5 & upwards ..	..											
	Houses infected .....	..	10	31	4	2	..	1	..	..	1	..	6		
	Cases	Under 5 5 & upwards ..	14 14	14 26	1 3	1 1	..	1	..	..	1	..	7		
	Deaths	Under 5 5 & upwards ..	..	..	1	..	..	..	..	..	..	..	..	2	8
	Cases treated in hos- pital	Under 5 5 & upwards ..	12	1 2											
	Deaths occurring in hospital.....	Under 5 5 & upwards ..	..											
MARKET DRAYTON. ‡ 2,224. 4/5. Nil.	Houses infected .....	..	..	..	..	..	..	..	..	..	1	..	3		
	Cases	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	1	..	3		
	Deaths	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	1	..			
	Cases treated in hos- pital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	1	..			
	Deaths occurring in hospital.....	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	1	..			
	Houses infected .....	..	..	..	..	..	..	..	..	..	1	..	3		
	Cases	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	1	..	3		
	Deaths	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	1	..			
	Cases treated in hos- pital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	1	..			
	Deaths occurring in hospital.....	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	1	..			

† Not specified.

‡ Tent available.

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
NEWCASTLE. 6,456. £1 16s. 5d. Nil.	Houses infected ....	..	..	21	3	4	..	..	..	..	..	..	56		
	Cases	Under 5 5 & upwards ..	..	9 18	3 ..	3 1	..	..	..	..	..	..	2 54		
	Deaths	Under 5 5 & upwards ..	..	..	2	2	..	..	..	..	..	..	1 2		
	Cases treated in hos- pital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..
	Houses infected ....	..	..	4	1	..	..	..	..	..	2	..	1		
NEWPORT. 4,366. 6/10. Nil.	Cases	Under 5 5 & upwards ..	..	2	1	..	..	..	..	..	2	..	1		
	Deaths	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..
	Cases treated in hos- pital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..
	Houses infected ....	..	2	52	9	..	..	1	..	..	1	..	12		
	Cases	Under 5 5 & upwards ..	..	45 95	2 14	..	..	1	..	..	..	..	12		
SEISDON.* 12,480. £1 14s. 3d. 12.5.	Deaths	Under 5 5 & upwards ..	..	1 2	1 2	..	..	..	..	..	..	..	..	1 2	1
	Cases treated in hos- pital	Under 5 5 & upwards ..	..	6 14	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..
	Houses infected ....	..	..	..	..	..	..	..	..	..	..	..	..
	Cases	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital	Under 5 5 & upwards ..	..	..	..	..	..	..	..	..	..	..	..

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
SHIFNAL. 234. Nil. Nil.	Houses infected ....	..											
	Cases	Under 5 5 & upwards												
	Deaths	Under 5 5 & upwards												
	Cases treated in hos- pital	Under 5 5 & upwards												
	Deaths occurring in hospital	Under 5 5 & upwards												
STAFFORD.* 10,520. 7/1. 66·6.	Houses infected † ..	..											
	Cases	Under 5 5 & upwards	6 16	3	..	..	2	..	..	1	..	2		
	Deaths	Under 5 5 & upwards	..	..	..	..	..	..	..	2				
	Cases treated in hos- pital ..	Under 5 5 & upwards	5 13											
	Deaths occurring in hospital	Under 5 5 & upwards												
STOKE-ON-TRENT.* 5,557. 12/1. 52·1.	Houses infected † ..	..											
	Cases	Under 5 5 & upwards	18 ..	2	2	2	3	..	..	..	..	2		
	Deaths	Under 5 5 & upwards	..	2	1	2	..	..	..	1				
	Cases treated in hos- pital	Under 5 5 & upwards	..	10										
	Deaths occurring in hospital	Under 5 5 & upwards	..	2										

† Not specified.

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of Cases treated in Hospital.	Houses infected	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Krysipelas.	Measles.	Whooping Cough.
STONE.*	Houses infected ....	..	8	3	1	..	2	..	..	..	..	10	3	12
8,422.	Cases Under 5 5 & upwards	..	10	3	1	..	2	..	..	..	..	10		
9/2.	Deaths Under 5 5 & upwards	..	4	1	..	..	..	..	..	..	..
10·0.	Cases treated in hos- pital Under 5 5 & upwards	..	1											
	Deaths occurring in hospital Under 5 5 & upwards	..	1											
STOURBRIDGE.*	Houses infected † ..	..											
20,724.	Cases Under 5 5 & upwards	..	42	1	1	..	8	..	..	1	..	2		
£1 0s. 7d.	Deaths Under 5 5 & upwards	..	1	..	1	..	3	..	..	1	..	1	21	1
37·6.	Cases treated in hos- pital Under 5 5 & upwards	..	17				2							
	Deaths occurring in hospital Under 5 5 & upwards	..	27	..	..	..	1							
TAMWORTH.*	Houses infected ....	..	2	10	1	..	..	..	..	..	..	1		
4,937.	Cases Under 5 5 & upwards	..	2	11	1	..	..	..	..	..	..	1		
10/2.	Deaths Under 5 5 & upwards	..	..	..	1	..	..	..	..	..	..	..	..	2
84·2.	Cases treated in hos- pital Under 5 5 & upwards	..	1											
	Deaths occurring in hospital Under 5 5 & upwards	..	11											

† Not specified.

