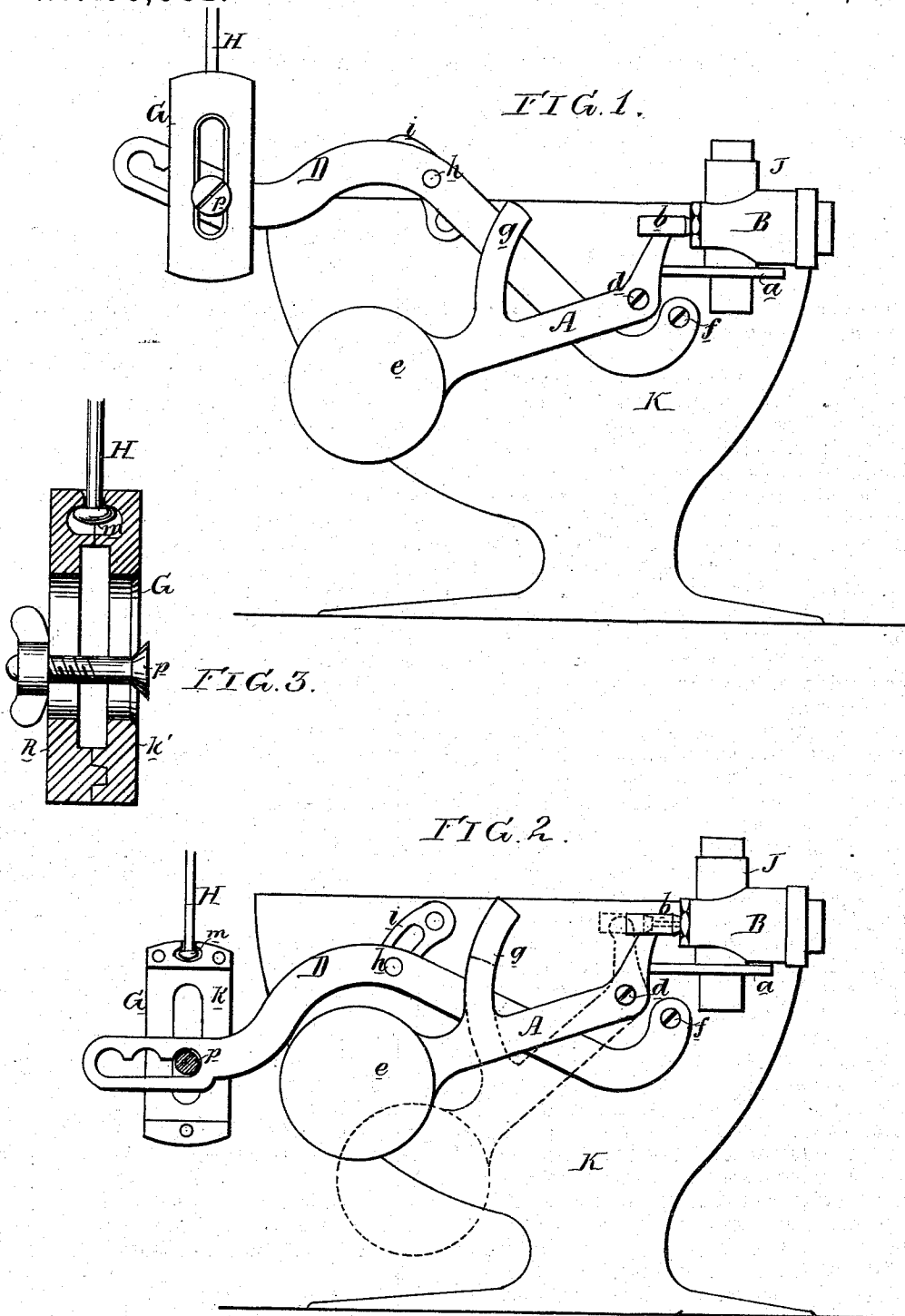


W. S. COOPER.
Water-Closets.

No. 156,882.

