

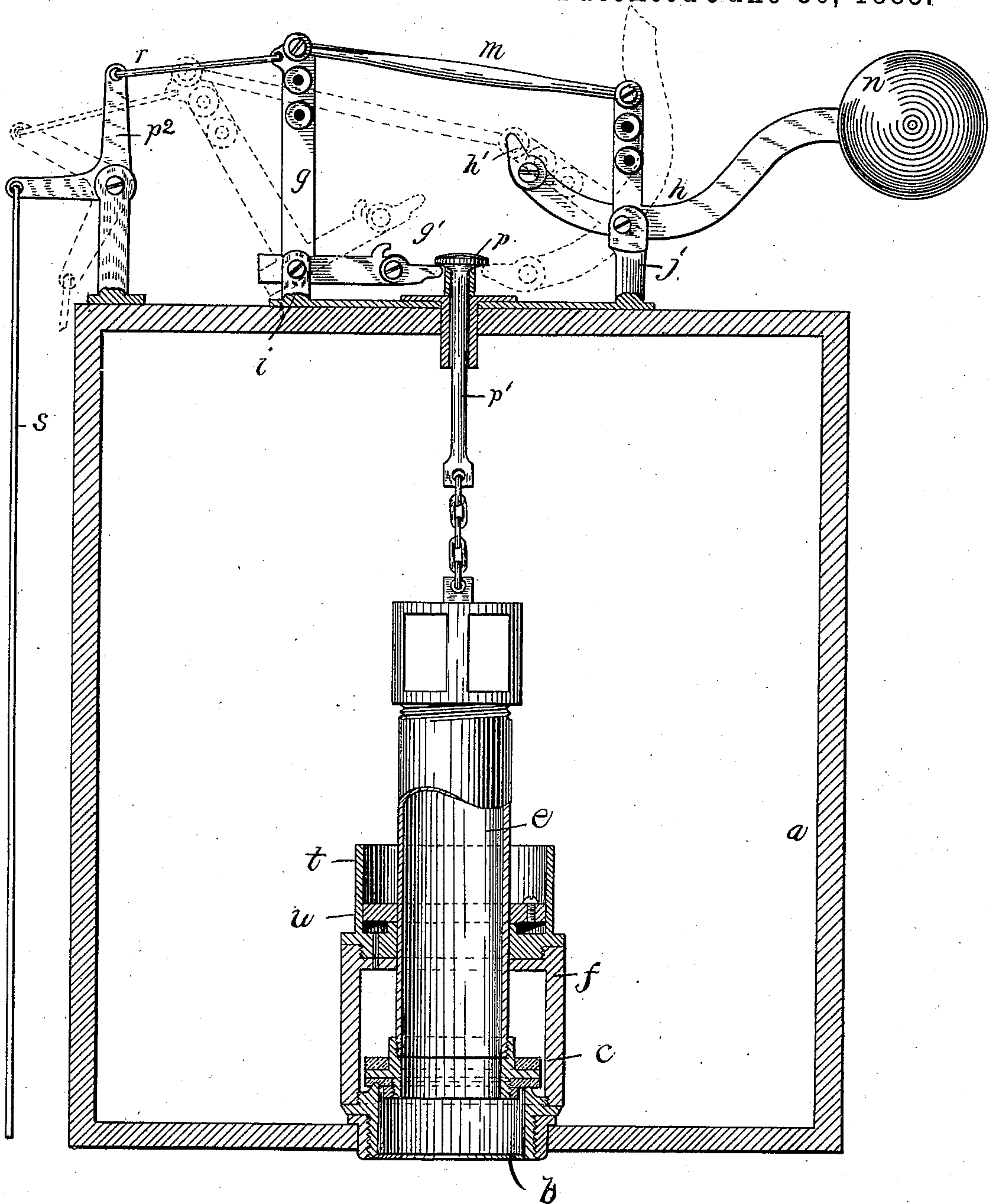
(No Model.)

T. McHUGH.

WATER SUPPLY APPARATUS FOR WATER CLOSETS.

No. 320,950.

Patented June 30, 1885.



WITNESSES:

H. Brown.

A. L. White

INVENTOR:

T. McHugh
by *Wm. Brown*
Attys

UNITED STATES PATENT OFFICE.

TIMOTHY McHUGH, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO WARD & CURLEY, OF SAME PLACE.

WATER-SUPPLY APPARATUS FOR WATER-CLOSETS.

SPECIFICATION forming part of Letters Patent No. 320,950, dated June 30, 1885.

Application filed March 23, 1885. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY McHUGH, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Water-Supply Apparatus for Water-Closets, of which the following is a specification.

