H. M. FRIESLEBEN.

FLUSH TANK CONTROL.

APPLICATION FILED APR. 6, 1915.

1,154,695. Patented Sept. 28, 1915.

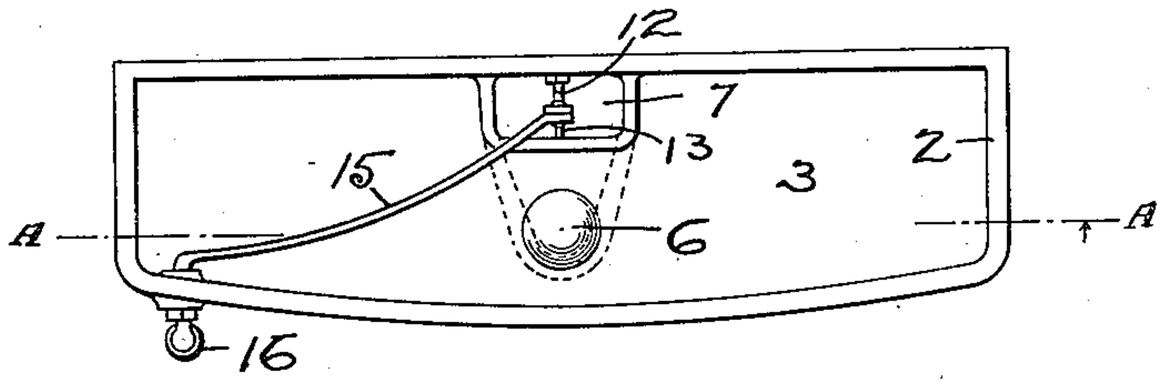

Fig. 1

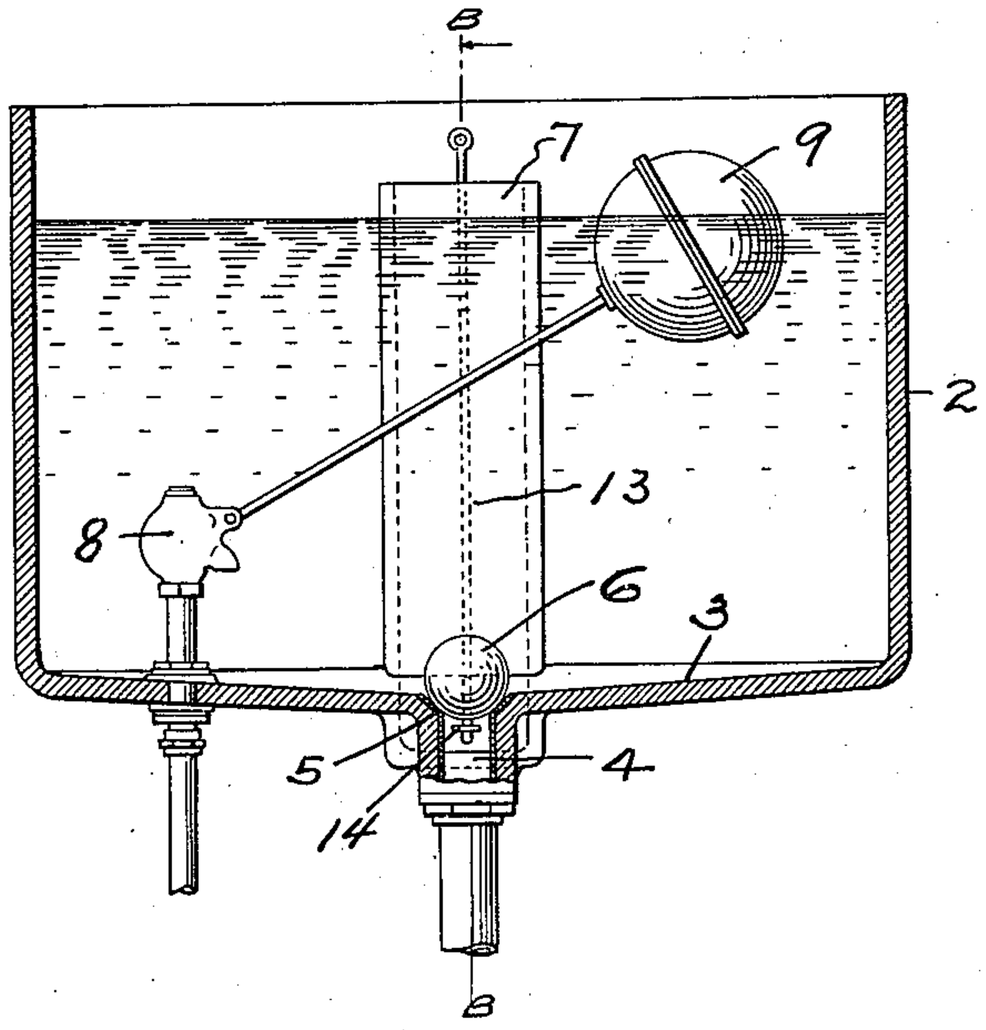

Fig. 2

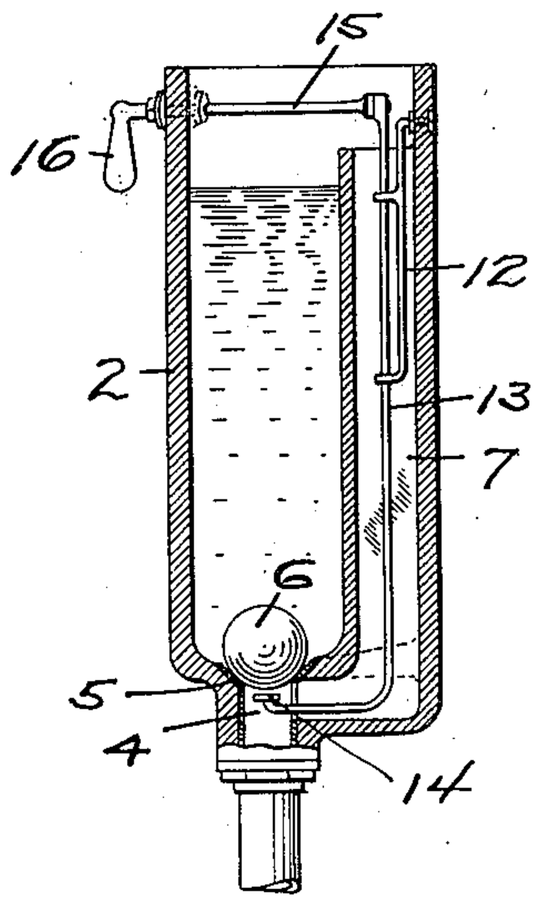

Fig. 3

Witness:
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INVENTOR
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HIS ATTORNEYS.

UNITED STATES PATENT OFFICE.

HAROLD M. FRIESLEBEN, OF SAN FRANCISCO, CALIFORNIA.

FLUSH-TANK CONTROL.

1,154,695. Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed April 6, 1915. Serial No. 19,464.

To all whom it may concern:

Be it known that I, HAROLD M. FRIESLEBEN, a citizen of the United States, and a resident of the city and county of San Francisco, State of California, have invented a new and useful Flush-Tank Control, of which the following is a specification.

The invention relates to means for controlling the discharge of water from flush tanks, which are used in connection with toilets and other devices and comprises a loose ball adapted to close the discharge outlet and means for unseating the ball.

An object of the invention is to provide a simple and cheap flush tank control of the class described.

Another object of the invention is to provide a flush tank discharge controlling means of the class described which obviates the use of packing or stuffing boxes.

Another object of the invention is to provide a flush tank discharge control of the class described, in which the connection between the operating handle and the apparatus within the tank is placed out of contact with the water in the tank.

The invention possesses other advantageous features, some of which, with the foregoing, will be set forth at length in the following description, where I shall outline in full that form of the invention which I have selected for illustration in the drawings accompanying and forming part of the present specification.

The novelty of the invention will be included in the claims succeeding said description. From this it will be apparent that I do not limit myself to the showing made by said drawings and description, as I may adopt many variations within the scope of my invention as set forth in said claims.

Referring to said drawings: Figure 1 is a top or plan view of a flush tank embodying my invention, the cover or top of the tank being removed. Fig. 2 is a vertical section taken on the line A—A Fig. 1. Fig. 3 is a vertical section taken on the line B—B Fig. 2.

The invention consists broadly of a tank having a bottom sloping toward a discharge outlet, a loose ball adapted to seat on said outlet and means for dislodging the ball to open the outlet, said means being connected, out of range of the water in the tank, to a handle or other operating means arranged on the outside of the tank. The connection between the handle and the apparatus within the tank is usually made above the maximum water level in the tank, so that no packing or stuffing boxes are necessary.

