

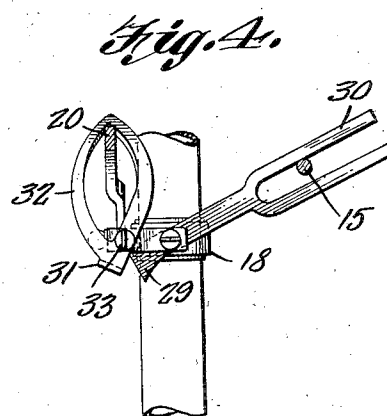
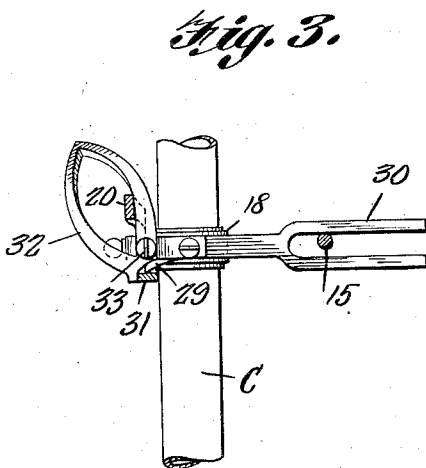
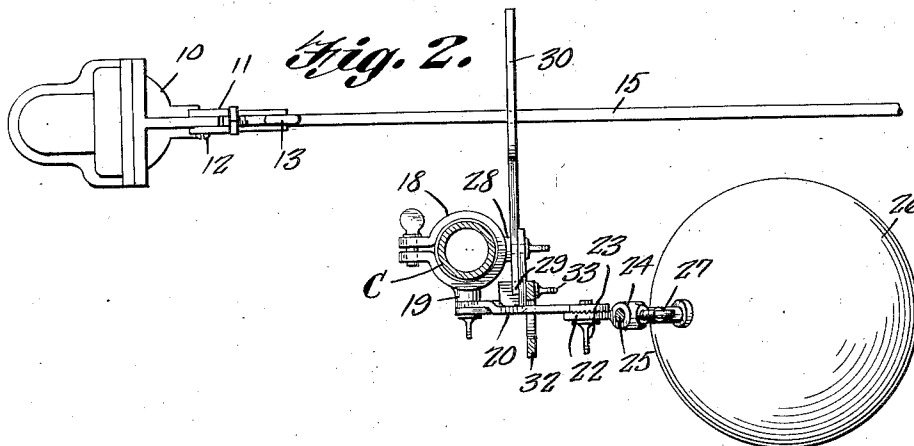
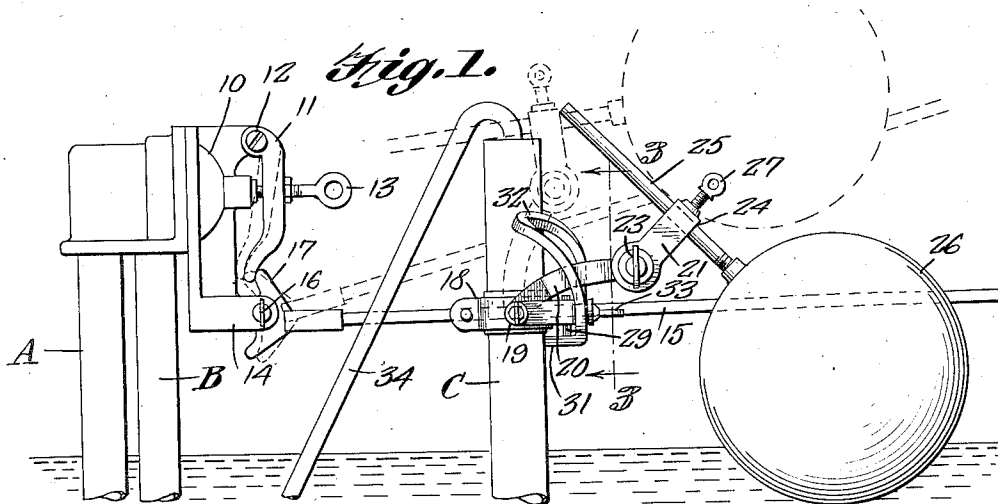
Oct. 1, 1935.

J. J. STEFANCIN

2,016,183

FLOAT VALVE

Filed July 17, 1934



Joseph J. Stefancin, INVENTOR

BY Victor J. Evans & Co. ATTORNEY

P. J. Hickey.
WITNESS:

UNITED STATES PATENT OFFICE

2,016,183

FLOAT VALVE

Joseph J. Stefancin, Kingston, Pa.

Application July 17, 1934, Serial No. 735,665

1 Claim. (Cl. 137—104)

The invention relates to a float valve and more especially to a quick-acting float valve for water tanks of lavatory bowls.

The primary object of the invention is the provision of a valve of this character, wherein the main float which controls the inlet valve for the filling of the tank of a lavatory bowl is supplemented by an auxiliary float, the latter serving to hold the arm of the main float in a position that the inlet valve will be maintained fully open, so as to allow the filling of the tank quickly, and thereafter the inlet valve will be instantly closed on the water reaching a predetermined level within the tank.

