[Report 1904] / Medical Officer of Health, Willenhall U.D.C.

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ANNUAL REPORT

TO THE MEMBERS OF THE

WILLENHALL

Urban District Council

BY

JOHN T. HARTILL,

L.R.C.P.L., M.R.C.S. Eng., J.P.

MEDICAL OFFICER OF HEALTH,

FEBRUARY 18TH, 1905.

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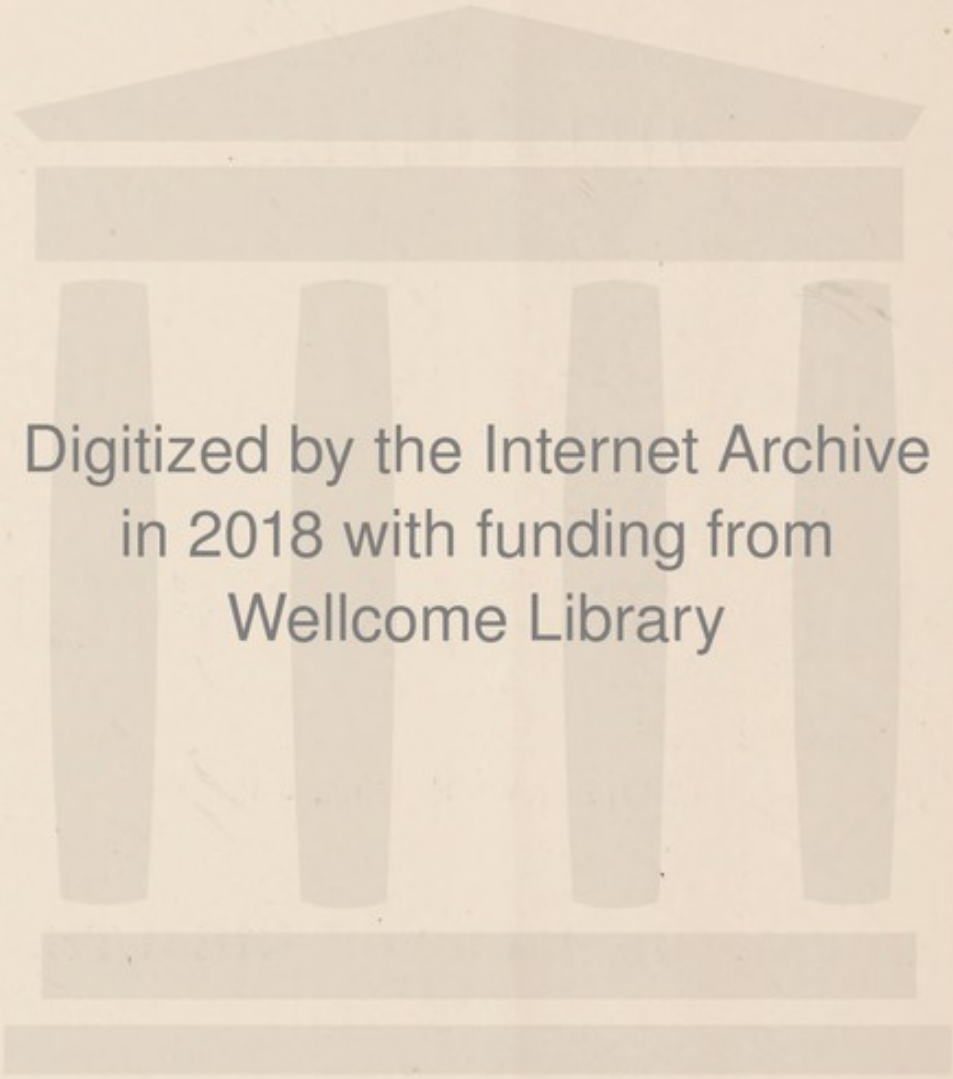

Medical Officer's Annual Report.

1904.

Mr. Chairman and Gentlemen,

When considering the incidence of disease in Willenhall, the chief physical features to be borne in mind are, that the town is situate in a broad, shallow, upland valley, 400 to 445 feet above the sea level, with a general fall of the land towards the South-East; that the soil is of considerable depth, overlying a heavy clay, or clay mixed with gravel, which is almost impervious to water; that some of the streets are cut through shale, excavated from coal and ironstone mines; that it is a manufacturing town, adjacent to several other manufacturing and mining towns; and that the air, though smoke-laden, is decidedly bracing. These features account for much of the hardiness of the adult population, and contribute, indirectly, to much of its infantile mortality. The weather was, on the whole, exceptionally beautiful; and there was a remarkable evenness of temperature and absence of wind-storms. February was wet and dreary; and December was sunless, foggy and humid. Trade was bad throughout the year, and deaths in the Union House were more numerous than in any year of which I have a record—probably, another indirect effect of the great "strike" in 1902.

