

granite settes on concrete foundations, were considered to be the only pavements that would stand the severe loads now carried by motor lorries, steam waggons and tractors.

There was a remarkably large number of steam waggons in use in Great Britain. In this respect it was ahead of America, though motor-cars were not so numerous as in the States, or in Canada. Concrete foundations were principally used in Britain and America for all first-class road pavements. So far as concrete roads were concerned the work done in Auckland in the last two years was, said Mr Bush, as good a class as that done in America.

Labour-saving Machinery.

The use of labour-saving machinery in the United States was remarkable. Practically no operation in connection with large engineering works which could be more economically and efficiently performed by machinery than by hand labour was carried out by the latter method to-day. Machines were in use for digging trenches, for laying sewers and water mains, for refilling and ramming trenches, for excavating foundations and removing earth in any quantity, for mixing concrete and other materials, and even for driving headings and tunnelling work in mines, etc. The first cost of such machinery was often very considerable, but America was so large, and there was so much work always proceeding, that machines were easily hired if it was not worth while to purchase them for a particular piece of work.

In regard to the use of labour-saving machinery, Britain was far behind America, but Mr. Bush said he anticipated that the very large increase in wages now being received by the British workman would cause more attention to be given to this important matter. In New Zealand, with its much smaller population, and necessarily lesser amount of work, hand labour would have to be used for many of these operations, but he was confident that in the carrying out of large works New Zealand and Australia both were likely to follow American methods more quickly than the older countries.

Water Supply and Power.

Mr. Bush said that water supply undertakings in America were on a very large scale. The consumption of water per capita there was far larger than in most other countries. As an instance, the city of Los Angeles had brought water from the Owens River, 300 to 400 miles distant from the city, and not only was the supply used for ordinary purposes, but also irrigating large tracts of what was previously desert land, but which now formed a part of the city area.

The most remarkable feature about this undertaking, however, was the development of hydro-electric power. Some 37,000 h.p. was already being developed by utilising the fall of the water in the aqueduct. It was estimated that ultimately 2,000,000 h.p. could be obtained from the Owens River and the aqueduct. America was much better off than Britain for water sources for hydro-electric power. San Francisco was

now going in for a scheme costing £9,000,000, of a somewhat similar character to that of Los Angeles, although the supply for San Francisco was nearer to the city than was that of the other centre.

Mr. Bush was able to visit and inspect all the great reservoirs and dams of the New York water supply system, the largest undertaking of its kind in the world. He found that the practice of metering the supplies was far more commonly adopted in the United States than in Britain or in New Zealand, but, even with the metering the American was much more lavish or wasteful in the use of water than the average British citizen.

Sewerage and Sanitation.

In regard to sewerage works and sewage disposal, Mr. Bush said he found in America that, where a discharge could be obtained into tidal water or into large rivers, the discharge of raw sewage was commonly undertaken. Where the same course was not possible great attention was being paid to the activated sludge system of sewage treatment. At Milwaukee he had inspected a station where most elaborate experiments, extending over four years had been carried out to test this method before finally adopting it. In other parts of the United States and Britain works were being carried out on this method.

The activated sludge system could be generally described, said Mr. Bush, as the purification of the sewage by the introduction of forced air, which speeded up the usual process of bacterial treatment. It is expected to produce by this process a sludge which, by pressing and drying, can be converted into a saleable manure.

The methods in use for the disposal of house refuse in America, and also in England since the war, were very interesting, said Mr. Bush. The necessity for utilising waste products had resulted in a new treatment of the subject. In America it was common to find that at the house the refuse was separated into two, and sometimes three, kinds. In the former case the cinders and combustible refuse was separated from the kitchen waste, or garbage as it was usually called, and the latter was used for the feeding of pigs. Where three separations were made the third consisted of paper, rags, and similar matter, which was sorted at a depot and sold.

Refuse destructors were, therefore, not so numerous in the United States as in Britain. In the case of the latter country many of the progressive cities, such as Birmingham and Sheffield, had installed plants for utilising waste products, and largely reducing the quantity of refuse that had to be burnt or otherwise disposed of. In the collection of house refuse electric vehicles were being used in Britain, while the use of motor vehicles for municipal purposes was being adopted largely on both sides of the Atlantic.

A Change.—“Isn't your wife dogmatic?”

“She was when Pomeranian pups were the style, but now she's auto-matic.”

—Baltimore “American.”