

(No Model.)

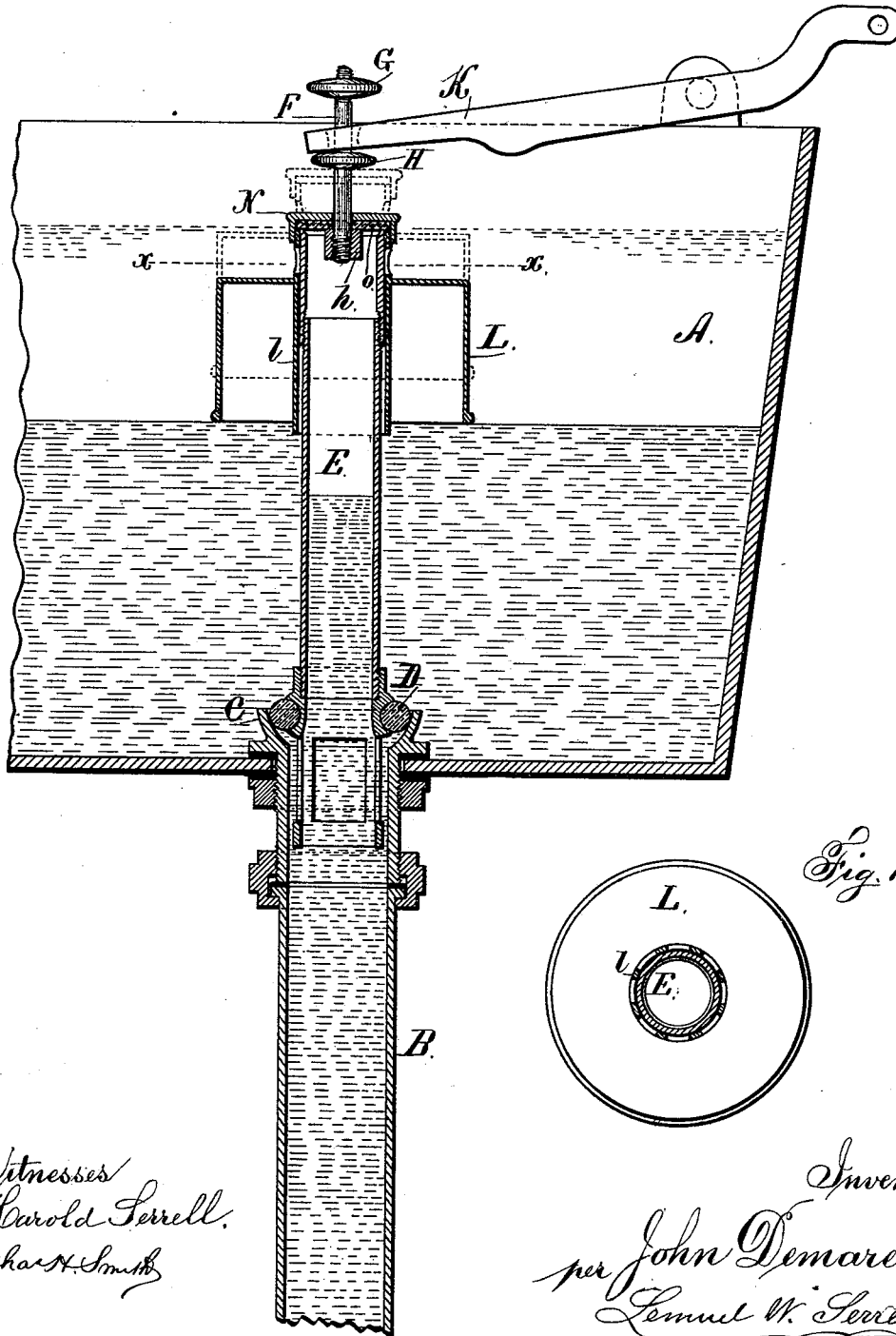
J. DEMAREST.

OVERFLOW VALVE FOR WATER CLOSET CISTERNS.

No. 386,918.

Patented July 31, 1888.

Fig. 1.



Witnesses
Harold Serrell.
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UNITED STATES PATENT OFFICE.

