

E. EICHMAN.  
FLUSHING TANK.

APPLICATION FILED APR. 21, 1909.

958,105.

Patented May 17, 1910.

2 SHEETS—SHEET 1.

FIG. 2.

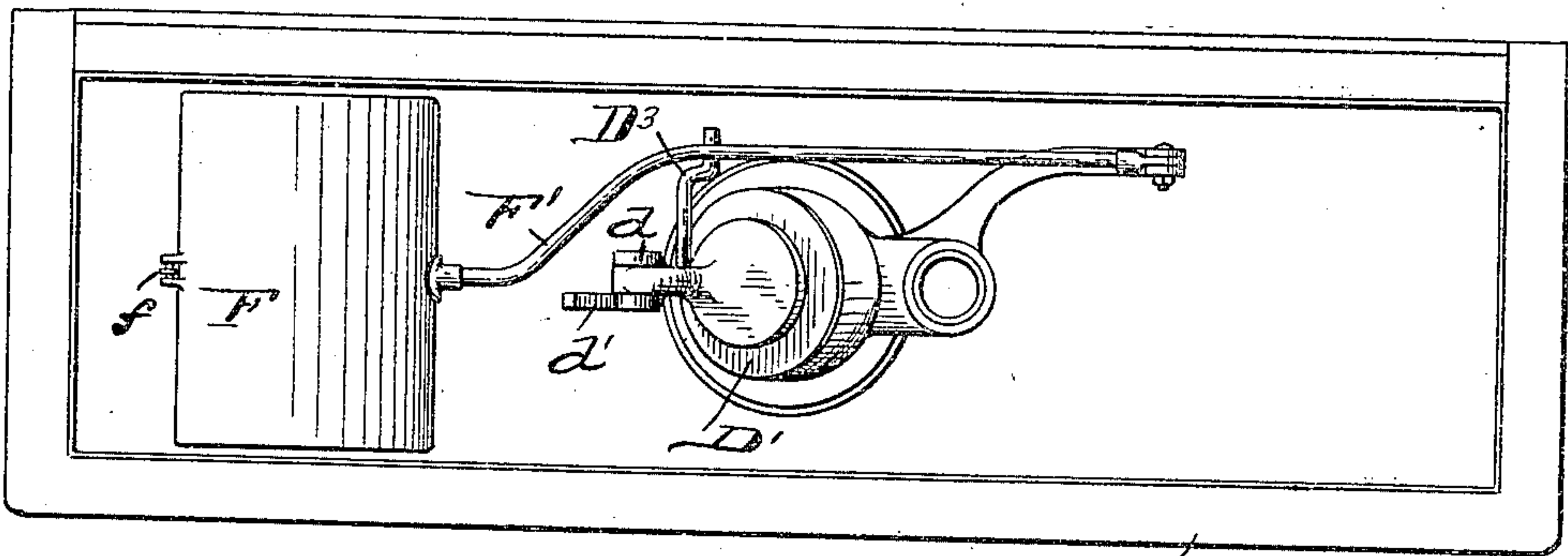
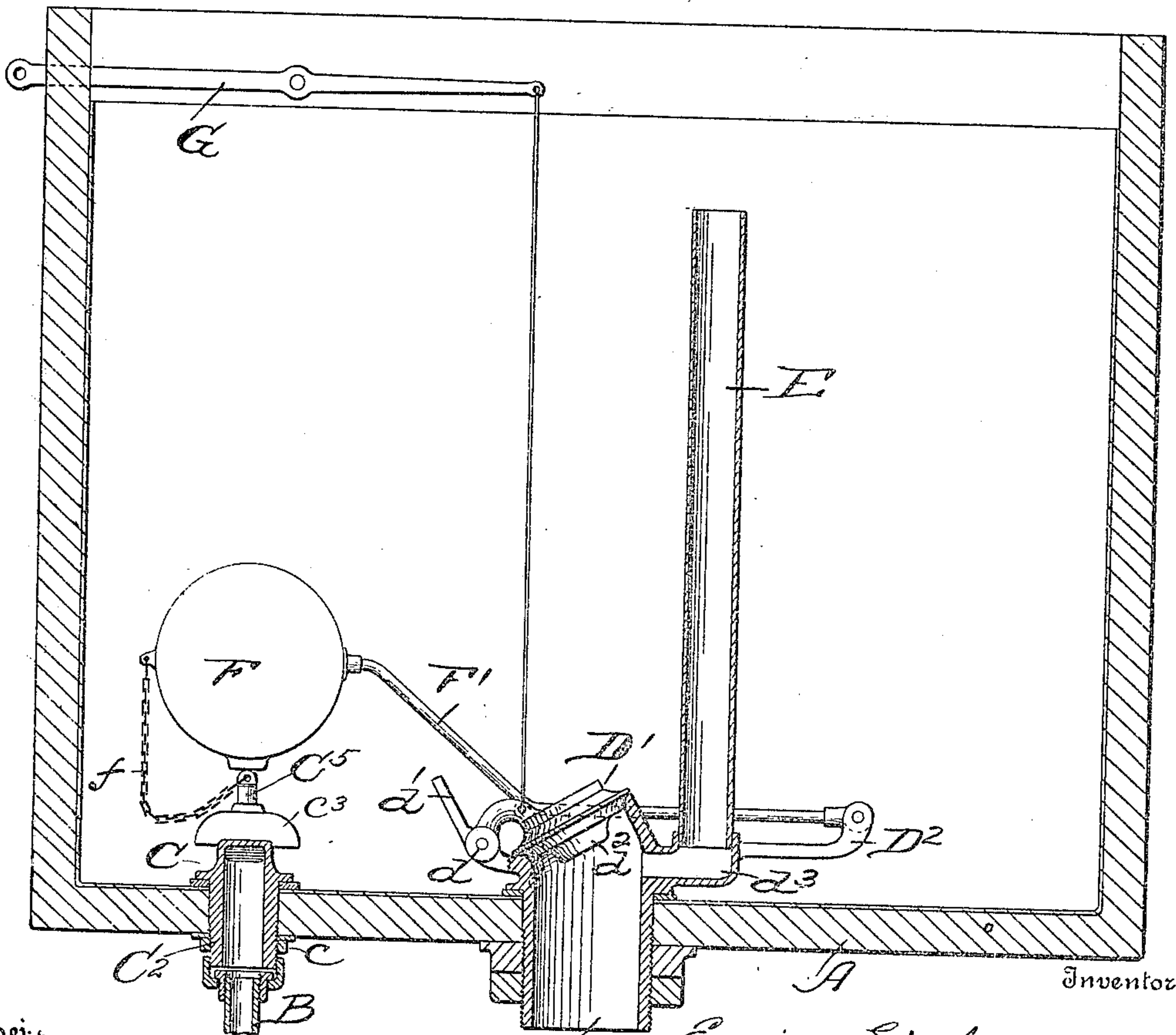


