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BOROUGH OF LUTON  
 18 APR 1905  
 GEO. SELL, Town Clerk.

*Borough*



*of Luton.*

# ANNUAL REPORT

OF THE

## MEDICAL OFFICER OF HEALTH,

MR. HORACE SWORDER, L.R.C.P., M.R.C.S.,

**For the Year ended the 31st day of December, 1904.**

*Presented to the Sanitary Committee on the 17th day of February, 1905,  
and ordered to be printed.*

MEDICAL OFFICER OF HEALTH'S OFFICE,  
 GEORGE STREET, LUTON,  
*January 26th, 1905.*

GENTLEMEN,

I beg to lay before you my Report for the year ended December 31st, 1904, being my Twenty-sixth Annual Report.

During the year 1,035 births and 496 deaths have been registered, equal to annual rates of 27.2 and 13 per 1,000 respectively.

During the 1st quarter there were 248 births and 103 deaths.					
..	2nd	..	..	263	.. 110 ..
..	3rd	..	..	256	.. 151 ..
..	4th	..	..	268	.. 132 ..

The births exceeded the deaths by 539.

There were 130 deaths under 1 year.			
..	33	..	between 1 and 5.
..	333	..	from 5 and upwards.

Forty-one deaths were referred to the seven principal zymotic diseases, viz., three to Measles, one to Diphtheria, one to Fevers, and thirty-six to Diarrhoea.

The zymotic rate was equal to only just over one per 1,000, and is probably one of the lowest ever recorded. As we do not believe that sanitary defects have, in our Borough, any particular influence in causing such a large mortality to be referred to Diarrhoea, we could wish that the term zymotic was reserved for Small-pox and kindred diseases.

**Small-pox.**—In the first quarter two soldiers were kept under observation for a short time owing to communications from the authorities at Southampton that they had come off steamships on which cases of Small-pox had occurred. In April, from private information received, I kept two men under observation; they had been at some gathering in a neighbouring town and found themselves in the same room with a man suffering from Small-pox. Dr. H. E. Armstrong, Medical Officer of Health for Newcastle, has made a most practical report on the subject of Small-pox in relation to vagrancy in England and Wales during the year 1903. Together with 126 Medical Officers of Health of Provincial Cities, Boroughs and Urban Districts, having populations of 20,000 and upwards, I answered ten queries relating to the subject.

The answers showed that of the 126 districts from which returns were received (205 had been circularized), 111 had been invaded by Small-pox in the present epidemic, and in fifty-seven, or fifty-one per cent of these, the disease was first introduced by vagrants. In twenty-five of these latter districts, spread of infection from vagrants occurred with varying results. The London County Council, ten years ago, invited the representatives of various sanitary and other authorities to a conference on the spread of disease by vagrants. Dr. Armstrong hopes that the invitation will be repeated, so that early opportunity may be given to discuss this vital matter. The result of the meeting ten years ago was that nine resolutions were passed in relation to the control of common shelters, the examination and bathing of persons entering casual wards and common lodging houses, the control over admission to common lodging houses and their closure in case of infectious disease, the detention of inmates of such lodging houses liable to convey infectious disease, the means of detention and isolation of such persons, and the power of disinfection of such lodging houses, the compulsory vaccination and re-vaccination of the inmates of common lodging houses and casual wards, inter-communication between the sanitary authorities of infected districts and those of surrounding districts. These resolutions were believed to have been forwarded to the Local Government Board, but apparently with no result; so far as the provinces were concerned, they would seem to have received very little attention. Since then great loss of life and considerably more than one million pounds spent unnecessarily has been the penalty resulting from a policy of *laissez faire*.

This is a so-called free country: the tramp has his freedom—freedom to spread disease and death with a vengeance at his own sweet will; as a writer remarks, often the only thing in his possession to which the adjective "sweet" applies. The Biblical injunction, That if a man will not work neither shall he eat, should be carried out in its full entirety in the case of these gentry, and their freedom to roam should be absolutely curtailed.

**Measles.**—Three deaths only were referred to Measles in the third quarter. This small mortality is doubtless owing to the disease occurring in warm weather, as this influences so favourably the bronchial congestion which always accompanies an attack of Measles.

**Scarlet Fever.**—Sixty-five cases were notified and twenty-seven removed to the Fever Hospital. As far as my experience went the cases, with one or two exceptions, were exceedingly mild, and no death was registered.

The disease is mildness itself compared with the cases seen when I was appointed in 1878. Then there was no difficulty in making a diagnosis—it was made for one, and what was dreaded more than the disease at the time were the sequelæ which so often followed; only to mention innumerable cases of permanent ear disease and consequent deafness, and kidneys which were often left permanently diseased, to say nothing of suppurating glands in the neck. Now the cases are so mild, and we are often called in so late, that there is often great difficulty in making a correct or positive diagnosis. One observer says he used to think it possible to diagnose correctly and with certainty practically every case of the disease coming to his notice, but a wider and more extended experience had caused him to modify that idea somewhat. The difficulty in diagnosis has been so great that a "fourth" disease has arisen, which is, in plain language, something betwixt and between Measles, German Measles and Scarlet Fever. Only a very limited number of observers, among whom one must allow some very competent ones, have indulged in the luxury of a fourth disease. I suppose the rest of us allow the undiagnosable nature of a certain number of cases and do not dub the disease by a new name. The observer I have before alluded to believes that the various forms of Scarlet Fever we come across are not all due to the same organism, but to different microbes, in vulgar parlance somewhere about first cousins to the Strepto-coccus Pyogenes group. If Scarlet Fever be due to a variety of microbes, the occurrence of secondary cases in hospitals could be explained. There seems to be much evidence to show that it is not advisable to mix up mild and severe cases in a hospital and that patients may, if they are free from nasal and aural discharges, enlarged glands or tonsils, be sent out desquamating with a minimum of return cases. We have, however, decided that what is worth doing is worth doing well, so retain cases until they have finished desquamating and until all discharges have ceased and the throat is well.

In spite of the strong remarks of the Medical Officer of Health for Leicester against the usefulness of isolating cases of Scarlet Fever in hospitals, the general impression among the majority of Medical Officers of Health best qualified to judge appears to be overwhelmingly in their favour, though it is thought there may be room for improvement in administrative details, &c. The Medical Officer of

Health for Cardiff thus sums up a practical paper on the subject: "With respect to the hospitals themselves, it seems quite likely that we have been detaining cases an unnecessarily long time, and that the removal of convalescents from acute cases should be effected as far as possible. Whatever reasons there may be for an improvement in these and other directions, I see none for advocating the abolition of isolation hospitals, and feel justified in submitting that, as far as Cardiff is concerned, the hospital has been one of the factors, and not the least important, in the reduction of the incidence and fatality of Scarlet Fever.

The following shows how important it is to remove cases to isolation hospitals where the slightest risk exists of contaminating milk with the Scarlet Fever poison. A very instructive outbreak of Scarlet Fever occurred at Liverpool early in the year, fifty-nine cases occurring, due to infected milk. The cause of the outbreak turned out to be the dairyman's child, who apparently had had such a moderate rash that the nature of the disease was overlooked. When the child began to have swelling of the feet and ankles, with copious desquamation, a medical man was called in. The child was at once removed to the hospital and every precaution taken, so that after the next four days no further case occurred in any house which had not previously been infected.