RURAL—continued.

District, Population, Cost of Notification per 1000 of Population, Percentage of cases treated in Hospital.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus Fever.	Enteric Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Measles.	Whooping Cough.
WALSALL. 9,869. 10/10. 22·5.	Houses infected	...	9	16	1	..	..	3	..	..	..	..	3	..	..
	Cases	Under 5 5 & upwards	2 10	7 17	1 1	..	..	3	..	..	..	..	1	..	..
	Deaths	Under 5 5 & upwards	1 1	.. 2	1 1	..	..	1	..	..	..	..	1	..	3
	Cases treated in hos- pital	Under 5 5 & upwards	1 8	..	..	..	..	..	..	..	..	..	..	..	..
	Deaths occurring in hospital	Under 5 5 & upwards	1 1	..	..	..	..	..	..	..	..	..	..	..	..
WOLSTANTON.* 32,252. £1 15s. 4d. 33·2.	Houses infected	...	1	237	14	3	..	26	9	..	3	..	43	..	14
	Cases	Under 5 5 & upwards	.. 1	117 219	5 12	2 1	..	7 33	2 10	..	..	..	6 38	..	..
	Deaths	Under 5 5 & upwards	.. ..	5 5	5 4	7 1	..	11	..	..	..	..	..	..	14
	Cases treated in hos- pital	Under 5 5 & upwards	.. 1	31 81	..	..	..	2 10	..	..	..	..	..	..	..
	Deaths occurring in hospital	Under 5 5 & upwards	.. ..	3 ..	..	..	..	3	..	..	..	..	..	..	..

SUMMARY
OF
SANITARY INSPECTORS'
WORK.

URBAN—continued.

District and Population.	Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisance.	Other nuisances.	Totals.												
	Foul condi- tions.	Structural defects.	Overcrowd- ing.	Unfit for habitation.										Defective Traps.	No discon- nection.	Other faults.																			
Burslem. 33,367.	Inspections & observations made	56	480	24	18	124	86	45	40	60	68	1700	50	760	155	20	4	131	6	12	72	15	17	543	4325										
	Formal notices by authority	23	26	6	2	..	5	2	2	..	4	151	22	56												4	131	6	6	6	5	2	7	9	489
	Nuisances abated after notice.....	23	26	6	2	..	5	2	2	4	151	22												56	20	4	131	2	2	4	2	2	9	479
Cannock. 21,000.	Inspections & observations made	10	26	5	1	..	..	..	..	112	85	58	2	6	9	42	16	120	3	..	..	..	3	498				
	Formal notices by authority	6	..	5	1	..	..	..	..	..	..	24	2	6	3	2	13	..	..	..	..	..	3	65
	Nuisances abated after notice.....	10	26	5	1	..	..	..	..	112	25	54	2	6	9	42	16	120	3	..	..	..	3	434				
Coseley. 21,980.	Inspections & observations made	193	46	19	14	..	56	150	91	153	125	5577	48	..	4	..	25	50	16	7	..	..	5	6579									
	Formal notices by authority	193	46	19	14	..	..	46	1	1	1	..	..	..	4	..	25	..	16	7	..	..	5	378				
	Nuisances abated after notice.....	193	46	19	14	..	..	46	1	1	1	..	..	..	4	..	25	..	16	7	..	..	5	378				
Darlaston. 14,777.	Inspections & observations made .....	..	..	11	..	..	26	52	26	52	117	2198	7	..	4	..	..	..	3	8	..	..	..	2504	
	Formal notices by authority	..	..	11	..	..	..	..	..	..	1	34	7	..	4	..	..	..	..	8	..	..	68	68
	Nuisances abated after notice.....	..	..	11	..	..	..	..	..	..	1	34	7	..	4	..	..	..	..	8	..	..	68	68
Fenton. 19,000.	Inspections & observations made	46	4	18	15	..	81	85	91	93	..	208	1	65	..	22	..	..	..	6	..	3	165	923								
	Formal notices by authority	41	4	18	15	..	..	..	..	..	..	208	1	33	..	22	..	..	..	6	..	3	165	536		
	Nuisances abated after notice.....	41	4	18	15	..	..	..	..	..	..	208	1	33	..	22	..	..	..	6	..	3	165	536		
125																																			

* 120 houses limewashed and cleaned during epidemic of small-pox.

URBAN—continued.