JOHN DEMAREST, OF NEW YORK, N. Y., ASSIGNOR TO THE J. L. MOTT IRON WORKS, OF SAME PLACE.

OVERFLOW-VALVE FOR WATER-CLOSET CISTERNS.

SPECIFICATION forming part of Letters Patent No. 386,918, dated July 31, 1888.

Application filed December 13, 1887. Serial No. 257,751. (No model.)

To all whom it may concern:

Be it known that I, JOHN DEMAREST, of the city and State of New York, have invented an Improvement in Overflow-Valves for Water-Closet Cisterns, of which the following is a specification.

In Letters Patent No. 348,663, granted to me, a valve is represented with an overflow-pipe connected therewith and a bell-shaped float at the upper end, which float rises to open the overflow-pipe when the water in the cistern reaches its highest point. In this instance, however, the upper end of the overflow-pipe is not closed sufficiently tight by the descent of the bell-float for the purposes of my present improvements.

In water-closets known as "wash-out" closets the rush of water carries the excreta out of the concave bottom to a delivery at one side, and in cases where the water continues to flow unobstructedly the momentum carries the water over to the delivery-pipe, so that sufficient does not remain in the bottom of the basin to prevent the excreta adhering when the closet is used the next time.

In my present improvement the bell-float is provided with a sliding tube surrounding the overflow-pipe and a valve at the upper end, so that when the water descends the valve closes the upper end of the overflow-pipe and the water in the flushing-pipe is confined and its momentum checked by atmospheric pressure, so that it descends slowly and passes into the bowl of the closet and fills the same sufficiently to prepare the closet for use the next time.

In the drawings, Figure 1 is a vertical section of the cistern and valve, and Fig. 2 is a sectional plan at the line *x x*.

The cistern A is of a suitable size and provided with float and supply valve, as usual, and from the bottom of the cistern the flushing-pipe B passes to the water-closet, and at the upper end of the flushing-pipe is a valve-seat, C, for the valve D upon the tubular stem E, which tubular stem forms the overflow, and there is a rod, F, attached to a bridge, *h*, at the upper end of the tube E with

nuts or collars G H, against which the eye of the lever K acts in raising the valve to flush the closet.

The float L is in the form of an open inverted cylinder or bell having a central tube, *l*, that is sufficiently large to slide freely upon the tubular stem E, and the cap N is screwed upon the upper end of the tube *l* and confines the edges of the valve *o*, of india-rubber or leather, to the top end of the tube *l*, and the cap and valve can slide upon the rod F; but when the valve rests upon the upper end of the tubular stem E and the surface of the bridge *h* the tubular stem is made air-tight, or nearly so. There are holes through the tube *l* above the top of the bell-shaped float, and when the water rises in the cistern sufficiently to lift the float these holes are open and water can overflow through the same should the supply-cock fail to act properly.

When the valve D is lifted, the water rushes down the flushing-pipe into the closet, and as the level of the water in the cistern is lowered the valve *o* closes tightly, and as soon as the valve D is allowed to descend and close on its seat the water is confined in the flushing-pipe B and held there by the vacuum action in consequence of the valve D and valve *o* being air-tight, or nearly so; but the column of water will trickle down slowly into the closet-basin and fill the same to the required depth, because bubbles of air will pass in at the lower end of the flushing-pipe, or else the valve *o* will allow a slight admission of air, so that the water will pass down very gradually and will not have sufficient momentum to carry the water across or out of the closet-basin, and the said water will remain in the basin to fit it for use the next time.

I claim as my invention—

1. The inverted or bell float having a central tube perforated above the top of the float, a cap screwed upon the top of the tube, and a valve below the cap for closing the upper end of the overflow-tube, for the purposes and substantially as specified.

2. The combination, with the closet cistern, the flushing-pipe, and the valve and seat, of

a tubular stem forming the overflow-pipe, the inverted bell-shaped float having a central tube around the overflow-pipe, with openings in the upper part above the float, a cap screwed
5 on the said tube and a valve confined by the cap, a rod and lifter for raising the tubular valve-stem, valve and parts therewith connected, substantially as set forth.

Signed by me this 1st day of December, 1887.

JOHN DEMAREST.

Witnesses:

E. CLINTON SMITH.

JOHN ABEL.