tained in these life tables. We may, however, claim to have established the fact that whilst the population of certain districts of our city compares not unfavourably with the rest of England and Wales, there are, nevertheless, other districts—as, for instance, those comprising the old township of Manchester—in which an appalling sacrifice of human life is still constantly taking place. Here is a population of nearly 150,000 persons paying a tax which must be reckoned, not in pounds, shillings, and pence, but in years, months, and days —a tax amounting on the average to fully thirty per cent. of the lifetime of every member of the community. Here are men and women entering the period of decline at an age when they ought scarcely to have passed the prime of life. And what is particularly distressing in this regard is the thought that although in some respects the local conditions of life have improved within the last half century, in other respects bad has become even worse.

But are we to rest satisfied with having exposed this alarming sacrifice of human life and assessed its amount? Is it not, rather, our plain duty to inquire whether it is not in some degree avoidable? How much of the terrible death-toll is due to the nature of the people's employment; how much to the state of their dwellings; how much to their home life—the personal habits of the occupants of our slums? These are some of the problems which confront us at the very threshold of our inquiry. Their solution will certainly tax our best energies —perhaps, indeed, it may at present be impossible —but we dare not shirk the attempt. The task which lies before us and our successors is nothing less than that of restoring to every infant in the Manchester township the twelve years of life expectation of which it has been defrauded by the evil surroundings of its birth. How far we have succeeded in this task, and how far we have failed, can only be known when the death records of the ten years 1891-1900 come to be compared with those herewith presented, which relate to the recently completed decennium 1881-1890.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

SHEFFIELD.

Small-pox.—The difficulties of dealing with persons who have been exposed to the infection of small-pox, but who refuse to be revaccinated, are well exemplified in the following extract from Dr. H. Littlejohn's report:—

"A man, aged 23 years, contracted the disease probably at Stocksbridge. No doctor was called in, and he stayed at home with the rash out on him (from May 3rd) for a week before the case was reported and his removal effected. Two sisters worked in a cigar factory, where about 40 other girls were employed. They continued to go to work while their brother was ill at home, and although they did not develop the disease themselves they must have carried the infection on their clothes, for on the 12th, 15th, and 16th of May cases occurred among the other girls of the factory. When the brother was taken to the hospital, they and the other members of the family were also removed for isolation, so that the infection must have been carried by them during the week their brother was ill at home and they were going to work. Two other girls subsequently developed the disease, but they probably caught the infection from one of the three later cases, and the dates of their illness point to this.

"The question of how to deal with the work-people in the factory was a difficult one. Forty girls living in different parts of Sheffield had been exposed to infection. They refused to be re-vaccinated, and therefore all we could do was to visit the premises daily, ask if anyone complained of feeling ill, and pay a visit to the houses of any absentees. The manufacturer also promised to let us know at once of any person who complained of being unwell. By this means we minimized any risk, and, as it happened, were enabled to remove five persons in the very first stages of the disease, and before they had become highly infectious."

SOUTH SHIELDS.

Is the Infection of Small-pox Transmitted Aerially?—Dr. Turnbull, in his annual report, gives a suggestive account of the treatment of small-pox in the vicinity of scarlet fever wards:—

"At the time when the first case of small-pox was reported, towards the end of October, it was a moot question with me whether we did not incur greater risk in removing the patient to the Denes Hospital than in leaving him to be treated at home. The only ward available was within a comparatively short distance of the scarlet fever ward, where there were then some 20 patients, at ages ranging from two to 16 years, under treatment, and within a still shorter distance of the Denes Lane, a much-frequented road. The conditions under which the patient was housed, lodged with a relative in a flat of two tenements with a common stair, decided the question. He was removed, to be followed two days later by a shipmate, and up to the end of the year eight cases were treated in the same ward block.

"The most stringent precautions were taken to prevent the introduction of the disease amongst the other patients. The whole of the staff were revaccinated, and communication between the ward and the administrative block absolutely forbidden. The food for the patients and nurses was taken to the door of the ward and left there to be afterwards taken in by the nurse, and every article leaving the ward was placed and allowed to

remain for some time (clothing and bedding 24 hours) in strong disinfecting fluid. That the measures taken were entirely successful up to the end of the year in preventing the occurrence of cases of the disease in the other wards is due to the conscientious manner in which the whole of the members of the staff, and especially the nurses in charge of the small-pox ward, carried out their instructions, at considerable inconvenience to themselves."

ANNOTATION.