The average time of detention of twenty-six Scarlet Fever cases in our fever hospital was seven weeks and one day.

**Diphtheria and Membranous Croup.**—Only four cases of Diphtheria and one of Membranous Croup were notified during the year, with one death referred to Diphtheria. The average number of cases for the preceding eight years was twenty-four. In 1898 there were forty-two and in 1899 fifty-six.

Last September Dr. Chalmers, of Glasgow, reported an outbreak of Septic Sore Throat, which had coincided with an eruption on the teats of certain cows, and quite recently the Medical Officer of Health for Leith has reported an epidemic of true diphtheria, in which the Loeffler bacillus was found by microscopical and bacteriological examination, also associated with an eruption on the teats of cows. This was well proven and the epidemic ceased when the last affected cow was isolated. An epidemic of Septic Sore Throat at Woking, Surrey, in November, 1903, in which 250 cases occurred, and in all probability eight deaths directly due to it, was found to be associated with a condition of the cow's teats, from which purulent matter could be expressed. It seems highly possible that the disease in this instance was conveyed to the cows by the farmer, who had six weeks previously suffered from a severe sore throat and whose family later became infected. In the above epidemic the Klebs-Loeffler bacillus was, in all the swabs examined, found to be absent.

**Phthisis.**—Thirty-eight deaths were referred to Phthisis. Seven deaths occurred in the first quarter, and ten, eleven and ten in the next three quarters respectively, equal to a Phthisis mortality of one per 1,000.

Disinfection is always carried out after the registration of the death, before which the cases do not come to my knowledge. If it were possible to get at the number of cases existing in Luton the alarm caused by that knowledge might result in steps being immediately taken to mitigate the evil; until such time, however, we shall go on most carefully shutting the stable door after the horse is stolen. Phthisis is a terrible and cruel disease, snatching our young people away in the prime of life. It is said that of all deaths in the British Isles between the ages of twenty-five and thirty-five nearly one-half are due to Phthisis, and it is further estimated that at least 250,000 persons are suffering from it at the present moment. One death in eight is attributed to it or some other form of tuberculosis. Provision has been made for infectious diseases which altogether destroy nothing like the 60,000 who fall victims to tuberculosis diseases annually. Still our Phthisical townspeople continue to go up and down to Brompton and other chest hospitals, doubtless infecting the railway carriages and other conveyances on their way to and fro, and themselves deriving harm, and often imparting it to other sufferers in the hospital waiting-rooms: the mild cases of tuberculous infection only, may, in these waiting-rooms, become infected with other and still more virulent germs, which turn a mild and benign case into one of galloping Consumption. I have not taken into account the harm often derived from the fatigue occasioned by the journeys and the exposure to very varying degrees of temperature and bad ventilation. Phthisis has, of course, enormously declined in recent years, probably one half during the last fifty years, and Luton is no exception. From 1879 to 1883 (both inclusive) the average number of deaths was fifty-six, and in the next five years, forty-nine. Now we have come down, with almost double the population, to thirty-eight. This decrease might be used by some as an argument to stay our

hand and let things take their course, but that won't suit those of us who observe with loathing the ravages of this cruel disease which we know might be wiped off the face of the earth were money no object and sufficient time given in which to do it, with a fairly free hand. Talk about money—too much money is wasted yearly through this unnecessary disease. "Think," says a writer, "of the men and women—the breadwinners—husbands and wives, fathers and mothers, snatched away in the prime of life: think of the many widows and orphans, and calculate, if you can, the money loss to the community and the precious lives that might have been saved or usefully prolonged." "Talk," says he, "of the *increase of expenditure* that would be entailed by the establishment of sanatoria for the curable, of refuges for the safe housing of those beyond hope of recovery. It would be a mere bagatelle in comparison with the money that would be saved to the community—to put the matter upon no higher ground—if only a tithe of the lives sacrificed every year to this fell disease could be preserved, to say nothing of the national benefits that would accrue were the disease, at any cost, ultimately to be extirpated." Sir William Broadbent, who has been at the head of the sanatorium movement, after showing the loss to the community only in the loss of young men from Phthisis between twenty and thirty, remarked, "if it were a question of stamping out disease in cattle all sorts of preventive measures would be taken at whatever cost of money, but the victims of Consumption being merely human beings, and not saleable, methods of prevention, known to be effective, were not put into force."

My own opinion is that this matter, so important to the whole county, ought to be taken up by the County Council. There is no doubt but that a hospital would, by combination, be run very much more cheaply than if one Sanitary Authority erected its own, even in a town the size of Luton. The Hospital erected by the County Council would be for the treatment of cases in the County of Bedford: a site, second to none, could readily be found. The Committee of the Cumberland branch of the National Association for the Prevention of Consumption have erected a Sanatorium for the moderate sum of £1,400, with accommodation for twenty patients. The working expenses will, it is believed, be met by the sum charged to each patient, which has been fixed at 30s. a week. Of course, this sum is altogether beyond the pockets of working-men; but it is believed that all the beds will be taken up by private subscriptions or by local authorities in various parts of the country. With regard to the sources of infection a German observer gave the history of 200 phthisical patients, which were the subject of careful enquiry. In 114, or 57 per cent., the infection was acquired *in the Home* from consumptive parents and relatives (this result agrees with Dr. Niven, of Manchester, in 1902). In 50, or 25 per cent., the source of infection appeared to be acquired in workshops from consumptive fellow-workers. In 14, or 7 per cent., the source of infection is put down as the "dwelling," *i.e.*, places such as common lodging-houses, infirmaries, etc., where the patient was in close contact with fellow-sufferers. In one, or 5 per cent., the source of infection was through inoculation from a tuberculous animal.

**Typhoid Fever.**—During the year only five cases were notified with one death. It is very possible that the death was not due to Enteric Fever: the doctor who certified it was a bird of passage, and I had no chance of getting any information from him; one of the notified cases, too, turned out to be the subject of some other disease. This shows the year to have been one peculiarly free from Typhoid.

It is still highly unsafe to eat oysters and other shell fish, and deadly to eat them indiscriminately. Dr. Collingridge points out that "in the case of a food supply so peculiarly liable to contamination, and in view of recent information, it seems hardly credible that anyone should accept so serious a responsibility. The impossibility of a satisfactory guarantee as to the purity of any particular oysters only emphasises the urgent necessity for legislative measures for registration of all beds and layers, and the absolute closure of all those found to be polluted. In this way only can the trade be made secure from the effects of panic, the public protected, and the shell fish rendered as reasonably safe as any other food supply."

During the year a number of cases of Typhoid in Hackney were traced to the consumption of watercress. It was ascertained that during last summer two "waves" of illness occurred, and that watercress eaters suffered nearly 5 times more than others. Samples of the cress exposed for sale by street hawkers were examined bacteriologically: every sample was found polluted by sewage organisms. The West Ham beds were also examined and found to be fed by almost undiluted sewage. The necessity for examining watercress beds whenever sewage pollution is possible is abundantly manifested. In an outbreak of Typhoid at Govan most of the cases were conclusively traced to the consumption of ice creams. The sender and maker of the ice creams had the disease upon him for two weeks before he laid up, all which time he was attending to his business: twenty cases resulted therefrom.