District and Population.	Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & water.						Precautions against infectious disease.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Foul condi- tions.	Structural defects.	Overcrowd- ing.	Unfit for habitation.										Defective Traps.	No discon- nection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stored or destroyed.	Houses disinfectd after infectious disease.	Schools disinfectd after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Handsworth 38,000.	170	100	20	8	..	155	113	130	194	..	4686	126	172	230	106	317	35	..	67	..	24	87	6740	1	141	188

Suggested form of Inspector's Return not adopted.

URBAN—continued.

District and Population.	Inspections & observations made by authority	Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.				Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.
		Foul condi- tions.	Structural defects.	Overcrowd- ing.	Unfit for habitation.										Defective Traps.	No discon- nection.	Other faults.								
Longton. 35,874.	3	29	7	7	100	48	48	30	60	186	2	20	7	2	94	10	3	..	37	37	400				
Newcastle. 19,300.	550	145	12	13	100	48	48	30	60	650	30	80	60	16	10	30	20	8	18	10	1933				
Quarry Bank 7,000.	5	..	3	3	..	15	4	6	..	21	3	..	6	6	10	3	..	..	6	6	85			
Rowley Regis 32,700.	257	42	11	16	..	22	243	..	148	94	61	45	..	11	..	39	540	83	1	4	27	1669			
Rugeley. 4,500.	5	2	1	..	6	14	17	..	33	47	7	1	3	4	3	3	1	2	6	..	2	158			
	..	2	..	..	..	..	..	..	1	2	..	1	..	4	3	..	..	1	..	..	15			
	..	..	..	..	..	..	..	..	1	2	..	..	..	4	3	..	..	1	..	..	10			

URBAN—continued.

District and Population.	Inspections & observations made Formal notices by authority Nuisances abated after notice	Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.				Animals improperly kept.	Offensive trades.	Smoke nuisance.	Other nuisances.	Totals.	Food supply & water.						Precautions against infectious disease.																																																																																																																																																																																																																																																																																																																																																																																																																															
		Foul conditions.	Structural defects.	Overcrowding.	Unit for habitation.										Defective Traps.	No disconnection.	Other faults.	Water supply.						Pigs.	Animals improperly kept.	Offensive trades.	Smoke nuisance.	Other nuisances.	Totals.	Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stored or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.																																																																																																																																																																																																																																																																																																																																																																																																																				
Sedgley. 15,000.	Inspections & observations made Formal notices by authority Nuisances abated after notice	519	2	1	2	..	15	15	3	3	..	2	1	Each house.	1	2	..	4	15	1	42

* Verbal notice given on each inspection when necessary, and notices complied with. † Including Public Institutions.

URBAN—continued.

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District and Population.	Inspections & observations made by authority Formal notices by authority Nuisances abated after notice.....	Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.				Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & Water.						Precautions against infectious disease.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
		Foul condi- tions.	Structural defects.	Overcrowd- ing.	Unfit for habitation.										Defective traps.	No discon- nection.	Other faults.	Seizures of unwholesome food.							Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stored or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Stoke-on-Trent. 26,000.	86	25	6	6	1	59	Verbal.	61	70	Verbal.	100	111	86	5	280	32	..	50	18	9	3	..	1008	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Suggested form of Inspector's Return not adopted.

Suggested form of Inspector's Return not adopted.

URBAN—continued.

District and Population.	Dwelling-houses and Schools.					Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.							
	Foul condi- tion.	Structural defects.	Overcrowd- ing.	Unit for habitation.	Defective Traps.										No discon- nection.	Other faults.															
Tunstall. 16,065.	Inspections & observations made	360	7	4	8	..	600	..	25	650	86	97	3	42	120	49	..	..	60	4	..	6	21	2142					
	Formal notices by authority	21	7	..	2	3	33
	Nuisances abated after notice.....	360	7	4	1	3	375
Wednesbury 25,311.	Inspections & observations made																														
Wednesfield. 4,965.	Inspections & observations made	7	1	7	1	..	Inspection made: no record or No.	1	4	..	42	3	..	2	..	13	4	5	1	..	10	..	10	101							
	Formal notices by authority	..	1	1	1	1	10	
	Nuisances abated after notice.....	7	..	7	1	6	97	
Willenhall. 17,684.	Inspections & observations made		1284			..	20	58	25	..	1100	5	1	..	24	..	..	6	..	10	2533 (about)	..	2	..					
	Formal notices by authority	2	..	1	2	1	29		
	Nuisances abated after notice.....	2	..	1	1	1	15		

District and Population.	Dwelling-houses and Schools.					Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.							
	Foul condi- tion.	Structural defects.	Overcrowd- ing.	Unit for habitation.	Defective Traps.										No discon- nection.	Other faults.															
Tunstall. 16,065.	Inspections & observations made	360	7	4	8	..	600	..	25	650	86	97	3	42	120	49	..	..	60	4	..	6	21	2142					
	Formal notices by authority	21	7	..	2	3	33
	Nuisances abated after notice.....	360	7	4	1	3	375
Wednesbury 25,311.	Inspections & observations made																														
Wednesfield. 4,965.	Inspections & observations made	7	1	7	1	..	Inspection made: no record or No.	1	4	..	42	3	..	2	..	13	4	5	1	..	10	..	10	101							
	Formal notices by authority	..	1	1	1	1	10	
	Nuisances abated after notice.....	7	..	7	1	6	97	
Willenhall. 17,684.	Inspections & observations made		1284			..	20	58	25	..	1100	5	1	..	24	..	..	6	..	10	2533 (about)	..	2	..					
	Formal notices by authority	2	..	1	2	1	29		
	Nuisances abated after notice.....	2	..	1	1	1	15		

Suggested form of Inspector's Return not adopted.