Another object of the invention is the provision of a valve of this character, wherein the float arrangement is novel in construction and will assure against the vibration of the inlet valve or the seeping of water past the same into a water tank of a lavatory bowl after the water has reached a predetermined level within the tank and a quick filling of the tank is assured without noises as are common with valve and float mechanisms employed in the water tanks of lavatory bowls.

A further object of the invention is the provision of a valve of this character, wherein the same is operated upon on the inflow of water within a tank of a lavatory bowl, so that it will be maintained in full open position until the water level has been reached within the bowl and thereafter instant closing of the inlet valve. is had, the float assembly being capable of adjustment to vary the quick closing of the inlet valve upon the water reaching a predetermined level within the tank.

A still further object of the invention is the provision of a valve of this character which is comparatively simple in construction, thoroughly reliable and effective for its purposes, readily and easily applied to the tank for a lavatory bowl, automatic in its working, strong, durable, readily and easily adjusted, and inexpensive to manufacture and install.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claim hereunto appended.

In the accompanying drawing:

Figure 1 is a fragmentary elevation of a water tank arrangement for lavatory bowls showing the float valve constructed in accordance with

the invention applied thereto, the valve being shown fully open by full lines and by dotted lines closed.

Figure 2 is a horizontal sectional view.

Figure 3 is a sectional view on the line 3—3 of Figure 1 looking in the direction of the arrows.

Figure 4 is a view similar to Figure 3 showing the parts in adjusted position or in a different position from that shown in Figure 3.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, A designates the vertical water feed pipe, B the delivery pipe for the water tank of a lavatory bowl and C the overflow pipe, these being conventional in standard makes of water tanks. Likewise associated with the delivery pipe B is an inlet valve 10, it being opened and closed by a trigger 11 pivoted at 12, the valve 10 being also of any approved form and susceptible of adjustment by a set screw 13 carried by the trigger 12.

Fitted with the delivery pipe B at the valve end thereof is a hanger 14 to which is pivoted the swinging arm 15 of a main float (not shown) which functions to close the valve 10 on the water admitted to the tank reaching a predetermined level therein. This arm 15, at the end engaged by the pivot 16, has formed thereon a striker 17 which operates upon the trigger 12 for effecting the closing of the valve 10, this being clearly illustrated in Figure 1 of the drawing.

Mounted upon the overflow pipe C, at the proper height required, is a split ring-like clamp 18 having a pivot lug 19 at one side thereof, and to this lug is swingingly connected the inner section 20 of an auxiliary float arm, its outer section 21 being adjustably engaged with the section 20 through the clutch cheeks 22 common to both sections and the binding section 23. The outer section 21 is formed with an eye 24 for engaging the stem 25 of an auxiliary float 26, the eye 24 being fitted with a set screw 27 which adjustably secures the stem 25 therein to permit the auxiliary float 26 to vary its action on the rise of the water within the tank.

The clamp 18 has a pivot lug 28 to which is pivoted a latch 29, the same having a fork 30 receiving the arm 15 of the main float, the latch being engageable with a keeper 31 formed on a swinging cam 32 pivoted at 33 and this cam is of loop form, having trained therethrough the sections 20 and 21 constituting the arm of the auxiliary float 26, so that this arm will act upon the cam 32 to have the keeper 31 thereof release

the latch 29 which, through the fork 30, will hold the arm 15 of the main float in a determined position after the water within the tank has risen to a determined height, and thus on the release of said main float the valve 10 will quickly close, but prior to the release of said main float this valve 10 will be sustained in full open position and thus the tank will fill with water with rapidity.

10 It should be apparent that the main float rises on the initial filling of the tank with water and thus during this shift the valve 10 will be in full open position until the auxiliary float becomes active to release the main float at a determined level, whereas, on the further rise of said main float, the valve 10 will be quickly closed.

15 The overflow pipe C has communicating therewith an excess flow pipe 34, this being common to standard makes of float valve assemblies in water tanks for lavatory bowls.

20 The float valve assembly as hereinbefore described will operate noiselessly and will assure a positive and quick closing of the inlet valve and the maintenance of this valve in full open position until the tank becomes filled with water at a predetermined level therein.

25 The auxiliary float arrangement will eliminate

valve seat grinding which is caused by water seeping through a slow-closing ball cock valve, this wearing away in spots the valve seat. Also, the auxiliary float prolongs the life of the washer in the inlet valve as this washer wears away much quicker or faster in a slow-closing ball cock valve. 5

What is claimed is:

In a valve of the kind described, a water inlet valve, a vertically swinging main float means 10 controlling the opening and closing of said inlet valve, a clamp for adjustable connection with an overflow pipe of a water tank and having pivot lugs at right angles to each other, an auxiliary float arm swingingly connected to one of the 15 lugs for disposition at one side and parallel with the main float means and having an adjustable portion, a forked lever pivotally connected to the other lug and having its fork straddling the main float means, a latching tip at the pivoted 20 end of the forked lever, and a loop-like cam pivotally supported next to the latching tip for encircling the auxiliary float arm to be controlled thereby and having a keeper releasably engaged by the latching tip of the forked lever. 25

JOSEPH J. STEFANCIN.