My calculations are based on an estimated population of 19,001, arrived at by multiplying the number of houses, by the average number of persons per house at the last Census, and adding 131, the estimated proportion of 1098 inmates of the work-house, who entered there from the township. As I did not know until recently, that the population as ascertained at the Census, did not include residents in the Union House, I have, in Table 1, revised the figures for 1902 and 1903. The population of the Union in 1901, was 154,591, and of the township 18,515.

The Birth Rate was 33·8 per thousand per year, as compared with 37·2 in the ten previous years. The rate here is higher than in most places, but there has been for some years a tendency throughout the Country to diminution, due it is believed more to the systematic avoidance of the *natural* duties of life, than to physical deterioration or incapacity. The Death Rate was 18·3 per thousand per year, as compared with 19·7 in the ten previous years; but, including those who died in Public Institutions outside the District, the rate was 20·1. This rate, which is higher than it ought to be, was largely due to the incidence of infectious diseases on children under 5 years old, and two of those diseases accounted for 31 deaths; again, in my opinion, largely due to the aggregation of very young children in Elementary Schools. The Death Rate from the principal zymotic diseases was 3·4 per thousand per year, or including outside institutions 3·6, as compared with 3·2 in the ten preceding years. One hundred and eight children died under a year old, equal to a rate of 167·9 per thousand births registered, as compared with an average of 191·8 in the ten previous years. In this respect there was marked improvement, though even this rate is too high.

Except in the month of December, sickness amongst adults was much below the average, and apart from contagious diseases, the same may be said of sickness amongst children.

The cases of Infectious Disease certified were: Diphtheria 7, Membranous Croup 1, Scarlet Fever 39, Enteric Fever 5, Puerperal Fever 1, and Erysipelas 12; whilst of non-notifiable Infectious Diseases, there came to my knowledge: Measles 257, Whooping Cough 223, Chicken Pox 59, Mumps 11, Diarrhœa 48, German Measles 3, and Influenza 10. Of these 1 died from Scarlet Fever, 3 from Diphtheria, 17 from Measles, 14 from Whooping Cough, 31 from Diarrhœa, and 1 from Influenza—whilst 1 died from Enteric Fever in Wolverhampton Hospital, and 3 from Diarrhœa, and 2 from Erysipelas in the Union House.

With regard to Diphtheria, one case occurred in Cross St., where the air space at the rear of the house is limited, and where the drains had been recently blocked and defects were found in the Kenyon trap disconnection with the sewers; two

cases in one house in St. Anne's Road were near the foul ditch which receives a large part of the sewage of Little London, the only effectual remedy for which is to abolish it, by substituting a properly constructed sewer; one case was in Noose Lane, where there was a nuisance from pigs kept 8 yards, instead of 20 yards, from the cottage; whilst, the house in which another case occurred, is built upon "made" land, and in which the same disease occurred in another year.

Cases of Scarlet Fever were much less numerous than usual. Every effort was made to secure the best isolation possible under existing circumstances, and at the conclusion of the illness, disinfection of bedding and clothing by the Washington Lyons Disinfector was freely employed. One case in the family of an Agricultural Labourer in Walsall Rural District was kept under observation for some weeks, and the boy's father was prevented from milking cows which supply a large part of the milk of the town, until it was considered he might do so with safety; and in another case, near to a dairy at Bunker's Hill, special directions were given to prevent contamination of the milk and milk vessels.

With regard to Enteric Fever, nothing was found on the premises, in four cases, likely to have caused the disease; and in two of these cases, the Doctors in attendance, whilst expressing their opinion, described the symptoms as very indefinite—in other words, they were doubtful cases. As regards the other case, there were possible sources of infection, which, previous to the disease occurring, I had directed the attention of the Council to, and I understand a purer supply of water will shortly be available.

With regard to the case of Puerperal Fever, precise instructions were given to the Nurse in attendance to prevent the spread of the disease, and bedding and clothing were thoroughly disinfected.

The origin and cause of the great epidemic of Measles, which began in September, 1903, were fully traced in my last Annual Report, and I have little to add to what I then wrote. Of the 257 cases which occurred in 1904, 213 were in the first quarter of the year, and chiefly among the children who attended one school.

On February 23rd, I advised closure of the Infant Department of Portobello County Council Schools for 6 weeks, and on March 3rd of the Mixed Department for 1 day, whilst the Schools were disinfected and cleaned. They were closed, and I believe closure helped to check the ailment.

The majority of the cases of Whooping Cough were in the last quarter of the year, and many of them were very severe. It is generally a week or ten days before the characteristic whoop is developed, and, therefore, before the cases are reported. In the meantime many children are exposed to infection, and contract the disease at school. As soon as cases were reported, I advised exclusion from school of all who lived in infected homes. In one case, children were sent to school for six weeks whilst there was infection in the home, before it was known to your Officers.