The material on the premises was destroyed and the place closed and thoroughly disinfected, then the disease was stayed. This shows the absolute necessity of keeping the trade under strict observation so that the operations shall be carried on under the most cleanly conditions and with material above suspicion, otherwise it is a source of constant danger to that portion of the community which indulges in these luxuries which have frequently been shown to have been produced and vended under the most filthy and revolting conditions.

**Epidemic Diarrhœa.**—Thirty-five deaths were referred to this disease, in the third quarter, thirty being of infants under one year. I have gone very fully into the subject under the head of infant mortality.

**Cancer.**—Twenty-seven deaths were registered during the year, five each in the first and second quarters and eight and nine respectively in the third and fourth. In 1901 I reported: "The average number of deaths during the last five years is 30·8 per annum, while that of the five preceding years is but 15·2, or less than half." In 1902 there were twenty-seven deaths, 1903 thirty-nine and this year twenty-seven; this gives an average of thirty-one for the last three years. It certainly appears that Cancer is on the increase. In July the Committee of the Liverpool Cancer Research forwarded to Medical Officers of Health a letter on the subject, hoping they would draw the attention, by public notice or other means, of the inhabitants of their district to this very important matter. The enclosed circular stated that in view of the increasing prevalence of Cancer the Committee deemed it their duty to call attention to what may be done to combat the increase. "No specific cure for Cancer is yet known, but, as with consumption, the earlier the treatment is commenced the greater is the chance for its success, but a large number of people put off seeking the advice of their doctor instead of going immediately when they notice anything wrong." The circular then pointed out how that the gullet, stomach and intestines in men and the breast and womb in women, were more obnoxious to the disease than other organs, and that they accounted for about two-thirds of all cases of Cancer. They again emphasised the importance of consulting the medical man early, so that the disease should be recognised at the earliest possible moment. Nor is Cancer apparently on the increase in England alone. A medical journal recently stated that carefully-compiled statistics are said to show a great increase of Cancer in the large American cities in recent years. San Francisco stands highest on the list with 103·6 in every 100,000, against 16·5 forty years ago. Boston comes next with 85 per 100,000, as against 28 forty years ago. The figures for other cities are 32 for New York in 1864 and 66 in 1903; Philadelphia 34 and 70; Baltimore 18 and 63; New Orleans 15 in 1864 and 82 in 1903.

**Infant Mortality.**—130 deaths of infants under one year were registered during the past year, equal to a rate of 125·6 deaths per 1,000 births.

The rates for the four quarters were respectively 72·5, 91·2, 261·7 and 78·3.

The mortality for the third quarter, therefore, exceeded the other three put together, the numbers for the first, second and fourth quarters totalling 63 (18, 24, 21), and the third quarter 67.

Of the 130 deaths, 109 were referred to the following:—Diarrhœa, 36; Bronchitis, &c., 9; Wasting, 37; Convulsions, 14; Premature Birth, 13.

Whatever other causes may be in operation, the large infantile death-rate in the third quarter is always most intimately connected with great summer heat, for in unseasonably wet and cold summers the infant death-rate is practically always—as far as the diarrhœa rate is concerned—a normal one; the fourteen deaths referred to Wasting are in a large measure due to the same cause. Great and continued summer heat kills off debilitated children, many of whom have been prematurely born and whose deaths, if not referred to Diarrhœa, are ascribed to Wasting, Convulsions and Premature Birth. The majority of these infants might survive a mild summer, but are quite unable to stand against a very hot one, the heat plus artificial feeding being altogether too much for them. Nature intended mothers to feed their offspring, and when this duty is properly carried out infantile diarrhœa loses most of its terrors; but, unfortunately, we live in an age in which natural feeding is the exception and not the rule. Dr. Hutchinson says "it would be unjust to the female sex generally to state that this inability to nurse their children is their own fault. I don't think that is true. I think, in the majority of cases, one can say that the woman is unable—not unwilling—to nurse her own child. Now that is a phenomenon of very considerable gravity, but it is one which is not confined to this country—it has been found to hold good in the whole of Europe and in America also. It seems to be part of the price which we pay for civilization. It would appear that under civilized conditions of life the tendency of women to nurse their own children becomes less and less, and I need hardly say that that is a social event

of very great seriousness, because the physical advantages to the baby of being breast-fed, not to speak of the moral advantages to the mother of suckling, cannot be over-estimated. This is one, indeed, of the signs of physical degeneracy which makes some observers afraid that there may arise a barbarian and more virile race which will sweep away our Western civilization altogether."

Statistics show that fewer diarrhoea deaths occur in breast-fed children than in those partially so fed, and fewer among those who are partially fed than in those brought up entirely by hand, or, as we call it, artificially fed. Our Diarrhoea mortality shows this conclusively. All these deaths have been enquired into and we found that one-sixth were brought up by hand, double that number were partially fed and about half were artificially fed. The nearer a baby is born to the end of June the more essential it is that the mother should endeavour to nurse it, until at least late in September, and it is always advisable for her, if unable to nurse the full time, to do so for as many months as possible, to give the baby a good hold on life, and so to make artificial feeding not quite so hazardous an experiment. Of course, these remarks as to the danger of artificial feeding, especially in hot summer weather, are of infinitely greater force with regard to the infants of our poorer inhabitants, though it would be well if natural feeding obtained universally. There would, it is suggested, be a great saving of infant lives if the Factory Act forbade women to engage in work until their infants were three or four months old. I have before remarked that during the Lancashire Famine in days gone by, and later during the siege of Paris, the infant mortality positively declined, owing to the mothers having time to feed and attend to their offspring. There are many reasons why artificial feeding is so deadly, and especially in hot weather. Among others—(1st) *The nature of the food itself.* Debilitated infants often cannot digest cow's milk EVEN IF properly prepared and diluted. The same applies to artificial foods, many of which are very injurious during the first six months or so, partly because they do not contain the necessary ingredients in anything like the proper proportion, and partly because before six months, infants digest starch very badly, owing to the deficiency of saliva. (2nd) *The ignorance or carelessness of mothers,* many of whom have not the ghost of an idea how to manage a baby or how to prepare its food; the firstborn of such parents have often a very rough time. (3rd) *The want of proper storing accommodation for milk.* This must often reach the house in very hot weather in a questionable condition. If placed in a dirty vessel open to flies and dust, and anything but cool, this milk will rapidly become putrescent. (4th) *The agency of flies.* These are unusually numerous the hotter and closer the weather. They are known to carry infective matter in the houses of the dirty poor; they go from all sorts of impurities directly to the milk in the open vessels and drown themselves frequently in it. Observations have been made which show that the maximum number of flies caught coincided with those weeks in which the maximum number of diarrhoeal deaths occurred. Flies seem to have the same place in the insect world which tramps occupy in the animal—both have no reason nowadays for existing; they both spread disease far and wide and subserve no useful purpose—apparently. (5th) *Teats.* These ought not to be overlooked. One sees a teat fall upon the floor—not of the cleanest—and further sees it promptly picked up and placed in triumph in the poor baby's mouth. Supposing the infant's food were agreeing up to that point, this insane act might be quite sufficient to determine decomposition of food in the infant's interior.

