

J. Keane.
Water Closet.

N^o 105,217.

Patented Jul. 12, 1870.

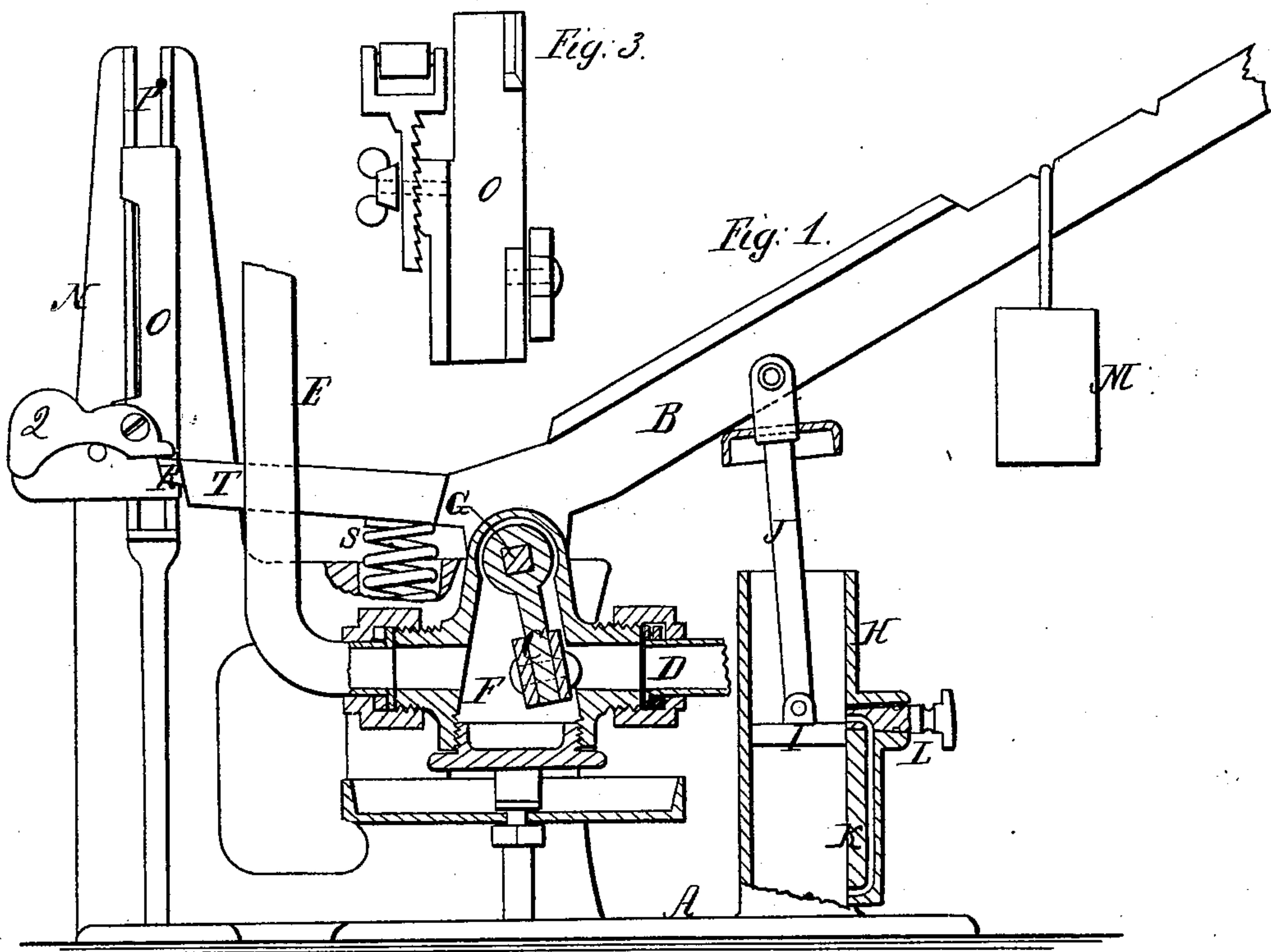
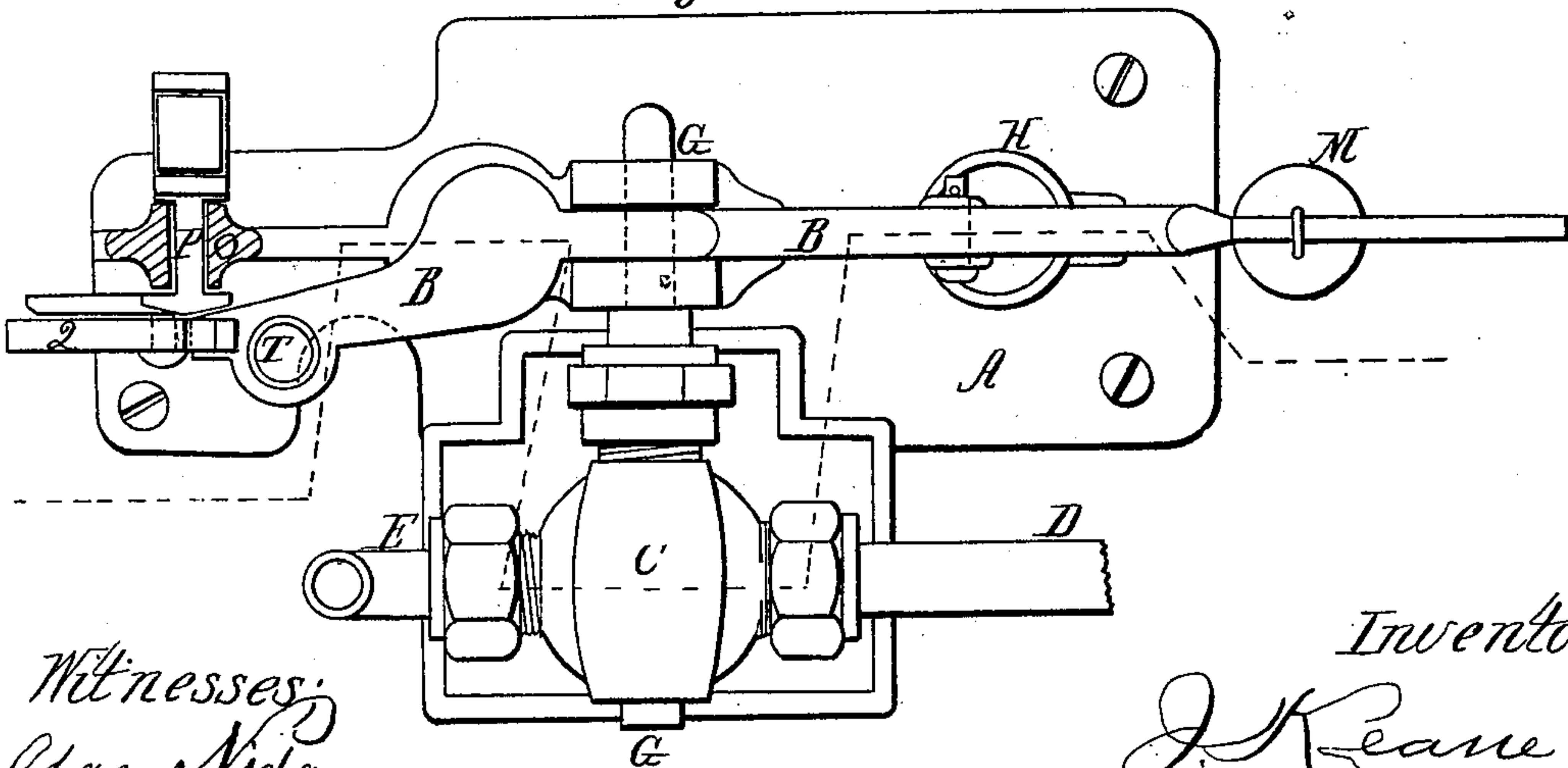


