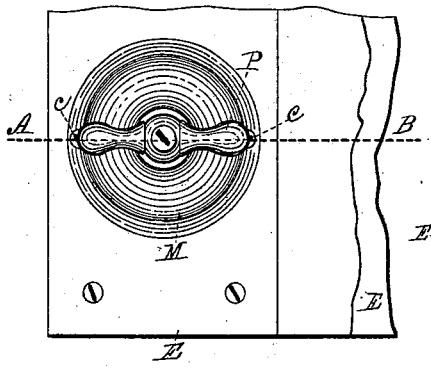
J. D. SISSON.
Water Closet Cock.

No. 201,957. Patented April 2, 1878.

FIG. 1.



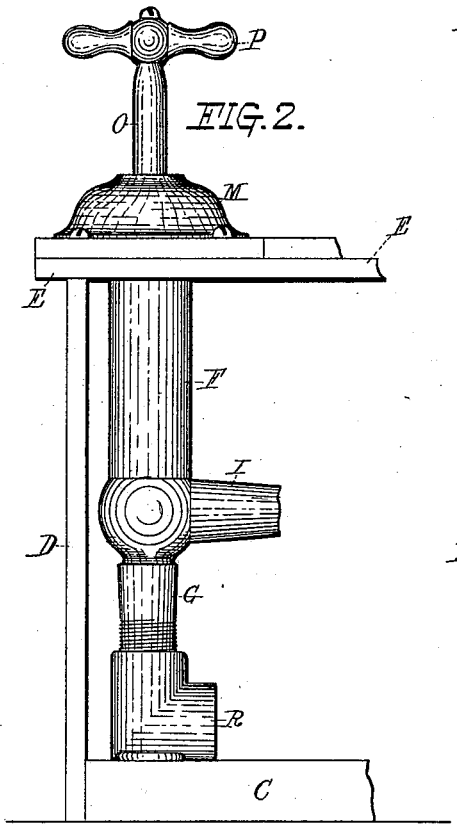


FIG. 2.

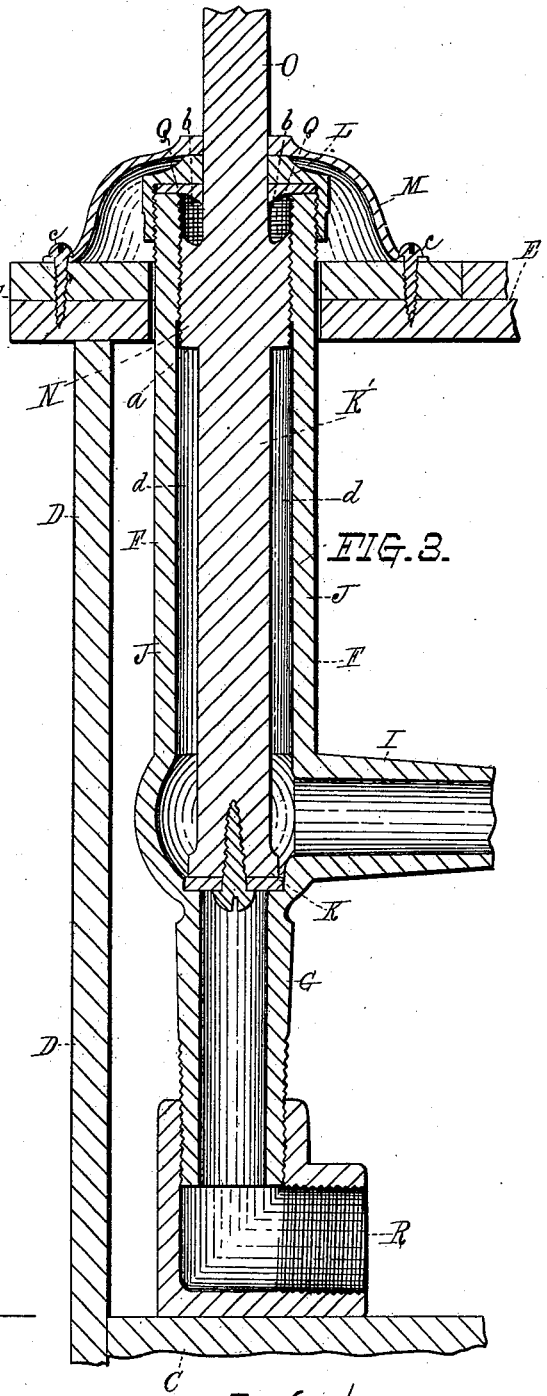


FIG. 3.

