No. 672,486. Patented Apr. 23, 1901.

W. P. MASON.

SETTLING RESERVOIR OR BASIN.

(Application filed Dec. 6, 1900.)

(No Model.) 2 Sheets—Sheet 1.

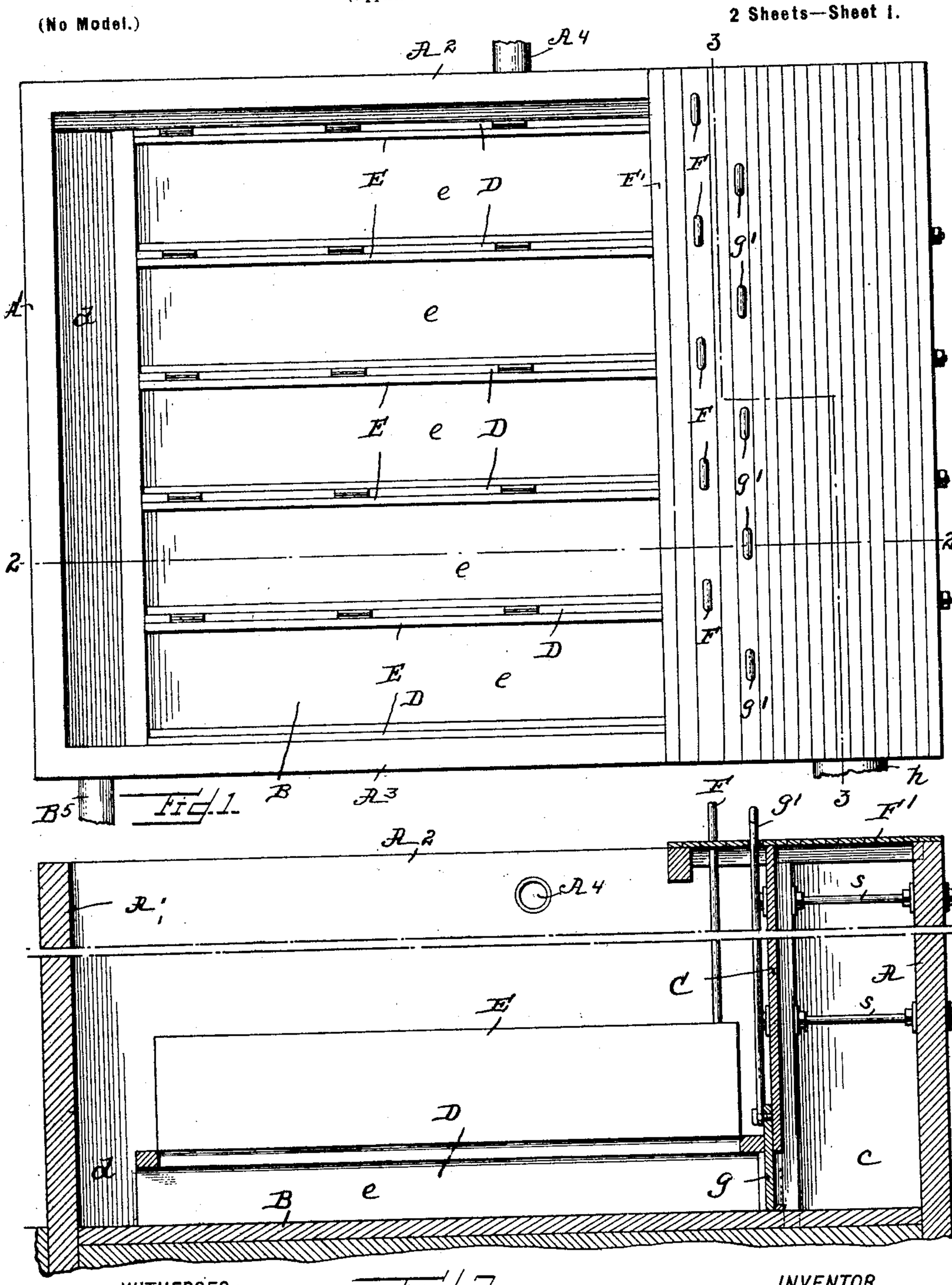

Fig. 1

Fig. 2

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Fig. 3.

