

O. F. GLIDDEN.
SUPPLY VALVE FOR FLUSH TANKS.
APPLICATION FILED OCT. 24, 1905.

899,486.

Patented Sept. 22, 1908.

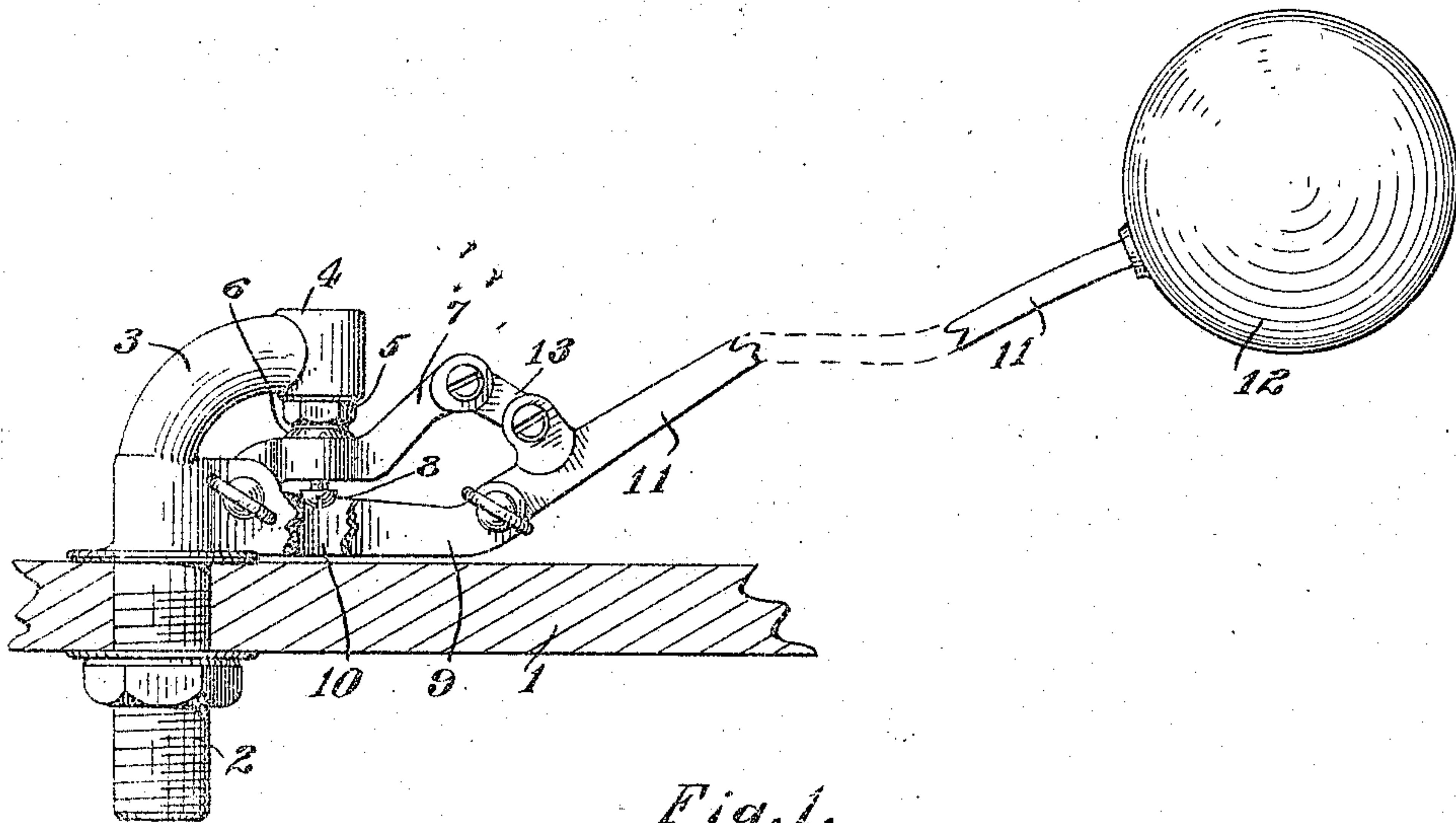


Fig. 1.