With regard to Diarrhœa, there were 222 deaths in the district from this cause in the ten years ended 1883; 209 in the ten years ended 1893; and 220 in the ten years ended 1903. By far the majority of these deaths were of children under one year old. Whilst there has been, in the past few years, a substantial increase of deaths from Diarrhœa in the country generally, these figures having regard to increased population show improvement locally; but it must be borne in mind that there is always more Diarrhœa here, than in the country generally. Comparing the first ten years of this period, with the last ten of the same period, my Practice here amongst adults has been large enough to enable me to say, that whereas serious, though not fatal, cases of Diarrhœa were very numerous in the earlier period, serious cases are now very rare. There is abundant evidence tending to show that the *fatal* Diarrhœa of young children is due to the development of a micro-organism in the soil surrounding dwellings; that this organism assumes greater vitality as soon as the temperature of the earth reaches 56° Fah., four feet from the surface; and that it gets abroad from its breeding place, and becoming air-borne, alights on food and drink, and entering the bodies of human beings sets up mischief therein. In this town, *fatal* Diarrhœa amongst children usually commences on or about July 17th, and continues for about eight or ten weeks. It is probable the nature of the sub-soil favours the developement of the organism, because

it retains for a long time pollution generated by privy cess-pits; large, wet, open ashpits; want of drainage and leakages from badly constructed drains; foul gutters and streets which have never been properly made. The death rate from Diarrhœa in 1904 was 1·7 per thousand per year, and I am satisfied that there might be a diminution of, from one-half to three-fourths of the deaths from this cause, if privy cess-pits, large, open ashpits, bad drains, no drains, foul gutters and unmade streets could be speedily abolished, in favour of wash-down water closets put in with a higher standard of workmanship than is usual here, of smaller covered ashpits or small covered galvanized iron receptacles to be emptied once a week or oftener, and if, once for all, the drainage of the whole of the town could be satisfactorily completed, the whole of the streets made and taken over by the Council, and no plans were passed in future for the erection of new property, until the streets have been made and taken over by the Council. Much of this can be, and ought to be, accomplished by the Council, and whatever standard the Council attains will re-act by way of education on the people generally. It is sometimes said that the chief cause of Infantile Diarrhœa is improper feeding, but we have to bear in mind that children are improperly fed all the year round, whilst fatal Diarrhœa is almost limited to a few weeks in the year. It is quite true that children who are improperly fed die more readily than others from Diarrhœa, but the manner of feeding is not the *main* cause, but the aggravation of the cause. In the year under review, my records are not complete, but more than a third of those who died from Diarrhœa, were improperly fed. It has also been said that the children of women who work in factories are very prone to Diarrhœa. If that be so, it is not work in factories only, but work of any kind and anywhere away from home which predisposes to the disease, and it is probable the only way it does so, is by neglect of the children, due to the absence of the mother from home, and consequent artificial feeding and insufficiency of cleanliness. On this part of the subject, it is said we have to look for instruction in school as the remedy—but writing as a Manager of an Elementary School with nearly 20 years' experience, and having regard to the standard attained in the majority of small manufacturing and

agricultural towns, I don't think we have much to hope for in that direction in the near future. We have much more to hope for from extension of the system of nursing at home, that is to say in the beneficent, pervading presence of well-trained, practical teachers and exemplars in the home, rather than in the school. There is one other point worthy of comment. This year 366 blocked drains have been opened by the Council's men. As most of these blockages were in waste-water closets, the practical inference is, that however near to perfection and cheapness the waste-water closet may be, in practice it does not work well here. I therefore ask the Council to issue a word of warning, especially through its Surveyor, against the putting in of any more waste-water closets.

As regards Consumption, I am glad to note a considerable decline in the deaths from that cause in 1904; and as tubercular diseases "may be cured, can be avoided, and ought to be prevented," I ask the Council's earnest attention to the subject. There are two ways of attacking the disease, the first by attempting to cure the sufferers in sanatoria built for the purpose, and the second by trying to prevent infection altogether. Of these, prevention is the more important, but both may proceed together. The more it is known that Consumption is an infectious disease due to the introduction of a consumptive parasite into the body, the better will individuals be able to protect themselves against infection. The Consumptive parasite exists in its most potent form in the sputum coughed up from Consumptive Lungs. This sputum is conveyed to others by the act of kissing friends, and by being disseminated in the form of a fine dust by the wind, so that people get it into their bodies in the act of breathing. They also contract the disease from the milk and the flesh of tubercular animals, at any rate most recent investigations on a large scale, which are not yet completed, support this view. In my Annual Report for 1899, I advised the Council to have printed and distributed leaflets of "Advice on the Prevention of Consumption," and in an appendix thereto, the Council will find the advice proposed to be given to the public. I again advise the Council to carry out my suggestion. In my last Annual Report, I expressed my view on the provision of a County Sanatorium for the out-door treatment of