One writer states that infant mortality has a definite relationship to (1) The feeding of infants; (2) Personal care of infants; (3) Housing accommodation. Other elements enter into the problem, but so far as municipal action is concerned, these are the three main elements; and, further, the sources of the pollution are not only in unsatisfactory methods of milking and in storing and conveying the milk supplied, but also very largely in dirty domestic conditions, and particularly in carelessness in use of feeding bottles. Apart from the deaths referred directly to Diarrhoea, the debility consequent upon the disease may produce Rickets and so cause death some long time after by Bronchitis or some other disease to which these cases are so prone, or they may grow up stunted or otherwise unfit for the battle of life.

I have so frequently alluded to the danger arising from the use of preservatives in milk and have twice attended to give evidence in court; in both instances the defendants were convicted. Alluding to adulteration with preservatives, one writer remarks, "Adults could possibly drink such milk with impunity, but in the tenement districts of cities, where the babies have such a hard struggle for existence, it takes very little to turn the scale either in favour of, or against their chances of life." Now the question arises what, if anything, can be done in Luton to reduce this terrible loss of infant life. First, we will take into consideration what is the state of our town as regards sanitary matters and the existence of slums, for

if sanitary affairs were in a bad way and slums abounded, both these subjects would have to receive full consideration: I am, however, thankful to state that I doubt whether the town was ever in a more satisfactory sanitary condition, and that though we have, perhaps two or three hundred low-class houses yet we have no slums in the ordinary acceptance of the term. Apparently the whole thing, then, resolves itself either into providing a suitable milk for the infants of the poor, or rather what I would incline to, viz., the appointment of a lady inspector; she, in addition to other duties, would visit the houses of the poor who had infants under one year, and give special attention to those under six months: these visits would be more frequent during the summer months and then her work could be supplemented by a few voluntary helpers. Such an appointment in Luton, now that the School Board has been merged into a Department of the Town Council, might be utilized also for school purposes. Parents would be informed how to attend to their children's heads so that the time which is now lost to education owing to parental ignorance or neglect in getting them well, which is so regrettable, may be minimised as much as possible: further, the Inspector would suggest medical advice, or removal to a hospital, where she believed valuable time was being wasted or where a child was running the risk of permanent disease; neglect of diseases of the ear or eye would be frequent cases in question. The *Sanitary Record* states "Some ground for holding that improper feeding is the chief element in the situation is afforded by certain figures showing the deaths from Diarrhoea in Preston—a town which enjoys the unfavourable distinction of having had over a series of years the highest infantile mortality of all the great towns. Preston has during the last two years been attempting to deal with this evil through the appointment of two lady inspectors, who instruct mothers in the feeding and management of children, their work being supplemented by the labours of voluntary visitors. The returns show that the deaths from Diarrhoea during the months of July and August numbered 31 as against 126 in 1897, and 93 in 1898. There is fair reason for thinking that this striking reduction of mortality is due, in part at least, to the system of visiting and the greater attention to feeding which is inculcated." In a few large towns humanised milk is supplied and one or more lady inspectors appointed; the inspectors among other visits go to those houses where the humanised milk is supplied. In one town great trouble has been experienced with the ignorant class who often decant the milk out of the sterilized bottles into those with the objectionable long tubes: in fact, they visit from time to time, those houses mostly where milk is likely to be misused.

A few milk depôts for the supply of humanised milk have been established in recent years—the first was on a small scale at St. Helen's. Battersea, Liverpool and other towns have followed suit. There is evidence that the experiment has been attended with much good. Initial expense is rather great. Their first object is to supply the infants of the poor with a milk which is easily digestible and the best substitute for mother's milk, to be used ONLY in those cases where the mother is UNABLE to nurse her child. The milk is free from noxious germs and from chemicals and is supplied in hermetically-sealed bottles. Milk is humanised by adding water, milk-sugar and cream to make it as like to human milk as possible, and then sterilizing it. Of course, there are objections urged to such a procedure. One writer says: "Municipal Depôts are not only wrong in abstract principles of political economy, but they attack the question in a wrong direction. Depôts can only be used as makeshifts. The proper procedure is to educate girls in the duties of wifehood and motherhood." Another writer says: "In studying the results obtained by supplying sterilised milk, you must remember that the mother who will take the trouble to fetch the milk every day will also be ready to take the trouble of looking after the babies at home. There is another thing to remember. Every mother ought to be able to sterilise the milk herself, and by undertaking her duties we take a very great responsibility upon ourselves. We shall never do much permanent good by doing for other people what they might do for themselves." Of course, when all is said and done, the refusal or inability of mothers to nurse their children, *i.e.*, to perform their natural duty, is at the root of this large infantile mortality, and more especially of that referred to epidemic, Diarrhoea. To go back a step further, the day will, and must come, when the girls in our advanced classes will be instructed in all that relates to the comfort and well-being of a home and of the responsibilities of married life. This will shortly be looked upon as essential to the future well-being of the nation—the decided lowering of our birth-rate will alone make this imperative.

The general death-rate has everywhere declined in the last twenty-five years, whereas the general infant death-rate shows comparatively little, if any, sign of declension. If as much attention is shown to the latter as has been taken to bring about the reduction of the former, we shall not have year by year to make the

same almost disgraceful admission. I have so far said nothing about the milk supply. We must endeavour to ensure a clean and wholesome one. We must have healthy cows, kept in cleanly condition, with clean udders when milked and the operation carried out in clean places by clean milkers. There must be cleanliness in storing and conveying to the consumers. How essential the above is when we consider the domestic condition of so many of the houses, which are disgustingly dirty, the feeding bottles which are not kept clean, and the tubes which are an abomination! The ideal is a pure supply of milk which does not require sterilisation, but until then, home sterilisation is at least indispensable.

**Sanitary Inspections.**—Mr. Wright's list of abated nuisances falls short of last year's by 451. On the face of it one might think that our indefatigable Sanitary Inspector had been lying a bit low, but on reflection, it appears that so many nuisances had been abated previously that there are nothing like the number to occur. For instance, in 1902, 2,172 nuisances were abated, and in 1903, 1,233. In 1902 defective drains and bell-traps accounted for 835 nuisances. No receptacle for ashes, 383; no constant supply to w.c.'s., 298. In 1903, no receptacles for ashes, 345; insanitary dwellings, 164; defective bell-traps, 148. When a town has been put into very thoroughly good condition it takes an infinity of time, trouble and visits to keep it to that high pitch, and that is why, though only 782 nuisances have been remedied this year, the energy of our Inspector has not the least bit abated.

No receptacles for Ashes ... ..	274
Drains and w.c.'s blocked ... ..	117
Defective Bell-Traps ... ..	74
Insanitary Dwellings ... ..	61
No constant water supply to w.c.'s ... ..	46
Defective w.c.'s. ... ..	44
Defective Pavings ... ..	24
Defective Drains ... ..	22
Offensive Smells and Accumulations ... ..	18
Defective Ashpits ... ..	15
Water Apparatus to w.c.'s out of order ... ..	14
No receptacle for Manure... ..	9
Sinks not disconnected ... ..	9
Insufficient Ventilation to houses ... ..	4
Insanitary Workrooms ... ..	3
Pigs kept contrary to the bye-laws ... ..	2
Slaughter-houses requiring whitewashing ... ..	2
Defective Ventilating Pipes ... ..	1
Drains Unventilated ... ..	1
Other Nuisances ... ..	42
<b>Total ... ..</b>	<b>782</b>

Three hundred and thirty-eight preliminary, and twenty-three legal notices were served in connection with the above nuisances.

