

CLEANERS FOR THE LARGE OUTFALL SEWER AT
SALT LAKE CITY, UTAH.

The sewerage system of Salt Lake City, Utah, has been fully described in our issues of Jan. 4, 1894, and March 8, 1897. One of the main parts of the work is an outfall sewer 42, 48 and 64 ins. in diameter, in different sections of its length. Devices for cleaning this sewer have been designed by Mr. F. C. Kelsey, City Engineer, to whom we are indebted for blue prints and notes regarding the same. Of the three prints sent by Mr. Kelsey we have selected for reproduction the one showing the cleaner for the 48-in. section. The other cleaners are similar in design, but that for the 64-in. section is flatter in cross-section, its outer edge being made up of two arcs of circles having radii of about 31 ins. each. Mr. Kelsey has described the cleaners in a letter addressed to us on Jan. 19, 1898, as follows:

The small cleaner was made first, and upon trial it was found that it would go around the curves in the sewer much better if the wheels were placed in front of the rim and the number increased to eight. This change was made on the 42 and 48-in. cleaners, as shown in dotted lines on the illustration. Two of the curves in the sewer have a radius of 90 ft.; the others have a radius of 127.32 ft. The cleaner for the 64-in. section is not the full size of the sewer, but it does the work as well as the others.

Manholes large enough to admit the cleaners were constructed at the points where the size of the sewer changes. The cleaners are handled with a light derrick, set up over the manholes.

The manhole covers now used in sewer construction are provided with pans for catching the dirt that falls through the perforated lids, but the old ones are not, and considerable dirt and gravel washes through them into the sewer.

The cleaners are run through the sewer about every three weeks and work very satisfactorily. The sewage backs up behind the cleaner until the head is sufficient to force the machine along, and the water rushing around the edge of the rim removes the slime and washes the sand, gravel and sediment along ahead of the machine. Ordinarily the cleaners travel at the rate of 100 ft. per min., but at times the sand and gravel is about 8 ins. deep for a distance of 100 ft., ahead of the machine, when they move much slower.
