F. POHLEY.

WATER-CLOSET.

No. 189,782. Patented April 17, 1877.

Fig. 1.

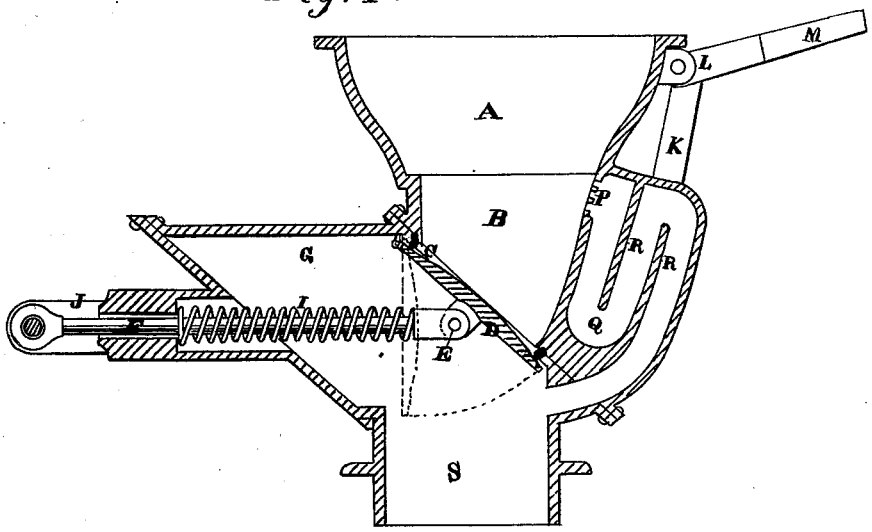
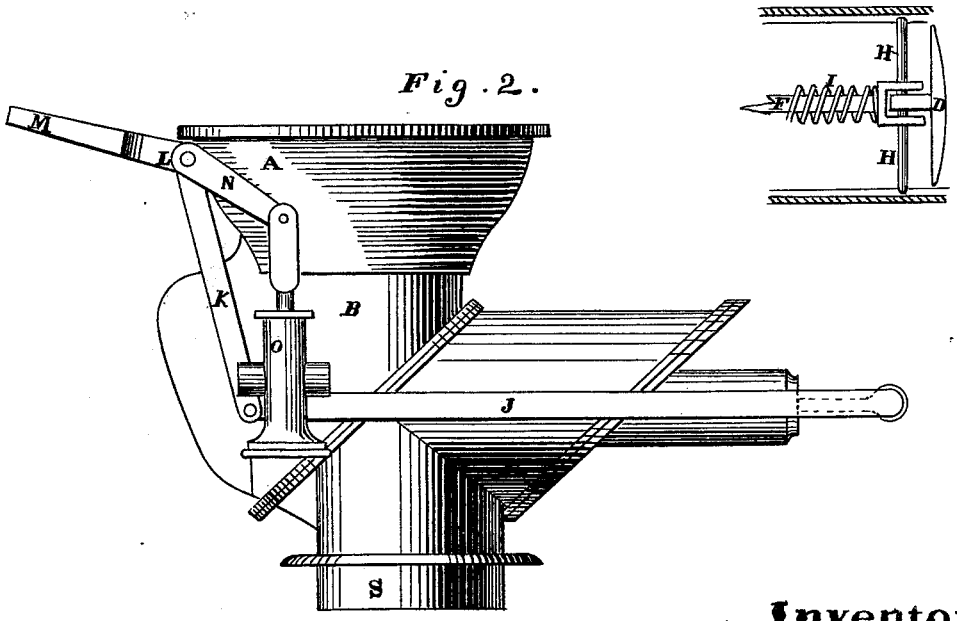


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK POHLEY, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN WATER-CLOSETS.

Specification forming part of Letters Patent No. **189,782**, dated April 17, 1877; application filed January 2, 1877.

To all whom it may concern:

Be it known that I, FREDERICK POHLEY, of the city and county of San Francisco, and State of California, have invented Improvements in Water-Closets; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to certain improvements in the construction of water-closets; and it is an improvement upon certain devices shown in a patent which was issued to me October 31, 1876, and numbered 183,864.

