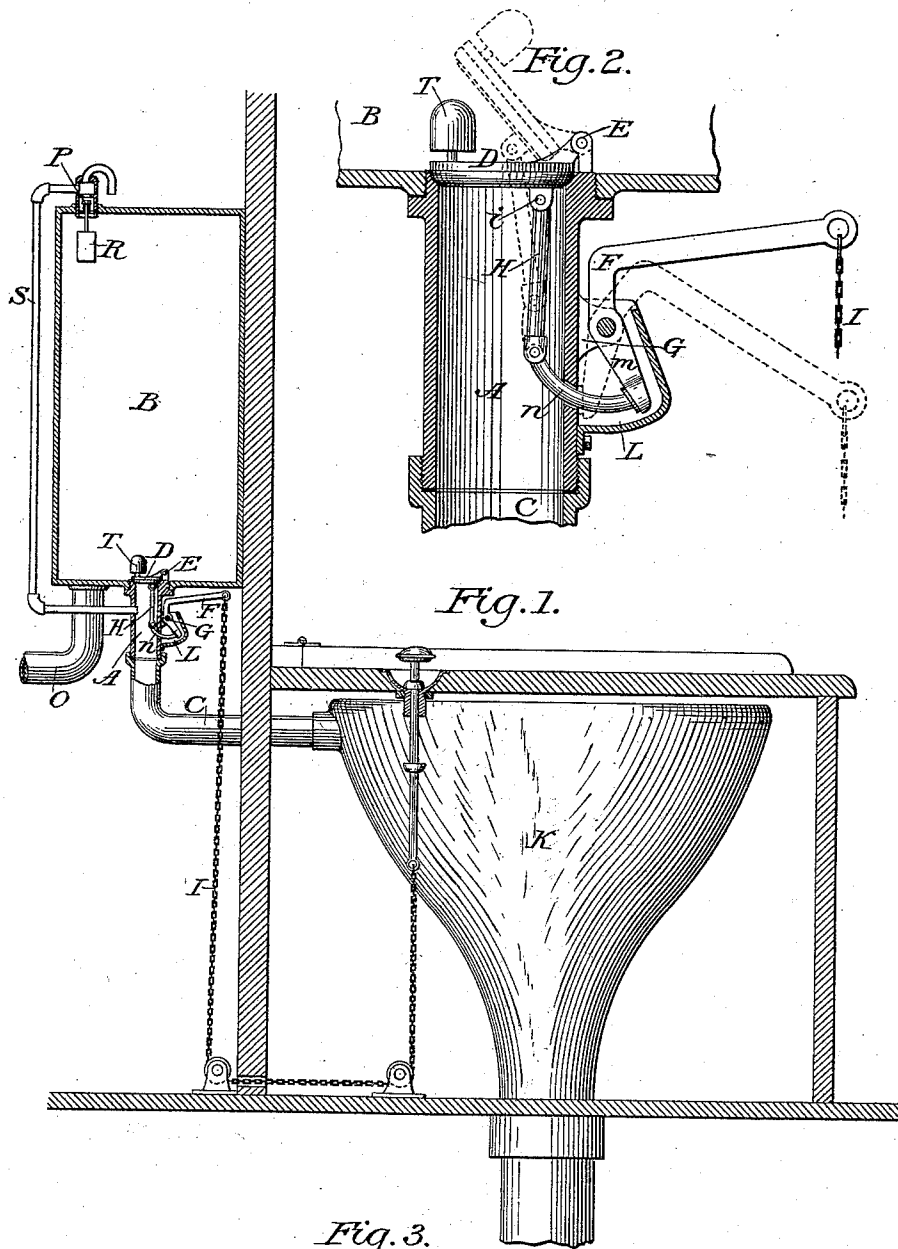


(No Model.)

G. MICHAUD.
FLUSHING VALVE.

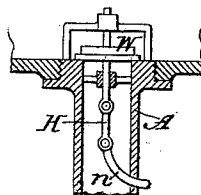
No. 408,124.

Patented July 30, 1889.



Attest:

A. St. Jeshira
E. M. Watson



Inventor:

Gilbert Michaud
By David A. Burr
Atty.

UNITED STATES PATENT OFFICE.

GILBERT MICHAUD, OF NEW YORK, N. Y.

FLUSHING-VALVE.

SPECIFICATION forming part of Letters Patent No. 408,124, dated July 30, 1889.

Application filed April 6, 1889. Serial No. 306,272. (No model.)

To all whom it may concern:

Be it known that I, GILBERT MICHAUD, of the city, county, and State of New York, have invented a new and useful Improvement in Flushing-Valves for Use in Connection Specially with Service-Boxes under Pressure; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to an improved flushing-valve for water-closets.

