

(No Model.)

2 Sheets—Sheet 1.

J. J. POWERS.
AUTOMATIC DISINFECTING TANK.

No. 408,432.

Patented Aug. 6, 1889.

Fig. 2.

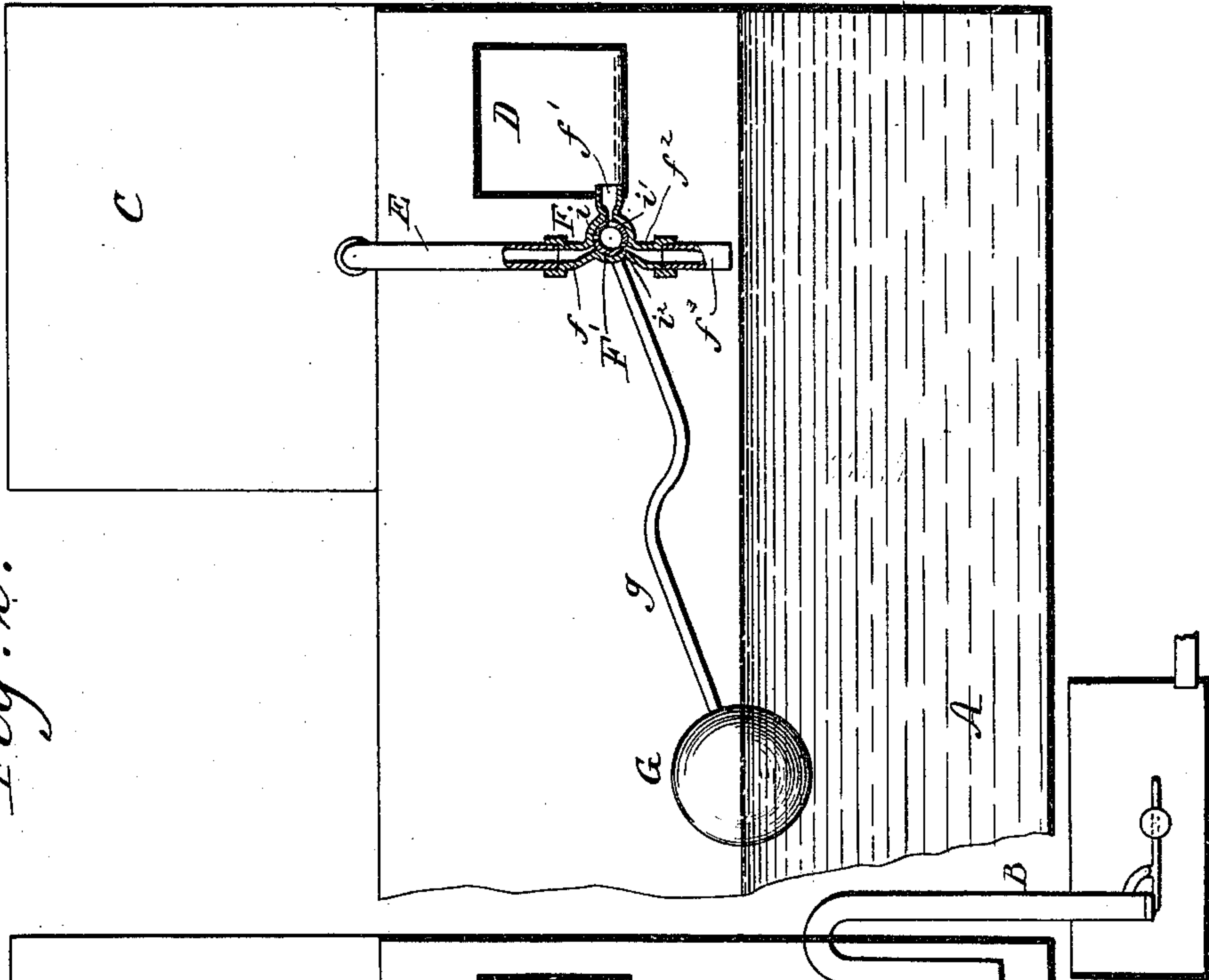
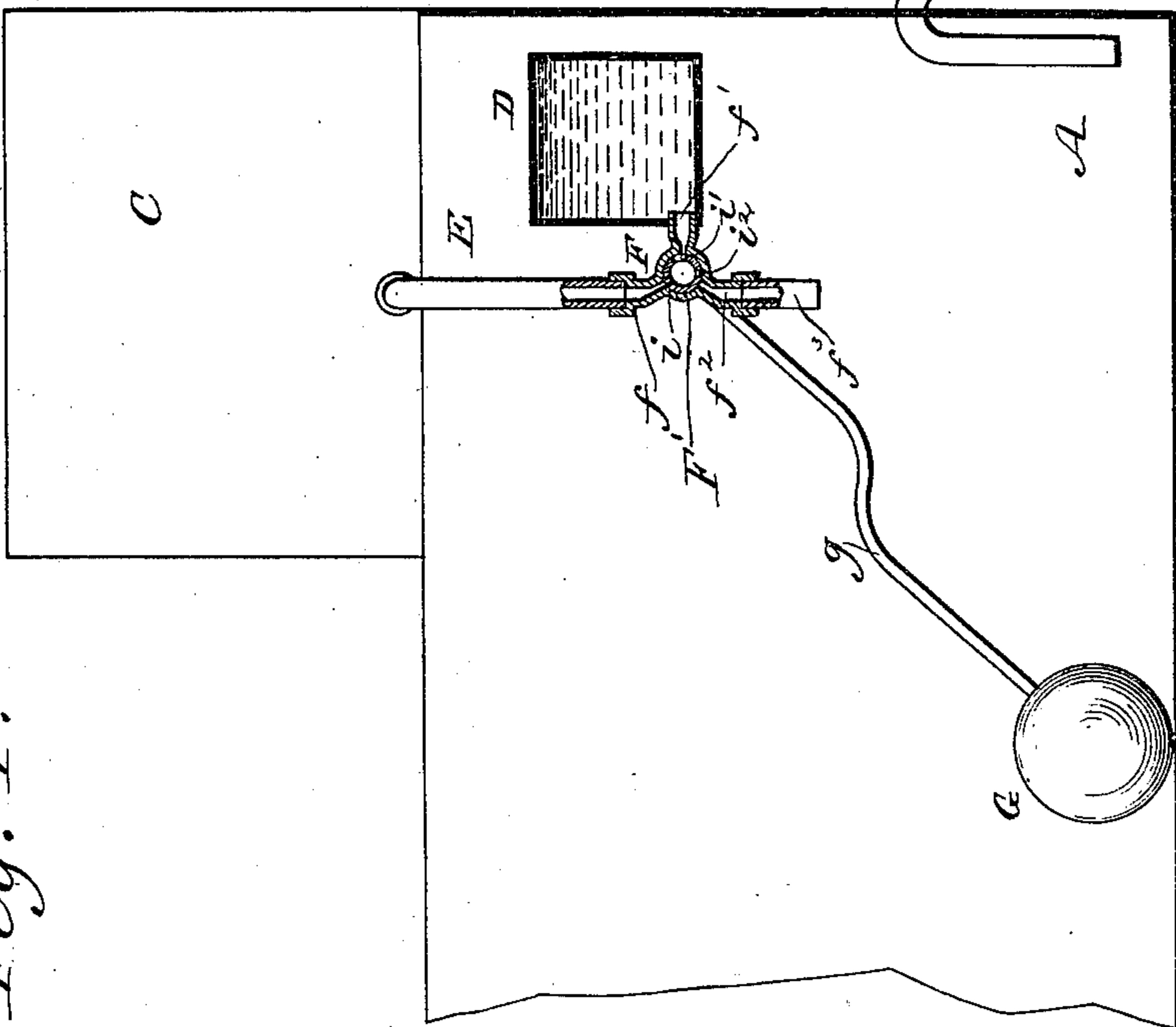


Fig. 1.