Pulmonary Consumption. As this has been a bone of contention in the County, and a large majority of Medical gentlemen have expressed themselves in favour of the scheme, I invite the Council to read a letter from Mr. W. A. Rix, which appeared in "The Times" on February 11th, on the open-air treatment of Consumption ; a letter in which he shows that Dr. Bodington, of Sutton Coldfield, wrote a pamphlet 65 years ago, which ought to be of special interest to us just now. In that pamphlet Dr. Bodington said "The only gas fit for the lungs is the pure atmosphere freely administered without fear ; its privation is the most constant and frequent cause of the progress of the disease. To live in and breathe freely the open air without being deterred by the wind or weather is one important and essential remedy in arresting its progress."..... "There is nothing gained by resorting to the coast ; in truth, the interior of the island is the best ; the air is just as pure and much milder and more suitable for the lungs of Consumptive people if they will but breathe it."....."Those persons who are for the most part freest from the attacks of Consumption, such as agricultural labourers, are commonly little troubled with nervous disorders..... It is a plain inference that to guard against the attacks of Consumption, the condition of patients should be assimilated as much as possible to that of the above-named class of individuals".... The temperature "should be that of the external air, instead of that so commonly employed, the warmth of a close room." I have long known that there was much less Consumption in Willenhall than in the Country generally; but to show how we now stand in relation to our past history, I have gone carefully through all the death records since I became your M.O.H. in 1889, including all the records I have of deaths in the Work-house from this District, and have carefully weighed all cases in which there seemed to be some want of definiteness in registration, as to whether they should be classed as due to Consumption, or otherwise. I find that in that time 302 have died from Pulmonary Consumption, at an average age of 34 years, of whom 182 were males, and 120 females ; and that 135 died from other forms of Consumption, at an average age of 9 years, of whom, 74 were males, and 61 females. Dividing the 16 years into two periods of 8 years each, there was a marked increase of deaths from Pulmonary Consump-

tion in the latter period, but a marked decrease of deaths from other forms of Consumption. Worked out on an average population, the death rates, respectively, in the first period were 0·7 and 0·5 per thousand per year, and 1·26 and 0·35 in the second period; that is to say the rate from all forms of Consumption increased from 1·2 per thousand in the first 8 years to 1·6 in the last 8. To show the effect of sanitation on the disease, I have prepared a table, giving the death rate per 10,000 persons living, expressed to the nearest half-unit, over a long series of years, from Pulmonary and other forms of Consumption in Willenhall and in England generally, and from all forms of Consumption in Prussia, where there is a more effective organization for sending Consumptives to sanatoria at the earliest stages of the disease.*

NUMBER OF DEATHS PER 10,000 PERSONS LIVING.

In Year	From Pulmonary Consumption.		From all forms of Consumption.		
	In England.	In Willenhall	In England.	In Willenhall	In Prussia.
1838	38				
1861	25·5		34		
1875	22		30		32
1889	15·5	8	22	16	28
1890	16·5	10	24	18	28
1891	16	7	23	11	27
1892	15	7	21·5	11	25
1893	15	10	22	14	25
1894	14	5	20	11	24
1895	14	3	20	9	23
1896	13	9	19	11	22
1897	13	8	19	13	22
1898	13	12	19	15	20
1899	13	14	19	18	20·5
1900	13	17	19	19	21
1901	12.5	14	18	17	19
1902	12.5	13	17·5	16	
1903		13		17	
1904		10		14	

A study of this Table will show that the death rate from Pulmonary Consumption in England generally, has fallen from 38 per ten thousand persons living in 1838, and 15·5 in 1889 to 12·5 in 1902, whilst the death rate from all forms of Consumption has fallen from 34 per ten thousand in 1861, and 22 in 1889 to 17·5 in

* In compiling this Table I have utilized information supplied by Dr. Hellier and Dr. Reid.

1902; that the death rate from all forms of Consumption in Prussia has fallen from 32 per ten thousand in 1875 and 28 in 1889 to 19 in 1901; and that whilst the death rate from all forms of Consumption in Willenhall has a tendency to rise, too much stress must not be laid on this, because the period covered and the population concerned are small enough to permit of wide fluctuation in general results. In the course of this year, if I am able to find the death records of Willenhall anterior to 1889, I will make the table more complete; but this much I can say without hesitation, sufferers from Pulmonary Consumption between 1870 and 1880 did not live to an average of 34 years in Willenhall. What however this Table brings out most strongly is, that where the open-air treatment has been most systematically employed, the fall in the death rate has been more marked than in England. I calculate that if we could make the death rate decline at the same rate as it has done in recent years, there should be no deaths in Prussia from Consumption about the year 1928, and that the same result should be obtained in England about 1947. But what, if we can advance more rapidly? and what, if we can keep in the vanguard of sanitation, and save from destruction in Europe alone, in the prime of life, by the spread of knowledge, something like a million of people each year? or in England alone something like 60,000? and what about the decrease in pauperism which would result? The whole study of the matter is a plea for fresh air and plenty of it; for more out-door life for ourselves, our women and children; for greater cleanliness in our homes, and open chimneys and windows; for better ventilation in workshops, clubs and public houses; for back doors, open spaces, and the abolition of courts and overcrowding; for dry house-walls and a drier sub-soil; for improved and better ventilated cowsheds; for disinfection of infected bedding and clothing by steam apparatus; for destruction of the bacilli coughed up; for all available means to be used which will prevent cows with tubercular teats being milked; for abattoirs which will lead to the more frequent detection and destruction of tubercular meat; for sanatoria as a means of education, and to some extent, as a means of isolation; for compulsory notification of the disease; and for consideration of the question whether tubercular workmen ought not to have their