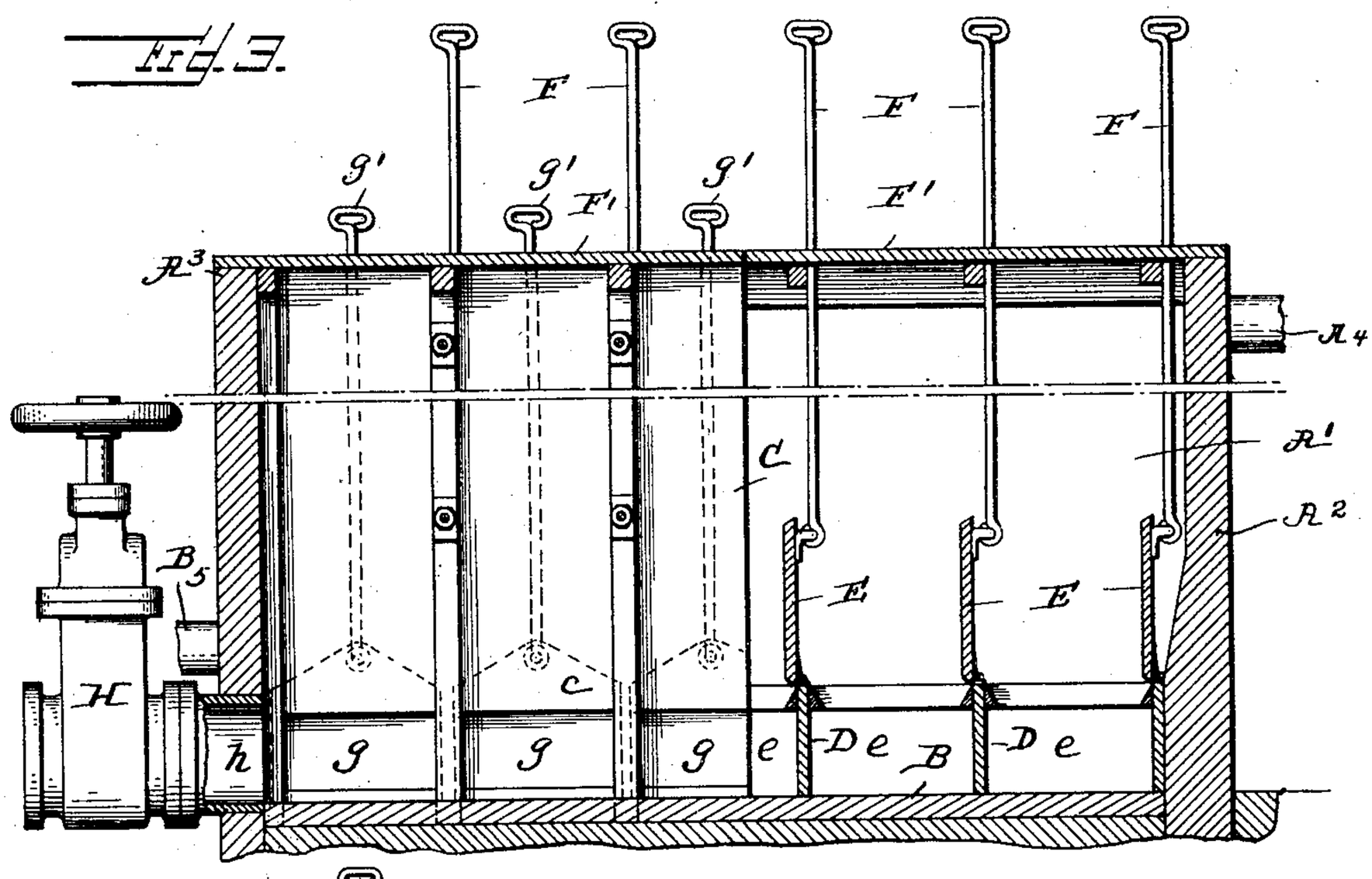
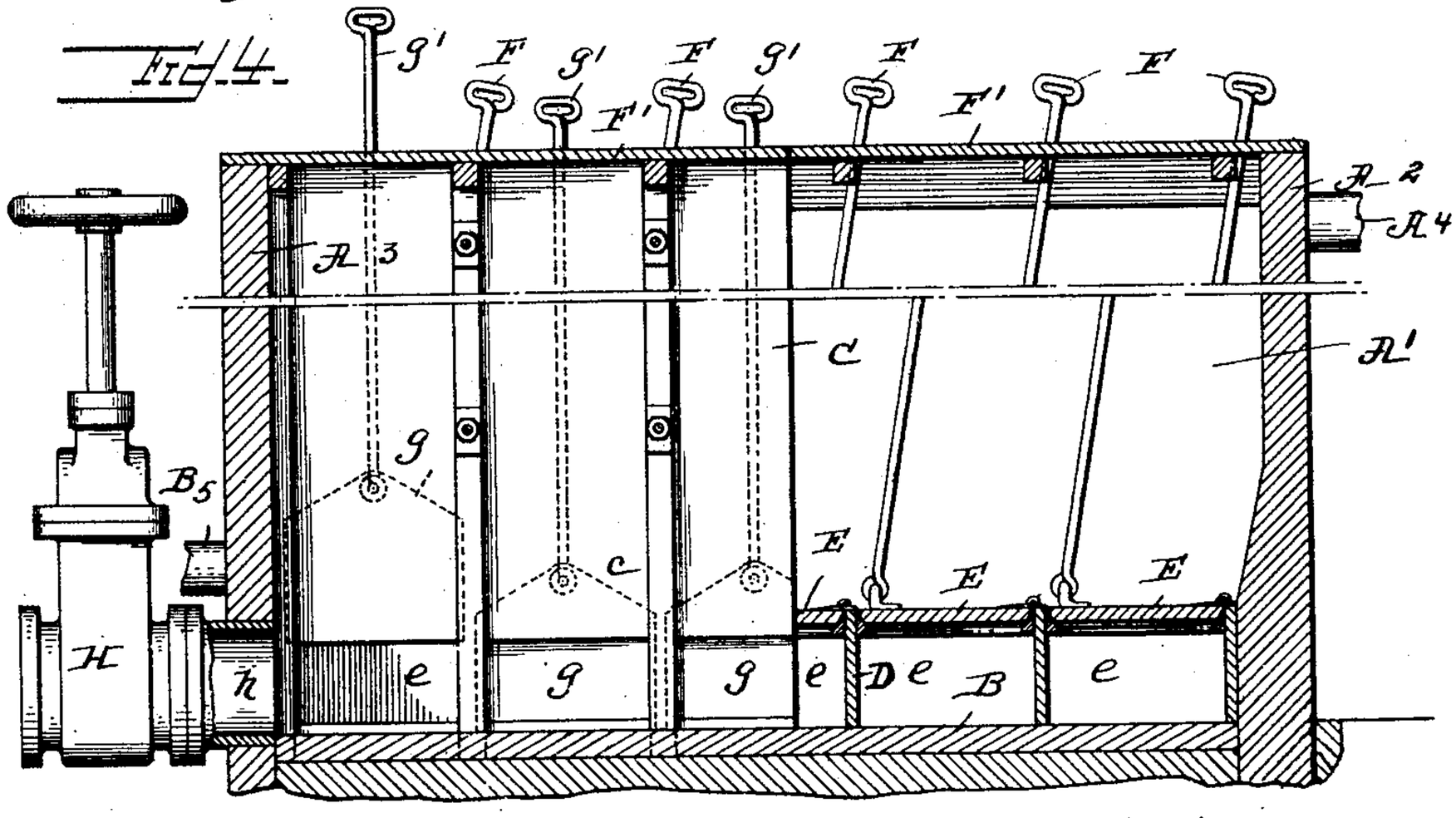