**Insanitary Dwellings**—Sixty-one houses were found to be in an insanitary condition. All of these were thoroughly cleansed and whitewashed by the respective owners.

**House Drains.**—Nine sink waste pipes were found directly connected with the drain. These were made to discharge on to 6-inch earthenware syphon gully traps.

**Closet Cleaning.**—During the year 17 loads of night soil were removed from privies and 57 loads from dumbwells. The charge made for emptying the same was £8 9s., and the expenditure in wages £4 13s. 4d.

**Ashes, Offal, and Trade Refuse Collection.**—13,074 loads of ashes, offal and trade refuse were collected by the Corporation teams. This is the largest quantity of ashes and refuse ever collected in one year. The cost of manual labour in connection with the collection and disposal of ashes was:—

	£	s.	d.
Horse drivers (28,487 hours) ... ..	474	15	8
Fillers (41,085 hours) ... ..	676	4	4
Hired Horses at 4s. per day... ..	109	4	0
	<b>£1,260</b>	<b>4</b>	<b>0</b>

The disposal of Ashes was as follows:—

	<i>Loads.</i>
Sewage Works and Farm ... ..	9,915
Elsewhere ... ..	3,159
	<hr/>
	13,074

Last year's total was 12,185 loads.

The income in connection with this department was as follows:

	<i>£</i>	<i>s.</i>	<i>d.</i>
Sifted Ashes ... ..	9	10	0
Trade Refuse ... ..	104	7	0
Rough Ashes ... ..		1	0
Collecting Offal from slaughter-houses ...	21	6	9
	<hr/>		
	£135	4	9

Time spent in sifting, covering up, etc. (wholly manual labour), 3,120 hours, cost, £49 8s.

The collection of Ashes for the last twelve years has been:—

1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
8,756	9,116	9,607	11,049	11,503	11,813	11,661	10,966	11,044	12,333
1903	1904								
12,185	13,074								

**Ventilating Shafts.**—No additional ventilating shafts were erected during the year. The total number of shafts in the borough is forty-seven.

**Inspection of Streets.**—Mr. Wright states that he has, in conjunction with myself, visited many streets and all the alleys during the year, and that the necessary steps were taken to remedy all the defects discovered in connection with those visits.

**Food and Drugs Acts.**—In connection with the "Sale of Food and Drugs Acts," 100 samples were submitted by Mr. Wright to the Public Analyst.

The samples were as follows:—Sixty-seven samples of new milk, eight samples of butter, three samples each of lard, pepper, whiskey, gin and sweets, two samples of golden syrup, one sample each of margarine, coffee, rum, chocolate powder, malt vinegar, sweet spirits of nitre, camphorated oil and lime water.

Of these, seven were adulterated. Mr. Wright here appends a full report of each sample, showing the article submitted, the person who submitted it, the result of analyses, the sum paid in respect of each analysis, and observations as to the results when a conviction was obtained. In a case of whiskey adulteration ten degrees below the legal limit, the vendor was fined £5 and costs £2 8s. The other six cases of adulteration were all of new milk:—

- 1st.—10 per cent. deficiency of fat. Vendor fined £3, including costs.
- 2nd.—10 per cent. " " " £3, " "
- 3rd.—Adulterated 1·6 grs. of boric acid per pint. Vendor paid costs, 10s. 6d.
- 4th.—Adulterated 1·8 grs. of boric acid per pint, and 10 per cent. deficiency fat. Vendor fined £6 6s., and costs, £4 5s.
- 5th.—10 per cent. deficiency of fat. Vendor fined £5, including costs.
- 6th.—20 per cent. " " " £5, " "

**Dairies, Cowsheds and Milk Shops.**—Under the "Dairies, Cowsheds and Milk shops Order of 1885" thirteen persons were registered as purveyors of milk.

During the year the inferior cow-sheds have been inspected and various improvements effected. The time will come when no one will be allowed to keep cows in makeshift sort of houses; the health of the nation depends in such a large measure upon the purity of its milk supply that every branch of it will in time be carried out under constant and strict supervision.

**Slaughter Houses** were regularly visited by Mr. Wright during the year, and on the whole were found to be in a satisfactory condition. Thirty-two licenses have been renewed, two transferred and one new license granted.

**Bake-houses.**—Have all been visited and the underground ones were found in very much better condition since Section 101 of the Factory and Workshops Act, 1901, has been put in operation. The bakers themselves, almost without exception, express themselves as highly satisfied with the improvements effected. Of the four condemned last year two were done away with, the other two were so structurally altered and improved that a certificate was given in each case.

**Markets.**—Mr. Wright reports that he visited the markets regularly during the year. On January 2nd, he seized the leg and two pieces of a shoulder of mutton which were exposed for sale in a shop. These were duly condemned by a Magistrate. On January 16th, he attended in Court to give evidence in the above case when defendant was fined £10 and costs £1 11s. 6d. On March 24th, he seized about fourteen lbs. of pork sausages which were condemned and destroyed. On September 10th, he seized about thirty lbs. of plums which were exposed for sale in the market. On October 12th, he seized one and a quarter cwts. of pears which were exposed for sale in the street. These were afterwards condemned by a Magistrate. On October 22nd, he attended Court to give evidence in the above cases when the defendants were fined respectively £3 including costs. During the year Mr. Wright examined one trunk of haddocks, seven boxes of kippers, one box of small witches, three bags of green peas and twelve boxes of tomatoes (at the request of the owners) on arrival at Luton, before being exposed for sale. These he found to be unfit for food and forthwith caused the same to be condemned and destroyed.

**Factory and Workshops Act.**—It will be seen by the following report, made to me by Mr. Wright, how much extra work has been thrown upon the officers of the Sanitary Department by the New Factories and Workshops Act, 1901: in fact to carry out the work as thoroughly as one would like to do, would necessitate the appointment of another inspector, for this is only a small portion of the work of our Sanitary Inspector and his assistant. The employers only just seem, after repeated warnings, to be waking up to the fact that the law means what it says and will undoubtedly drop on them if they persist in continuing to disregard its provisions. The Inspector tells me that a largely increased number of outworkers have been sent in for 1905. The number of registered workrooms are used by Straw Hat Manufacturers, Block Makers, Box and Cartoon Makers, Bakers, Confectioners, Milliners, Dressmakers, Tip and Lining Manufacturers, Upholsterers, Tailors, Joiners, Tinplate Workers, Jewellers, Boot makers, Ropemakers, Cycle makers, Laundresses, etc.

**SANITARY CONDITION OF WORKSHOPS.** (a) *Cleanliness*:—Generally it may be said that the workshops are kept in a fairly clean condition; most of these have to do with the making of straw hats and bonnets. (b) *Air Space*:—Taking the standard of 250 cubic feet of air space per head as laid down in Section 3 of the Act, in no case has it been necessary to serve notices. In a few places a little re-arrangement of workers has been made in order to comply with the Act. (c) *Ventilation*:—Most of the workshops are provided with sufficient means of ventilation: however, it is frequently found that where ample ventilation is provided, the workers themselves prevent that object being carried out by not maintaining in operation the means provided. (d) *Drainage of Floors*:—There are but few workshops or workplaces where wet processes are carried on. In no case has it been necessary to order further drainage. (e) *Sanitary Accommodation*:—Fifteen defective waterclosets were found and remedied during the year. *Outworkers*:—Fifty-six occupiers of factories and workshops have sent in lists showing the names and addresses of 670 persons employed by them as outworkers. A great many manufacturers do not appear to read their abstracts or realise that in the event of a contravention of this section by the occupier of a factory, or workshop, or place, or by a contractor, the occupier or contractor shall be liable to a fine not exceeding forty shillings, and in the case of a second or subsequent offence, not exceeding five pounds.

