

No. 758,012.

PATENTED APR. 19, 1904.

E. A. MARSH.
FLUSH VALVE.

APPLICATION FILED FEB. 5, 1904.

NO MODEL.

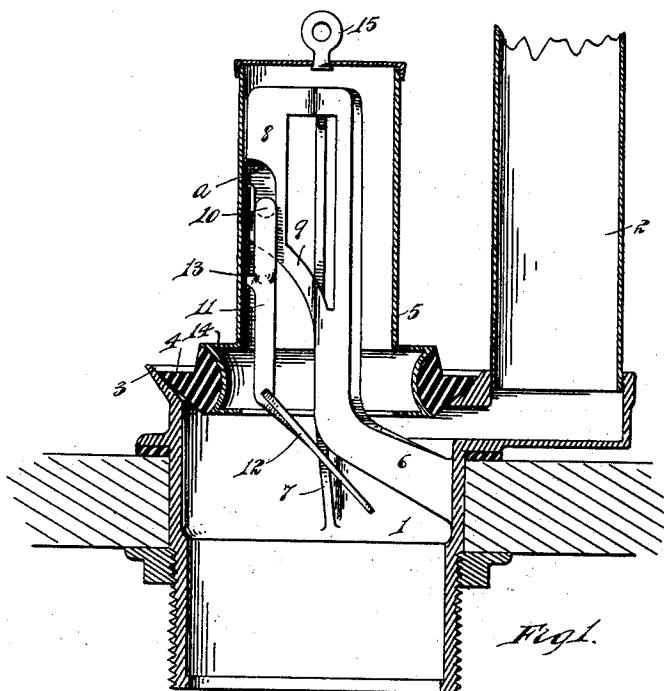


Fig. 1.

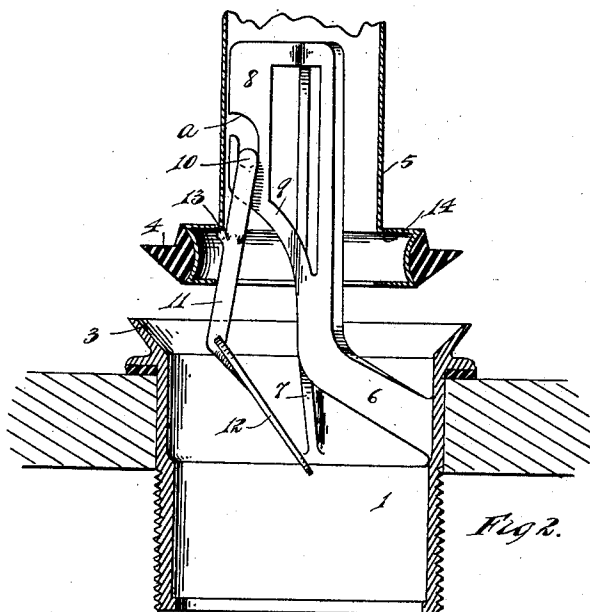


Fig. 2.

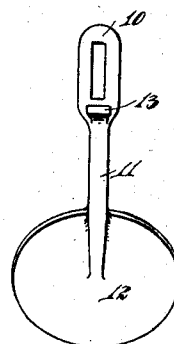


Fig. 3.

WITNESSES
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ELON A. MARSH, OF DETROIT, MICHIGAN.

FLUSH-VALVE.

SPECIFICATION forming part of Letters Patent No. 758,012, dated April 19, 1904.

Application filed February 5, 1904. Serial No. 192,191. (No model.)

To all whom it may concern:

Be it known that I, ELON A. MARSH, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Flush-Valves; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to flush-valves, and has for its object an improved self-sustaining valve which supports itself above the spud through which the water empties from the tank so long as water is flowing from the tank through the spud and which drops at once as soon as the water ceases to flow or as soon as the flow is so slight that its force no longer serves to sustain the valve.

In the drawings, Figure 1 shows the valve in connection with the spud, into which there is a waste-pipe connection at the side. Fig. 2 shows the valve having a hollow vertical stem, which serves as the waste-pipe. Fig. 3 is an elevation of the tongue and its hanger.

In Fig. 1, 1 indicates the spud with a side connection for a waste-pipe 2. At the top of the spud is a valve-seat 3, into which engages a somewhat flexible valve 4, that surrounds the lower end of a bell-like valve-stem 5. A flexible valve or packing 4 is forced over and into a grooved container 5, arranged as a flange at the bottom of the valve-stem. From the spud rises a guide, preferably made in the form of a three-part standard, of which two parts, 6 and 7, are secured to the inner wall of the spud, and the third part, 8, is supported as a hanger from the yoke 9, which unites the three parts. The part 8 serves as a guide, engaging against the inner part of the bell 5, and this part is provided with a notch *a* for the reception of cross-bar 10 at the upper end of the stem 11 of a tongue-like plate 12, which hangs in the spud below the mouth thereof and normally hangs somewhat inclined to the axis of the spud. On the stem 11 is a catch 13, upon which lower edge 14 of the bell at times engages and which serves to sustain the bell with the valve open so long as the engagement between the catch 13 and

the edge 14 of the bell continues. The top of the bell is closed in and is provided with a lifting-eye 15, by means of which it is lifted manually until the edge 14 of the bell rises above the catch 13, and immediately, if the tank be full, the water begins to escape through the spud, and the weight and pressure of the water acting on the tongue 12 tends to turn it to bring the face of the tongue 12 to a position approaching parallelism to the current or to the axis of the spud. The pressure forces the catch strongly against the edge 14 and holds the valve and its connections in an elevated position so long as the water continues to exert a force on the tongue sufficiently to overcome the action of gravity on the weight of the valve and its connections. As soon as the forcing action of the water ceases the weight of the valve and its connections cause the valve to drop to its closing position again, where it remains until again manually lifted.

In Fig. 2 all the parts corresponding to those described with reference to Fig. 1 are the same, except that the top of the bell is removed and the tubular part extended high enough to form the ordinary waste-pipe, and the waste-pipe 2 is removed entirely.

What I claim is—

1. In a flush-valve, in combination with an outflow-spud and a valve-seat at the top thereof, a valve seating thereon and provided with a hollow stem, a guide secured to the spud and projecting into the stem, a hanger suspended from said guide provided at its lower end with a tongued plate arranged obliquely to the axis of the spud, and with a catch arranged to engage under an edge of the valve-stem, substantially as described.

2. In a valve for flush-tanks, in combination with a discharge-pipe provided with a valve-seat, a valve arranged to seat thereon, a catch provided with means adapted to be actuated by the flowing water to swing the catch under a part of the valve-stem, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

ELON A. MARSH.

Witnesses:

MAY E. KOTT,
CHARLES F. BURTON.