wages secured by the State, so long as the sufferer is fit for work at all, in order to compel him to keep away from the workshop—and in connection with this side of the question, to consider whether males are in other places attacked in the same ratio to females, as they are here; and if so, to find, as far as possible, the cause. The chief local change in recent years has been a great development in the casting trades, and the consequent greater use of machinery to revolve at high speed emery, stone and leather polishing bobs, which not only must generate a fine metallic or mineral dust, but must tend to disseminate any dust containing tubercular bacilli which may be near at hand.

As regards Cancer, there were 13 deaths, compared with 10, 7, 6 and 4 respectively, in the four preceding years. I regret the increase, but have no useful suggestion to make.

The Washington Lyons Steam Disinfector was worked on 57 days, and 287 lots of infected bedding and clothing were disinfected.

With regard to properties on which reports were made during the year and in previous years, the Sanitary Inspector informs me that plans have been passed and the work is in hand to remedy defects at 3, New Street; that 47, Brick-kiln Street, has been put into sanitary order; that the condition of 93, High Street, near the Railway Bridge, is worse than ever; that Nos. 9 and 10, Birmingham Street have been demolished; that the serious nuisances at 26 and 27, Mill Street and in the cottage at the rear of 26, at 28 and 29, Mill Street, at 30 and 31, Mill Street, all in separate ownership, and at the Royal Oak Inn, New Street, have all been abated to the satisfaction of your Surveyor; that the work relating to 24 and 25, Mill Street, for which plans were passed, has not been done; that the ditch at the rear of Mill Street has not been filled up, but it is not now a nuisance; that 55, New Street, which I described as not fit for occupation, has not been materially improved; that nothing has been done to improve the drainage of 61, Wednesfield Road; that a disgraceful case of overcrowding, in Lower Hall Street, has been abated, after prosecution; and that notice has been served to secure a better sanitary condition of 58, Bloxwich Road.

A summary of the Inspector of Nuisances' work will be found in Table 5. The dairies, milkshops, cowsheds and bake-houses were regularly inspected. There are 68 persons registered as cowkeepers or purveyors of milk, including 11 resident outside the District, of whom 5 were registered in 1904. One Milk Vendor was cautioned against using unclean vessels to convey his milk from an adjacent town, and also advised as to Section 11 of the Food and Drugs Act, 1899, requiring every vendor of "Skimmed Milk" or "Machine-skimmed Milk" to so label the milk-can in large and legible type. Four applications for slaughter-house licences were made, of which one was granted subject to conditions, two were refused, and one is under consideration. Notices to provide proper drainage for 100 houses were served. The removal of house refuse, which was taken over by the Council at the end of 1903, has been quicker, oftener, and more satisfactorily done than hitherto—over 7,600 loads having been removed. Plans were passed for the erection of 28 new houses, and 174 house-drains were connected with the sewers, making a total of 2969 ; 38 privies and waste-water closets were converted into wash-down closets ; 50 privies were converted into waste-water closets ; and 14 new wash-down and 25 waste-water closets were put in. A cowshed at Mr. Alexander's, Noose Lane, was erected, without any suitable water supply being provided. The water mains in Birmingham Street and Crescent Road were twice flushed to rid the water of vegetable matter and an offensive odour, and a nuisance from Sulphuretted Hydrogen in many houses on the same evening, was traced by the Manager of the Gas Works to a defect in the gas purification plant and immediately remedied.

There are 318 Workshops in the Register, of which 245 are occupied ; and details with regard to occupation will be found in Table 7. Two hundred and twenty inspections of Workshops and 20 of Factories were made, chiefly by the Sanitary Inspector. Including cases brought forward from 1903, 42 informal notices to limewash were made, 31 of which have been complied with, and the remainder will be. Twenty-five other notices, formal and informal combined, were given ; and of these 16 were complied with, and it is believed the