FIG. 1.



Witnesses

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# UNITED STATES PATENT OFFICE.

EMIL EICHMAN, OF DETROIT, MICHIGAN.

## FLUSHING-TANK.

958,105.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed April 21, 1909. Serial No. 491,250.

*To all whom it may concern:*

Be it known that I, EMIL EICHMAN, citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have  
5 invented a certain new and useful Improvement in Flushing-Tanks, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains  
10 to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in flushing tanks for water closets, shown in  
15 the accompanying drawings and more particularly pointed out in the claims.

In discharging water from flushing tanks as heretofore constructed the noise produced by sucking the air out with the water as it  
20 leaves the tank has been very objectionable.

One of the objects of the present invention is to overcome this disagreeable feature by providing means whereby the discharge outlet is always under a water seal.

Other improvements and advantages will hereafter appear.

In the drawings accompanying the specification: Figure 1 is a vertical sectional view through the tank with the discharge valve  
30 closed. Fig. 2 is a plan view of the tank. Fig. 3 is a vertical sectional view through the tank with the discharge valve open. Fig. 4 is a fragmentary view of the tank with the tank and inlet valve in cross-section.  
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Referring to the letters of reference spread upon the drawings:—A is the tank.

B is a water inlet pipe. C a valve controlling the admission of water to the tank  
40 through said pipe,—in which C' is the valve body provided with a screw-threaded depending neck C<sup>2</sup> designed to project through the bottom of the tank, it being secured thereto by the nut c.

