No. 839,147. PATENTED DEC. 25, 1906.

W. S. HOLLAENDER.

FLOAT VALVE.

APPLICATION FILED DEC. 1, 1905.

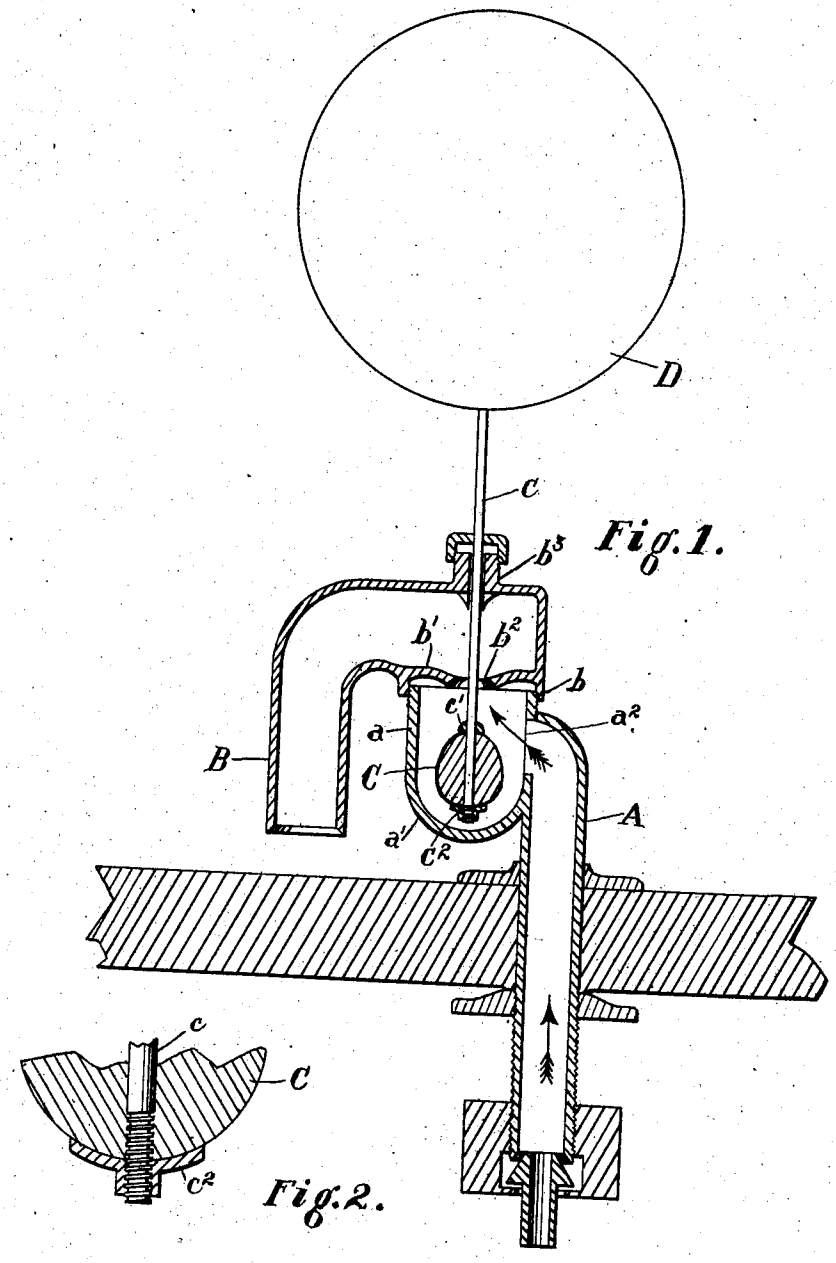


Fig. 1.

Fig. 2.

WITNESSES:

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FLOAT-VALVE.

No. 839,147. Specification of Letters Patent. Patented Dec. 25, 1906.

Application filed December 1, 1905. Serial No. 289,826.

To all whom it may concern:

Be it known that I, WALTER S. HOLLAENDER, a citizen of the United States of America, and a resident of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Float-Valves, of which the following is a specification.

My invention relates to that class of valve wherein the valve is carried upward to its seat to cut off the flow of water to a tank by a float carried upward in the tank by the inflow of water.

The object of my invention is a valve of this character which when the water is drawn off from the tank drops the valve below its valve-seat out of the current of the water flowing in through the valve, so as to leave a free and unrestricted flow of the water until it has almost reached the predetermined height in the tank, at which time the float is assisted in carrying the valve to its seat by the water flowing in through the valve-housing. This object is attained by the means illustrated in the accompanying drawings, in which—

Figure 1 is a view in central vertical section of the valve-housing and valve and in elevation of the float. Fig. 2 is a sectional detail view, upon an enlarged scale, of the lower end of the ball-valve and the valve-stem.

Referring to the parts, admission-pipe A has formed upon one side a cup a, which has a pocket a', which stands below the orifice a^2 near the upper end of the pipe A. Cup A is externally screw-threaded at its upper end to fit the annular extension b of the discharge-pipe B. Extension b has upon its interior a diaphragm b', within which is formed valve-seat b^2, which stands in the axis of the cup a. In axial alinement with the valve-seat b^2 pipe B has a gland b^3. The ball-valve C is conical in shape and is located below the valve-seat b^2, being held upon the end of the valve-stem c by a collar c' and a nut c^2. Valve-stem c passes through the gland b^3 and receives upon its upper end a float D.

The relative sizes of the pocket a' and of the ball-valve C are made such that when the ball-valve drops into the bottom of the pocket it is below the current of the inflowing water, as indicated by arrow in Fig. 1. In this position it is seen that there is a flow of water through the valve which is not obstructed by the ball-valve C, and that the inflowing water has no tendency to carry the valve toward its seat, so as to obstruct the flow of the water until just before the time when the water in the tank reaches its predetermined height, when the float carries the ball-valve C upward into the current of the inflowing water, which then has a tendency to assist the float in carrying the ball-valve to its seat.

What I claim is—

1. In a float-valve the combination of a valve-housing, a diaphragm in the housing, a valve-seat formed in the diaphragm, a pocket located below the valve-seat, an intake-pipe below the diaphragm with its orifice above the pocket, a ball-valve located below the valve-seat, a float and a vertical rod coupling the ball-valve and the float.

2. In a float-valve the combination of an intake-pipe having a cup formed upon its side near its upper end, the bottom of the cup extending below the orifice at the upper end of the pipe, a discharge-pipe having an extension engaging the cup and a diaphragm above the top of the cup with a valve-seat formed therein, a ball-valve located below the valve-seat and in its open position adapted to seat in the pocket below the line of the current, a float and a stem connecting the ball-valve and the float.

WALTER S. HOLLAENDER.

Witnesses:
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