others will be. There was no overcrowding and there were no wet floors and no wet trades. In cases where there was not separate sanitary accommodation for the sexes, your Surveyor has the matter in hand. The Bake-houses were kept in fairly good order, and the only underground bake-house in the town is no longer used for that purpose. One list of out-workers only was received, and in that case the work was done in a registered workshop. I don't think the out-workers section of the Factory Act will be likely to do any good here. Four Workshops were demolished, and 20 Workshops had become Factories since date of last inspection. The special rules and orders issued by the Home Secretary relating to File Cutters, have in most cases been complied with. They shall receive further attention this year. One case in the Home Office Table (Table 7) under the heading of "other offences," calls for special comment, and in my opinion for an amendment of the law in the direction of simplicity and directness of application. A Baker kept several sacks of flour in a small place, at the rear of his bakehouse, at one time part of a house in a Court. In the same place horse-corn and hay were kept, and at the time of my visit there was a dog in the place. The room in which the flour was stored, is approached through a doorway from another place, in which a pony was kept. In addition to the doorway, there was a large hole through the brick-work. There was horse-dung on the floor, and no drainage. The flour was no doubt intended for the use of man, and was so deposited that it might absorb, and probably had absorbed unwholesome vapours from the stable ; but, to prove actual absorption would be difficult. A written undertaking was given that the flour should not be used for the food of man, and I believe it was sent away from Willenhall to be used for cattle. In my opinion, Sections 97 to 100 of the Factory and Workshop Act of 1901 would not touch the case, because the flour was not stored in the bakehouse. It might be argued that flour deposited in such a place, makes the place part of a workshop, but it is very doubtful whether Magistrates would so decide. If they did, such a case might be dealt with under Section 2, Sub-sections 1 and 2 of the Factory and Workshop Act, 1901, read in conjunction with Section 91, Sub-sections 1, 3, 4 and 6 of the Public Health Act, 1875. It

seems to me, however, that Sanitary Authorities should have power in such a case, if they so decide, to institute a prosecution with the certainty of success, for the protection of the Public ; and that proceedings under Section 28 of the Public Health Act, 1890, would be uncertain in its application.

Several complaints have been made to me about the increasing nuisance occasioned by gas engines. The noise they cause is irritating to the studious, and seriously interferes with the sleep and comfort of those who are ill. I believe if the Council, through their Clerk, were to courteously approach the Manufacturers, all of them would take measures to reduce the annoyance to a minimum ; and if they did not, I think the Council could make an effective Bye-Law to compel them. I have communicated with Messrs. Crossley, the eminent firm of Gas Engine Manufacturers, who tell me that any engine of their manufacture can be rendered practically silent, and that they have thousands at work in large towns, which are for practical purposes silent. They tell me that all their large engines are fitted with silencers when erected, and that it is not a costly matter to silence small engines, such as the bulk of those in Willenhall are. The noise is caused by the "exhaust," and a wrought-iron box filled with gravel, and fitted at the end of the exhaust pipe in proper manner has the desired effect. In the case of small engines, all that is needed is to build a four-feet square pit in the ground with $4\frac{1}{2}$ inch walls, aud cover it over with an arch, or stone or iron plate. Into this pit the exhaust box should be put, and the box should have a couple of bends within the pit, so as to throw the "exhaust" downwards. The slabs should be covered with earth, but a pipe about four inches wide should pass from the pit and be carried about half way up any wall near at hand.

The food supply was plentiful, but four lots of unwholesome meat and fish were destroyed, not however under circumstances needing Magisterial intervention. Towards the end of the year a quantity of very lean meat, of very doubtful quality, was exposed for sale in the Market Place. The internal organs of the animals were not exposed for sale, and there was nothing exposed which

would justify your Officers in condemning it. I strongly suspect, nevertheless, that some of the meat may have been that of diseased animals. Enquiries were made through the Officers of adjacent towns as to possible place where the animals were slaughtered, but with no practical result. In the course of the year, in view of applications for licences for slaughter-houses which did not come up to the standard required by the bye-laws, I invited the Council to consider the desirability or otherwise of providing a Public Slaughter-house on the outskirts of the town, by virtue of their powers under the Public Health Act, 1875, Section 169.

The Water supply was on the whole satisfactory. One sample of well water was examined from Bunker's Hill, and condemned as unfit for use. An arrangement for a purer supply is about to be made with the Bilston Water Authority.

There have been no further sewer extensions along the Bilston and Wolverhampton Roads, and there is nothing fresh to report concerning the Sewage Outfall Works.

With regard to streets, Cemetery Road, North of the Midland Bridge, has been made and taken over ; and the Bilston Road, East of the summit of Rose Hill, has been widened and much improved. A large number of streets have never been made and taken over, although property has been built in them for many years. Every unmade street sooner or later becomes a nuisance ; usually in this town, very soon. The worst of these by far is Field Street ; and I again invite the Council to consider possible improvement. Three streets, of comparatively recent development, also need the Council's attention, Mount Pleasant off Birmingham Street, Monday Alley, and Villiers Street. Regent Street is, I understand, about to receive attention.

A report on all the Cowsheds was made by me in November. The condition of Mr. Cash's, Portobello, is so far below the standard of the bye-laws, that I advise the Council, they are at present absolutely unfit for the purpose. The general condition of Mr. Cole's, at Bunker's Hill, was excellent, but the water supply was bad. This is about to be remedied. That at Mr.

Alexander's, Noose Lane, has no proper water supply, and I have advised the Council to try to get the water mains extended in that direction. The condition at Mr. Proffitt's, Rose Hill, in shed No. 2 was unsatisfactory, and drainage from both sheds can best be accomplished by extending the sewers. Minor remediable nuisances were described at Mrs. Pitt's, Calf Croft, also at Mr. Aston's, Field Street ; whilst there was an intolerable nuisance outside the shed at Mr. Griffiths', Market Place, which has since been remedied. Having regard to the prevalence of Infantile Diarrhœa in the summer, and to the tendency to a rise in the death rate from Consumption, I advise the Council to do their best to get the cow-sheds fully up to the standard fixed by the new bye-laws.

