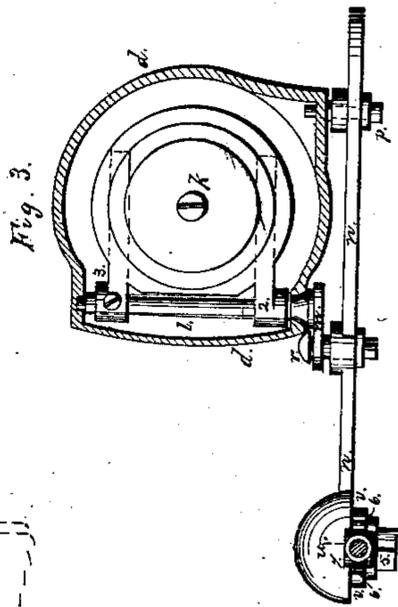
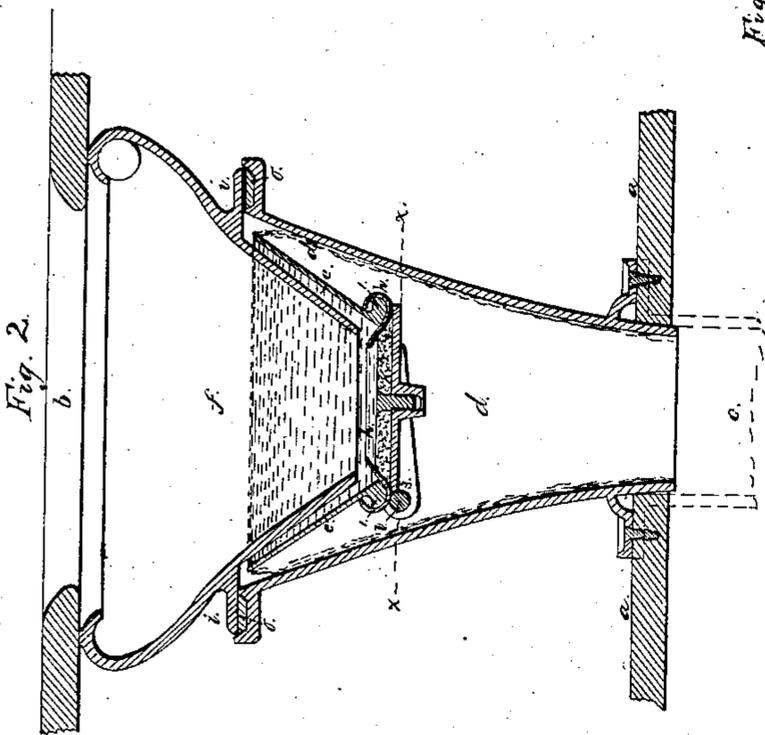
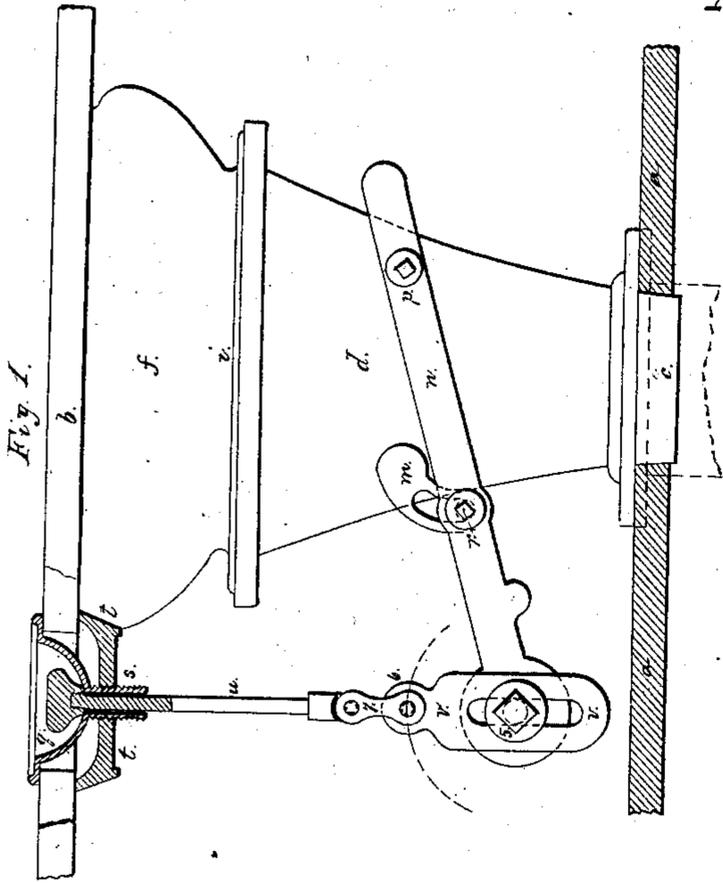