District and Population.	Dwelling-houses and Schools.					Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.							
	Foul condi- tion.	Structural defects.	Overcrowd- ing.	Unit for habitation.	Defective Traps.										No discon- nection.	Other faults.															
Tunstall. 16,065.	Inspections & observations made	360	7	4	8	..	600	..	25	650	86	97	3	42	120	49	..	..	60	4	..	6	21	2142					
	Formal notices by authority	21	7	..	2	3	33
	Nuisances abated after notice.....	360	7	4	1	3	375
Wednesbury 25,311.	Inspections & observations made																														
Wednesfield. 4,965.	Inspections & observations made	7	1	7	1	..	Inspection made: no record or No.	1	4	..	42	3	..	2	..	13	4	5	1	..	10	..	10	101							
	Formal notices by authority	..	1	1	1	1	10	
	Nuisances abated after notice.....	7	..	7	1	6	97	
Willenhall. 17,684.	Inspections & observations made		1284			..	20	58	25	..	1100	5	1	..	24	..	..	6	..	10	2533 (about)	..	2	..					
	Formal notices by authority	2	..	1	2	1	29		
	Nuisances abated after notice.....	2	..	1	1	1	15		

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District and Population.	Dwelling-houses and Schools.					Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.							
	Foul condi- tion.	Structural defects.	Overcrowd- ing.	Unit for habitation.	Defective Traps.										No discon- nection.	Other faults.															
Tunstall. 16,065.	Inspections & observations made	360	7	4	8	..	600	..	25	650	86	97	3	42	120	49	60	4	..	6	21	2142							
	Formal notices by authority	21	7	..	2	3	33
	Nuisances abated after notice.....	360	7	4	1	3	375
Wednesbury 25,311.	Inspections & observations made																														
Wednesfield. 4,965.	Inspections & observations made	7	1	7	1	..	Inspection made: no record or No.	1	4	..	42	3	..	2	..	13	4	5	1	..	10	..	10	101							
	Formal notices by authority	..	1	1	1	1	10	
	Nuisances abated after notice.....	7	..	7	1	6	97	
Willenhall. 17,684.	Inspections & observations made		1284			..	20	58	25	..	1100	5	1	..	24	..	..	6	..	10	2533 (about)	..	2	..					
	Formal notices by authority	2	..	1	2	1	29		
	Nuisances abated after notice.....	2	..	1	1	1	15		

130

District and Population.	Dwelling-houses and Schools.					Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.							
	Foul condi- tion.	Structural defects.	Overcrowd- ing.	Unit for habitation.	Defective Traps.										No discon- nection.	Other faults.															
Tunstall. 16,065.	Inspections & observations made	360	7	4	8	..	600	..	25	650	86	97	3	42	120	49	60	4	..	6	21	2142							
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	Formal notices by authority	..	1	1	1	1	10	
	Nuisances abated after notice.....	7	..	7	1	6	97	
Willenhall. 17,684.	Inspections & observations made		1284			..	20	58	25	..	1100	5	1	..	24	6	..	10	2533 (about)	..	2	..							
	Formal notices by authority	2	..	1	2	1	29		
	Nuisances abated after notice.....	2	..	1	1	1	15		

130

District and Population.	Dwelling-houses and Schools.					Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.							
	Foul condi- tion.	Structural defects.	Overcrowd- ing.	Unit for habitation.	Defective Traps.										No discon- nection.	Other faults.															
Tunstall. 16,065.	Inspections & observations made	360	7	4	8	..	600	..	25	650	86	97	3	42	120	49	60	4	..	6	21	2142							
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	Nuisances abated after notice.....	360	7	4	1	3	375
Wednesbury 25,311.	Inspections & observations made																														
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	Formal notices by authority	..	1	1	1	1	10	
	Nuisances abated after notice.....	7	..	7	1	6	97	
Willenhall. 17,684.	Inspections & observations made		1284			..	20	58	25	..	1100	5	1	..	24	6	..	10	2533 (about)	..	2	..							
	Formal notices by authority	2	..	1	2	1	29		
	Nuisances abated after notice.....	2	..	1	1	1	15		