Six hundred and fifty-two children were successfully vaccinated, 19 certificates of exemption were made by Magisterial Order, and 2 certificates of insusceptibility were received. This is the most satisfactory return received for many years, and the increase is due to the fact that a large number of children, above the usual age, but under 3½ years of age, have been vaccinated. To emphasize my report to the Council on the epidemic of Small Pox in 1894, I will add an extract from the report by the M.O.H. for Leicester for 1903, in which year there were in Leicester 394 cases of Small Pox, with a mortality amongst the vaccinated of 2·06 per cent., and amongst the unvaccinated of 8·08. He says, "As regards the influence of recent vaccination, the experience of the epidemic leaves no room whatever for doubt. It proves, if anything can be proved, that recent vaccination successfully performed before exposure to infection, gives complete protection from Small Pox. Exceptions have been recorded, but their rarity may be judged from the fact that not a single instance of failure occurred in Leicester during the whole course of the epidemic."

The Masters of Elementary Schools have again given me their cordial assistance. Table 6 gives particulars of certificates issued.

The Nursing Association, which was started in 1903, with the approval of the whole Council, has been generously supported,

and the services of the two Queen's Nurses have been greatly appreciated by the working classes.

All but one of the deaths were certified by Doctor or Coroner.

The Tables required to be filled up by the Local Government Board, the County Council and the Home Office will be forwarded, and in substance are appended hereto.

I am, Gentlemen,

Yours obediently,

JOHN T. HARTILL,
M. O. H.

Willenhall, February 18th, 1905.

TABLE 1.

Vital Statistics of Whole District during 1904 and Previous Years.

Year.	Population estimated to middle of each Year.	Births.		Total Deaths registered in District				Total Deaths in Public Institutions in the District.	Deaths of Non-Residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Net Deaths at all Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate*	Number	Rate per 1000 Births register'd	Number.	Rate*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	17335	668	38·5	149	223·0	406	23·4	14				
1895	17499	690	39·4	129	186·9	342	19·5	0		15	357	20·4
1896	17664	649	36·7	120	184·8	314	17·7	0		13	327	18·5
1897	17831	720	40·3	164	227·7	414	23·2	0				
1898	18000	717	39·8	149	207·8	392	21·7	0		9	401	22·2
1899	18170	650	35·7	127	195·3	371	20·4	0		14	385	21·1
1900	18342	697	38·0	118	169·2	340	18·5	0		18	358	19·5
1901	18515	656	35·4	139	211·8	365	19·7	0		13	378	20·4
1902	18731	654	34·9	99	151·3	294	15·6	0		23	317	16·9
1903	18868	633	33·5	102	161·1	345	18·2	0		31	376	19·9
Averages for years 1894—1903	18095	673	37·2	129	191·8	358	19·7	1·4	0			
1904	19001	643	33·8	108	167·9	349	18·3	0	0	34	383	20·1

* Rates in columns 4, 8, and 13 calculated per 1000 of estimated population.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

NOTE.—Before 1895 it was not possible to get particulars of deaths of persons from the District within the Union House at Wolverhampton, separately from Short Heath, which was governed locally by a separate Local Board, although until then in the Township of Willenhall. In 1897 I could not get the particulars.

Area of District in acres ... 1249

Total Population at all ages	...	18515
Number of inhabited houses	...	3614
Average number of persons per house		5·1

At Census of 1901.

TABLE 2.

LOCALITIES.

There are no Localities of known population.

TABLE 3.

Cases of Infectious Diseases Certified or Notified during the Year.

	At all Ages.	At Ages—Years.					
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards
Diphtheria ...	7	...	3	4	...	...	...
Membranous Croup	1	...	...	1	...	...	...
Erysipelas ...	12	...	...	1	3	5	3
Scarlet Fever ...	39	...	7	27	2	3	...
Enteric Fever ...	5	...	...	..	2	3	...
Puerperal Fever ...	1	...	...	...	...	1	...
TOTALS ...	65	...	10	33	7	12	3

Cases of Non-Notifiable Infectious Diseases in same period.

	At all Ages.	At Ages—Years.					
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards.
Measles ...	257	19	126	112	...	...	...
German Measles ...	3	...	...	3	...	...	...
Chicken Pox ...	59	3	30	26	...	...	...
Whooping Cough ...	223	21	120	82	...	...	...
Mumps ...	11	1	5	3	1	1	...
Diarrhœa ...	48	26	8	1	1	9	3
Influenza ...	10	..	...	.	4	6	...

TABLE 4.

Causes of, and Ages at, Death.