Fig. 4.



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WILLIAM P. MASON, OF TROY, NEW YORK.

SETTLING RESERVOIR OR BASIN.

SPECIFICATION forming part of Letters Patent No. 672,486, dated April 23, 1901.

Application filed December 6, 1900. Serial No. 38,977. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. MASON, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented a new and useful Improvement in Settling Reservoirs or Basins, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My application is designed particularly for use in settling-reservoirs connected with public water-supplies, although it is applicable to all varieties of reservoirs and settling-basins. With this class of apparatus as now constructed in order to remove the deposit it is necessary to stop the use of the reservoir or basin, which is inconvenient and expensive.

The object of my invention is to so construct the settling basin or reservoir that the deposit may be readily removed and also that this may be done without stopping its use during such removal. I will now describe the construction illustrated in the accompanying drawings, by which this is accomplished.

In the drawings, Figure 1 is a plan view of my improved settling reservoir or basin. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a section on line 3 3, Fig. 1. Fig. 4 is a view similar to Fig. 3 with the covers closed, showing how the conduits are washed out.

A, A′, A^2, and A^3 are the walls of a reservoir or basin constructed in the ordinary manner, and B the ordinary floor of such reservoir.

A^4 is the water-inlet pipe or orifice from the water-supply, and B^5 the water-exit pipe or orifice to the water-mains.

