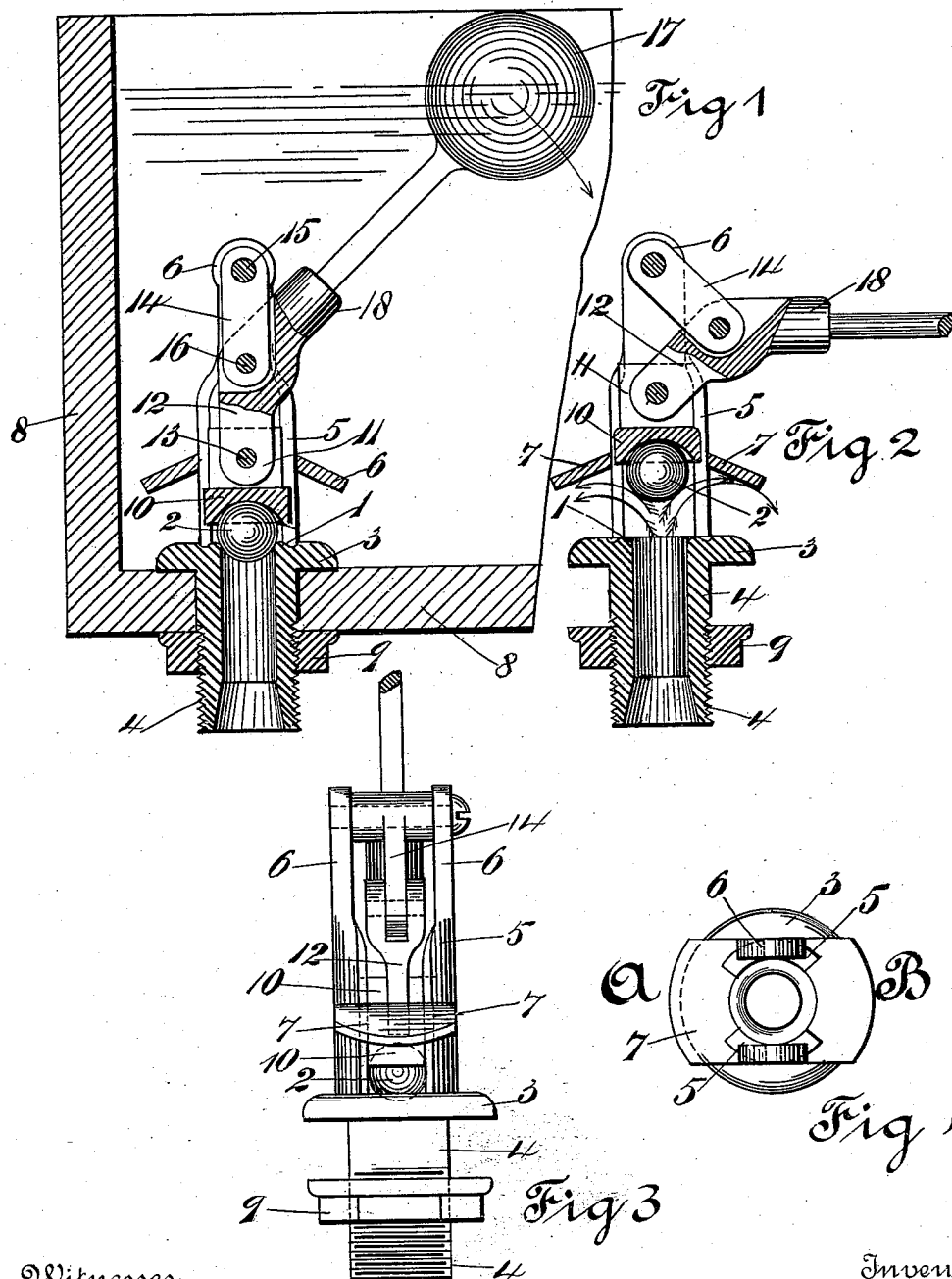


(No Model.)

J. J. BERRY.
TANK SUPPLY VALVE.

No. 522,644.

