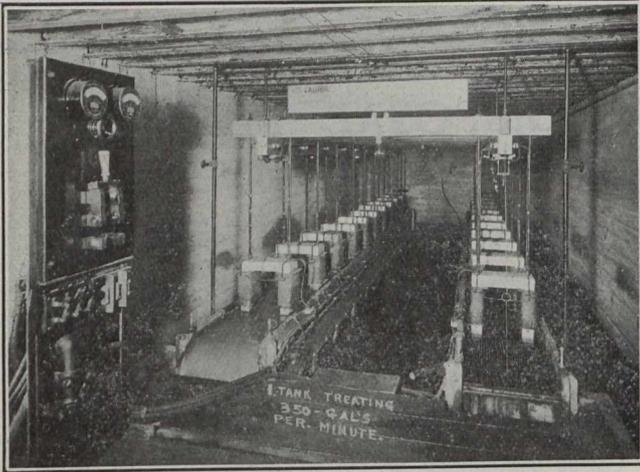


the sewage from a reservoir to the level of the flumes, but this is caused by local topographical conditions, as elsewhere it might be convenient to construct the plant on a lower level than the basin.

The cost of current will vary in different cities, but the electrodes need but little (the bill for an entire year at Santa Monica was only \$152.95) and the expense of repairs and replacement of plates is slight. One attendant can care

raw sewage discharged into the ocean. Protests were heard at once from visitors and residents, but when it started again, all complaints ceased. In Oklahoma the conditions were quite different, as the outfall was in a dry gulch which was shunned and its vicinity rendered useless for any purpose. Now that the discharge has been electrolytically treated, the air is not contaminated. In fact such water could be used for irrigation and its great proportion of fertilizing content put to good use.

The two plants described can be reproduced for \$15,000 each. Many costly features have been eliminated since the first one was installed. The heavy and expensive magnets, once considered necessary, have been discarded, and an elaborate system of cleaning the electrodes by high pressure steam was abandoned when it was found that the reversal of the current would give better results. The cost of the plates has been greatly reduced, by the substitution of cast iron for

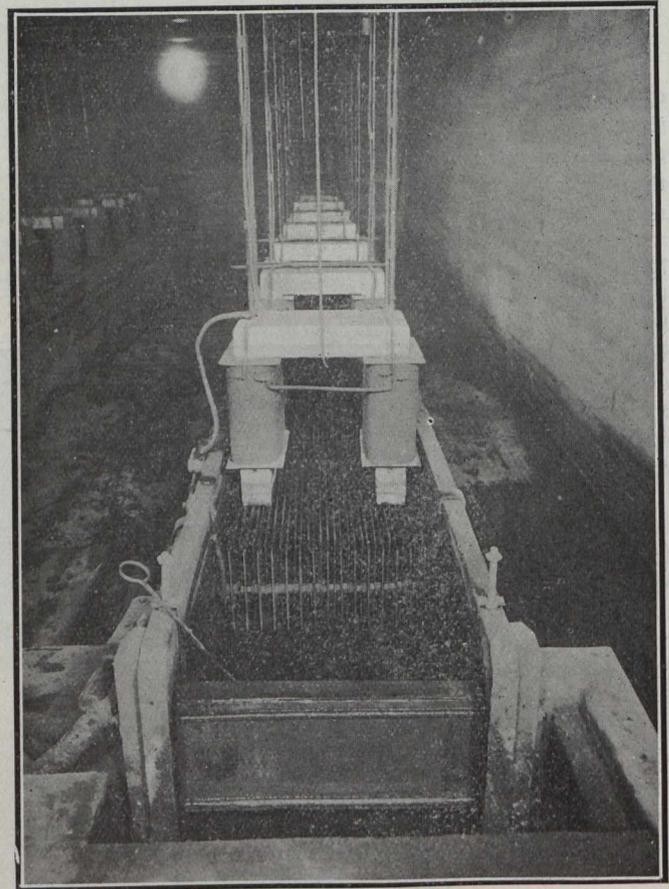


**Santa Monica Plant, as Originally Built. The Magnets Over the Flumes Have Since Been Discarded and Another Flume Added.**

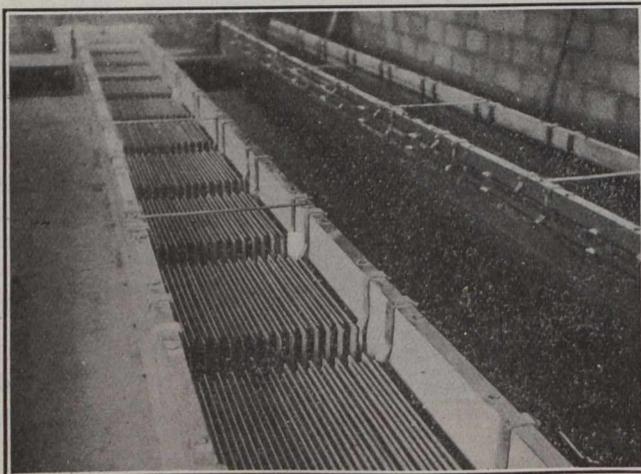
for the plant, or even two or three if they were conveniently located for going back and forth between them, as they require hardly any work.

Cleaning of the plates is done by means of reversal of the current, while the use of a garden hose a few minutes each day cleans out the flumes and washes off the plates.

Very limited space is sufficient to house such a plant. In Oklahoma City a building 18 x 50 feet and 10½ feet high encloses a system of three flumes that handles three-quarters



**Electrodes in Place, Santa Monica Plant. The Heavy Magnets Have Now Been Discarded, Reducing Expense.**



**Interior Oklahoma City Plant, Showing Electrodes in Empty Flume, and Flow in Another.**

of a million gallons a day. In Santa Monica no ground surface is required, the plant being installed under Colorado Avenue at the head of the pleasure pier owned by the city. This pier is a popular resort in spite of the fact that the city's sewage is treated right below it and discharges into the sea at its outer end. Most people are unaware of such a plant being in the vicinity, indicating that it is in no sense a nuisance. To show what it accomplishes, it may be stated that for a few days the plant was closed and the

the aluminum which was first tried. The aluminum plates gave good results, but they were very costly and decomposed so rapidly that their expense was prohibitive. The cast iron was substituted, and by sheathing the upper edge of the plates with copper, excessive decomposition was prevented.

Aside from its sanitary importance, this novel use of the electric current may add materially to the world's wealth in saving the millions of tons of valuable fertilizer that are now swept into the sea each year. Thoughtful men have deplored this waste, and many years ago Victor Hugo, in writing a description of the sewers of Paris, referred to such waste as an appalling crime. In some parts of Germany and in China, the soil is so depleted that raw sewage is used in spite of its danger and nuisance to renew the exhausted lands. By this modern method it may be treated and used on fields, enormously increasing their value and being in no wise offensive to the senses or a menace to health.