Thirty-four addresses of outworkers have been forwarded to other authorities.

Six cases of Infectious Disease were notified in home-workers' premises. These were removed to Spittlesea Hospital and the premises thoroughly disinfected.

**OFFENCES UNDER THE FACTORY AND WORKSHOP ACT.** One person was prosecuted for the illegal occupation of an underground bakehouse. This was ordered to be closed, and defendant was let off on payment of costs.

The following tables show the number of inspections and the result of such visits:—

<i>Premises.</i>	<i>Number of Inspections.</i>		
	<i>Inspections.</i>	<i>Written Notices.</i>	<i>Prosecutions.</i>
Factories ... ..	169	—	—
Workshops ... ..	741	30	1
Workplaces ... ..	3	—	—
Homeworkers' premises	511	24	—
	1424	54	1

#### Underground Bakehouses (S. 101).

				<i>Totals.</i>
In use during 1903	...	...	...	38
Certificates granted	{ in 1903	...	...	0
	{ in 1904	...	...	36
In use at the end of 1904	...	...	...	35

#### DEFECTS FOUND.

<i>Particulars.</i>	<i>Number of Defects.</i>		<i>Number of Prosecutions.</i>
	<i>Found.</i>	<i>Remedied.</i>	
<b>Nuisances under the Public Health Acts:—</b>			
Want of Cleanliness ... ..	27	27	—
Want of Ventilation ... ..	—	—	—
Overcrowding ... ..	—	—	—
Want of Drainage of Floors ... ..	—	—	—
Other Nuisances ... ..	12	12	—
Sanitary Accommodation—Defective ... ..	15	15	—
<b>Offences under the Factory and Workshop Act:—</b>			
Illegal occupation of Underground Bakehouse ... ..	1	1	1
<b>TOTALS</b> ... ..	<b>55</b>	<b>55</b>	<b>1</b>

#### Infectious Diseases Notification and Prevention Acts.—

The following list shows the number of cases notified under the provisions of the Infectious Diseases Notification Act, and with it Mr. Wright has combined the figures for each year since the Notification Act was adopted:—

<i>Name of Disease.</i>	<i>Number of Cases each year—</i>								
	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Scarlet Fever ... ..	236	185	75	43	62	268	89	68	65
Erysipelas ... ..	35	53	36	52	40	59	30	35	49
Typhoid Fever ... ..	16	37	16	28	22	19	7	5	5
Continued Fever ... ..	1	6	2	1	2	2	4	—	1
Diphtheria ... ..	13	12	39	50	11	12	17	18	4
Membranous Croup ... ..	2	—	3	6	7	2	—	—	1
Puerperal Fever ... ..	3	6	2	8	8	8	3	7	6
Variola ... ..	1	—	—	—	—	2	5	—	—
Choleraic Diarrhoea ... ..	—	1	—	—	—	—	—	—	—
Anthrax ... ..	—	—	1	—	—	—	—	—	—
<b>TOTALS</b> ... ..	<b>307</b>	<b>300</b>	<b>174</b>	<b>188</b>	<b>152</b>	<b>372</b>	<b>155</b>	<b>133</b>	<b>131</b>

The following list shows the Number of Houses and the different Wards in which Infectious Diseases occurred during the past year:—

<i>Name of Disease.</i>	<i>No. of Cases.</i>	<i>North Ward.</i>	<i>East Ward.</i>	<i>West Ward.</i>	<i>No. of Houses Infected.</i>
Scarlet Fever ... ..	65	21	15	29	52
Erysipelas... ..	49	11	22	16	48
Typhoid Fever ... ..	5	1	1	3	5
Continued Fever ... ..	1	—	1	—	1
Diphtheria ... ..	4	—	3	1	4
Membranous Croup ... ..	1	1	—	—	1
Puerperal Fever... ..	6	1	5	—	6
<b>TOTALS</b> ... ..	<b>131</b>	<b>35</b>	<b>47</b>	<b>49</b>	<b>117</b>

Mr. Wright also gives an interesting table showing the streets in which infectious diseases occurred, the nature of the cases, and from which streets cases were removed to the Fever Hospital.

**Disinfection and Disinfectants.**—Disinfection and other precautionary measures for the prevention of the spread of disease were duly carried out: children from infected houses were advised not to attend school, and any defects in the houses or localities were remedied. Disinfectants were also freely supplied to all who applied for them at the Inspector's office. The cost of disinfectants for the year was £81 14s 11d., which sum also includes the bulk of the disinfectants sent to Spittlesea.

**Spittlesea Hospital.**—Twenty-seven cases of Scarlet Fever and one case of Typhoid Fever were removed to Spittlesea during the year, making a total of twenty-eight cases, against thirty-eight last year.

**School Closure.**—No certificate had to be issued by me during the year for the closure of any one of the Elementary schools on account of infectious disease.

**Attendance in Court.**—On January 16th I attended in Court to give evidence in the Meat Case referred to by Mr. Wright under the heading of "Markets." I would only add that the Magistrates declared the case to be a most glaring one.

On June 11th I attended in Court to give evidence for the purpose of obtaining an order from the Magistrates for the closing of an underground bakehouse in Castle Street. I had previously advised the Sanitary Authority that it was quite unfit for the purpose and a certificate had been refused. The baker-tenant had already received three notices to discontinue the use of the bakehouse, but at my visit on June 7th he was still engaged in baking. The Magistrates adjourned the case for three weeks to give the tenant the opportunity of summoning his landlord, the latter being, at the time, out of town. On July 2nd I again attended in Court in the same case. In the meanwhile, the landlord had given the tenant notice to quit and the baker had sold his business. The case was again adjourned, the question of costs being *sub judice*. Ultimately, the baker paid 42s. costs.

On July 16th I attended in Court to give evidence in a case of milk adulteration. Analysis showed the presence of 1·8 grs. of boracic acid per pint. The defendant was fined £3 3s. and £2 13s. in costs.

**Sewage Works.**—During the year 617,060,300 gallons of sewage were pumped on to the Sewage Farm, being equal to 1,685,957 gallons per day. There was a decrease over the amount pumped last year of 70,554,205 gallons or 192,771 gallons per day.

**Common Lodging Houses.**—They are very efficiently kept under observation by the Chief Constable; when I last visited them with the Inspector of Nuisances they were in a most cleanly condition. As many as 18,284 tramps passed through them in 1903.

**Water Analysis.**—No samples of water have been submitted for analysis. As we have not had a sample of the Company's water officially examined recently I have obtained through the courtesy of Mr. W. R. Phillips, C.E., the able manager of the Luton Water Works, the following recent and satisfactory analysis.

Note:—Column A—grains per gallon or parts per 70,000. Column B—Parts per million.