It has for its object to permit the use in connection with a water-closet of an air-tight service-box placed at or near the level of the closet-seat and connected directly with the service-pipe, so as to be subjected to the pressure therein.

It consists in the combination, with a gravitating valve fitted to close automatically upon a seat in the upper end of a short section of pipe adapted to be screwed directly into the bottom of the service-box, of a lever pivoted on the outer periphery of the pipe, and whose inner arm curved in the form of an arc, having the pivot at its center, passes through the side of the pipe, and is coupled by a connecting-link to the valve, so that the valve may be readily forced open by a movement of the lever. By means thereof a jointless service-box cheaply cast in one single piece may be put up in close proximity to the bowl or hopper of the closet in manner to permit of ready access to the valve, and the valve itself be operated without danger of leakage therefrom.

In the accompanying drawings, Figure 1 is a sectional view of a water-closet fitted with my improved flushing-valve and jointless service-box; Fig. 2, a sectional detail, upon an enlarged scale, of the valve and its connections detached; and Fig. 3 shows a modification in form of the valve.

A represents a short section of pipe threaded at both ends and flanged or otherwise adapted to be coupled directly to a service-box B and to a discharge-pipe C. The upper end of this section of pipe A is fitted to serve as a seat for a valve D, which is preferably hinged at one side to an ear E, projecting from said end,

as shown in Figs. 1 and 2. A lever F is pivoted between ears G G on the outer periphery of the pipe A, immediately in line with the hinge E of the valve, and at a suitable distance below it, as shown in the drawings. The inner arm of said lever extends in a straight length *m* (see Fig. 2) downwardly for a short distance from its pivot, and is then bent inwardly with a curve *n*, having the pivot as its center, so as to work freely through a lateral aperture in the pipe. The free end of this curved length *n* of the lever is pivoted to a link H, by which it is coupled to the valve, the upper end of said link being pivoted between lugs *i*, projecting from the under side of the valve near to its hinged edge, as is clearly shown in Fig. 2. The outer arm of the lever F extends horizontally at an angle with the straight length *m* of its inner arm, and is connected in the customary manner by a chain I with the pull of the closet K.

The arms *m* and *n* of the lever F on the outside of the pipe are inclosed within a pocket or safe L, attached to the pipe, so that any moisture leaking through the joint between the arm *n* and the pipe will be caught in said pocket and returned into the pipe through the same joint.

The service-box B is connected directly with the water-main by means of a service-pipe O, and is fitted in the customary manner with an air-valve P, closed by a float R, and which is provided with an overflow-pipe S to convey away any moisture escaping through the valve. The entire apparatus is thus guarded against the possibility of damage from leakage, and may be readily secured in place, while the valve admits of being easily removed for inspection or repair. By combining the curved lever directly with the peripheral wall of the pipe a straight link may be used to couple the valve and lever within the pipe with the least resistance to the direct flow of water through the pipe. By preference a weight T is mounted upon the valve to insure its prompt action.

It is evident, although the curved arm *n* of the lever F is represented as coupled to a hinged valve, it may be coupled in like manner to a puppet-valve W, as illustrated in Fig. 3.

I claim as my invention—

1. The combination, substantially as described, with a pipe and a valve automatically closing the same transversely to its bore, of a lever pivoted upon the outer periphery
5 of the pipe, an arm actuated thereby and curved to extend through the peripheral wall of the pipe upon an arc having the pivot of the lever as its center, and an intermediate link extending longitudinally within the pipe
10 substantially parallel with its bore.

2. The combination, with a pipe, a valve closing the same, and a lever pivoted laterally upon the outer face of the pipe having an arm extending into the pipe upon a curve,
15 having the pivot as its center, and which is coupled to the valve to move it, of an outer case or safe secured to or formed upon the pipe to inclose the lever and its arm below the pivot, substantially in the manner and for the purpose herein set forth.

3. The combination, with a water-closet

bowl or hopper, a service-box connected with a water-main under pressure, and an intermediate connecting-pipe, of a valve closing
25 said pipe and opening toward the tank, a lever pivoted upon the outer periphery of the pipe and having an arm curved to extend and move with a close joint through the peripheral wall of the pipe upon an arc having the pivot of the lever as its center, a link
30 extending longitudinally within the pipe and coupling the arm and valve, and a device for operating the lever from the closet, substantially in the manner and for the purpose
35 herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GILBERT MICHAUD.

Witnesses:

A. N. JESBERA,
E. M. WATSON.