W. GORDON.

WATER CLOSET VALVE.

No. 113,875. Patented Apr. 18, 1871.

FIG. 1

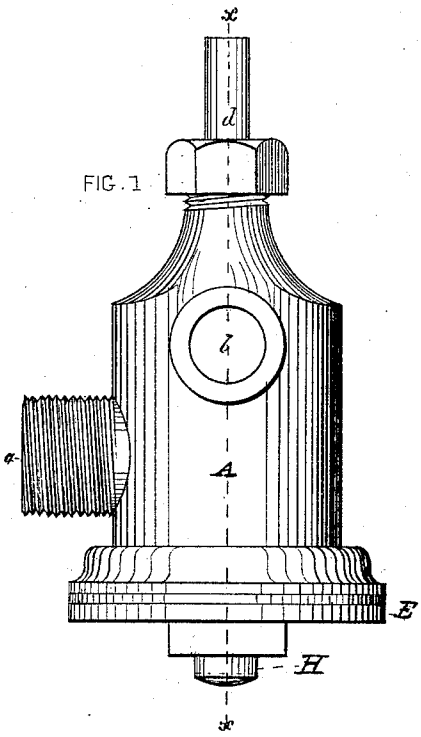


FIG. 2

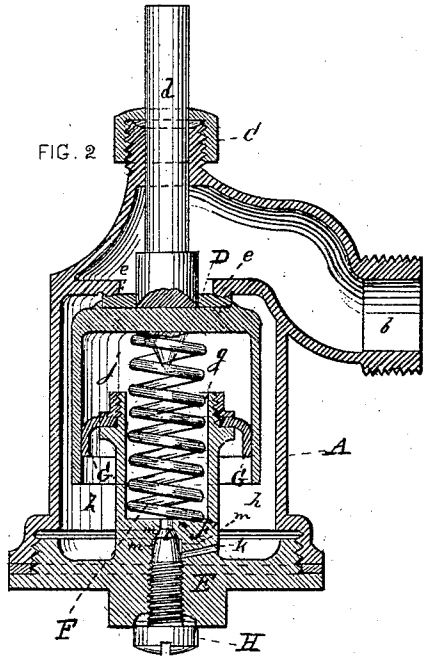


FIG. 3

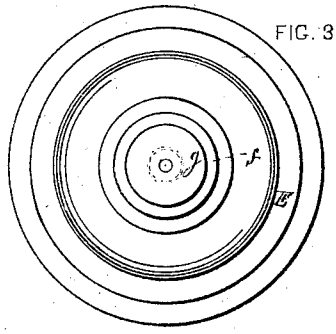


FIG. 5

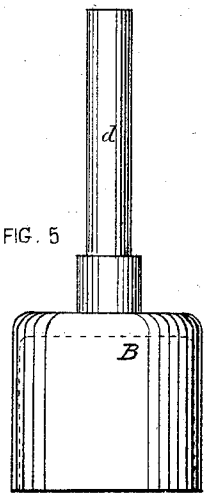
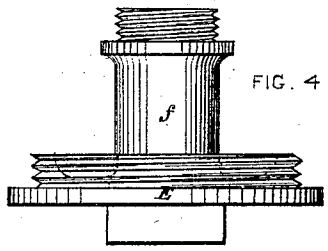


FIG. 4



WITNESSES

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WILLIAM GORDON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND ANDREW McCAMBRIDGE, OF SAME PLACE.

Letters Patent No. 113,875, dated April 18, 1871.

IMPROVEMENT IN WATER-CLOSET VALVES.

The Schedule referred to in these Letters Patent and making part of the same.

I, WILLIAM GORDON, of the city of Philadelphia and State of Pennsylvania, have invented certain Improvements in Water-Closet Valves, of which the following is a specification,

The nature of my invention is as follows:

The valve is provided with a vacuum-chamber, into which water passes through a channel which leads from the water-chamber, the said channel being opened and closed by means of an adjustable screw to regulate the movements of the valve, and consequently the flow of water through the discharge-pipe, as hereinafter described.

The valve-chamber is combined with a stationary bucket, that has a counter-pressure of water exerted by the water in the water-chamber, whereby a tight and easy fit is secured.

To enable others skilled in the art to which my improvement appertains to make and use my improved valve, I will now proceed to give a full description thereof.

In the accompanying drawing which makes a part of this specification—

Figure 1 is a side elevation of the improved valve.

Figure 2 is a vertical section at the line *x x* of fig. 1.

Figure 3 is a plan view of the plate E, provided with the central bucket-support *f*.

Figure 4 is a side elevation of the same.

Figure 5 is a side elevation of the valve B.

Like letters in all the figures indicate the same parts.

A is the valve-case, which has an induction-opening, *a*, and an exit-opening, *b*.

B is the valve, whose stem, *d*, works in the stuffing-box C.

The valve is provided with a leather or other elastic ring, D, around its stem *d*, whereby a tight and easy fit is made with the seat *e*.

The central stem *f* of the crown-plate E of the case A has a central opening, *g*, in which is placed the wire spring F, that bears the valve against its seat to close the same, and yields to the force of the lever, allowing the water to escape through exit-opening *b*.

The central stem *f* of the crown-plate E is provided with a leather or other elastic bucket, G, seen in fig. 2.

The upward pressure of the water in the chamber *h* of the case A, and on the under side of the bucket G, closes the latter against the side of the vacuum-chamber *j*, thereby giving an elastic fit to said bucket, allowing a free up-and-down movement of the valve.

The central screw H is connected with the crown-plate E for regulating the flow of water from the chamber *h*, through the passage *k*, into the vacuum-chamber *j*, thereby causing a quick or slow movement of the valve B to regulate the flow of water through the exit-opening *b*.

The upper end of said screw H is provided with a valve, *l*, and the chamber *m* of the plate E with a valve-seat, *n*.

What I claim as my invention, and desire to sesure by Letters Patent, is—

1. The central opening *g* of the stem *f*, in combination with the spring F and valve B, substantially as and for the purpose set forth.

2. The combination and arrangement of the passage *k* with the central opening *g* and water-chamber *h*, as and for the purpose described.

3. The combination of the adjustable valve-screw H with the crown-plate E, arranged and operating in relation to the passage *k* and vacuum-chamber *j*, substantially as and for the purpose set forth.

In testimony that the above is my invention I have hereunto set my hand and affixed my seal this 28th day of November, 1870.

WILLIAM GORDON. [L. S.]

Witnesses:
JOHN ROBINSON,
THOMAS J. BEULEY.