130

District and Population.	Dwelling-houses and Schools.					Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.							
	Foul condi- tion.	Structural defects.	Overcrowd- ing.	Unit for habitation.	Defective Traps.										No discon- nection.	Other faults.															
Tunstall. 16,065.	Inspections & observations made	360	7	4	8	..	600	..	25	650	86	97	3	42	120	49	60	4	..	6	21	2142							
	Formal notices by authority	21	7	..	2	3	33
	Nuisances abated after notice.....	360	7	4	1	3	375
Wednesbury 25,311.	Inspections & observations made																														
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	Formal notices by authority	..	1	1	1	1	10	
	Nuisances abated after notice.....	7	..	7	1	6	97	
Willenhall. 17,684.	Inspections & observations made		1284			..	20	58	25	..	1100	5	1	..	24	6	..	10	2533 (about)	..	2	..							
	Formal notices by authority	2	..	1	2	1	29		
	Nuisances abated after notice.....	2	..	1	1	1	15		

130

District and Population.	Dwelling-houses and Schools.					Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.							
	Foul condi- tion.	Structural defects.	Overcrowd- ing.	Unit for habitation.	Defective Traps.										No discon- nection.	Other faults.															
Tunstall. 16,065.	Inspections & observations made	360	7	4	8	..	600	..	25	650	86	97	3	42	120	49	60	4	..	6	21	2142							
	Formal notices by authority	21	7	..	2	3	33
	Nuisances abated after notice.....	360	7	4	1	3	37

RURAL.

District and Population.	Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.				Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & water.						Precautions against infectious disease.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	Foul condi- tions.	Structural defects.	Overcrowd- ing.	Unfit for habitation.										Defective Traps.	No discon- nection.	Other faults.	Seizures of unwholesome food.								Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stored or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Ashbourne. 5,489.	Inspections & observations made Formal notices by authority Nuisances abated after notice.....	1	2	1	105	24	6	..	7	7	23	22	7	20	225	

* Staffordshire portion.

RURAL—continued.

District and Population.	Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.				Animals improperly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & water.						Precautions against infectious disease.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Foul conditions.	Structural defects.	Overcrowding.	Unfit for habitation.										Defective Traps.	No disconnection.	Other faults.	Water supply.						Pigsties.	Animals im-	Samples of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stored or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Proseutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Proseutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Newport. 4,366.	Inspections & observations made	79	19	4	..	2	74	13	13	69	131	54	..	36	2	154	64	57	23	794	7	5	1	7	2</

RURAL—continued.

[illegible]

Suggested form of Inspector's Return not adopted.

* Staffordshire portion.

RURAL—continued.

District and Population.	Inspections & observations made Formal notices by authority Nuisances abated after notice.....	Dwelling-houses and Schools.				Lodging-houses.	Dairies and Milkshops.	Cowsheds.	Bakehouses.	Slaughter-houses.	Canal Boats.	Ashpits and Privies.	Deposits of refuse & manure.	Water-closets.	House drainage.			Water supply.	Pigsties.	Animals im- properly kept.	Offensive trades.	Smoke nuisances.	Other nuisances.	Totals.	Food supply & Water.						Precautions against infectious disease.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		Foul condi- tions.	Structural defects.	Overcrowd- ing.	Unfit for habitation.										Defective Traps.	No discon- nection.	Other faults.								Seizures of unwholesome food.	Samples of food taken for analysis.	Samples of food found adulterated.	Samples of water taken for analysis.	Samples of water condemned as unfit for use.	Lots of infected bedding stored or destroyed.	Houses disinfected after infectious disease.	Schools disinfected after infectious disease.	Prosecutions for not notifying existence of infectious disease.	Convictions for not notifying existence of infectious disease.	Prosecutions for exposure of infected persons or things.	Convictions for exposure of infected persons or things.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Perry Barr (URBAN). 2,500.		17	..	5	3	35	1	76	3	..	10	..	12	2	164

Suggested form of Inspector's Return not adopted.