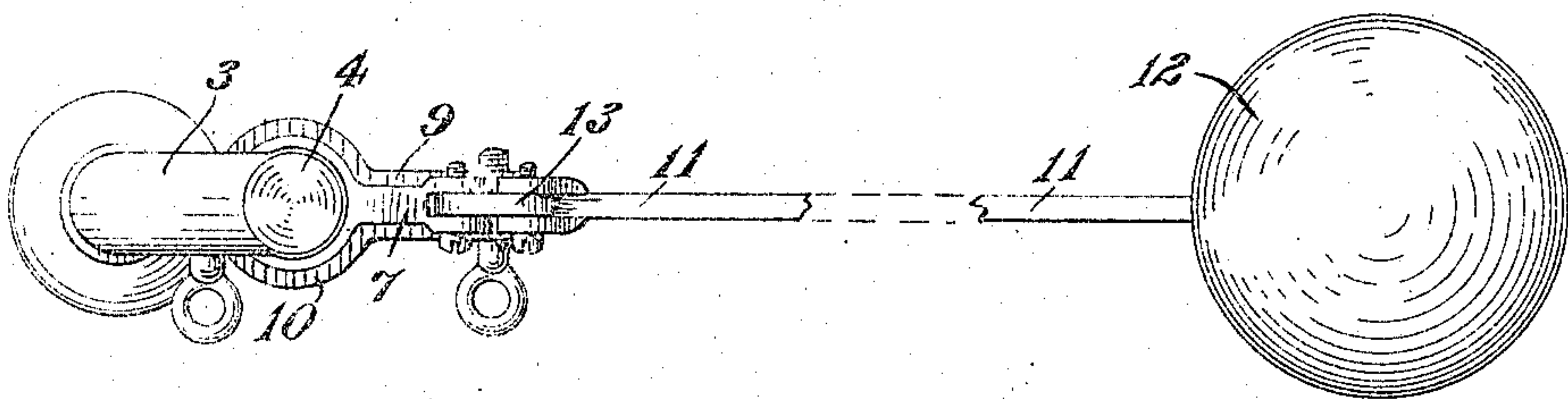


Fig. 2.

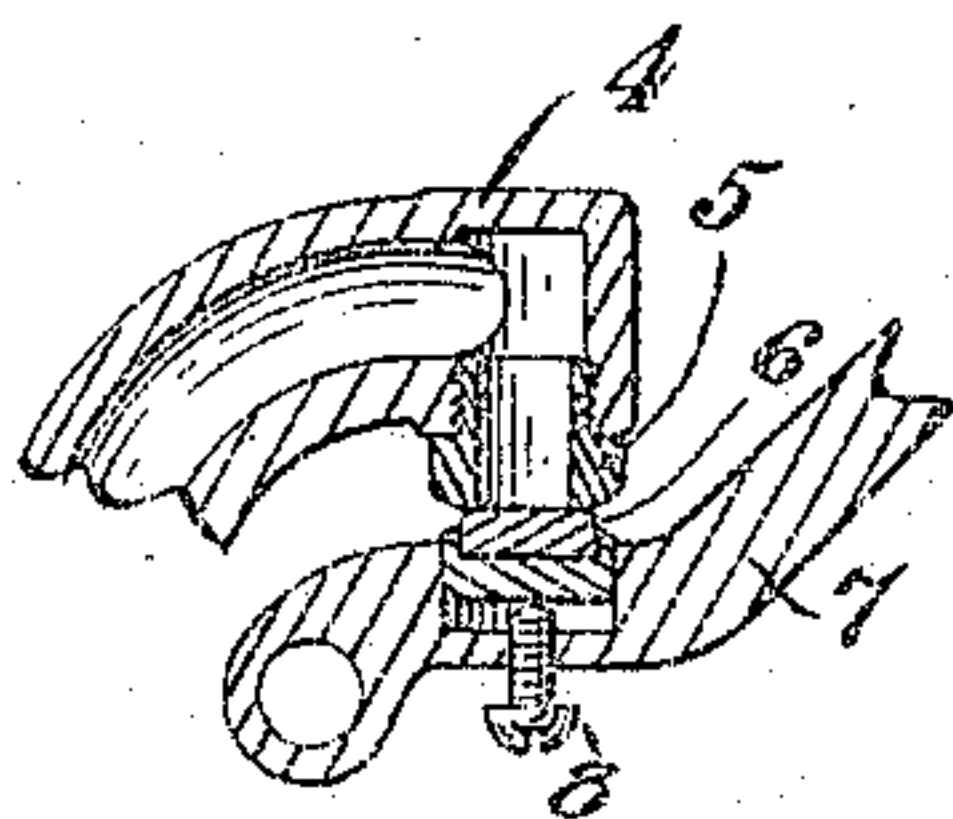


Fig. 3.