	A			B		
Total Solid Matter ... ..	26·90000	...	...	384·285	...	...
Chlorine as Chlorides... ..	1·10000	...	...	15·714	...	...
Nitrogen as Nitrates ... ..	0·12394	...	...	1·770	...	...
Nitrogen as Nitrites ... ..	0·00000	...	...	0·000	...	...
Nitrogen as Free Ammonia ...	0·00000	...	...	0·000	...	...
Nitrogen as Albumenoid Ammonia ...	0·00265	...	...	0·037	...	...
Poisonous Metals ... ..	0·00000	...	...	0·000	...	...

(Signed) EDWARD MARSH.

**Refuse Destructor.**—I went fully last year into the crying evil resulting from the disposal, or rather want of proper disposal of ashes and other refuse, and explained that the delay was entirely due to our anxiety to obtain the best Refuse Destructor in the market; this, of course, necessitated visits to various parts of the kingdom to see several destructors in operation, and consequently delay was

inevitable. However, we have now erected a *Horsfall Refuse Destructor* in a very suitable building lined with glazed bricks on a site adjoining our Pumping Station. It will be very shortly in operation. The amount of Refuse collected in Luton is taken at 10,000 tons, which works out at about  $27\frac{1}{2}$  tons per day. The two cells already built are each capable of burning 15 tons in 24 hours, so that provision is made to burn 30 tons per day. It is intended to start with two cells only, but already provision has been made for three, so that it will be possible, ultimately, to consume about 45 tons per day. In connection with the Destructor a new Lancashire Boiler is provided 30 feet long by 8ft. 6in. diameter, an economiser consisting of 48 pipes with scraper, gear, etc.; a patent Centrifugal Dust Catcher, a Steam Disinfecter, a Mattress Chamber for consuming infected bedding, etc. The building harmonises with the existing ones. The Destructor is approached by an inclined way which rises about 10 feet above the existing ground. The river has been diverted. The amount to be spent at first is £5,600. The chimney of the pumping station has been utilised. A guarantee is given, and full responsibility taken, that no nuisance whatever shall result from the use of the Destructor. A Centrifugal Dust Catcher is fixed so as to prevent the escape of any dust from the chimney.

**Local Government Board.**—Weekly and quarterly returns have been made and forwarded most regularly of the Infectious Diseases in the Borough. In return the Board have forwarded me weekly returns of the notifications in Boroughs and Urban Districts. The Annual Returns, which get more and more elaborate, have also been forwarded.

**County Council.**—Monthly returns of Infectious Diseases in the Borough have also been regularly forwarded to the Council; I have received in return monthly notifications for the whole county.

#### **Infectious Disease and Notification.**

- (i.) Notification: 131 cases were notified.
- (ii.) Isolation: One case diagnosed Typhoid, as it turned out erroneously, and 27 cases of Scarlet Fever were removed to Spittlesea. The remaining cases were kept under observation at their own homes.
- (iii.) Disinfection of rooms, bedding, clothing, etc., was carried out in all the cases of Scarlet Fever, and in the majority of those in which death had occurred from Cancer or Phthisis.
- (iv.) Investigation into the sources and causes of all the cases of notifiable infectious disease has been made as usual.
- (v.) Controlling the Channels of Infection: Children from infected houses have been kept away from school. An eye has been kept on the common lodging-houses. Two men on one occasion and two on another have been kept carefully under observation, as they had been possibly in immediate contact with Small-pox cases.

Advice given to my authority: No very special advice has been given during the year except urging the necessity of thoroughly flushing the drains in anticipation of the advent of hot weather and its accompanying epidemic, diarrhoea.

No advice was necessary to get you to continue the policy of taking proceedings against the parents of verminous children.

**Sanitary Requirements.**—I think that it will be very interesting under this heading to indulge in a little retrospect; this will show how requirements at Christmas, 1878, when I was first appointed Medical Officer of Health, became, after many delays, requirements no longer, this or that particular "need" having been satisfied; and it will further show how requirements, not dreamt of at that time have since arisen.

1879. In my Report for this year no "needs" were alluded to—we had not begun to have such expensive luxuries; the Sanitary Committee was not in those days on the look out for them, and I was new and raw to the work.

1880. I reported "with regard to the future much of course remains to be done and especially in the direction of Immediate Notification of Infectious Diseases, the erection of a Fever Hospital for the Borough, and the reduction, if possible, of the excessive Infant Mortality, which unfortunately depends much more upon social than upon sanitary clauses."

It is interesting to note the last remark, for time has proved its truth; had it been otherwise the reduction of the general death-rate by about seven per 1,000 would have been accompanied by a considerable lowering of the

- infant death-rate; this however has remained pretty constant in its unsatisfactoriness.
1881. Special needs noted were: 1, Immediate Notification; 2, A Fever Hospital; 3, The Company's water to be more generally laid on; 4, Privies to be turned into Water Closets wherever practicable (the Bye-laws stood in the way here); 5, Smoke must be consumed on some premises more than it is now. The advocacy of the Company's Water in preference to well water laid me open to the suggestion that I was an interested party.
1882. No. 1 and 2 of 1881 remained unsatisfied; 3, The Company's water had been laid on to those houses where the well water had been condemned; 4, Seventy privies had been converted into water Closets and as to No. 5, two smoke nuisances had been abated.
1883. No new needs were mentioned and the old ones remained.
1884. The Ampthill Small-pox epidemic frightened the Committee into obtaining from me a Report on the subject of Hospital Tents. The difficulty of obtaining a site on which to erect them was prohibitive. We had one in view, but popular feeling was aroused and put a stop to the project, otherwise it would have been purchased and tents erected.
- The need of more land for the disposal of sewage resulted in the purchase of the present Sewage Farm, upon which Spittlesea Fever Hospital now stands.
- All the other needs remained, but the Company's water was provided to more and more houses.
1885. Requirements the same. Necessity for Fever Hospital more apparent than ever, as the Local Government Board had given orders to the Infirmary Authorities to refuse to admit to their Fever Ward any other than pauper cases.
1886. No mention is made of "needs," but "in conclusion, I hope that this Report will convince you that though rather old in your service, I still have the interests of the Borough at heart, and that my enthusiasm in the cause of progress has received no *fatal damping*." On thinking over this in 1905, I feel sure that as no needs are mentioned, but fatal damping is referred to, that enthusiasm had received somewhat of a set-back, it would have been a miracle if it had not been so!
1887. At last half a "need" was satisfied. Finding that we could not find a site for a Fever Hospital without the greatest opposition, we provided a site on our recently-purchased land—the present Spittlesea site. No other "needs" are alluded to, but under the head of Scarlet Fever the want of a Hospital is deplored.
1888. No mention of "needs," but "thanks to Dr. K. Tomson, a tramp was, after I had been refused, removed into the Iron Small-pox Hospital in the Infirmary grounds." I find that the school teachers helped us largely in the way of notification through a circular letter written by Mr. Hoyle.
1889. I find nothing directly about "needs" but the futility of the non-adoption of the Infectious Disease (Notification Act), 1889, deplored. Further, the neglect of vaccination was deplored (in such strong terms that I was almost called over the coals), and also the shortsightedness—to say the least—of the *laissez faire* policy with regard to a Fever Hospital, the townspeople being so largely without the immunity ordinarily conferred by vaccination. The site of the hospital so far only had been selected.
1890. No direct mention of needs, except with regard to the non-adoption of the Notification Act, about which I wrote most strongly. "Our good fortune in the way of immunity from serious epidemics still continues, but when the day of awakening arrives, my Annual Reports for the last eleven years will show that I, at least, was not blind to the danger, and did not hesitate to lay my fears, in the strongest way possible, before you. I am well aware that many are deterred from advising the adoption of the Act in the belief that a Fever Hospital would undoubtedly follow its adoption. So it would—or rather, so it ought—one is quite a necessary sequence to the other."
1891. Sewer Ventilators were increased in number. Took satisfaction in the fact that privies had been reduced to about 500. The nightly round of the disgusting "night carts" stirred my pen to some sort of eloquence. Again remarked the Notification Act not adopted; not deplored, as the zymotic rate was never so low before.

