F. POHLEY.

Water-Closet.

No. 213,835. Patented April 1, 1879.

FIG. 1

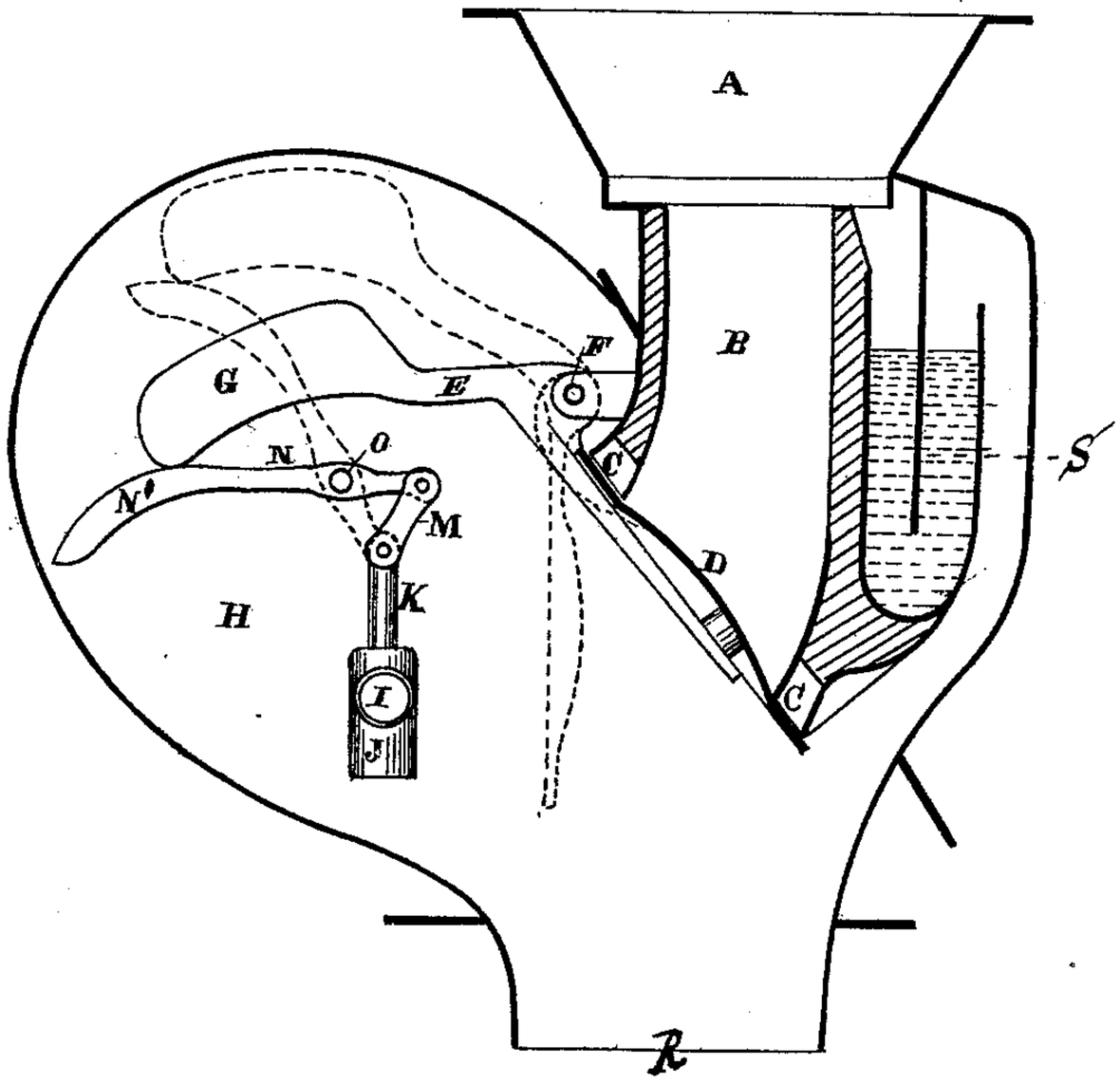
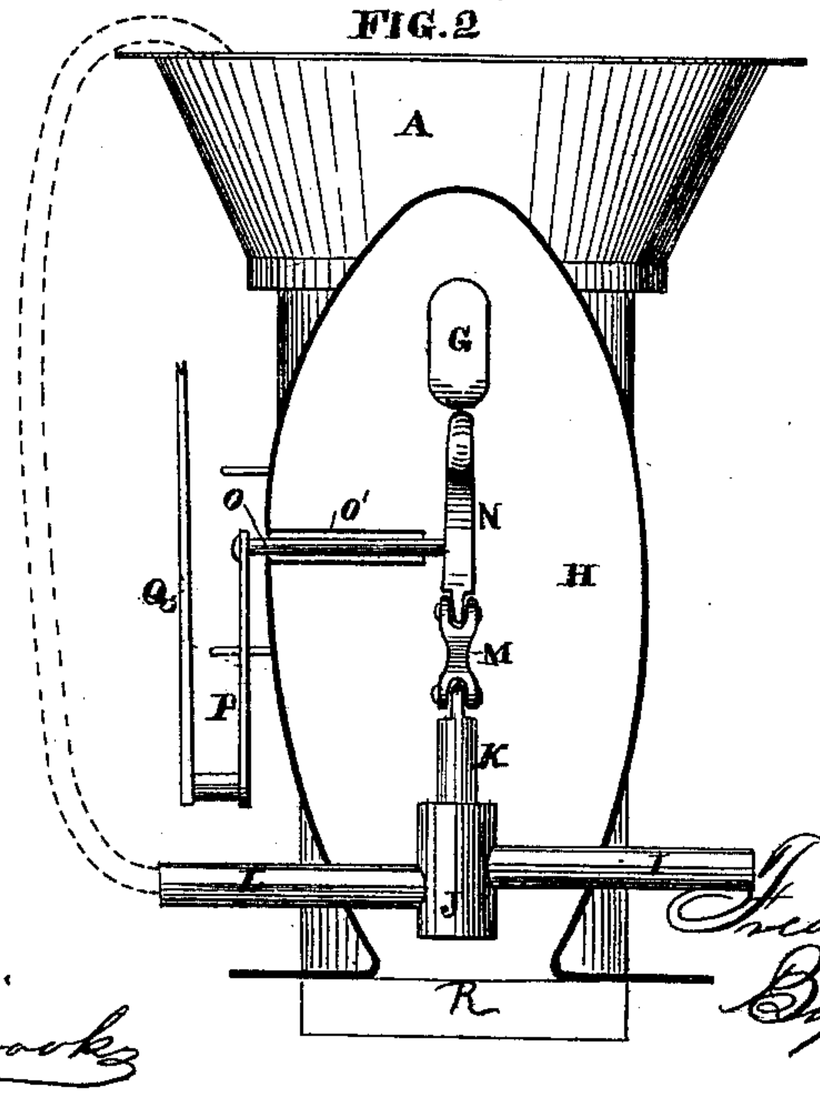