Witnesses
H. O. Van Antwerp.
Georgiana Chace

Inventor
Oscar F. Glidden
By
Luther T. Moulton
Attorney

UNITED STATES PATENT OFFICE.

OSCAR F. GLIDDEN, OF GRAND RAPIDS, MICHIGAN.

SUPPLY-VALVE FOR FLUSH-TANKS.

No. 899,486.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed October 24, 1905. Serial No. 284,220.

To all whom it may concern:

Be it known that I, OSCAR F. GLIDDEN, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Supply-Valves for Flush-Tanks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in supply valves for flush tanks, and its object is to provide a submerged valve not likely to get out of order; to provide such valve with a downward discharge to prevent escape of water from the top of the tank in case the valve should get out of order; to provide improved lever mechanism whereby the valve is securely closed, and to provide the device with various new and useful features, herein-after more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:

Figure 1. is a side elevation of a device embodying my invention; Fig. 2. a plan view of the same; and Fig. 3. a detail in vertical section of the adjustable closure.

Like numbers refer to like parts in both of the figures.

1 represents a portion of the bottom of the tank; 2 a tube extending vertically through the said bottom, and to which the water supply pipe is attached; 3 is an extension of the tube 2, curved in an arc of about ninety degrees and terminating in a head 4 open at the under side and provided with a detachable annular valve seat 5 surrounding a downward discharge opening, which opening is closed when the float rises, by means of a closure 6 mounted in a socket formed in a pivoted lever 7 and vertically adjustable by means of a screw 8. This lever 7 is pivoted at one end between lugs projecting laterally from the base of the curved extension 3 and at the other end is vertically movable, and operated by a connecting rod 13 pivoted thereto at one end and pivoted to the float lever 11 at the other end. This float lever is pivoted at one end to an arm 9 extending beneath the lever 7 and having an annular portion 10 opposite the screw 8 to permit access

to the same. To the outer end of the float lever 11 is attached a float 12, which rises as the tank is filled, and thus carries the end of the lever 7 upward and brings the closure 6 against the seat 5. The connecting rod 13 and the pivoted end of the lever 11 form a toggle lever and thus compound the leverage whereby the float exerts a very strong pressure to hold the valve in closed position. The discharge being downward, if the closure lever should be accidentally displaced, the water will be discharged into the bottom of the tank and will not fly over the top thereof as with a side or top discharge. The valve being submerged, is liable to accumulate sediment, but being devoid of any sliding or piston movements, it will not be obstructed, but will operate regardless of any sediment thereon.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is:

1. A supply valve for flush tanks, comprising a tube adapted to be inserted in a tank, a head on the inner end of the tube having a downwardly open valve seat, a lever pivoted at one end and extending beneath the valve seat, a closure mounted on the lever intermediate its ends, a rigid arm beneath the lever, a toggle lever between the end of the rigid arm and the movable end of the pivoted lever, and a float attached to the toggle lever.

2. A supply valve for flush tanks comprising a tube adapted to be inserted through the bottom of the tank, an upward and curved extension to the tube a head on the tube and having a downwardly open valve seat, a pivoted lever beneath the valve seat, a closure adjustably mounted on the lever and engaging the seat, a rigid arm beneath the lever, a float lever pivoted to the arm, a connecting rod pivoted at its respective ends to the closure lever and the float lever, and a float attached to the float lever.

3. A supply valve for flushing tanks comprising a tube adapted to be inserted in the bottom of the tank, an upwardly projecting curved extension to the tube, a head on the end of the extension and having a downward opening, a detachable annular valve seat in said opening, a lever beneath the valve seat

and pivoted to the base of the extension, a
closure mounted on the lever and engaging
the valve seat, an adjusting screw in the lever,
a rigid arm having an annular portion oppo-
5 site the screw and extending beneath the
lever, a float lever pivoted to the arm, a float
on said lever, a connecting rod pivoted at its
respective ends to said levers and forming

with the float lever, a toggle lever to operate
the closure lever.

In testimony whereof I affix my signature
in presence of two witnesses.

OSCAR F. GLIDDEN

Witnesses:

LUTHER V. MOULTON
GEORGIANA CHACE.