

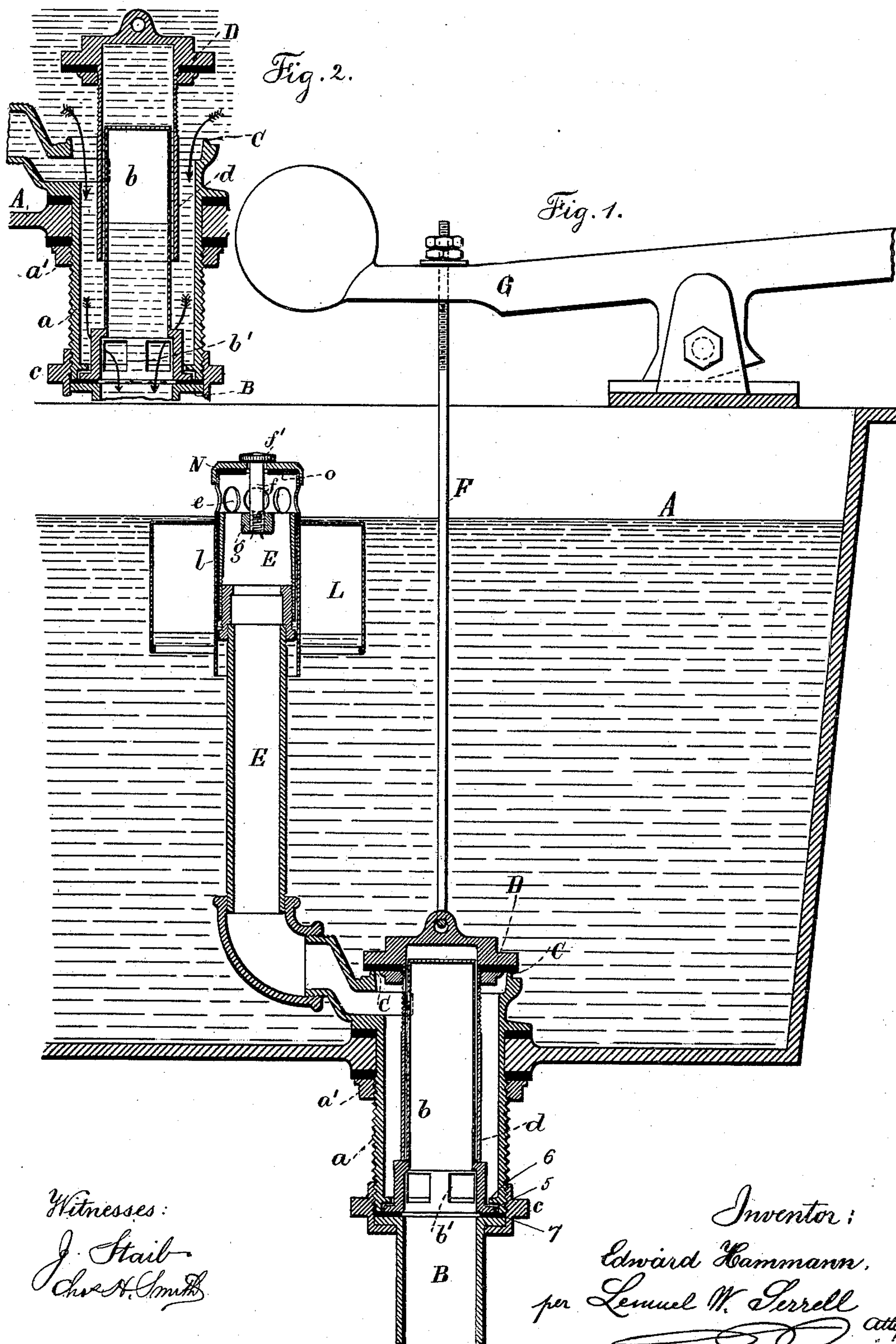
(No Model.)

E. HAMMANN.

VALVE FOR WATER CLOSETS, &c.

No. 398,149.

Patented Feb. 19, 1889.



Witnesses:  
J. Stail  
Chas. H. Smith

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# UNITED STATES PATENT OFFICE.

EDWARD HAMMANN, OF BROOKLYN, ASSIGNOR TO THE J. L. MOTT IRON WORKS, OF NEW YORK, N. Y.

## VALVE FOR WATER-CLOSETS, &c.

SPECIFICATION forming part of Letters Patent No. 398,149, dated February 19, 1889.