This invention relates to apparatus operated, first, by the depression of a water-closet seat, to give the preliminary wash or discharge of water into the bowl, and, secondly, by the release of said seat to give the second or after wash; and it consists in the improved devices hereinafter described, whereby said results are obtained.

The accompanying drawing represents a sectional view of a tank having my improved devices.

In the drawing, *a* represents a supply-tank of ordinary or any suitable construction, having in its bottom an outlet-passage through a ring or valve-seat, *b*, secured to said bottom.

c represents a valve which normally rests on the seat *b* and prevents the escape of water, and is raised by the means hereinafter described when water is to be discharged. The valve shown in the present instance is attached to the lower end of a tube, *e*, which constitutes an overflow-pipe and valve-stem, as shown in my pending application, filed February 11, 1885, the tubular stem being guided by an open frame or cage, *f*, attached to the valve-seat. I do not limit myself, however, to this particular valve, but may use any valve of suitable construction.

g *h* represent levers pivoted, respectively, to ears or posts *i* *j* over the tank *a*. The lever *h* has an arm which is connected by a link, *m*, to one of the arms of the lever *g*. The lever *h* has also a weight, *n*, which normally holds both levers in the position shown in full lines, the lever *g* being thus held so that a pivoted toe, *g'*, on the end of one of its arms projects under a shoulder, *p*, on a rod, *p'*, which is connected to or forms a continuation of the stem of the valve. The toe *g'* is rigidly supported by the lever *g* against downward pressure, so that when the arm to which the toe is pivoted rises the toe will be in effect a part of the arm, and will raise the rod *p'* by its shoulder *p* until its end slips off from said shoulder; but when said

arm is falling the toe in striking the shoulder will yield until it passes said shoulder, and then will project under said shoulder, as shown in full lines. The lever *g* is connected with the water-closet seat in such manner that the depression of said seat will move the lever *g* and with it the lever *h* to the position shown in dotted lines. The toe *g'* of the lever *g* is thus caused to raise and then release the rod *p'*, thus raising the valve and giving the preliminary wash and allowing the valve to return to its seat. A similar toe, *h'*, on the lever *h* is depressed by the movement of the latter, so that it engages with the shoulder *p* when the valve has returned to its seat after the preliminary wash. When the water-closet seat is released, the weight *n* on the lever *h* raises the toe *h'*, causing the latter to raise and then release the rod *p'* and valve *c*, thus causing the second or after wash, the two levers being at the same time restored to their normal position, so that the toe *g'* is in position to raise the valve for the preliminary wash when the seat is again depressed. The pivot of the lever *h* is preferably higher than that of the lever *g*, as shown, so that the toe *h'* will give the valve a greater upward movement than the toe *g'*, and thus make the second wash longer than the first. The connection between the seat of the water-closet and the lever *g* consists of a bell-crank lever, *p''*, pivoted to a fixed support, and rods *r* *s*, connecting said lever respectively with the lever *g* and the seat, the latter not being shown in the drawing, since its construction and mode of operation are well known.

t represents a cylindrical cup placed on the valve-stem-guiding frame *f*, and *u* represents a piston secured to the valve-stem and working in said cup. When the valve-stem rises, the water fills the cup through a valved orifice in the piston, the water thus admitted escaping slowly through an orifice in the bottom of the cup and retarding the descent of the piston and valve, thus prolonging the duration of the wash. The size of the escape-opening may be varied to regulate the escape of the water and the duration of the wash.

I do not limit myself to the joint use of the levers *g* and *h*. If it is desired to have only the first wash, the lever *g* may be dispensed with, the lever *h* being connected directly

with the bell-crank lever p , so that it will operate in the manner described and raise the valve when the seat is released.

I claim—

- 5 In a water-supply apparatus for water-closets, the combination with the valve c , having a shouldered stem, p' , of the three-armed lever h , having a weight on one arm and a pivoted toe on another arm, which toe engages with
10 the shoulder of the valve-stem only when said weight is raised, the two-armed lever g , having on one arm a pivoted toe which engages with said shoulder when the lever g is in its normal position, the rod m , connecting an arm
15 of the lever g with an arm of the lever h , the bell-crank lever p^2 , connected to one arm of

the lever g , and the pull-down rod s , connected to the lever p^2 , the arrangement being such that when said levers are moved from their normal position the lever g is caused to first 20 lift and then release the valve-stem, and the weighted lever is put in position to raise the valve automatically when the levers are released, as set forth.

In testimony whereof I have signed my name 25 to this specification, in the presence of two subscribing witnesses, this 19th day of March, 1885.

TIMOTHY McHUGH.

Witnesses:

C. F. BROWN,

WM. H. WARD.