Causes of Death.	Deaths in or belonging to whole District at subjoined Ages.							Total Deaths in Public Institutions in the District.
	All Ages.	Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards	
Smallpox								
Measles	17	1	16					
Scarlet Fever	1		1					
Whooping Cough	14	4	9	1				
Diphtheria & Membranous Croup	3		1	2				
Croup	3		3					
Fever { Typhus								
Fever { Enteric	1				1			
Fever { Other continued								
Epidemic Influenza	1					1		
Cholera								
Plague								
Diarrhœa	34	26	8					
Enteritis	3	1	1			1		
Puerperal Fever	1					1		
Erysipelas	2						2	
Other septic diseases								
Phthisis	20				5	15		
Other tubercular diseases	9	2	2	2	2	1		
Cancer, Malignant disease	13					11	2	
Bronchitis	57	12	12		1	21	11	
Pneumonia	17	4	8			4	1	
Pleurisy								
Other diseases of respiratory organs	4	1			1	2		
Alcoholism (Cirrhosis of Liver)	5					3	2	
Venereal Diseases	1	1						
Premature birth	13	13						
Diseases & accidents of parturition								
Heart Diseases	19				2	9	8	
Accidents	1				1			
Suicides	2					2		
All other causes	142	46	14	4	2	32	44	
All causes	383	111	75	9	15	103	70	0

TABLE 5.

Summary of Work by Inspector of Nuisances, under my supervision.

	Inspections made.	Informal Notices	Formal Notices	No. of Nuisances.	Nuisance abated after notice	Prosecutions
Dwell'g Houses and Schools — Foul Conditions		2		2	2	
Dwell'g Houses and Schools — Structural Defects	ABOUT	1	8	10	3	1
Dwell'g Houses and Schools — Overcrowding	1100	9	2	11	11	1
Dwell'g Houses and Schools — Unfit for Habitat'n			1	1		
Dairies, Milkshops & Cowsheds	57	5	1	6	6	
Bakehouses	73	11	1	14	8	
Other Workshops	167	27	11	38	23	
Slaughter-houses	48	3	1	4	4	
Ashpits and Privies	ABOUT 1400	699	44	743	710	4
Deposits of Refuse and Manure	16	8		8	8	
Water Closets	292	141	5	146	145	
House Drain'ge — Defective Traps / No disconnection / Other Faults	400	150	50	200	166	5
House Drain'ge — Defective Traps	4	2		4	2	
Water Supply	14	3	4	7	6	
Pigsties and animals improperly kept	40	12		12	4	
Other Nuisances	42	12	9	21	14	

Seizures of unwholesome Food	4
Sample of Water taken for Analysis	1
,, ,, condemned as unfit for use	1
Notices to Surveyor re new buildings and sanitary conveniences for Workshops	6
Lots of Infected Bedding Disinfected or Destroyed	287
Houses Disinfected after Infectious Disease	64
Schools ,, ,, ,, ,,	1
Formal Notices in 1901, 1902 and 1903 complied with in 1904	39
Formal Notices in 1902 and 1903 not yet complied with	4
Formal Fotices in 1904 not yet complied with, but in most cases Nuisances in process of abatement	84

TABLE 6.

Shewing Certificates to Elementary School Authorities advising exclusion of Scholars from infected houses for specified periods during the School year ended November 30th, 1904, including those granted in the previous School year, the effect of which had not expired on December 1st, 1903.

	Certificates of Infected Persons.	Healthy Absentees.
County Council Schools, Little London	143	242
,, ,, ,, Portobello ..	120	195
,, ,, ,, Central ..	45	115
,, ,, ,, Walsall Road .	30	31
St. Giles' National Schools ..	72	95
St. Anne's ,, ,, ...	39	73
Wesleyan Methodist ,, ...	106	128
Primitive ,, ,, .. .	42	80
St. Mary's Catholic ,, ...	43	86
TOTALS ..	640	1045

TABLE 7.

Abstract of Particulars asked for by Home Office.

FACTORIES—Inspections	...	20	Notices	...	0
WORKSHOPS— ,,	..	220	,,	...	12
Defects found :					
Want of Cleanliness	...	42	Remedied	...	31
Insufficient Ventilation	.	1	,,	...	0
Other Nuisances	...	14	,,	...	11
Defective Sanitary Accommodation	...	5	,,	...	3
Sanitary Accommodation not separate for sexes		4	,,	...	1
Other Offences	...	1	,,	...	1
OTHER MATTERS :—					
Notified by H. M. Inspector		...		...	5
Reports to H. M. Inspector		...		...	4
Underground Bakehouses in use		...		...	0
HOME-WORK :—					
List received—1 Out-worker—1 in registered workshop.					
WORKSHOPS ON REGISTER AT END OF 1904—318			OCCUPIED—245		
CHIEF TRADES THEREIN :—					
Lock, Key and Latch Manufacture	...		...		125
File Cutting ...	...	...	...		11
Other Hardware Manufacture	...		..		26
Articles of Dress ,,	...		...		28
Workers in Wood and Iron	...		...		19
Bakehouses ...	...	...	...		29
Sundry Trades	...	...	...		7
Workshops demolished in 1904	...	...	...		4
,, converted into Factories since last inspection					20