The tank 2 is provided with a bottom 3 sloping toward the discharge outlet 4, in which is seated a metallic nipple 5 which forms a seat for the loose buoyant ball 6. The ball is preferably a hollow rubber ball, which when dislodged from its seat ascends through the water in the tank. Formed in the tank is an integral passage or chamber 7 which opens into the discharge passage 4 below the valve seat, and this passage 7 preferably constitutes the overflow passage for the tank, and for that purpose is open at its upper end which extends above the normal level of the water in the tank. The inflow of the water into the tank is controlled by the valve 8 which is operated by the float 9.

Secured to the wall of the tank above the maximum water level and depending into the passage 7 is a guide 12, which is engaged by a rod 13. The rod 13 is bent at its lower end, so that its end is disposed in the outlet passage and is provided on its upturned end with a foot 14 adapted to engage the ball 6 from below. The upper end of the rod 13 is pivotally connected to a lever 15 which passes through the wall of the tank above the maximum water level and which is provided on its outer end with a handle 16. By arranging the rod 13 in the overflow passage, with which all flush tanks are provided, a very simple discharge control means is possible. It is not essential that the passage through which the rod extends be the overflow passage, but for the purpose of economy, it is advisable that the overflow passage be used for this purpose.

In operation, the handle 16 is turned, causing the rod 13 to be raised and the ball 6 dislodged from its seat. The ball then floats up through the water and when the water has discharged the ball settles to the inclined bottom and rolls to the discharge outlet, sealing it against the discharge of water until the ball is again unseated. As the water discharges from the tank, the float 9 descends and opens the valve 8 and as the

tank again fills with water, after the ball has seated, the float 9 is raised and the supply of water is cut off.

I claim:

1. The combination with a tank having a discharge outlet passage, a loose ball seated on said outlet and an integral overflow passage opening into the discharge passage below the ball, of a guide secured to the tank above the overflow inlet and depending into said overflow passage, a rod engaging said guide and having its lower end curved upwardly into a foot disposed beneath said ball, a lever connected to said rod and extending through the wall of the tank above the level of the overflow inlet and a handle connected to the lever.

2. The combination with a tank having a discharge outlet passage spaced from the side walls of the tank, a loose ball seated on said outlet, of an overflow passage formed integral with a side wall of the tank and extending laterally at its lower end into the discharge passage below the ball, a guide secured to the wall of the tank above the overflow inlet and depending into said overflow passage, a rod arranged in the overflow passage and engaging said guide and having its lower end bent to lie below said ball and means for raising said rod to unseat said ball.

In testimony whereof, I have hereunto set my hand at San Francisco, California, this 1st day of April 1915.

HAROLD M. FRIESLEBEN.

In presence of—
H. G. PROST.