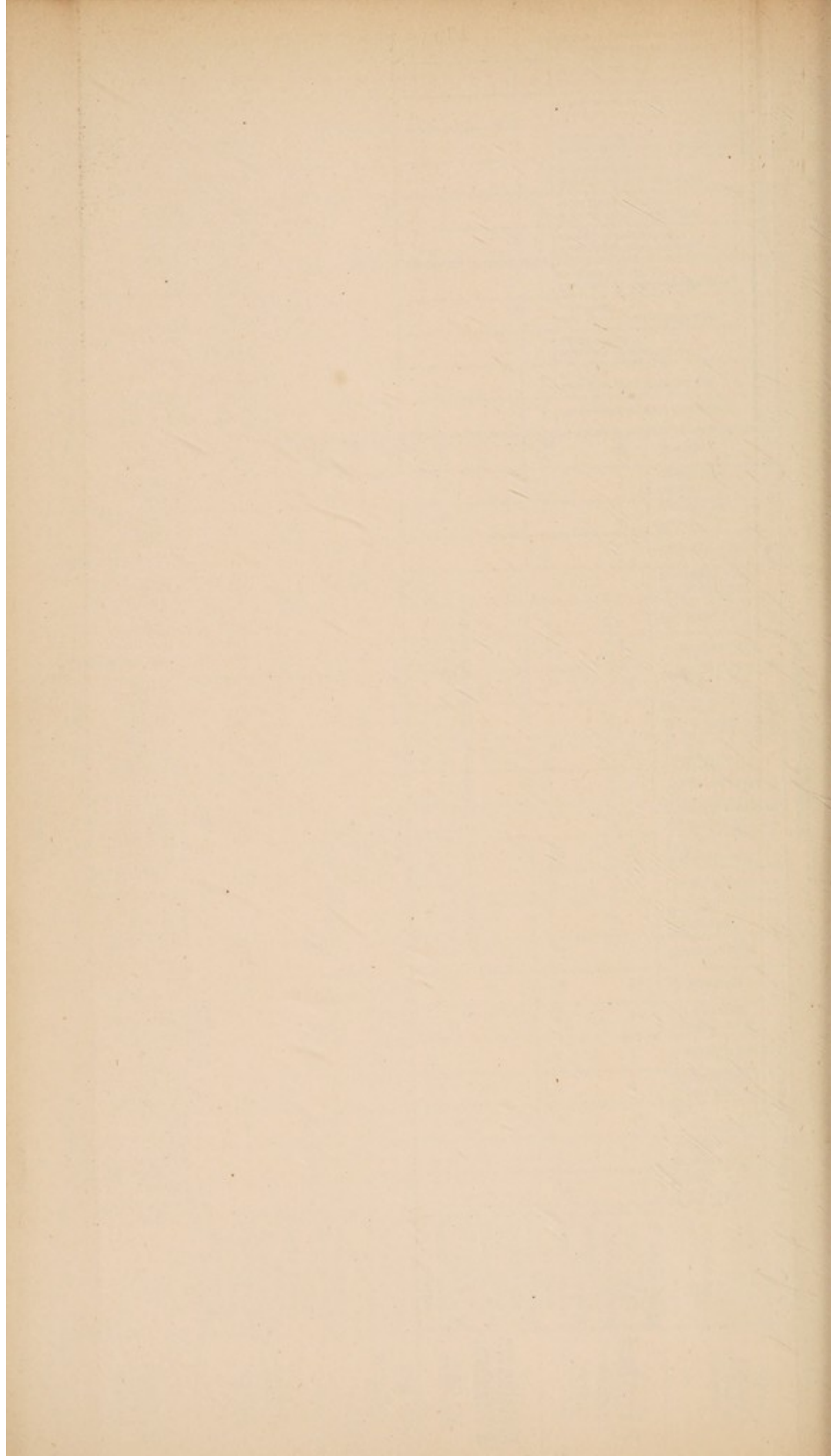
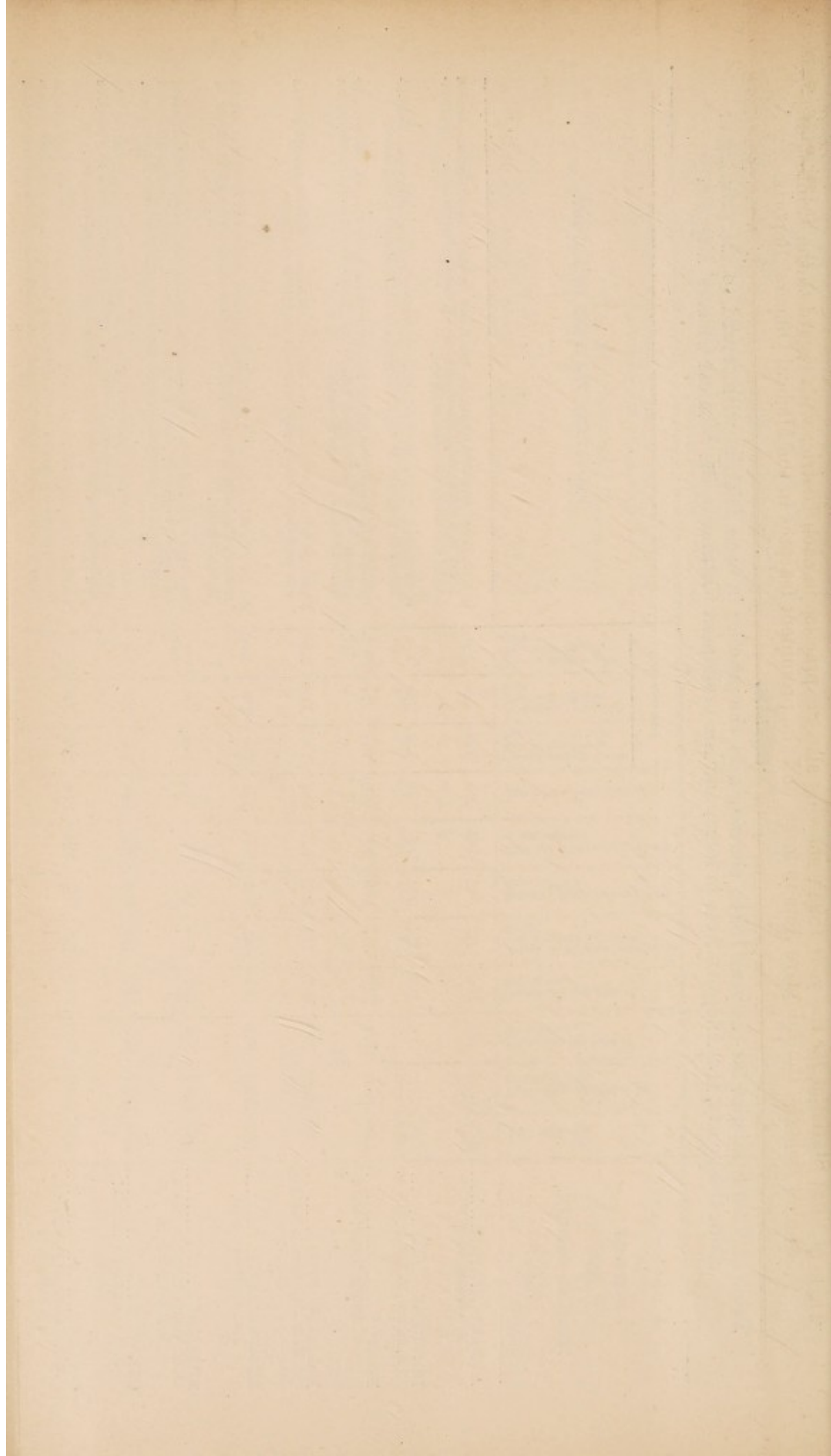


