To all whom it may concern:

Be it known that I, John Renner, a citizen of the United States, residing at Madison, in the county of Madison and State of Nebraska, have invented certain new and useful Improvements in a Closet-Tank Valve, of which the following is a specification.

This invention has for its principal object to provide an extremely simple and highly efficient closet tank valve; and to such ends, generally stated, the invention consists of the novel devices and combination of devices hereinbefore described and defined in the claim.

A further object of the invention is to provide a valve of the above indicated character, which is simple in construction and one that can be manufactured and installed in all closet tanks at a very low cost.

Particularly, the invention relates to float controlled inlet valves, such as generally employed to control the inlet of water to closet tanks and other tanks having flushing valves for controlling the discharge, but the invention has nothing to do, specifically with the flushing valve.

Referring to the accompanying drawing which forms a part of this specification, Figure 1 shows a closet tank in vertical section and the improved float controlled inlet valve in elevation.

Figure 2 is an enlarged vertical section of the improved inlet valve, and Figure 3 is a vertical section taken on line 3—3 of Figure 2.

Referring to the accompanying drawing in detail, like characters will be used to designate like parts in the different views.

In the drawing, the numeral 1 indicates the closet tank having an inlet pipe 2, as shown, which extends upwardly through the bottom of said tank and has connected thereto a T-shaped connection member 3 at the lower branch of said connection member.

In another branch of said T-shaped member 3 is screwed threadedly received a horizontal tubular casing 4, while in the remaining branch is threaded a plug 5. One extremity of the valve casing is provided with a central aperture 6, while the other extremity of the casing which is entirely open is covered by a screw threaded cap 7. A valve stem 8 is mounted in the tubular casing and has a ball valve 9 secured to the end of same, which is adapted to seat on a valve seat 10 provided in the end of the valve casing at the opening 6. Attached to the stem 8 adjacent the ball valve 9 is a member 9' having straight parallel side portions 10' which engage the interior of the opening 6 and hold the ball valve 9 centrally with respect to the valve seat 10. When the valve is seated, the same assumes the position shown by dotted lines in Figure 2. One end of the valve stem passes through the screw threaded cap 7 and the degree to which the valve 9 may be opened is regulated by a lock nut 11.

Arms 12 are formed integral with opposite sides of the valve casing and extend upwardly, the free ends being brought together as at 13 to provide means for pivotally connecting therebetween an L-shaped lever 14. A link 15 which is also approximately L-shaped is pivotally connected to the L-shaped lever 14 as at 16, while the opposite end of the link 15 which is formed with an eye 17 is mounted over the valve stem 8 and is secured thereon by a lock nut 18. A rod 19 is pivotally connected to one end of the L-shaped lever 14 as at 20 and on the free end of the rod 19 is mounted a float 21. A weight 22 is slideable on the lever 19 and is adapted to be held at any point by means of a lock screw 23, and by adjusting the weight 22 at different points on the lever 19, the ball valve 9 is adapted to open and close when the water within the tank 1 rises and falls to a certain degree.

Assuming that the weight 22 has been properly adjusted and that the float valve is in the position shown in Figure 1, and that the water has been discharged by the flush valve, the flush valve is now open permitting the tank to fill through the pipe 2 until the water reaches the level of the float 21. The rising water lifts the float 21 which in turn raises lever 14, causing the link 15 to bring the ball valve 9 onto the seat 10 thus shutting off further supply of water. When the flush valve is opened and the water is drained from the tank the reverse movement takes place thereby opening the ball valve and allowing a new supply of water to enter the tank.

When it is desired to remove the valve 9 and stem 8 from the tubular casing 4 for repairs, the same may be slid through the T-member by removing the plug 5 and the
nuts 11 and 18, said nuts 11 and 18 permitting the detachment of the link 15 from the stem 8.

In view of the foregoing description of my invention taken in connection with the accompanying drawing, it is thought that any further explanation as to the construction and operation of my invention is unnecessary.

While I have shown and described the preferred form of my invention, I realize that various minor changes may be resorted to, without departing from the spirit and scope of the invention as claimed, and therefore, I do not wish to limit myself to the exact details of construction shown, nor to the combination and arrangement of parts.

What I claim as new and desire to secure by Letters Patent is:

A device of the character described comprising a horizontal tubular casing having a valve seat at one end thereof, an inlet pipe connected to said casing at the end having said valve seat, a valve stem slidably mounted in said casing, a valve carried by said valve stem adapted to engage said valve seat, a support extending upwardly from said tubular casing, an L-shaped lever pivotally connected intermediate its ends to said support, a float connected to one end of said L-shaped arm, and an L-shaped link having one end thereof connected to one end of said L-shaped arm while the opposite end thereof is detachably connected to the end of said valve stem opposite to that carrying said valve seat.

In testimony whereof, I have affixed my signature in the presence of two witnesses.

JOHN RENNER.

Witnesses:

F. H. TAYLOR,

H. C. HASKINS.