W. S. Carr,
Water Closet,

No. 76,398,

Patented Apr. 7, 1868.



Witnesses:
Chas. H. Smith,
Geo. A. Walker.

Inventor:
Wm. S. Carr.
per L. W. Serrell
Att'y.

UNITED STATES PATENT OFFICE.

WILLIAM S. CARR, OF NEW YORK, N. Y.

IMPROVEMENT IN WATER-CLOSETS.

Specification forming part of Letters Patent No. 76,398, dated April 7, 1868.

To all whom it may concern:

Be it known that I, WILLIAM S. CARR, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Water-Closets; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is an elevation of said water-closet. Fig. 2 is a vertical section of the same, and Fig. 3 is a sectional plan at the line *x x*.

Similar marks of reference denote the same parts.

Water-closets have heretofore been constructed with a swinging pan, that comes up below the end of a hopper or open basin, and is swung down to empty the contents. It often, however, happens, through insufficiency of water, that the soil is not entirely emptied, and as the pan is returned to place the outside of the basin and inner portion of the iron hopper become soiled, causing the closet to smell. Besides this, these swinging pans quickly rust out, and the cast-iron hopper has to be very large to allow them to swing within it.

The nature of my said invention consists in a stationary overflow-vessel, introduced within the hopper, and receiving the lower end of the basin, in combination with a valve applied to close the lower end of said overflow-vessel, so that surplus water runs over the edge of said vessel, and the closet is emptied by turning down said valve. I employ a peculiar packing for said valve, and form the spindle for said valve so that it can be inserted from the outside of the hopper. The cup or socket for the pull is attached by a reversible screw-bridge, that is formed so that different thicknesses of wood-work can be accommodated.

In the drawings, *a* represents the floor or support for the closet. *b* is the seat, fitted in any usual manner. *c* is the soil-pipe, over which is placed the hopper *d*. *e* is an overflow-basin, secured by lugs and screws within the upper part of the hopper *d*; and *f* is the basin, formed of porcelain or other suitable material, having a flange, *i*, that sets upon the top of the hopper *d*. A recess is formed in the top flange of the hopper, as at *o*, for the recep-

tion of putty or cement to make a tight joint, and a clamp may be employed to keep the two flanges together.

The lower edge of the stationary overflow-vessel *e* is formed with a flange, *l*, to which is secured an india-rubber packing, *h*. This I make of an india-rubber cylindrical ring of sheet-rubber, of the diameter corresponding to the opening of the packing, and stretch it over the flange *l*, which, contracting around the flange, holds upon the same firmly, leaving the lower edge in the form of a flat disk with an opening in the center. This opening I close by a valve, *k*, which I prefer to have of porcelain, of a conical shape, so as to set into the india-rubber packing and make a perfectly tight joint. This valve *k* is on arms 2 3, that connect it with the spindle *l*, and with the porcelain valve it is to be screwed to a plate or disk at the end of said arms.

