

not connected with the sewer, and in a great number of such cases the situation is a closet, with no sewer connection, and nearby a well furnishing surface water and constant danger of contamination; and it cannot be said that these are entirely in the new sections of a growing city where sewer and water mains have not been extended. A large number of these cases are on streets that have been sewered and have been furnished with water mains, and frequently in the oldest and most thickly populated parts of the city.

In regard to the disposal of garbage, conditions in most cities were unsatisfactory. The most sanitary way of disposing of garbage is probably to burn it. About half a dozen of the cities investigated had incineration plants, and, as a rule, these plants were working in a reasonably satisfactory manner—and if they were not it was generally because the work of collecting the garbage for burning was subject to political influences with unfavorable results. In the great majority of cases the garbage is dumped on vacant lots, frequently within the city limits, and sometimes not far from the heart of the city. In some cases, to a certain extent, it is disinfected; but there was not a single case where the work of disinfecting the garbage seemed to be thorough and not a single competent official was found who claimed that the thorough disinfection of garbage dumped on vacant lots is possible. Of course, sanitary methods of disposing of city garbage and waste matter in general are still in the experimental stage, and no method has yet been found which is in every way satisfactory. Nevertheless, it is difficult to find any modern method which is not vastly superior to the dumping of garbage on vacant lots within the city limits.

Ordinances for inspection of milk, meats and perishable provisions were quite general, and it is clear that they are being enforced with increasing effectiveness every year; but successful work of this kind depends mainly upon three things: freedom from political control, a competent, and particularly a courageous board of health and a strong public opinion in favor of thorough enforcement of the work. Compared with the situation ten years ago there is room for much con-

gratulation—but it is equally true that there is still room for much improvement.

The science of bacteriology in connection with city sanitary work is comparatively new. Ten years ago there were probably not a dozen cities in the country which had such a department. Ten years hence there will hardly be a city of fifty thousand inhabitants without such a department. At present the condition in different cities shows great variation. One city visited, one of the most prosperous and progressive places in the country, has a department which is unworthy of the city. Such a department ought to be an example of cleanliness at least. This department was just the opposite. Another city of less than seventy-five thousand inhabitants had a thoroughly equipped, liberally supported department, with the most competent experts, and in every way a model. Even the bacteriological department in the great city of New York, which was the forerunner of such departments in this country, did not make as favorable an impression, taking everything into consideration. It will be a liberal education to our health officials throughout the country to inspect this modern department of bacteriology and make a report of what is being done to their home cities.

Coming now to the consideration of some special points, the following is quoted from the annual report for 1910 of the department of health of a city of less than one hundred thousand inhabitants and the capital of one of the leading states of the Union:

"There are 7,000 shallow wells in the city and the pollution of these wells is assured by 6,000 privy vaults.

"There are 9,000 homes in the city, 6,000 of which are not connected with city sewers or water mains for sanitary purposes. The sewer and water systems of this city have cost the taxpayers approximately \$4,000,000. This means that the public expenditure of \$4,000,000 for sanitary purposes is utilized by but one-third of the population and the benefits which should be derived by the community are lost.

"Since 1902 the typhoid fever mortality of the city has been high compared with that of other cities. In 1903 it was 46 per 100,000 of population, while the aver-