FIG. 2



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. **213,835**, dated April 1, 1879; application filed February 6, 1879.

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 my improvements refer more particularly to certain devices shown in patents issued to me October 31, 1876, No. 183,864, and April 17, 1877, No. 189,782.

My invention consists in the combination of a weighted valve with the water-supply devices, so they will operate conjointly, as hereinafter more fully described and claimed.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a vertical section of my trap. Fig. 2 is a transverse section through the chamber H.

In my previous patents 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 pressure, but on a certain weight of water accumulating it will overcome the tension of the springs and allow the surplus to escape. This valve is placed in the bowl at an angle, so that all of the contents of the bowl may escape without danger of clogging. The valve is supported on a single stem having suitable guides, so 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 out of the way, and the closing-spring acts on the stem of the valve. This stem is suitably connected with an operating-lever, which opens the valve, and at the same time admits a flow of water to clean the bowl, a peculiarly-constructed trap being formed to receive any overflow and prevent the return of any odor.

In my improved arrangement I dispense entirely with the springs, guides, and valve-stem, substituting instead a bell-crank lever, one end of which is attached to the valve and the other has a weight which will close the valve. I have also placed the valve admitting water to the bowl inside of a chamber connected to the bowl, so that any leakage which may occur will pass off into the soil-pipe. The lever connected with this water-valve operates the bell-crank lever at the same time, thus opening the large valve, which the weight on the lever closes when the handle is released.

In the accompanying drawings, A is the bowl of the closet, which is mounted on or secured to the pipe B. The lower end of this pipe is curved, as shown, so that the opening through it, with its retaining-flange or valve-seat C, is almost at right angles with the upper end of the pipe. The angle at which this valve-seat or flange may be placed may be anywhere between forty-five degrees and a right angle to the top of the pipe B, where it is joined to the bowl.

A valve, D, which fits close to the flange or seat C, is secured to the arm of the bell-crank lever E, which is hinged, as shown at F, and at the other end of this lever is the weight G, which keeps the valve close to its seat. This bell-crank lever, with its weight and valve, operates in the chamber H, which is attached to or cast with the bowl and pipe, as shown, and forms part of said bowl. A groove is formed around the face of the flange or seat C, as shown, and is fitted to receive an elastic ring, which insures the water and gas tight closing of the valve.

Passing into the chamber H is the water-pipe I, which leads from the mains or a suitable tank, and at its end is the valve-chamber J, in which is a valve, K, controlling the flow of water through the outlet-pipe L. This pipe L is led up into the upper edge of the bowl A at any suitable point, so as to wash out and fill said bowl with water. The valve K is hinged by the link M to the lever-arm N, as shown.

The fulcrum shaft or spindle O of this lever-arm N passes through a sleeve, O′, to the outside of the case or chamber, and is secured to an arm, P, to the other end of which is fastened the operating-lever Q. The lever-arm N is extended and curved, as shown at N′, so that its edge will come in contact with the weight G on the bell-crank lever E. As soon, therefore, as the operating-lever Q is lifted the lever N raises the valve K and admits the water to the bowl, while the same action lifts the weight on the bell-crank lever and takes the valve D away from its seat, allowing the

water and other substances in the bowl to pass off, they then passing off through the outlet-pipe R into the sewers.

S represents a peculiarly-formed trap, which is more fully described in Letters Patent No. 189,782, which were issued to me April 17, 1877, reference to which is hereby directly made. This trap insures the closet against overflow, and prevents any odor or gases from passing up into the bowl.

It will be seen from the construction described that the operative parts of this water-closet are simplified, and all springs which are liable to get out of order are dispensed with, and I am also enabled to avoid the use of guides, which will rust and work badly. As the valve controlling the water-supply is inclosed within the chamber any leakage which may occur will pass off through the soil-pipe. The sleeve through which the fulcrum-pin of the lever N projects acts as a stuffing-box, which prevents any odor escaping into the room in which the bowl is placed, and this is easily packed and kept tight.

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

1. The valve D and the weight G, secured to opposite ends of the bell-crank lever E, to operate as shown, in combination with the levers N N′, shaft O, and the water-inlet valve K, substantially as and for the purpose herein described.

2. The bowl A, with its opening and valve-seat C, and having the chamber H formed as a part of it, so as to inclose the bell-crank lever E, valve D, and weight G, and the water-inlet valve K, together with the levers N N′, the whole being operated by means of the lever P upon the outer end of the spindle or stem O, substantially as and for the purpose herein described.

In witness whereof I have hereunto set my hand.

FREDERICK POHLEY.

Witnesses:

GEO. H. STRONG,

FRANK A. BROOKS.