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C. Sedgwick

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BY *Munn & Co.*
ATTORNEYS.

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Fig. 4.

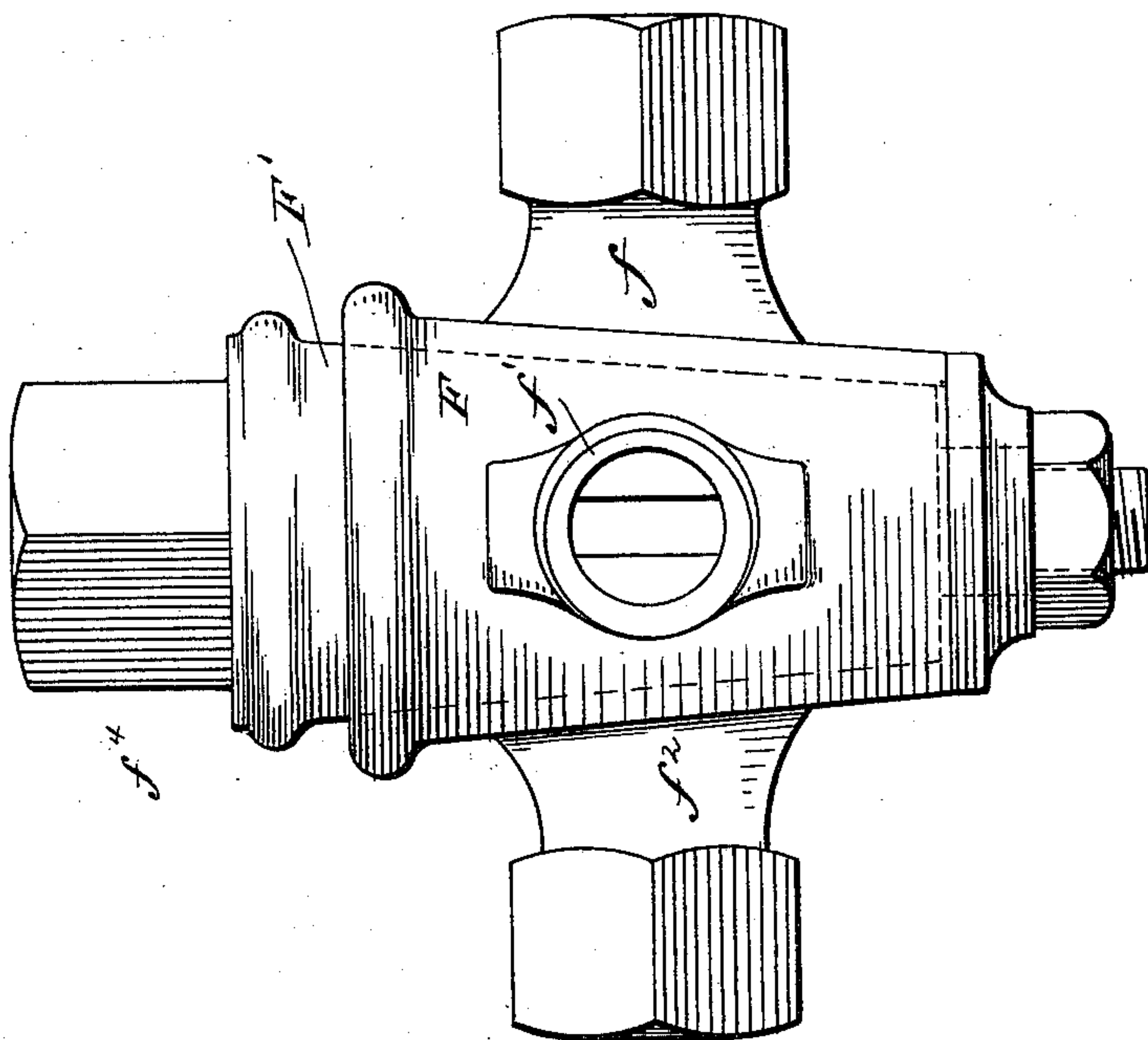
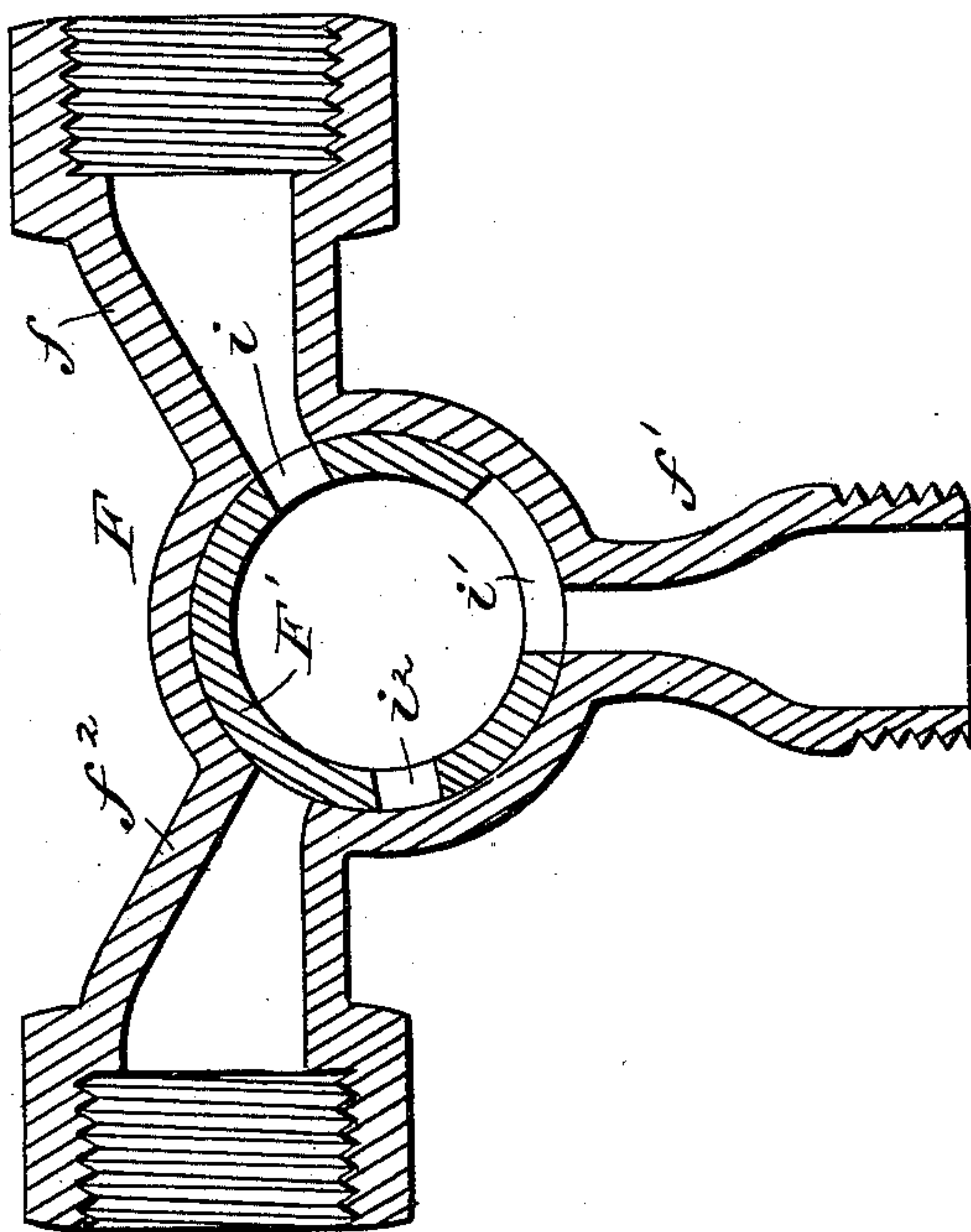


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES J. POWERS, OF BROOKLYN, NEW YORK.