The spindle *l* is made square at the part where it passes through a corresponding hole in the arm 2. The arm 3 is provided with a set-screw to clamp the spindle. At the end of the spindle *l* is the slotted crank-arm *m*. This spindle and arm are made in one piece, and the spindle passes through holes in the side of the hopper *d*, and through the said arms 2 and 3, and is held from working out of its place by the set-screw in the arm 3.

This construction is cheap, durable, and there are no parts to become loose by the concussion and motion to which they are subjected.

This mode of constructing and fitting the shaft *l* and crank may be employed with a pan by substituting that for the valve.

The lever *n* has its fulcrum at *p*, and is provided with a roller or pin, *r*, entering the slot of the crank-arm *m*, to give motion to it and the valve when the lever is pulled up.

In order to attach the socket *q* to the seat, I provide a screw-cylinder, *s*, on the central portion at the under side, and use a screw-bridge, *t*, having T or projecting ends. The socket *q* is often deeper than the thickness of the seat; hence the upward-projecting ends of the bridge *t* will reach to and be pressed upon the under side of the seat as the socket is screwed down to place; but where a thicker seat is used the bridge *t* may be inverted before being screwed upon the socket, thereby adapting the attach-

ment to any ordinary thickness of seat. Through the socket *q* the rod *u* of the pull passes to the lever *n*, to move the same.

Heretofore difficulty has been experienced in attaching the lever and pull, because the pull-rod might be too long or too short, or the point of connection of the rod to the lever not come (in setting the closet) directly under the socket *q*. To overcome these difficulties I have made an auxiliary adjustment, *v*, to the lever, formed as a slotted plate, attached by a screw, 5. By loosening this plate the adjustment *v* can be turned so as to bring the end 6, that is jointed by a link, 7, to the pull-rod *u*, to any desired point up or down, in toward the hopper or out beyond the end of the lever, as may be rendered necessary, in order to correspond with the position of the pull-socket *q*.

It will be understood that when the valve *k* is closed the water will be retained in the overflow-vessel *e*, and prevent the escape of smell by immersing the lower end of the hopper-basin *f*, and any water running into the basin will flow over the vessel *e* into the hopper and soil-pipe, and when the valve *k* is dropped the contents of the closet will run bodily down the waste or soil pipe without splashing or risk of improper emptying. This closet, therefore, is much more cleanly and compact than those heretofore constructed.

What I claim, and desire to secure by Letters Patent, is—

1. The stationary overflow-vessel *e*, introduced within the upper end of the hopper *d*, and receiving the lower end of the basin *f*, in

combination with the valve *k* on the spindle *l*, and the flexible packing *h*, applied to the lower end of the overflow-vessel *e*, in the manner and for the purposes set forth.

2. I claim the valve *k*, attached to a plate, and connected by the arms 2 and 3 to the spindle *l*, in combination with the flexible ring, forming a packing and seat for said valve, substantially as set forth.

3. I claim the spindle *l* for the valve, having a close bearing at one end, and formed with an arm, *m*, at the other end, and connected to and combined with the valve in the manner specified, so that the spindle can be inserted end-wise and connected with the valve without disconnecting any of the parts of the hopper.

4. I claim the reversible screw-bridge *t*, formed as specified, in combination with the cup or socket *q*, whereby the said cup or socket can be firmly secured to the varying thicknesses of wood-work of the seat, as set forth.

5. I claim an elastic packing or seat for the valve *k*, composed of a cylinder of vulcanized rubber, stretched upon the bottom flange of the overflow-vessel *e*, and forming a loose or free inner edge to receive the pressure of the superincumbent water in the overflow-vessel, and form, with the valve, a water-tight joint, as specified.

In witness whereof I have hereunto set my signature this 14th day of March, A. D. 1867.

WILLIAM S. CARR.

Witnesses:

CHAS. H. SMITH,
GEO. D. WALKER.