1892. A double danger threatening. Small-pox was extending in all directions in the country (largely disseminated by tramps), and Epidemic Cholera threatened. "I would again draw your attention to the fact that our borough is quite behind the times, inasmuch as the Act (so often referred to), has not yet been adopted: if that were adopted and a *Steam Disinfector* purchased, which is quite as necessary as a steam roller, &c." "With money no object, I know that all my desires would be realized: if human life in the aggregate were only valued half as highly as that of the individual life, money would not stand in the way of all that pertains to its preservation." At last, however, one pressing need was satisfied. "In consequence of my recommendation (and the fear of Cholera) you at once ordered a small iron structure to be erected, to which the first three or four cases of any infectious disease might be removed and thoroughly isolated. Hospital two miles from Luton.
1893. "Needs": Adoption of Notification Act; disinfecting apparatus; abolition of remaining privies; efficient flushing and ventilation of sewers; further hospital accommodation. We had a grievance; the County Council had come into being. I appeared to be the only Medical Officer of Health who in the 1892 Report went thoroughly into the needs of his sanitary district, so that Luton appeared to have so many needs and was on the face of the County Medical Officer's Report behind the rest of the county, instead of being, as she was, well to the front. Even our long list of nuisances abated gave things a bad appearance. I pointed out the injustice to the County Medical Officer, who did us full justice in his next Report.
1894. The combined hospital for three local authorities which was contemplated in 1893 fell through, and with it my confident prediction of the near realisation of our constantly reiterated needs, viz., increased hospital accommodation, a disinfecting apparatus, and the adoption of the Notification Act. Other requirements alluded to were the further abolition of privies and the efficient flushing and ventilation of the sewers. Of the former eighty-one were abolished during the year, leaving only ninety-one in the Borough and thirty-five at Round Green. The flushing recommendation was favourably received.
1895. "Needs": Immediate notification, which, however, had been adopted and was to come into force on Feb. 23rd; completion of our hospital accommodation; steam disinfector; systematic and automatic flushing of sewers and further ventilating shafts.
1896. Mr. F. Drew Harris, the Sanitary Expert engaged in the Enquiry of the small Typhoid Epidemic of 1895, made as a result of it certain recommendations concerning which I was able to write: "It will, therefore, be seen that of all Mr. Harris's recommendations only one has not been attended to, and that (*Steam Disinfector*) is out of my power to rectify and provide. Adequate accommodation was provided during the summer for Variola, Scarlet Fever and Typhoid Fever at one and the same time. Further, a large portion of ground at Spittlesea has been levelled, so that tents or temporary structures can be immediately erected. Further, the Borough Surveyor's big scheme for Storm Water Drainage and Sewerage is shortly to be carried out at an expense of £40,000."
- "It will be seen that if there still remain some sanitary requirements unsatisfied, we are by no means stationary in sanitary matters. We have travelled very far since my appointment in 1878."
1897. Requirements. I. Provision of permanent accommodation for Small-pox cases. II. *Steam Disinfector*. III. Some small additions to Spittlesea.
1898. A *Steam Disinfector*.  
It will be seen in comparing these requirements with last year's that numbers I. and III. have disappeared. We have erected a Small-pox Hospital, &c. The Hospital will accommodate eight patients in two wards, which for airiness and light can hardly be surpassed.
1899. I. A Refuse Destructor. II. A *Steam Disinfector*. III. Continue providing a proper water supply to every closet.
1900. As in 1899.
1901. I. A Refuse Destructor. II. A *Steam Disinfector*.  
*Note.*—We are still *in search of* a perfect Refuse Destructor and consequently minus a *Steam Disinfector*.
1902. Still in search of perfection as above.

1903. Still in the same search. For the first time I have noted that some provision for last stage cases of Phthisis is advisable and that a Lady Sanitary Inspector would be a very useful addition to our staff.
1904. A *Horsfall* Refuse Destructor has been purchased, housed, and is shortly getting to work. A Steam Disinfector is the outcome of the above. I mention the need of provision for early as well as late cases of phthisis and again recommend a Lady Sanitary Inspector and remark that the Town Council have already appointed a Committee to make enquiries and recommend.

In conclusion, I must allude to the loss the borough and his fellow officers have sustained in the untimely death of our talented friend and Borough Engineer, Mr. A. J. L. Evans. I wish to bear witness to the help he always accorded me personally. From a sanitary standpoint the year under review has not been an unsatisfactory one. The birth-rate was fairly high, 27.2 (as birth-rates go now), the death-rate only 13. The population increased from within by 539 births over deaths. The zymotic rate, in spite of a hot summer, and many deaths referred to Epidemic Diarrhoea, was only 1 per 1,000, and the Infant rate, in spite of the same disease, was as low as 125.6 per 1,000 births: the rate in the 3rd quarter was 261.7, and the three other quarters *only averaged 84*, a most unusually low rate, the 1st quarter was as low as 72.5; only 1 death was referred to Diphtheria (and only 4 cases notified) none to Scarlet Fever, only 3 to Measles, 1 to Typhoid Fever, and most unusual, not one to Whooping Cough. Cancer deaths were lower rather than higher. The *blots* on the year's returns are: the Infant deaths referred to Diarrhoea (36), Wasting (39), and Convulsive (16), making a total of 91 deaths, many of which undoubtedly ought to be saved, as the majority probably would be if they were placed under the conditions which will obtain in the "garden cities" of the future. As we cannot obtain these conditions in Luton we must do the next best thing, which is, in my opinion, to obtain the services of a Lady Inspector; this subject I have gone into elsewhere. Last year was my 25th anniversary and, owing to ill-health, I was unable to indulge in retrospect: this year, with the advent of a Refuse Destructor and Steam Disinfector I have given a short review of our gradual advance from no "needs" at all to, first, the recognition, and then the final attainment of them. As time goes on others are bound to arise, but we shall never be so blind to the necessity of keeping up with the times as we were in the past. Ours is a busy commercial and fairly up-to-date borough, close to town in the number of miles, and closer by our splendid service of trains. By this, and by our up-to-dateness with pure Company's Water very good and cheap gas, electric light and power of our own supplying (and at moderate cost), and with the Borough in a good sanitary condition, we have attracted various trades and shall, I believe, continue to attract them. We may therefore, with much confidence, look forward to the future of the Borough, destined to have a much larger population and to become increasingly important. That sanitary matters may not lag behind commercial and other matters will be my constant endeavour while I remain in the service of the town and while I am supported by such zealous and friendly officers. I thank you, gentlemen, most heartily for the past kindness and consideration you have so invariably shown me.

Yours obediently,

**HORACE SWORDER.**

*To the Members of the Sanitary Committee  
of the Borough of Luton.*