Witnesses;

Fred S. Goulding.
Edwin E. Moore

Inventor;

Jacob D. Sisson

UNITED STATES PATENT OFFICE.

JACOB D. SISSON, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO SISSON & TUCKER, OF SAME PLACE.

IMPROVEMENT IN WATER-CLOSET COCKS.

Specification forming part of Letters Patent No. **201,957**, dated April 2, 1878; application filed February 25, 1878.

To all whom it may concern:

Be it known that I, JACOB D. SISSON, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Water-Closet Cocks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a top or plan view of my improved water-closet cock as it appears when applied to the water-closet box, one corner of which box is shown in the drawing. Fig. 2 represents a front view of the parts shown in Fig. 1, the front of the water-closet box being removed; and Fig. 3 represents, upon an enlarged scale, a vertical central section on line A B, Fig. 1.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe the improvement more in detail.

In the drawings, the parts marked C, D, and E represent the bottom, side, and top of one corner of a water-closet box, and the part marked F represents my improved water-closet cock, which consists of a downwardly-projecting stem, G, laterally-projecting stem or outlet-pipe I, and upwardly-projecting neck and air-reservoir J, while with the parts G, I, and J are combined the central valve and valve-stem K K′, screw packing-cap L, and convex nut-cap and spindle-guide piece M.

As water-closet cocks were made previous to my invention, the screw-head N was arranged upon the valve-stem K′ down close to the laterally-projecting stem or outlet-pipe I, and the packing screw-cap L also screwed upon the part J close down to the outlet-pipe or stem I, there being in such old device no neck or air-reservoir J, while the rod O extended down through a hole in the top E of the water-closet box, for the purpose of opening and closing the valve K by means of the handle P, attached to its upper end, which projected above the water-closet box.

To this old device there were serious objections, since when it became necessary to pack the valve K the top E of the water-closet box had to be removed, and was often broken and injured by the operation. Still again, the old device, when used, subjected the pipes to great strain, since when the valve K was screwed up the water would rush through, and, coming in contact with the shoulders *a* of the screw-head N, would react and check the force of the moving water, causing it to react for the instant upon the pipes below valve K, while the force of the water would drive the water up through the screw-threads upon the outside of the head N into the space *b* below the packing Q and above the head N, and which operation not only strained the packing Q, thereby tending to impair its security as a water-tight packing, but, the water being forced into said space *b* when valve K was first opened, the sudden opening of valve K to its full extent would cause head N to rise so high as to fill, or nearly fill, space *b*. Consequently the water therein was liable to be forced out between the packing Q and the screw-cap L; and as all these parts occupied positions down close to the stem or outlet-pipe I, a portion of the seat or water-closet box had to be removed in order to examine, pack, and repair not only valve K, but the parts L and Q.

By my improvements all of these objections are overcome and avoided, since all that the plumber has to do is to remove handle P upon the operating valve-rod O, (shown broken off in Fig. 3,) and then remove screws *c c*, which hold the convex cap M in place; then lift the latter off the rod O, after which screw-cap L is removed, when rod O, valve K, and valve-stem K′ can be easily withdrawn by unscrewing head N out of the upper end of the neck J; and all this can be done without disturbing in the least the water-closet box, since the neck J is made long enough to extend above the seat-box E, as fully indicated in the drawings.

In addition to all these advantages I obtain the air chamber or reservoir *d* above the outlet-pipe or stem I, whereby the water, when it rushes through valve K, is cushioned by the action or spring of the air in chamber *d*. It is also prevented from entering the space *b*, which is filled with air.

My invention, it will be seen, is a great and

marked improvement over the old device, while at the same time insuring the user against leakages and breakages when repairs are required.

The part marked R represents a knee or bend secured to the lower end of the projecting part G, and may serve as a pipe-connection to receive the water; or the supply-pipe may be connected with the pipe G in any other convenient manner. The convex cap M, in addition to guiding the spindle of the valve, covers and protects the projecting end J and its screw-cap L, both of which extend above the top of the seat.

Those skilled in the art will readily appreciate the practical value and importance of my present invention.

Having described my improvements in water-closet cocks, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination of screw-head N and screw-cap L with valve-stem K K′, neck J, and rod O, arranged in relation to each other substantially as and for the purposes set forth.

2. The combination, with the top E of the water-closet box, and neck J, screw-head N, and screw-cap L, of the convex cover or cap M, as shown and described.

JACOB D. SISSON.

Witnesses:
FRED. L. GOULDING,
EDWIN E. MOORE.