Fig. 2.



Witnesses;
Chas. Aida
Wm. L. Brooks

Inventor;
J. Keane
PER Munn & Co

United States Patent Office.

JOHN KEANE, OF NEW YORK, ASSIGNOR TO HIMSELF AND GEORGE H. BROWN, OF MILBROOK, N. Y.

Letters Patent No. 105,217, dated July 12, 1870.

IMPROVEMENT IN WATER-CLOSET VALVULAR APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, JOHN KEANE, of the city, county, and State of New York, have invented a new and useful Improvement in Water-closet Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in apparatus for governing the flow of water to and from the basins of water-closets, having more especial reference to a water-closet apparatus for which Letters Patent were granted me, bearing date the 25th of May, 1869, and numbered 90,453; and

The invention consists in the supply-valve, and in the manner in which it is operated and governed, and in the combination of parts as hereinafter more fully described.

In the accompanying drawing—

Figure 1 represents a vertical section of the apparatus through the line *xx* of fig. 2.

Figure 2 is a top or plan view.

Figure 3 is a detailed view of the sliding device for opening and closing the pan.

Similar letters of reference indicate corresponding parts.

A represents the bed-plate of the apparatus upon which the operating parts are supported.

B is the lever which is attached to the stem of the supply-valve.

C represents the supply-valve.

D is the supply-pipe.

E is the discharge-pipe, both of which are connected with the shell of the valve.

The valve C is double acting, and oscillates so as to alternately open and close the pipes E D. It is operated by means of its stem, and its faces close the water-pipes as it is oscillated by the action of the lever.

F is the valve-chamber.

G is the valve-stem.

H is a retarding cylinder, the piston I of which is connected with the lever by the rod J. The cylinder H contains liquid of any suitable kind, which liquid, as the piston descends, is forced through the small channel K, and discharged above the piston.

L is a cock by which the flow of liquid from beneath the piston is regulated.

M is a weight on the lever.

N is a slotted stand on the bed A.

O is a slide which works in the slot P of the stand.

Q is a catch or button under which the end R of the lever catches when that end of the lever is depressed, as seen in fig. 1.

S is a spiral spring which bears upward against the lever with a constant pressure, but its principal duty is to steady the downward motion of the lever and prevent concussion.

Near the end of the lever, T represents a socket which receives the end of an upright rod. Upon the upper end of this rod the seat of the water-closet bears, so that the weight of a person using the closet or sitting on the seat will depress the shut end of the lever, or bring it into the position seen in fig. 1. This action catches the end R under the button Q, and closes the supply-pipe D. The liquid in the retarding cylinder H has returned by its own gravity to the lower part of the cylinder beneath the piston.

The pan or valve beneath the seat is closed, and the apparatus remains in this position as long as the person using the closet remains on the seat.

When the person rises from the seat, the long end of the lever begins to descend and the short end to raise the slide O.

This movement of the lever is controlled entirely by the cock L, by which a longer or a shorter period of time is required for forcing the liquid through the channel K. As the lever thus operates the "wash" commences.

When the slide O has been raised by the short end of the lever a certain distance, the end R slips from the button Q, and the pan or valve, which had been dropped at the commencement of the movement, is closed by the descent of the slide. After this, the wash continues until the valve closes the pipe E, when the apparatus is at rest.

By the arrangement shown, the apparatus is entirely automatic in its action, or is operated by the weight of the person on the seat.

I do not confine myself strictly to an automatic apparatus, that is, to an apparatus where the pan or valve beneath the seat or at the bottom of the hopper is opened and closed by the action of the lever, but I design to embrace and combine other essential features of my invention in any form of water-closet apparatus which I may find advisable.

The double-acting oscillating valve C I esteem a new and essential feature of such apparatus. By its use I am enabled to dispense with one lever, and to otherwise greatly simplify my patented apparatus, and, consequently, to lessen the expense.

The advantages secured by these improvements must be obvious to all who are acquainted with the subject.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. In combination with an inlet-pipe, D, and outlet-pipe E, the valve C, constructed and arranged to

operate within the chamber F, substantially as described, for the purpose specified.

2. The combination of the lever B, valve C, and tripping device Q O, substantially as herein shown and described.

3. The combination of the retarding cylinder H with the valve C, and lever for operating the latter, substantially as described.

4. The combination of the retarding cylinder H

with the valve C, spring S, and lever B, provided with the socket T, and engaging with the tripping device Q O, each of said parts being constructed and all arranged as set forth.

JOHN KEANE.

Witnesses:

GEO. W. MABEE,
ALEX. F. ROBERTS.