Nov. 6, 1945. E. B. GREEN 2,388,480

ATTACHMENT FOR FLUSH TANKS

Filed Dec. 3, 1943

Fig. 1.

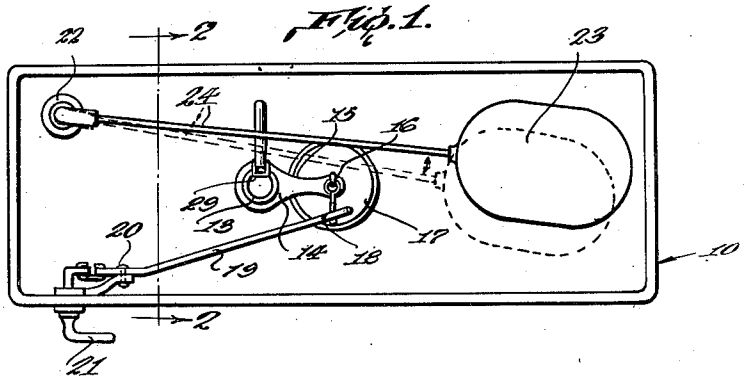


Fig. 2.

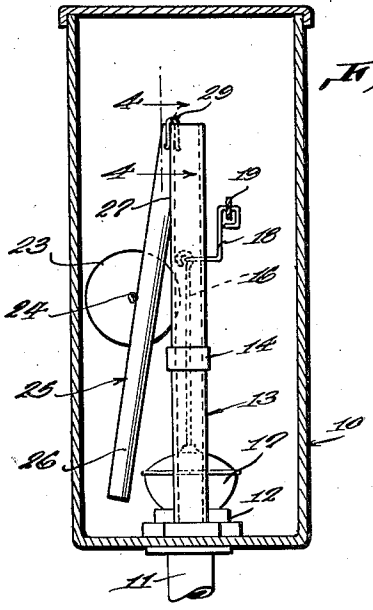


Fig. 3.

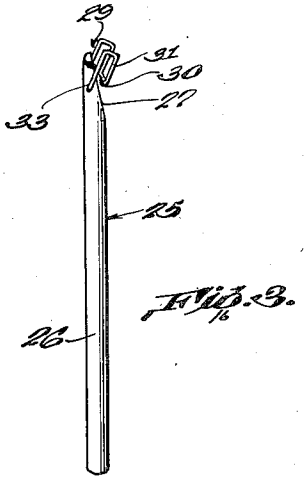


Fig. 4.

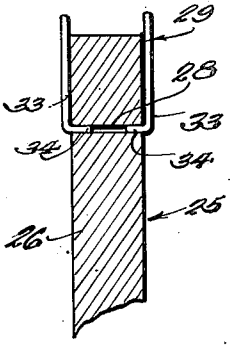
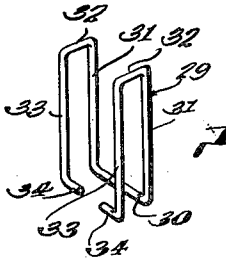


Fig. 5.



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ATTACHMENT FOR FLUSH TANKS

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3 Claims. (Cl. 4—57)

This invention relates to an attachment for flush tanks and it consists in the constructions, arrangements and combinations herein described and claimed.

Considerable difficulty, annoyance and waste of water has been occasioned with flush tanks of present-day constructions, due to the fact that the float lever quite often becomes entangled with the levers associated with the flush valve, preventing seating of the valve entirely or canting the valve in a manner so that it can seat only partially. In such cases, it becomes necessary to uncover the flush tank to release the float lever and the levers of the float valve or to actuate the operating handle, successively, to effect disengagement of the float and valve levers.

It is therefore an object of the invention to provide a simple attachment for shunting or guiding the float lever in a direction away from the levers and linkage of a flush valve, thus insuring proper free seating of the valve.

More specifically, it is the object of the invention to provide an elongated body member adapted to be suspended from the overflow pipe of a flush tank, extending at an angle outwardly therefrom and in a downward direction and positioned so that upon downward movement of the float lever the latter will be shunted or directed in a lateral direction away from the valve levers and linkage.

It is also an object of the invention to provide an extremely simple means for detachably mounting the shunt member within the tank enabling its ready removal for repairs upon the flushing mechanism, when required.

Additional objects, advantages and features of invention will be apparent from the following description and accompanying drawing, wherein

Figure 1 is a top plan view of a flush tank with the cover removed, showing my attachment installed.

Figure 2 is a cross section on the line 2—2 of Figure 1.

Figure 3 is a perspective view of the attachment.

Figure 4 is a vertical section on the line 4—4 of Figure 1.

Figure 5 is a perspective view of the attaching hanger of the device.