Patented Nov. 17, 1874.



Witnesses, Hubert Howson,
Thomas M. Ilvain

Wm. S. Cooper
By his Attys.
Howson and Son.

UNITED STATES PATENT OFFICE.

WILLIAM S. COOPER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WATER-CLOSETS.

Specification forming part of Letters Patent No. 156,882, dated November 17, 1874; application filed April 27, 1874.

To all whom it may concern:

Be it known that I, WILLIAM S. COOPER, of the city of Philadelphia, Pennsylvania, have invented certain Improvements in Water-Closets, of which the following is a specification:

The object of my invention is to facilitate the operation of the supply-cock and pan of a water-closet basin; and I attain this object by the use of a weighted lever, A, for opening and closing the supply-cock B, by combining the said lever with the weighted lever D, connected to the tilting-pan of the basin, and by so constructing and adapting the weight G to the end of the lever D that it can be adjusted both horizontally and vertically upon the latter, and serve also as a coupling for the operating-rod H, all as shown in the side elevations, Figures 1 and 2, and enlarged sectional view, Fig. 3, of the accompanying drawing.

The water-supply pipe J is secured to a projection, *a*, at one side of the basin K, and the valve-cock B on the said pipe has a sliding stem, *b*, slotted at its outer end for the reception of the short arm of the bell-crank lever A, which has its fulcrum at *d* on the side of the basin, and is provided at the extremity of its long arm with a weight, *e*. By elevating the said lever to the position shown in Fig. 1, the valve-stem will be forced inward, and the water turned on, and on releasing the said lever it will be caused by its weight to slowly descend to the position indicated by dotted lines in Fig. 2, and to thus gradually turn off the water. The lever D is hung to the basin at *f*, passes through a slotted projection or yoke, *g*, on the lever *a*, is connected at *h* to the slotted pan-tilting arm *i*, and is provided at its outer extremity with a weight, G, which also serves to couple the said lever to the operating-rod H. When this rod is elevated the lever D will also be raised, and the first effect of this movement will be to lift the weighted lever *a* sufficiently to partially turn on the water, which will occur while the connecting-pin of the lever D is passing through the slotted portion of the arm *i*. During the latter portion of the same movement the arm *i* will be turned to the position shown in Fig. 1, in order to lower the tilting-pan, and the whole head of water will at the same time be turned on. On releasing the

rod H the weighted lever D will fall to the position shown by full lines in Fig. 2, which will cause the pan to be instantly closed; but the lever *a*, which is entirely independent of the lever D during the downward movement, will remain elevated for an instant, and will then slowly descend to the position indicated by dotted lines, and thus gradually turn off the water, as before described.

The combined weight and coupling G is an important feature of my invention. It consists of two longitudinally-slotted sections, *k* and *k'*, recessed on their inner faces for the reception of the end of the lever D and enlargement *m* of the rod H, the said sections, when adjusted, being secured together by a screw, *p*, which is passed through a slot, or through one of a series of holes, in the lever D, and through the vertical slots in the sections. The connection of the weight with the rod H is of the nature of a ball-and-socket joint, which permits the weight to be freely turned on the lever, so that no obstruction whatever is offered to the operation of the parts, owing to changes in the relative position of weight and lever, while every facility is afforded by the slots both for the horizontal and vertical adjustments of the weight, which are frequently required in fixing water-closets.

I claim as my invention—

1. The combination of the valve B of a water-closet basin, and a weighted lever, A, hung to the basin K, connected to the valve-stem, and operated by, but having a limited movement independent of, the pan-operating device, as set forth.

2. The block G, having two slots at right angles, and provided with a pin, *p*, adjustable in one of the slots, as and for the purpose described.

3. The combination of the slotted sections *k* and *k'* of the weight G, the clamping-screw *p*, and the slotted or perforated end of the lever D.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. S. COOPER.

Witnesses:

WM. A. STEEL,
HUBERT HOWSON.