C is an interior wall made of wood, brick, masonry, or any suitable material. This wall C extends along the wall A and at a distance therefrom sufficient to leave the passage *c* between the wall C and wall A. The wall C may be stayed from wall A by the stay-rods *s*. The height of this wall C is such as to be above the normal water-level in the reservoir. Resting upon the floor B are a series of longitudinal partitions D, extending about eight inches above the floor. These partitions may be constructed of wood or stone or any suitable material. These partitions D extend from the wall C toward the wall A′, leaving a passage *d* between their ends and the wall A′. This forms a series of conduits or sluices *e*, extending between the passage *d* and wall C. Hinged to the top of each of these partitions D is a cover E. These covers are of such width as to extend between adjacent partitions D and of length equal to the length of the partitions D. When these covers E are elevated, as shown in Figs. 1, 2, and 3, the main floor B of the reservoir is in use. When these covers E are down, as shown in Fig. 4, a floor is formed in the reservoir above the floor B. These covers are elevated in the following manner: Connected with each cover E is a rod F, which extends upward and through a platform F′, extending from wall A^2 to wall A^3. If necessary, similar rods may be used at the opposite ends of the covers E.

In the wall C at each conduit *e* is a gate *g*, which is operated by a rod *g*′. H is a valve connected with pipe *h*, extending through wall A^3 into passage *c* and near the bottom thereof. Initially the covers E are elevated and the floor B is the active floor of the reservoir. Whatever accumulation of deposit takes place will fall to the bottom B, and before the accumulation reaches a point above the partitions D the covers E are closed, forming a secondary temporary floor for the reservoir above the deposit-line, and the use of the reservoir can continue during cleaning, which is accomplished as follows:

The valve H is opened and the water in passage *c* will pass out, carrying the deposit in that passage with it. Next, the gates *g* are successively, one at a time, opened. This will cause the water entering passage *d* to successively pass through the conduits *e*, all the water in said passage being thus concentrated in a single conduit. This will carry the deposit in the conduits into the passage *c* and out through the pipe *h*. When the deposit has been removed, the covers E are again opened and the complete reservoir again used. The time taken in thus removing the deposit is so short that practically no deposit feeds on the covers; but if any there be it will fall to the floor B when the covers are opened. By this construction I am enabled to rapidly clean the reservoir and continue using the same during such cleaning. The details of construction of and means to operate the

various parts may be varied from that shown and described without departing from my invention.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

1. A reservoir or settling-tank provided with a plurality of conduits extending along the floor thereof, a passage at one end of said conduits, a discharge in connection with said passage, a passage at the other end of said conduits in connection with the water-supply, and means to open and close connection between the ends of said conduits and the passage in connection with the discharge.

2. A reservoir or settling-tank provided with a plurality of conduits extending along the floor thereof, said conduits at one end being in communication with the water-supply, and means to open and close the other end of each conduit independently.

3. A reservoir or settling-tank provided with a plurality of conduits extending along the floor thereof, said conduits at one end being in communication with the water-supply, a discharge in connection with the other end of said conduits, and means to open and close the discharge end of each conduit independently.

4. A reservoir or settling-tank provided with a plurality of conduits extending along the floor thereof, said conduits at one end being in communication with the water-supply, and means to open and close the other end of each conduit independently, said conduits being provided with removable covers.

5. A reservoir or settling-tank provided with a plurality of conduits extending along the floor thereof, said conduits at one end being in communication with the water-supply, a discharge in connection with the other end of said conduits, and means to open and close the discharge end of each conduit independently.

6. A reservoir or settling-tank provided with a plurality of conduits extending along the floor thereof, a passage at one end of said conduits, a discharge in connection with said passage, a passage at the other end of said conduits in connection with the water-supply, and means to close and open the discharge ends of said conduits, said conduits being provided with removable covers.

7. A reservoir or settling-tank provided with an inner wall on one side, there being a passage between the main and inner walls, a plurality of partitions extending upward from the floor and from said inner wall toward the opposite main wall, there being a passage between the ends of said partitions and the opposite main wall, gates in the inner wall in the spaces between said partitions, removable covers extending between partitions at the top thereof, and means to operate said gates and covers from above the water-level.

In testimony of which invention I have hereunto set my hand, at Troy, New York, on this 4th day of December, 1900.

WILLIAM P. MASON.

Witnesses:

JAMES H. DAVIS,

FREDERICK S. COTE.