There is illustrated in Figures 1 and 2 a flush tank 10 of conventional construction including an outlet 11, a valve seat 12 and overflow pipe 13. Upon the overflow pipe 13, a bracket 14 is positioned having an arm 15, apertured at its outer end for reciprocably mounting a stem 16 of a ball valve 17, the latter being cooperable with the valve seat 12 for controlling flow of water therethrough. The upper end of the stem 16 is connected to a link 18, which in turn is connected to a lever 19 pivotally mounted upon the tank, as at 20. An operating handle 21 is connected to the lever 19 for actuating the parts for raising the ball valve from its seat. The tank also includes a water inlet valve 22 controlled by a float valve 23, the latter being spaced a substantial distance from the inlet by means of a rod 24 which extends quite close to the stem 16 and overflow pipe 13 as indicated in dotted lines in Figure 1.

In view of the fact that the rod 24 is of considerable length, lateral movements of the rod 24 is occasioned with the rise and fall of the float valve 23 due to turbulence created in the tank by flushing and filling of the tank, and quite often the rod 24 will become entangled with operating levers and links associated with the ball valve. Therefore, in order to avoid contact with any parts of the valve mechanism, I provide a shunt device 25.

The shunt device consists of an elongated cylindrical body 26, preferably of wood, of a length less than the height of the overflow pipe 13. One end of the body 26 is provided with a tapered side portion 27 which may be slightly arcuate, if desired, so as to snugly engage the periphery of the overflow pipe, as will be presently explained. The body member 26 is provided with a transverse opening 28 positioned inwardly of the tapered side 27 and below the upper end thereof, as clearly shown in Figure 3.

Attention is now invited to Figures 4 and 5 of the drawing, wherein a hanger device 29 is shown. The hanger is formed from a single strand of wire, bent intermediate its length to form a bight portion 30, the legs 31 thereof extending in parallel relation a suitable distance, and are then bent at right angles to the legs 31, as at 32, and again bent downwardly to present legs 33 parallel to the legs 31 but spaced therefrom. The legs 33 are now bent at right angles to the legs 31, presenting lugs 34 lying parallel to the bight portion 30 and stopping short of each other a distance. The wire being resilient, the legs 33 may be readily sprung apart so that the body 25 may be presented therebetween, and with the lugs 34 aligned with the opening 28, the lugs will readily enter the opening upon release of the legs 33. With the hanger thus engaged upon the body member, the legs 31 and bight 30 will be spaced a distance outwardly of the inclined face 27 and will readily permit the upper end of the

overflow pipe 13 to be inserted therebetween, as clearly shown in Figure 2. The distance between the legs 31 and 33 is only slightly greater than the thickness of the wall of the overflow pipe and therefore the inclined face 27 will rest snugly against the outer periphery of the overflow pipe. Thus the body 25 will be suspended in a downward direction at an angle with respect to the overflow pipe. The inclined face 27 should be such that when the body 25 is engaged upon the overflow pipe the inclination of the body with respect to the pipe will permit the rod 24 to pass smoothly upon the body to a point where full opening of the inlet valve 22 will be permitted.

In use, when the tank is flushed, the float valve 23 will move downwardly with the lowering depth of water in the tank, the rod 24 moving therewith, and since the shunt device 25 is located in the path of the rod 24, the latter will be moved in a lateral direction away from the ball valve and associated links and levers, thus avoiding any possibility of entanglement between the float rod 24 and parts of the valve.

While I have shown and specifically described the invention, this is by way of illustration only, and I consider as my own all such modifications in construction as fairly fall within the scope of the appended claims.

I claim:

1. An attachment for flush tanks consisting of an elongated body having means at one end for suspension from the upper end of the overflow pipe of the flush tank, said body extending downwardly at an inclination with respect to said overflow pipe and in the path of downward movement of the rod of a float valve of the flush tank, whereby to effect lateral movement of said rod upon lowering movement of said float valve.

2. An attachment for flush tanks consisting of an elongated body member having an inclined face at one end thereof, a hanger pivotally mounted upon the body inwardly of the inclined face, said hanger having a portion constructed and adapted to engage within the upper end of an overflow pipe and draw the inclined face into contact with a portion of the periphery of the overflow pipe whereby to present the body member at an angle to the pipe and in the path of movement of a rod of a float valve of a flush tank.

3. The combination of a flush tank having an outlet, an overflow pipe and a valve-controlled inlet, a valve for the outlet including a stem reciprocally mounted parallel to the overflow pipe, a float having a rod operatively connected to the valve of the inlet and movable in vertical directions in close proximity to said overflow pipe and said stem, a shunt means mounted on said overflow pipe extended downwardly at an angle and interposed beneath said rod to effect lateral movement thereof upon lowering movement of said float.

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