

SEWAGE DISPOSAL AT PROVINCIAL GAOL, VICTORIA, B.C.
(Concluded.)

AERATING TROUGH—The trough is a box of No. 26 galvanized iron, provided with slits in the bottom and end, set 15 inches above the conductor, and fed by the 6 inch pipe before mentioned.

CONDUCTOR—The conductor is a level concrete trough, of which a cross section is shown on the drawing, and has ample capacity for one discharge of the flush tank. It is provided with eleven tapering outlets, furnished with stops so as to divert the flow to such distribution channels as require irrigation. The tanks and catch pits are provided with plank covers.

DISTRIBUTION CHANNELS — Owing to some misapprehension, the channels were not placed as shown on the drawing, but small gutters were cut below the general surface of the ground. It is, however, intended to carry out the original plan this year after the removal of the crops.

AREA IRRIGATED —Before the sewage was turned upon the land, about a quarter of an acre was thoroughly dug, and the sewage has generally been applied to this area, though occasionally diverted to an adjacent piece under cultivation.

RESULTS—It is thought that the foregoing description, with the drawing, will convey a clear idea of the method adopted, and it only remains to mention the results obtained. It is to be regretted that the degree of purification attained cannot be stated, as no analysis has been made either of its influent or effluent. The sewage was first turned into the tank on the 20th December, 1901.

All sewer gas has been completely cut off between the catch pit and the goal, and there is a marked improvement in the sanitary condition of the building. The surface scum in the septic tank was of very slow growth; indeed the tank was working fully six months before a complete coating was formed. During that period the effluent was very turbid and somewhat offensive. Since then there has been a marked improvement. Though not absolutely clear, it is inoffensive, except when confined for some hours in the conductor. The surface in the septic tank in May, 1903, was completely covered with a coating about two feet thick, from which no offensive odors arise.

On the 18th May, 1903, a sludge pump was placed in position in case there should prove to be a considerable amount of sludge deposited during the eighteen months' work of the tank. In that period from 650,000 to 800,000 gallons of sewage must have passed through the tank. The pump has a 2½" suction reaching to 8½" above the bottom of the tank. On starting it, no sludge deposit was found at that depth, the discharge being precisely similar to that of the catch pit. The pump was placed in position, so that, in the event of the tank area available for liquid sewage becoming restricted, it would always be possible to remove a few yards of sludge without disturbing the surface scum and with the least possible trouble and annoyance.

The character of the soil, which, as before stated, was an unproductive clay, appears to be much improved. Sweet

corn, peas, cabbages, beets, carrots and leeks have been raised of excellent quality and it appears not improbable in the future that the value of the crop might equal the interest and sinking fund for the original outlay.

The cost of the whole plant—common labor being furnished by the prisoners—has been as follows, and includes tearing up and replacing the old sewers and trenching, about 150 feet of which was in rock:

Lumber and Haulage.....	\$ 50 78
Cement (32 barrels at \$3.50) ..	112 00
Haulage of Cement, Shingle and Sand.....	52 55

Syphon and Freight.....	37 50
Sewer Pipes.....	138 80
Aerating Trough.....	12 45
Labor and Superintendence..	164 75
Sludge Pump.....	21 00
	\$589 83

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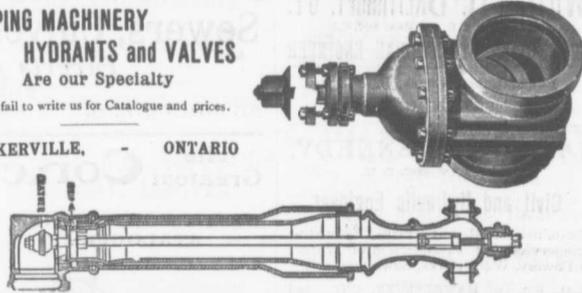
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