

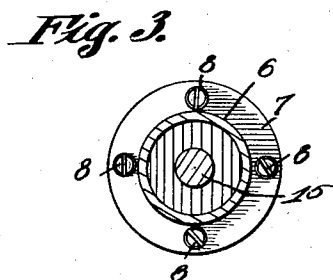
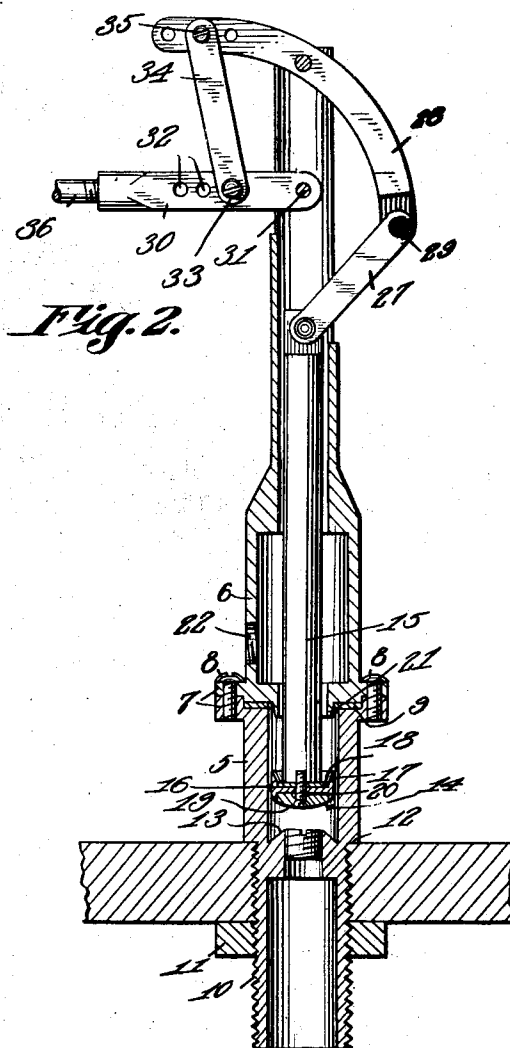
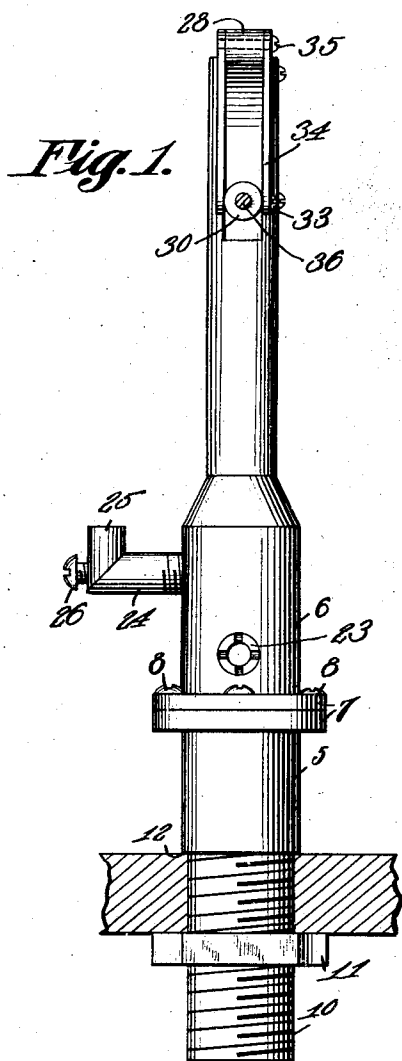
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CLOSET VALVE

Filed June 6, 1922



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CLOSET VALVE.

Application filed June 6, 1922. Serial No. 566,354.

This invention has reference to valve constructions, and more particularly to valve construction of the float control type employed in flush tanks.

5 The primary object of the invention is to provide a valve which will be cushioned in its movement to close off the fluid supply, thereby reducing the noise incident to a valve closing, to the minimum.

10 Another object of the invention is to provide means whereby the stroke of the valve rod may be adjusted, to cause the valve carried thereby to operate for closing off the supply of fluid to the tank, at predetermined

15 intervals.
A still further object of the invention is to provide a valve which will automatically cut off the passage of fluid therethrough, when one of the pivot pins or other connecting member becomes broken or displaced.

20 With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in
25 the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without
30 departing from the spirit of the invention.

Referring to the drawing:

Figure 1 is an elevational view of a valve mechanism constructed with the present invention.

