J. DAIME.

SYSTEM FOR DECANTATION OF WATER.

APPLICATION FILED MAY 18, 1910.

1,005,419.

Patented Oct. 10, 1911.

2 SHEETS—SHEET 1.

Fig. 1

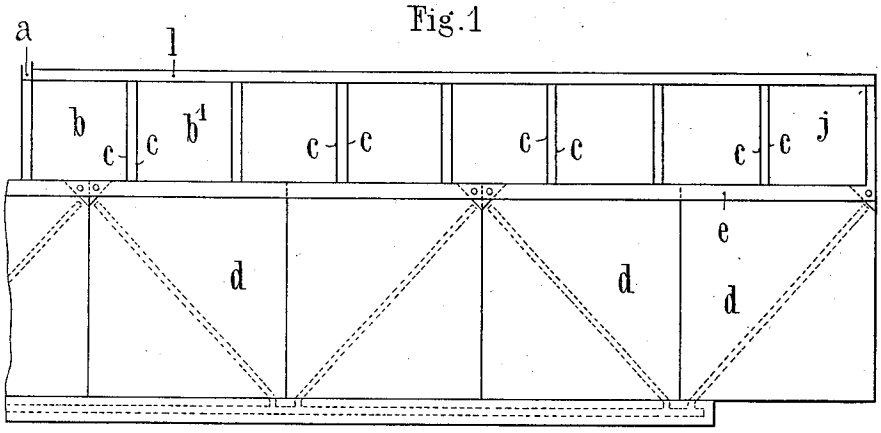


Fig. 2

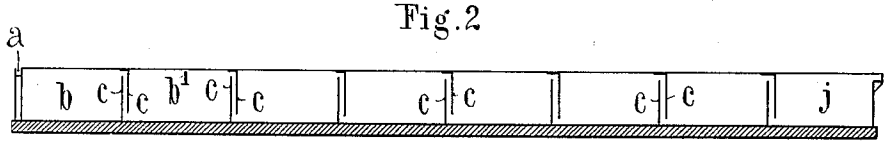
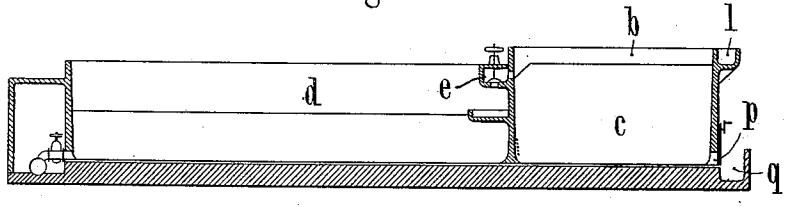


Fig. 3



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2 SHEETS—SHEET 2.

Fig. 4

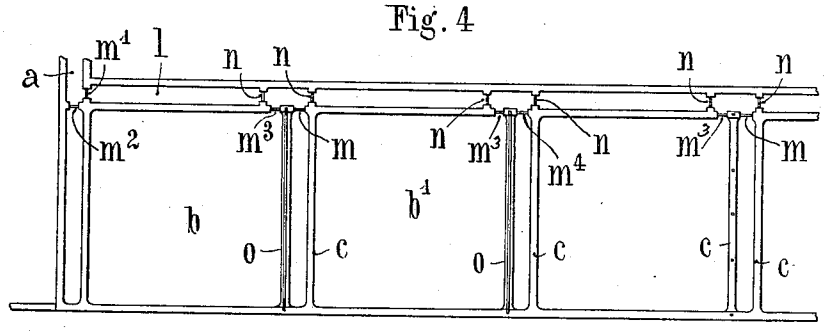


Fig. 5

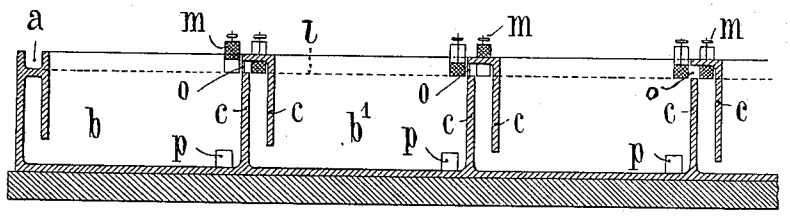


Fig. 6

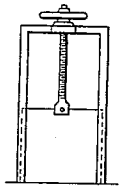


Fig. 7

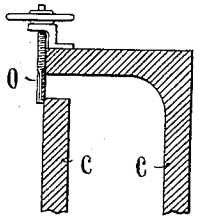


Fig. 8

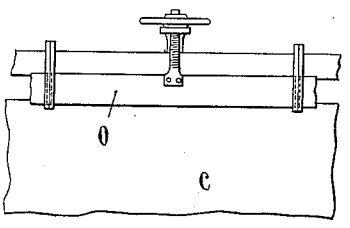


Fig. 9

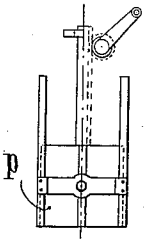
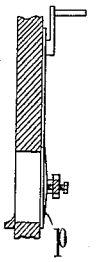


Fig. 10



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JOSEPH DAIME, OF MARSEILLE, FRANCE.