45 C<sup>3</sup> is a passage through the neck and valve body, entering the valve chamber C<sup>4</sup> at right angles to the travel of the valve.

50 c' is the valve seat and c<sup>2</sup> are openings through the wall forming the valve chamber C<sup>4</sup>.

c<sup>3</sup> is a bell-shaped portion formed integral with the valve body and bored for the passage of the valve stem C<sup>5</sup>, which projects through it. The bell-shaped portion c<sup>3</sup>  
55 serves a double purpose, namely; as a bearing

for the valve stem and to deflect the water downwardly as it enters the tank.

D is the discharge outlet for the water mounted in the bottom of the tank.

D' is a weighted valve governing the discharge of water through the outlet being  
60 pivoted to a lug d formed in its wall.

d' is an arm extending upwardly from the lug d, having a slight incline, and is designed to support the valve in its open position, as shown in Fig. 3.  
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d<sup>2</sup> is a weight secured to the bottom of the valve D' to assist in holding it to its seat when closed.

E is an overflow pipe rising from an elbow d<sup>3</sup> formed in the discharge outlet D  
70 through which excess water may be discharged in the event of water rising in the tank above its predetermined level through accidental disarrangement of the controlling  
75 mechanism.

F is a float secured to the end of the rod F' which is in turn pivoted to an arm D<sup>2</sup>, formed integral with the discharge outlet or fitting D.  
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f is a chain or other flexible connection between the float F and the valve stem C<sup>5</sup>.

G is a lever connected at one end by a cord or chain with the weighted discharge valve D' and at the other with an operating  
85 cord or chain, not shown. Projecting laterally from the valve D' is an arm D<sup>3</sup> adapted to receive the float rod F', which is designed to rest upon it to force the valve D' to its seat, as the float descends upon dis-  
90 charging the water from the tank.

Having indicated the several parts by reference letters the construction and operation will be readily understood.

Assuming the tank is already filled with  
95 water and it is desired to discharge the same, the weighted valve D' is raised by pulling on the operating cord (not shown) connected with the lever G, in turn engaged with the valve D'. The valve D' is thus raised to the  
100 position shown in Fig. 3, resting against the arm d'. As the water passes from the tank through the discharge outlet D the float rod F' contacts with the arm D<sup>3</sup> attached to the discharge valve D' forcing it to its seat  
105 thereby shutting off further discharge of water from the tank. The cutting off of the discharge of water from the tank is so timed that an effective water seal is secured above the opening through the discharge outlet D,  
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the noise incident to the air being sucked out with the water as in present constructions being thereby avoided. The arrangement and adjustment of the parts are such that  
5 upon the float rod F' forcing the discharge valve to its seat the float itself will rest upon the inlet valve stem C<sup>5</sup>, the weight of which opens the valve C admitting water again to the tank. Upon the water rising in the tank  
10 to its predetermined level, the chain f connecting the float F and the valve stem C<sup>5</sup>, serves to close the valve C thus cutting off further admission of water to the tank.

Having thus described my invention, what  
15 I claim is:—

1. In a flushing tank for closets, a valve controlling the water inlet, a valve controlling the discharge outlet, means for manually opening the latter valve, a float mechanism adapted to automatically open the inlet  
20 valve and to close the valve controlling the passage of water through the discharge outlet while said outlet is under water seal, and a flexible connection between said inlet valve

and the float mechanism whereby the inlet 25 valve is automatically closed upon the water again reaching its predetermined level.

2. In a flushing tank for closets, a valve controlling the water inlet, having a bell-shaped deflector located directly above its 30 discharge opening, a manually operated discharge valve, a float mechanism adapted to rest upon the stem of the inlet valve to open said valve while acting upon the discharge 35 valve to close the latter whereby said discharge opening may be kept under water seal at all times, and a connecting member secured to the inlet valve stem and to the float whereby the inlet valve is automatically closed when the water in the tank has again 40 reached its predetermined level.

In testimony whereof, I sign this specification in the presence of two witnesses.

EMIL EICHMAN.

Witnesses:

GRACE E. WYNKOOP,  
SAMUEL E. THOMAS.