35 Figure 2 is a vertical sectional view through the same.

Figure 3 is a horizontal sectional view through the upper section.

Referring to the drawing in detail, the
40 body portion of the valve embodies a lower section 5 and an upper section 6, the sections being formed with flanges 7 having openings to accommodate the bolts 8, whereby the sections of the body may be secured
45 thereto. A suitable washer 9 is interposed between the adjacent ends of the sections of the body to insure a fluid-tight connection therebetween.

50 The lower section 5 of the body portion is threaded as at 10 to accommodate the nut 11 that cooperates with the shoulder 12 formed on the section 5 for clamping the valve body within a flush box.

55 An inwardly extended flange 13 is formed integral with the lower section of the valve body and defining a valve seat with which

the valve member 14 carried at the lower end of the valve rod 15 cooperates to cut off the passage of fluid through the valve body.

60 The valve member 14 is in the form of a body portion 16 having upwardly extending flanges 17 between which the washer 18 is positioned. A cushioning member formed of rubber or other suitable material is indicated at 19 and is secured to the body portion 16 as by means of the screw 20 that is disposed within a suitable threaded opening formed in the lower end of the valve rod 15.

65 Formed integral with the upper section 6 of the body is a downwardly extending circular flange 21 adapted to fit within the flange 17 to close the upper section of the body and prevent the passage of fluid therethrough when the valve member is moved to the limit of its upward movement.
70 The upper section 6 of the body has an opening 22 formed therein, the walls of which opening being threaded to accommodate the plug 23 that has an opening formed therein
80 which opening provides communication between the upper section 6 and the tank or box in which the valve body is positioned, to admit fluid to the box. If it is desired to cause the fluid entering the tank to pass
85 through the valve member at a comparatively low rate of speed, the plug 23 may be removed and replaced by a plug having a smaller opening.

It might be further stated that this plug
90 may be used to restrict the flow of fluid to the valve member by positioning the same, in the opening formed in the inwardly extended flange 13. Communicating with the interior of the upper section 6 of the body is
95 a pipe 24 that has a right angled extremity 25, through which fluid may pass to the box in which the valve is positioned. An adjusting screw 26 extends into the pipe 24 and by means of this adjusting screw, it is obvi-
100 ous that the quantity of fluid passing through the pipe 24 may be regulated to meet the various requirements.

Pivottally connected to the upper extremity of the valve rod 15 is a link member 27
105 which has pivotal connection with the curved arm 28 as at 29, the curved arm 28 being however pivottally connected to the upper extremity of the valve body.

110 An arm 30 is pivottally connected to the body portion as at 31, and is formed with a plurality of spaced openings 32 to accom-

- modate the pivot pin 33 that provides means of connection between the arm 30 and the link member 34, which also has pivotal connection with the curved arm 28 as at 35.
- 5 The float rod indicated at 36 has connection with the arm 30 so that movement of the float rod will produce a relative movement of the valve rod 15 through the rods and link member as described.
- 10 From the foregoing it will be seen that as fluid passes through the valve member and into the box, the float not shown, and which is carried by the float rod 36 moves upwardly moving the valve member carried
- 15 at the lower end of the valve rod 15 towards its seat to shut off the supply of fluid through the valve member.
- When the fluid within the box has been released and the rod 36 moved by gravity
- 20 to the lower portion of the box, the water in the upper section 6 of the valve body acts as a cushion to retard the movement of the valve rod 15 and cause the valve carried at the end thereof to move to the limit of its
- 25 upward movement, gradually.
- If it is desired to lengthen the stroke of the rod 15 to admit a greater quantity of fluid, it is only necessary to move the link member 34 to a position adjacent to the outer
- 30 end of the arm 28.

Having thus described the invention, what is claimed as new is:—

A valve for use in connection with flush tanks including a body portion having a threaded extremity to be secured within a flush box, and through which water passes to the flush box, a flange extending inwardly from the walls of the body portion and defining a valve seat, an upper section normally supported on the body portion and having a depending flange at the lower end thereof, a valve rod operating through the body portion, a removable valve member supported on one end of the valve rod, said valve member including an upwardly disposed tapered flange and adapted to cooperate with the first mentioned tapered flange to prevent the passage of fluid through the body portion, and a downwardly disposed flange forming a part of the valve member, a cushioning member positioned within the downwardly disposed flange to move into engagement with the valve seat to restrict the passage of fluid through the body portion of the valve, and means for operating the valve.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

FRED C. DIEDRICH.