Table of Vital Statistics for the year 1894; showing also the practice in each District with regard to the printing of Annual Reports, the Adoptive Acts in force, and the prominent features in the Medical Officers' Reports.

† Present Medical Officer of Health—J. Aspinall, M.R.C.S.



RURAL.

Table of Vital Statistics for the year 1894; showing also the practice in each District with regard to the Printing of Annual Reports, the Adoptive Acts in force, and the prominent features in the Medical Officers' Reports.

DISTRICT AND MEDICAL OFFICER.	Area in Acres.	Population estimated to middle of 1894.	Birth-rate per 1000 of Population.	Death-rate per 1000 of Population.	Deaths in Infants under one year per 1000 registered births.	Zymotic death-rate per 1000 of Population.	Phthisis death-rate per 1000 of Population.	Annual Report printed.	Adoptive Acts.				PROMINENT FEATURES OF REPORT.
									Compulsory Notifi- cation of Infectious Diseases Act, 1889.	Infectious Diseases (Prevention) Act, 1890.	Public Health Acts Amendment 1890, †		
BLORE HEATH F. J. Sandford, M.D.	13662	2224	20·2	8·5	133	Nil	0·44	Yes	Yes	Yes	Part 3	No sanitary details of importance.	
CANNOCK W. Hosegood, M.B.	52222	16076	34·2	15·3	101	0·43	0·37	Yes	Yes	No	Part 4	Water-supply at Cheslyn Hay and Great Wyrley is said to be very unsatisfactory. The question of river pollution throughout the district calls for the attention of the Authority. The removal of refuse is now undertaken by the Authority.	
CHEADLE H. L. Webb, M.R.C.S., L.S.A.	55140	22302	34·5	18·4	127	0·89	1·47	No	Yes	No	No	A supply of water has now been provided for Dilhorne Common, and the Authority have now under consideration different schemes for supplying Wetley Rocks, Cellar Head, and Wellington. The supply at Kingsley is also defective in dry weather.	
ECCLESHALL H. W. Gosse, L.R.C.P., L.M., M.R.C.S.	32278	5921	26·8	11·1	94	0·16	1·01	No	Yes	No	No	Nothing of importance has yet been done to remedy the pollution of the stream at Eccleshall. The water-supply in many parts of the district has been improved, but is still defective in others.	
GNOSALL W. N. Thursfield, M.D., D.P.H.	24513	4366	30·0	12·8	76	0·22	1·37	No	Yes	Yes	Part 3	Attention is called to pollution in the case of Gnosall village and Gnosall Heath. In both these villages there are some wells which are objectionable on the ground of construction and surroundings. Near the station there are some houses scarcely fit for habitation.	
KIDDERMINSTER Trevor Webster, M.R.C.S.	3913	647	18·5	15·4	83	Nil	1·54	Yes	Yes	No	No	Sanitary details not specially mentioned.	
KINGSWINFORD E. Turner, M.R.C.S., L.S.A.	6083	20724	32·7	19·5	157	2·07	1·15	Yes	Yes	No	No	Public water-supply laid on to 81 houses during the year.	
LEEK T. E. Dakeyne, L.R.C.P., L.M., M.R.C.S.	68363	13998	33·9	18·2	143	0·78	1·42	Yes	No	No	Sec. 49	House drainage considerably improved, and various pollutions corrected. In many cases privy accommodation has been improved. In the Norton district the pail system has been further extended. Except at Longnor, there has been no scarcity of water during the year.	
LICHFIELD J. Clark, M.D.	60792	22699	32·1	13·7	126	0·74	0·82	Yes	Yes	No	No	Have had to destroy clothing owing to absence of disinfecting apparatus; Authority now considering the provision of a disinfectant. The question of river pollution is a serious one; Authority recommended to call in an experienced engineer to advise them.	
MAYFIELD † P. R. Littleton, M.R.C.S.	24377	5489	17·4	9·4	147	0·18	0·72	Yes	No	No	No	Medical Officer of Health urges the provision of an isolation hospital, and the adoption of the Notification Act. Much still requires to be done to purify the rivers.	