Patented July 10, 1894.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN J. BERRY, OF INDIANAPOLIS, INDIANA.

TANK SUPPLY-VALVE.

SPECIFICATION forming part of Letters Patent No. 522,644, dated July 10, 1894.

Application filed June 5, 1893. Serial No. 476,627. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. BERRY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Tank Supply-Valves, of which the following is a specification.

My invention relates to new and useful improvements in tank supply valves for use particularly in connection with flushing water tanks of water-closets.

The object of my invention is to provide a supply valve that will automatically operate to close the valve when the tank is full and open said valve when the tank is emptied of its contents; and to provide means whereby the supply of the inflowing water will be directed or deflected downwardly to avoid splashing and to cause a rotation of the valve to present different portions of its bearing surface to the valve seat. I accomplish these objects by means of the valve and the valve mechanism illustrated in the accompanying drawings in which similar numbers of reference designate like parts throughout the several views.

Figure 1. is a broken sectional view of a supply tank and showing my supply valve in section, and taken through the line A. B. See Fig. 4. Fig. 2. is a similar section of the same showing the valve in its open position. Fig. 3. is an end elevation of the valve, and Fig. 4. is a plan of the same, with the valve operating mechanism removed.

The supply valve is composed of the annular valve seat 1, having a central opening rounded at its edge to form a bearing for the ball valve 2, preferably of rubber, or other yielding or elastic material, the collar 3, the hollow threaded stem 4, the vertically projecting guide standards 5, the toggle supporting ends 6, and the downwardly inclined deflecting wings or ears 7, all of which are formed in one piece, and secured firmly to the bottom of the supply or flushing tank, 8, by means of the binding nut 9, which clamps the bottom of said tank. The guides or standards 5, have their inner guiding surfaces concave to receive the cylindrical sliding piece 10, which is adapted to slide longitudinally between them. The sliding hold-down piece

to receive the end 11, of the bottom toggle 12, which is pivoted on the pin 13, secured in said sliding piece. The top link 14, of the toggle is pivoted on the pin 15, secured on the standard ends 6, and the toggle pin 16. The stem of the float 17, is firmly secured in the socket 18 formed integral on the bottom toggle 12.

It is obvious that when the supply of water in the tank 8, is exhausted till the float 17 descends in the direction of the arrow shown in Fig. 1, and when the sliding piece 10 has moved upwardly into the position shown in Fig. 2, the ball valve 2, is released and is free to move upwardly by reason of the pressure of the inflowing water which forces said valve upwardly against the bottom concave surface of the said sliding piece 10.

The main feature of my invention is embodied in the arrangement of the valve and its actuating mechanism which is automatic in its action. By means of this special arrangement of toggle a great amount of pressure is brought to bear on the valve to hold it on its seat against a great pressure of a resisting fluid and to effectually close said valve and avoid leakage.

It is clear that the end of the sliding piece may be formed to close or seat on the valve seat, or a rubber valve disk may be secured on said sliding piece without departing from the spirit of my invention; but I prefer to use an independent globe or sphere valve in connection with this device as such more effectually closes the valve seat opening.

Having thus fully described the nature and construction of my invention, what I claim as new and useful, and desire to cover by Letters Patent of the United States therefor, is—

In a tank supply valve, the combination with an annular valve-seat having a central opening and vertically projecting standards formed integral thereon and on opposite sides of said valve opening, of a cylindrical sliding piece having its top end bifurcated, said piece adapted to slide longitudinally upwardly and downwardly between said standards, a sphere or ball between said sliding piece and valve seat and adapted to move upwardly and downwardly between said standards, fixed and downwardly inclined deflecting ears or wings connecting said standards

above said valve seat, a toggle link pivoted
on the top ends of said standards and a float
lever pivoted on the said valve between the
bifurcations thereof and fulcrumed on the
5 lower end of said toggle link with its fulcrum
point between its pivotal point and the float
end of said lever, substantially as and for the
purpose set forth.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit- 10
nesses.

JOHN J. BERRY.

Witnesses:

THOMPSON R. BELL,
JAMES E. BERRY.