Application filed November 12, 1888. Serial No. 290,524. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD HAMMANN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Valves for Water-Closet Cisterns; and the following is declared to be a full and exact description of the same.

Valves for water-closet cisterns have been provided with a regulating device that allowed the valve to close gradually after it had been lifted.

My invention relates to a tubular stand-pipe having openings through its base and supported within the thimble that connects the flushing-pipe to the cistern and forms at its upper end the valve-seat, and there is a tubular pendent guide to the valve surrounding the stand-pipe, so that water is drawn into the pendent guide-pipe as the valve is raised, and this prevents the valve descending rapidly and regulates the flushing action.

In the drawings, Figure 1 is a vertical section of the cistern overflow and float and of my improved valve, which is shown as closed. Fig. 2 is a vertical section of the valve as raised.

A represents the cistern, which is of any desired size and provided with a float and supply valve, as usual.

B is the upper part of the discharge-pipe passing to the water-closet.

C is the valve-seat, and D the valve.

F is a rod connected to the valve D, and G the lever to which the rod F is connected, and which lever is acted upon by a pull-chain and handle (near the closet) to raise and open the valve D in flushing the closet.

The tubular thimble *a* passes through the bottom of the cistern A, and is secured by a nut, *a'*, and is made water-tight by packing-rings or cement.

The valve-seat C, upon which the valve D rests, is at the upper end of the tubular thimble *a*, and the lower end of the thimble is connected to the pipe B by a coupling-ring, *c*.

The stand-pipe B is of smaller diameter than the interior of the tubular thimble *a*, and is received within said thimble, its upper end being closed and its lower end open, and there is a perforated ring-base, *b'*, having a flanged

edge, 5, by which it is held between an inward flange, 6, near the lower end of the thimble *a* and the washer 7 at the upper end of the pipe B, and said ring-base *b'* is thereby kept in position; but it may move laterally or yield slightly to accommodate the other parts.

The lower end of the tubular overflow E is connected by elbows to one side of the tubular thimble *a*, and I provide a float, L, in the form of an inverted bell, and having a central tube, *l*, surrounding and sliding upon the upper end of the overflow-tube E. Said tube *l* is made with a cap, N, and a valve, *o*, of leather or rubber, and there are openings at *e* around the upper portion of the tube *l*, and I provide a rod, *f*, secured in the bridge *g* and passing through the cap N, and having a head, *f'*, and the cap slides on this rod *f* as the float rises, the head *f'* preventing further upward movement. A float and overflow like this is described and shown in Patent No. 386,918, in which the tube E forms the valve-stem.

The operation of my improved valve is as follows: The lever G is tilted by the downward movement of the pull-chain, and the rod F, valve D, and tube *d* are raised into the position shown in Fig. 2. The water in the cistern now rushes down the chamber *a* through the openings in the base *b'* and down the pipe B to the closet. As the valve D and pipe *d* are raised, a partial vacuum is created between them and the stand-pipe *b*, which, as the water flows into the thimble *a*, causes the water to rise and fill the space between the pipes *d* and *b*. The lever G is now released and assumes its normal position, and as it no longer holds up the valve D said valve is free to descend to its seat, which it will do gradually, because the water between the pipes *d* and *b* holds up the valve; but the water is forced out gradually by the weight of the valve, the pipe *b* acting as a guide for the pipe *d*, and causing the valve D to come properly to its seat. The valve may be raised to a greater or less height, and thereby the time of closing will be varied according to the quantity of water that has to pass out from between the stand-pipe *b* and the tubular hanging guide of the valve.

I claim as my invention—

1. The combination, with the cistern and discharge-pipe to the closet, of a tubular thimble passing through the bottom of the cistern and having a valve-seat at its upper edge and connected to the discharge-pipe at its lower end by a coupling-ring, a stand-pipe and perforated ring-base within and secured to the thimble, a valve, and an open-ended pendent pipe from said valve, said pipe surrounding the stand-pipe, substantially as and for the purposes set forth.

2. The combination, with the cistern-valve and discharge-pipe, of the thimble attached to the discharge-pipe and to the cistern and hav-

ing the valve-seat at the upper end and an inward flange, 6, at the lower end, and the tubular stand-pipe closed at its upper end and having holes through its base, and a flange, 5, to pass below the flange 6, and the hanging pipe attached at its upper end to the valve and surrounding the stand-pipe, substantially as set forth.

Signed by me this 21st day of September, A. D. 1888.

EDWARD HAMMANN.

Witnesses:

HENRY MORFORD,  
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