In this patent I have shown a valve closing against the end of a pipe, and retained in place by springs, which act upon it so as to resist a certain amount of pressure, and when the water within the pipe has accumulated to a certain extent its weight will overcome the tension of the springs, and thus allow the surplus to escape.

This device is susceptible of being applied to water-closets in its present form; but in order to make it practical and entirely successful, I have invented an improved construction, which is especially applicable to water-closets, and in this I have shown a peculiar adaptation and arrangement of my valve, which is placed at an angle, so that all of the contents of the bowl will be allowed to escape without any danger of clogging and preventing the closing of the valve.

The valve is supported upon a single stem, so guided as to move at an angle with the face of the valve-seat, and thus carry the valve to one side of the discharge-passage and entirely out of the way, and the closing spring surrounds or acts upon this stem or valve. The stem is connected with a suitable operating-lever, which opens the valve, and at the same time admits a flow of water to cleanse the bowl, and a trap of peculiar construction is formed to receive any overflow and prevent any return of odor.

Referring to the accompanying drawings for a more complete explanation of my invention, A is the bowl of my closet, which is properly secured upon the short pipe B. This pipe has its lower end formed at an angle, which, in the present case, is made about forty-five degrees, and around this periphery I fix, by means of a retaining-flange or other suitable device, a rim, C, of rubber, leather, soft metal, or other substance which will make a tight-fitting seat for the valve D. This valve is mounted, by means of a hinge-joint, E, upon the stem F, which moves horizontally in a suitable case, G, and is guided by means of a sort of cross head or arms, H, which move in horizontal guides, as shown. The valve may be closed and held to its seat by means of a single spiral spring, I, which surrounds the stem F, and presses against the back of the case G.

The valve D may be secured rigidly to the stem F, if desired, in which case it would need to be moved back a longer distance to make a clear opening than if hinged. When hinged, it will be seen that it will turn upon the hinge so as to stand nearly vertically as the stem F is drawn back, and this will leave a perfectly-free passage for the escape of the contents of the bowl, with but a small movement of the stem.

At the rear end of the case G the stem passes out through a stuffing-box, if necessary, so as to be tight, and has the connecting-rods J, extending forward to the arms K of the lever, which is hinged at L, and has the arm M so fitted as to be easily connected with a knob, or other means for operating it and through it the valve. Upon one side of this lever an arm, N, projects, and serves to operate a cock or valve in the water-pipe O, which supplies the bowl, and when the valve is opened this water-supply will be turned on, so as to entirely cleanse the bowl, and when the valve closes a small quantity of water will stand upon it, sufficient to insure a perfectly-tight joint.

As my device does not depend upon any form of bent-pipe trap or other means which allow a surplus of water which might be thrown or leak in to escape, it will be necessary to employ an overflow at P, to allow such surplus to escape without overflowing the bowl. This overflow-passage leads directly into a trap, Q, which is formed by casting a box upon the side of the pipe B, having partitions R, which open alternately at the bottom and top, finally allowing the water to pass into the outlet-pipe S below the valve.

By this construction the closet is at all times

insured against overflow, and no stench or odor can at any time pass upward from below.

The outlet-pipe S may be made in the form of a bent or S trap, if desired, as an additional precaution; but this will not be necessary, as, when the valve is opened for the escape of the contents of the bowl, the flooding with water will produce a downward current of air, which will prevent any return of the odor for the moment during which the valve remains open.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a water-closet, the inclined valve D, mounted upon the horizontally-moving stem F, said stem being provided with the guides H, and the operating-spring I for closing the valve, substantially as herein described.

2. In combination with the inclined valve D, with its stem F and spring I, the operating-lever K M and the connecting-rods J, substantially as herein described.

3. The lever K M, for operating the valve D by means of the stem F and rods J, said lever having a supplemental arm, N, to simultaneously open a valve in the water-supply pipe O, substantially as herein described.

4. In combination with the pipe B of a hermetically-closed water-closet, the overflow P and the trap Q, with its partitions R, the whole constructed and operating substantially as herein described.

In witness whereof I have hereunto set my hand and seal.

FREDERICK POHLEY.. [L. S.]

Witnesses:

GEO. H. STRONG,

FRANK A. BROOKS.