AUTOMATIC DISINFECTING-TANK.

SPECIFICATION forming part of Letters Patent No. 408,432, dated August 6, 1889.

Application filed April 12, 1889. Serial No. 306,977. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. POWERS, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Automatic Disinfecting - Tank, of which the following is a full, clear, and exact description.

The object of my invention is to provide practical means for automatically adding to sewage or other offensive liquids the requisite proportion of chemicals needed for antiseptic treatment without waste, using the liquid to be treated as the power to operate the device.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation showing a part of a sewage-tank and a part of a chemical-tank located above the same, and showing in sectional elevation the automatic chemical-measuring tank, showing the parts in position for filling the chemical-measuring tank or box. Fig. 2 is a similar view showing the parts in position for emptying of chemical-measuring box into the sewage-tank; and Figs. 3 and 4 are enlarged views of the automatic cock for admitting the chemical liquid from the supply-tank to the measuring-tank and from the latter to the sewage-tank.

A represents the sewage-tank, to which the sewage or other offensive liquid is admitted and from which it is intermittently discharged by the siphon B. Above the sewage-tank A is located the chemical-reservoir C, and in the tank A or at any proper locality is placed the measuring-box D for the chemical supply, and which is connected to the tank C by a pipe or conduit E and cock or valve-seat F, one branch or port f of which connects with said pipe E, and another f' connects with the measuring-tank.

f^2 is the spout or outlet for the chemical liquid from the measuring-box D to the sewage-tank. This spout f^2 also forms a part of the valve seat or casing F, and to its lower end is connected the short pipe f^3 , which may be dispensed with, if desired. In the valve seat or casing F is fitted the cock F' , to the end f^4 of which is connected the float-arm g , to the outer end of which is attached a float G, which rises and falls with the rise and fall of the sewage in the tank, and thus rotates the cock F' in the casing F. The cock F' is

formed with three passages $i i' i^2$, which communicate with each other. The passages $i i^2$ are in such relation to the branches $f f'$ and spout f^2 that when the cock is turned to open one it will close the other, as shown clearly in Figs. 1 and 2. The passage i' is midway between the passages $i i^2$, and is of considerable width and at all times coincides with the branch f' , so that the passage to the measuring-tank D is at all times open.

The operation is as follows: The box D is made of the size required to hold the amount of chemicals to be added to a given quantity of sewage in the tank A. When the tank A is emptied by the siphon B, the float-arm g falls and permits the flow of disinfecting-liquid from the reservoir C to the measuring-box D, filling the same. As the sewage fills into the tank A the float-arm is raised, thereby automatically turning the cock F' and shutting off the supply of chemicals to the box D, and at the same time opening the spout f^2 , whereupon the contents of the box D will be discharged into the sewage, a given quantity being thus automatically supplied to a given quantity of sewage.

When the sewage rises sufficiently high to flush the siphon B, the sewage will be drawn from the tank A and the float-arm g lowered and the cock turned, as before, to admit the chemicals to the box D to repeat the operation.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a sewage-tank, an elevated reservoir, and a measuring-box connected to the reservoir by a conduit and valve-casing, of a cock fitted in the valve-casing, formed with three passages and provided with a float-arm, whereby the rise and fall of the sewage in the sewage-tank automatically admits chemicals to the measuring-box and automatically empties the same and cuts off the supply, substantially as described.

2. The casing F, having the branches $f f'$ and spout f^2 , in combination with the cock F' , fitted in said casing, and formed with passages $i i' i^2$, substantially as described.

JAMES J. POWERS.

Witnesses:

H. A. WEST,
C. SEDGWICK.