NEWCASTLE R. H. Dickson, L.R.C.S.I., L.R.C.P.I., L.M.	17922	6456	28·9	15·4	106	0·61	0·92	Yes	Yes	Yes	Yes	The various pollutions throughout the district remain unabated; Authority recommended to seek the advice of a competent engineer. An isolation hospital much needed. No definite step has been taken to provide a wholesome water-supply for Madeley and Lycett.	
PATSHULL (Portion of Seisdon Rural) W. N. Thursfield, M.D., D.P.H.	1824	234	21·3	12·8	Nil	4·27	0·96	No	Yes	No	No	A detailed house-to-house inspection recommended, principally because of the close proximity of privies to wells.	
SEISDON W. Spackman, M.D.	35718	12480	24·1	13·6	96	1·12	1·44	Yes	Yes	Yes	No	Authority recommended to adopt bye-laws. Great scarcity of water at Bratch owing to the sinking of a well in that neighbourhood for supply of Bilston. Defective drainage and sewage disposal in certain villages referred to.	
STAFFORD S. Butler, L.F.P.S.G., L.M., L.S.A.	52103	10520	29·0	11·4	66	Nil	0·96	Yes	Yes	Yes	Yes	In several instances throughout the district the question of river pollution has received attention, and in other instances the matter is being considered.	
STOKE-ON-TRENT J. Swift Walker, M.D.	5699	5557	34·5	14·7	145	0·89	0·71	Yes	Yes	Sec. 4 to 9, 12 & 14, & 16 to 20	Yes	The water-supply of the district has been improved; the neighbourhood of Stockton Brook is now well supplied, and the public supply has been carried to Bagnall. Refuse removal is said to be satisfactory.	
STONE E. Fernie, M.D., D.P.H.	23318	8422	25·4	14·3	135	0·47	0·71	No	Yes	No	No	Some parts of the district are badly supplied with water; water-mains, however, have been extended to Barlaston, and some houses at Trentham, Hanford, and Walton have been connected with the public supply. Oulton also should be connected with this supply. Refuse removal has been improved. Medical Officer of Health suggests that the Authority should undertake the refuse removal at Hanford. Disinfecting apparatus much needed.	
TAMWORTH H. J. Fausett, M.D.	23353	4937	24·5	16·4	157	1·21	1·21	Yes	Yes	Yes	Yes	At Fazeley and Bonehill the removal of night-soil is now undertaken by the District Council, which is a great improvement upon the former contract system.	
TUTBURY ‡ J. Hay Moir, M.D.	25916	9197	28·9	12·3	131	0·97	0·86	Yes	Yes	No	No	The question of river pollution is referred to, and Tutbury is mentioned as causing the most serious pollution. The district is well supplied with water, with the exception of Hanbury, where it is very defective. Medical Officer of Health urges the adoption of the Notification Act.	
UTTOXETER B. H. Herbert, M.R.C.S., L.M., L.S.A.	47802	12027	28·8	15·0	106	0·41	1·49	Yes	No	No	Secs. 23, (1) (2) & (4), also 25 & 26 for part of dist.	Authority not yet adopted Notification Act, and the district is still without an isolation hospital. Nothing has yet been done to remedy the pollution which takes place at Uttoxeter.	
WALSALL J. Wood, M.B.	12302	9669	33·4	14·3	142	1·21	0·70	Yes	Yes	No	No	Refuse removal is badly done, and Medical Officer of Health recommended Authority to undertake the work. The drainage of Felsall and Rushall has been improved, and the Authority have consulted a Sanitary Engineer as to the question of sewage disposal. The public water-supply has been laid on to 56 houses during the year.	
WOLSTANTON F. de B. Collenette, L.R.C.P., M.R.C.S., L.S.A.	9728	32252	39·3	17·3	144	1·86	1·11	Yes	Yes	Yes	Part 3	No sewerage work of importance has been carried out. The scheme for Chell parish is still under consideration.	

* Where no mention of sections appear, the whole Act has been adopted.

† " " " " parts " " " " " " " "

‡ Present Medical Officer of Health, A. Hall, M.R.C.S.

§ " " " " " " K. D. B. Dobbs, M.R.C.S.

¶ Act has been adopted since the date of the Report.

