

pipe and pump which were used to handle the ground water. Fig. 3 shows the walls of the filter after removal of the forms. The column and roof forms, which were put in place after the removal of the wall forms, are shown in Fig. 6. The roof was reinforced for continuous action. Fig. 4 shows the bent rods between two of the beams. The roof will be covered with a foot of sand to prevent freezing in the filters.

Eight-inch split tile were laid in the gutters of each filter, as shown in Fig. 8. From these the filtered water is carried through Venturi meters to the pure water reservoir. The tile are covered with about 12 inches of graded gravel, the bottom 6 inches passing 1 in. to 1½ in. mesh; the next 3 inches, ¼ in. to 1 in.; the top 3 inches, 1/20 in. to ¼ in. Over this gravel there is laid 42 inches of screened, washed and graded sand.

**Operation.**—When the sand must be washed, it is planned to rake it up into piles, from which it will be shovelled into an ejector box, which will be lowered through a manhole. Water from the town distributing system will flow into the box through a hose, and will carry the sand into another hose leading from the other side of the box, which latter hose will carry it to the sand washer placed on top of the filters. The washed sand will be carried hydraulically back into the filters. There are five manholes for each filter, so there will be excellent light for the cleaning operations.

The ground covered by the filters is 1/5 acre, so their capacity is estimated at 600,000 Imperial gallons per day. The average daily consumption of the town at present is 200,000 gallons. During unusual demands, such as for fire purposes, the filters will be capable of operating for 24 hours at the rate of 1,600,000 gallons.

It is expected to obtain a bacterial efficiency of 98 per cent. At present the town

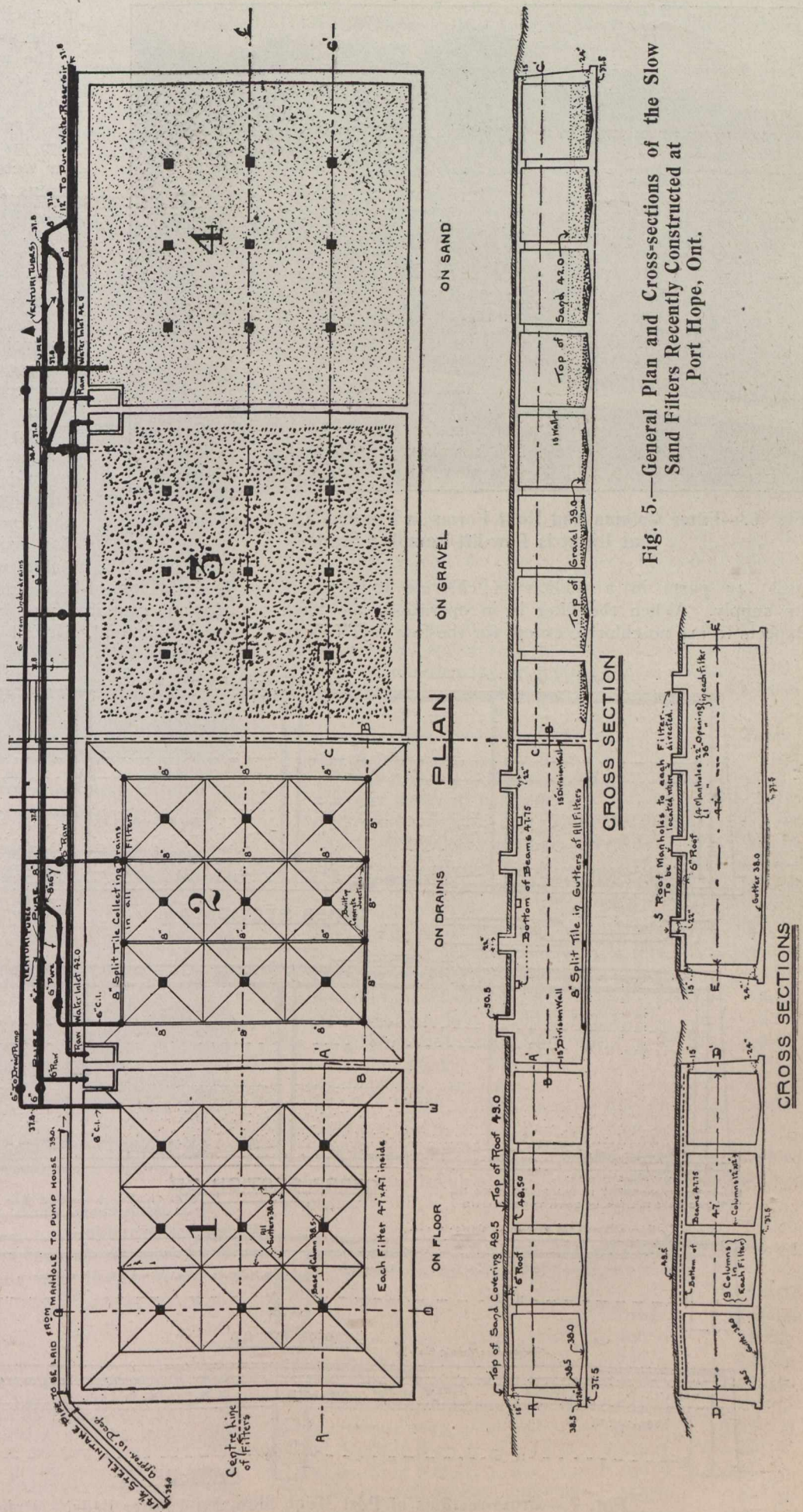


Fig. 5.—General Plan and Cross-sections of the Slow Sand Filters Recently Constructed at Port Hope, Ont.