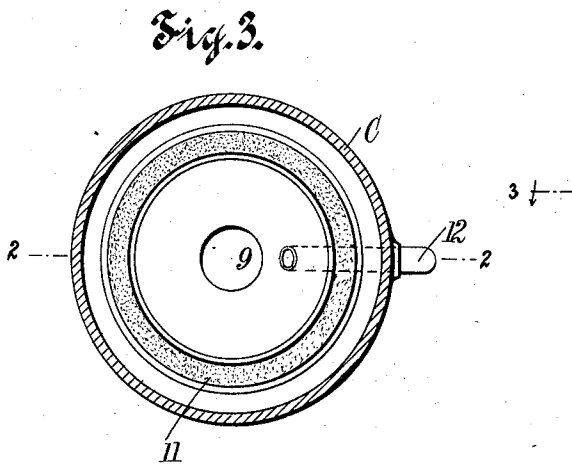
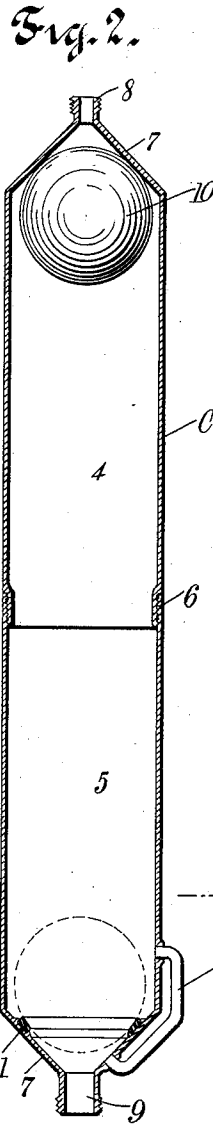
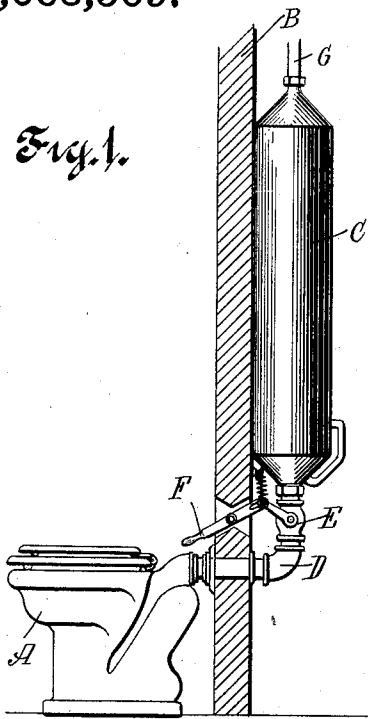


H. T. CRONK.
FLOAT CONTROL.

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1,063,509.

Patented June 3, 1913.



WITNESSES
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HARRISON TAYLOR CRONK, OF NEW YORK, N. Y.

FLOAT CONTROL.

1,063,509.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed November 23, 1911. Serial No. 661,920.

To all whom it may concern:

Be it known that I, HARRISON T. CRONK, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Float Control, of which the following is a full, clear, and exact description.

My invention relates to a float control for a flush tank, and an object of my invention is to provide a flush tank having but one valve, and in which there are no valves connected with the float, thereby eliminating leakage incidental to float control valve mechanisms now in common use.

With the above and other objects in view, as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

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

Figure 1 is a side elevation showing a preferred embodiment of my invention in position to flush a closet bowl; Fig. 2 is a vertical sectional view taken through the tank shown in Fig. 1 and on the line 2—2 of Fig. 3; and Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 2 and looking in the direction of the arrow.

In Fig. 1, I have shown a closet bowl A, positioned on one side of a partition B, which partition carries on its opposite side the tank C more particularly forming the subject-matter of my invention. The tank C is connected to the bowl by means of an elbow D, within which elbow is a spring-controlled valve E actuated by a handle F located adjacent the bowl A. Water is conveyed to the tank through a water pipe G.

For convenience in construction, the tank C is shown to be of two cylindrical parts 4 and 5 threaded together at 6. The opposite outer ends of the cylindrical sections are formed into cone-shaped ends 7, the upper end terminating in a threaded nipple 8 in engagement with the water pipe G and the lower end formed into a nipple 9 in threaded engagement with the elbow D, the outlet

of the nipple 9 being larger than the inlet of the nipple 8.

Floating within the tank C is a hollow ball float 10 of a diameter slightly less than the diameter of the cylindrical sections 4 and 5. As this float is lighter than the amount of water displaced by it, said float is normally positioned at the top of the section 4, as shown in full lines in Fig. 2, so that opening the valve E by means of the handle F, will cause the water to rush from the tank C through the nipple 9 into the bowl A. The rush of the water will carry the ball float 10 to the bottom of the tank, to the position shown in dotted lines in Fig. 2, and will rest on the rubber ring gasket 11, closing communication between the tank and its outlet, permitting the tank to be filled from the pipe G. A by-pass 12 of relatively small bore has one of its ends opening into the tank above the position of the float when at the bottom of the tank, and its opposite end opening into the tank below the float when in said position. By means of this by-pass water will be fed from above the float to the space below the float filling up this space, which will equalize the water pressure on the top and bottom of the float, permitting the latter to rise to its position at the top of the tank, to be again actuated to flush the bowl.

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

1. In a tank, a water inlet at the top thereof, a water outlet at the bottom thereof, valve seats at the top and bottom of said tank, a single ball float within said tank adapted when the tank is full, to rest against said upper valve seat to close the inlet, said outlet being of relatively larger bore than the inlet, and a valve controlling the passage of water through said outlet, whereby the opening of said valve will cause said tank to empty and position said ball float on said lower valve seat, to close said outlet.

2. In combination, a closed tank continually open to a water supply and having an outlet at its lower end, a float adapted to close said outlet, a continually opened by-pass connecting the tank immediately above said float with the tank immediately below said float, whereby an uninterrupted stream may pass through the tank during the filling of the same.

3. In a cylindrical tank having an inlet at its upper end and an outlet at its lower end, a float valve of a diameter slightly less than the diameter of the tank normally closing said inlet when the tank is filled with water and adapted when the tank is empty, to close said outlet, a ring gasket within said tank adjacent said outlet adapted to carry the float while the tank is being filled, and a by-pass connecting said tank above said gasket with part of the tank below said gasket.

4. A tank having an outlet at the bottom and an inlet at the top thereof, a manually-controlled valve normally closing said outlet, a valve seat adjacent the bottom of said tank, a float closing said inlet when the tank is filled and resting on said seat when the tank is filling, closing fluid communication between the portion of the tank above said seat and the portion below the seat, and a relatively small by-pass connecting the portion above the seat with the portion below the

seat, whereby the portion between the valve and the seat will be filled, whereby the float will be unseated to raise and close said inlet.

5. In a tank having an inlet at the upper end and an outlet at its lower end, a float valve normally closing said inlet when the tank is filled and adapted when the tank is empty to close said outlet, and a valve seat adjacent said outlet adapted to carry said float while the tank is being filled, and a by-pass straddling said seat and connecting the part of the tank above with the part of the tank below said seat, placing the portion of said tank below said seat continually in fluid communication with the portion above the same.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRISON TAYLOR CRONK.

Witnesses:

W. S. ORTON,

PHILIP D. ROLLHAUS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."