SYSTEM FOR DECANTATION OF WATER.

1,005,419. Specification of Letters Patent. Patented Oct. 10, 1911.

Application filed May 18, 1910. Serial No. 561,988.

To all whom it may concern:

Be it known that I, JOSEPH DAIME, a citizen of the French Republic, residing at Marseille, in France, have invented certain new and useful Improvements in Systems for Decantation of Water, of which the following is a full, clear, and exact description.

This invention relates to a system for the decantation of water which is to be supplied to cities or for different industries before said water has been finally filtered.

Among the objects in view is to provide a system for the decantation of water which will be of simple construction, effective in its operation, and wherein any one or more of the decantation tanks may be isolated from the remaining tanks for the purpose of cleaning, without stopping the operation of decanting in said remaining tanks.

The invention consists in the novel construction of the apparatus constituting the improved system substantially as hereinafter fully described, illustrated in the accompanying drawing, and pointed out specifically in the appended claim.

In the drawings: Figure 1 is a general plan of the decantation tanks and of the filtering tanks. Fig. 2 is a longitudinal section of the decantation tanks. Fig. 3 is a transverse section of the decantation tanks and the filters. Fig. 4 is a plan of the decantation tanks showing the sluice-gates or valves separating said tanks. Fig. 5 is a longitudinal section thereof. Fig. 6 is a front view of one of the sluices. Fig. 7 is a vertical section of a sluice-gate arranged in the upper part of the overflow partitions. Fig. 8 is a front view thereof. Figs. 9 and 10 are respectively a front view and a vertical section of the draining sluices.

In constructing the system I employ a series of tanks as b, b', etc., which are separated by vertical partitions c, c, arranged vertically in pairs adjacent each other but with an intervening passage between the partitions of each pair for the flow of water from one tank to the other. One of the partitions of each pair reaches from the floor or bottom of a tank to nearly the height thereof, while the other partition of each pair reaches from a point on a level with the top of each tank to a point adjacent to the floor but not quite touching said floor, thus leaving a passage or conduit. When the water reaches the top of the first tank it flows over into the second tank between the two partitions c, and so on from tank to tank to the last one j of the series whence it flows into the filters proper d, through a suitable pipe or conduit e. The number of the decantation tanks b, b', etc., and the capacity of these tanks depend on the degree of impurity of the water and the quantity to be supplied. By this system of tanks the water is forced to flow upward, and by passing from one tank to the other in a thin sheet it is freed gradually from the impurities which are deposited in the lower portions of the tanks b, b', etc., so that the water that rises to the surface is more and more decanted and reaches the last tank in a clear state.

In order not to interrupt the supply service for the filters and the system of continuous decantation, each tank should be cleaned separately and without stopping the action of the remaining tanks. Consequently a conduit l, has been arranged exteriorly of and at the upper edge of the tanks and communicating at one end with the inlet conduit a, of tank b, and at the other end with the last tank and also being in communication at intermediate points with the intermediate tanks. Each tank has a set of four sluice-valves m', m^2 identical with those as m, are placed laterally at the side of the conduit l, and two, as n, are placed transversely of the conduit. Moreover on each partition c, forming the overflow or sluice a series of sluice-gates o, is arranged each gate o extending lengthwise over the whole length of its respective partition. At the point where it discharges the conduit a has two sluice-valves m', m^2 identical with those above mentioned. Finally, each tank has in addition near the bottom a draining sluice-valve p. Normally, the sluice-valve m', is always closed and the sluice-valve m^2, is always open and at the same time the lateral sluice-valves are always closed. As regards the transverse sluice-valves n, they may occupy any position whatever, the sluice-valves o, on the partition sluices being always raised.

In order to clean an individual tank, for example b', the transverse sluice-valves n, n, are kept closed, the sluices m^3, m^4 are opened, and the series of sluices o, lowered. By this means the tank b' will be completely isolated. The draining and decanting will be

effected by the sluice p at the bottom, the material which passes out running into a drain q.

What I claim is:

In a system for the decantation of water the combination of a series of decantation tanks, a series of vertical partitions arranged in pairs intermediate the tanks, the partitions of each pair being spaced apart to provide water passages therebetween, one partition of each pair extending from the floor of a tank to nearly the upper edge thereof and the other partition of each pair extending from the upper edge of a tank to nearly the floor thereof, as described, a water inlet conduit for the tanks arranged adjacent the upper edge of the tanks and extending from the first tank of the series to the last one thereof, sluice-valves arranged transversely across the said conduit to control the flow of water longitudinally along said conduit, sluice-valves arranged laterally of the conduit and adapted to control the flow of water laterally from the conduit into the tanks, sluice-valves arranged transversely of the tanks and adapted to control the flow of water from one tank to the adjacent tank into the passages between the vertical partitions.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH DAIME.

Witnesses:
H. BONNET,
H. RAUX.