THE PUBLIC HEALTH (LONDON) ACT.—The most essential difference between the procedure under the Public Health (London) Act, 1891, and the various preceding Acts, is that formerly if a notice to abate a nuisance from the sanitary authority was not complied with, proceedings had to be commenced before a justice and evidence produced to satisfy him that a nuisance injurious to health existed, when, if satisfied that such nuisance existed and was injurious to health, an order would be made for the abatement of the same. If this order was disregarded and the necessary works not executed it was necessary to commence fresh proceedings to recover penalties. But under the Public Health (London) Act, 1891, the sanitary authority, which in the case of the Vestry of Battersea is the Sanitary Committee, to whom all such powers have been expressly delegated; if satisfied that an intimation of the existence of a nuisance dangerous or injurious to health has been served by the sanitary department, under section 3 of the Act, upon the person liable to abate such nuisance, and such intimation has not been complied with, will, after taking the circumstances into consideration, cause notice to be served under section 4 of the Act requiring the nuisance to be abated, and if this be not complied with, will at once sue in the police-court for penalties for neglect to comply with the order of the sanitary authority; the magistrate cannot go into the merits of the case, but has only to decide upon the amount of the penalty for non-compliance with such order. It will be seen that the sanitary authority here acts in a judicial capacity, as a court of first instance, in the same manner as the magistrate formerly did under the Metropolis Local Management and other Acts; and it is necessary that each case should be considered upon its merits in order that the authority may be said to have considered the case in a judicial manner. This adds much to the work of the Sanitary Committee and its staff, but a very considerably larger amount of work is gone through than was possible under the old Acts, and the committee has imposed upon it much more important functions than formerly. — *From Dr. Kempster's Annual Report for Battersea* (1892).

REVIEWS.

Methods of Practical Hygiene. By Professor LEHMANN, of Würtzburg. Translated by W. CROOKS, F.R.S. In two volumes. (Kegan Paul, Trübner, and Co. 1893. Demy 8vo. 31s. 6d.)

This important work will be welcomed by English hygienists as a valuable addition to their library. It forms an almost complete library of experimental research, so far as it bears on hygienic work, whether it be chemical, physical, or biological.

It is divided into two parts, the first dealing with general methods, the second with special investigations. In the first part chemico-physical methods and bacteriological methods are dealt with. In the second part, the methods of examining the air, the soil, water, foods and stimulants, clothing, the dwelling-house, household appliances, methods of investigating an epidemic, and disinfecting agents, are successively given in detail.

Appendices contain valuable tables, and a statement of important advances made during translation. The subject of food is treated in thirteen chapters, dealing with general principles for the examination and appreciation of articles of food, chemical agents for the preservation of food, meat, preparations of meat and preserved meats, milk, butter and cheese, flour and bread, vegetables and fruit, sugar, etc., non-alcoholic stimulants and condiments, beer, wine, and spirits.

This enumeration of the subjects discussed in full will give a better idea of the scope of the work than any general commendation. The two volumes are handsomely bound and well printed, and the type and illustrations (which are numerous) are excellent.

The bacteriological section contains a valuable conspectus of the most important schizomycetes, which will be very useful from a diagnostic standpoint.

The views expressed on disputed points are moderate and judicious. On the question of the use of boric acid as a preservative for food, it is admitted that its cautious use in healthy persons and for a short period is probably harmless, though larger and more continuous use more particularly in weakly persons is probably harmful. It is urged that when any preservative is used the kind and quantity of the preservative must be stated on the label, and that no preservative except ebullition must be allowed for milk.

In the section on examination of meat, the necessity of a concurrent examination of the skin and viscera, especially in difficult cases, is urged. Without such confirmatory evidence, unsound meat must occasionally escape detection.

The English analyst will find in the chapters on food analysis, many points on which more stress is laid than in England. On the other hand, the substitution of pyroligneous acid for vinegar is not regarded by Professor Lehmann as an adulteration.

Stress is laid on the two points that (1) all the other alcoholic-ethereal constituents of spirits are more deleterious than ethylic alcohol; and that (2) it cannot be said with certainty on the other hand whether the quantities of fusel oils occurring in the majority of our spirits (from below 0·2 to 0·3 per cent.) in reality appreciably intensify their hurtfulness. The second of these conclusions is somewhat more cautious than that arrived at by the Committee over which Lord Playfair presided, which appeared to show that the difference in amount of fusel oils in new and old spirits was inappreciable, and that the amount was quite insufficient to cause the deleterious effects so commonly ascribed to them.

The difference between the English and the German views of hygiene are illustrated by the devotion of only two or three pages to the examination of the water-closets and drains, or as they are called by a very unwisely limited use of the words the "sanitary arrangements" of a house. English sanitation has in the past shown a tendency "to run" to drain-pipes and closet-pans; German sanitation, while it pays too little attention to these practical details, has a more philosophical grasp of the whole subject.