(No Model.)

P. WHITE.

WATER CLOSET VALVE.

No. 285,191. Patented Sept. 18, 1883.

Fig. 1.

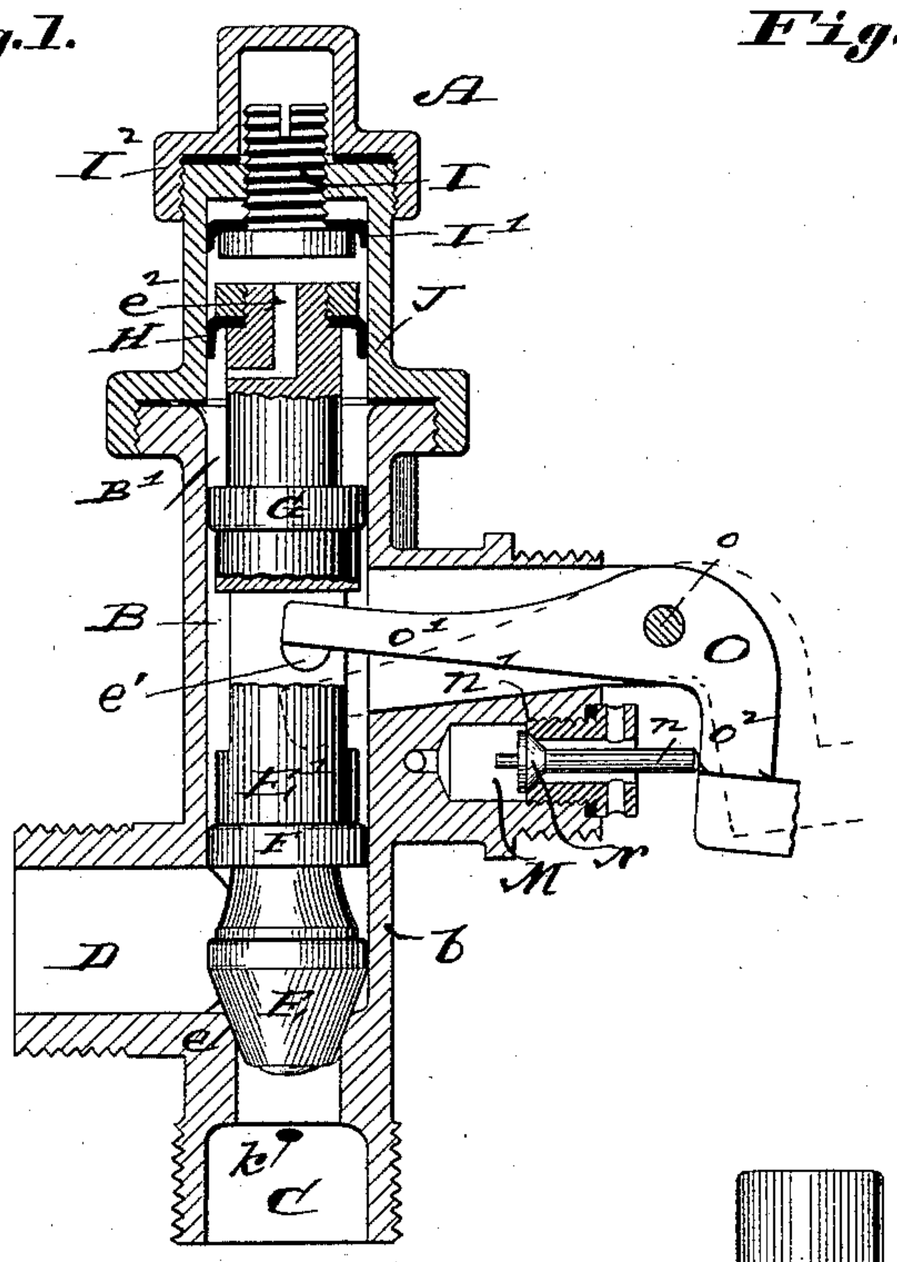


Fig. 2.

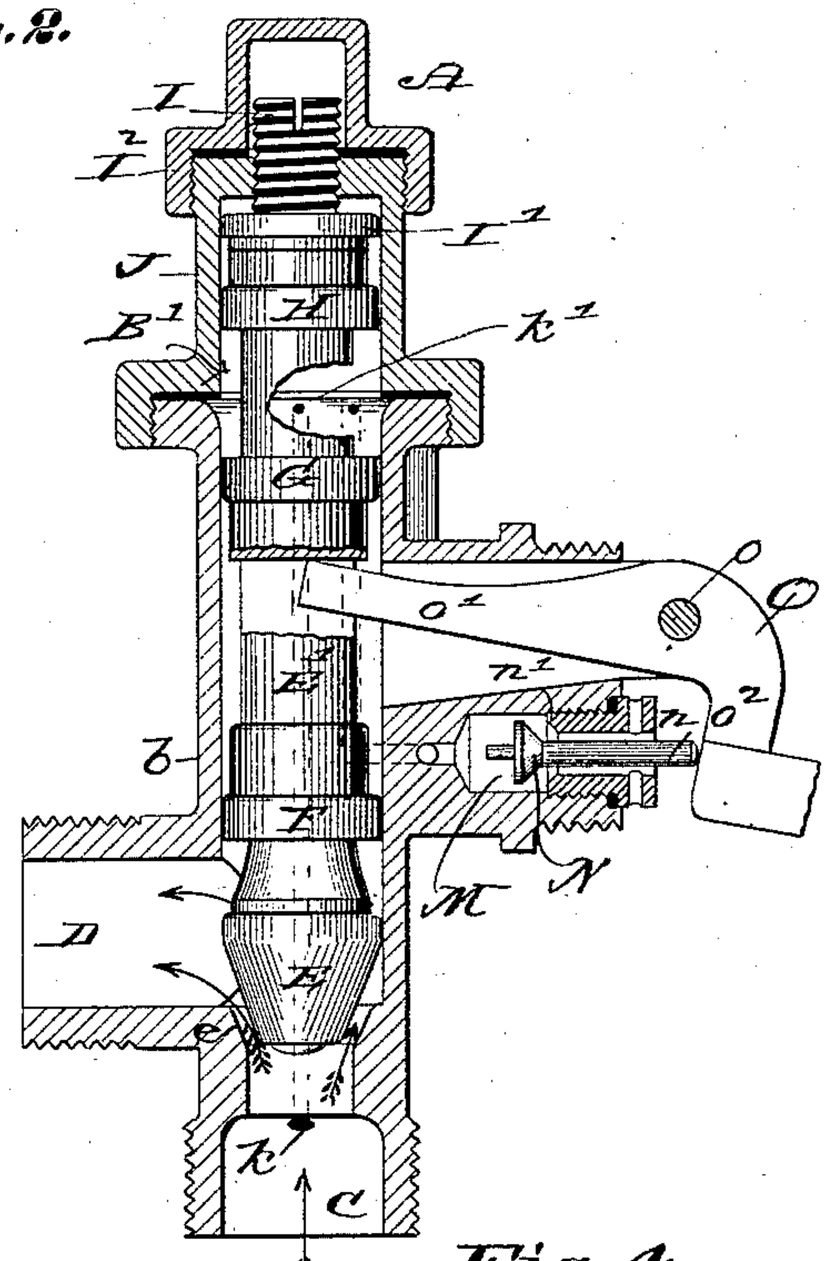


Fig. 3.

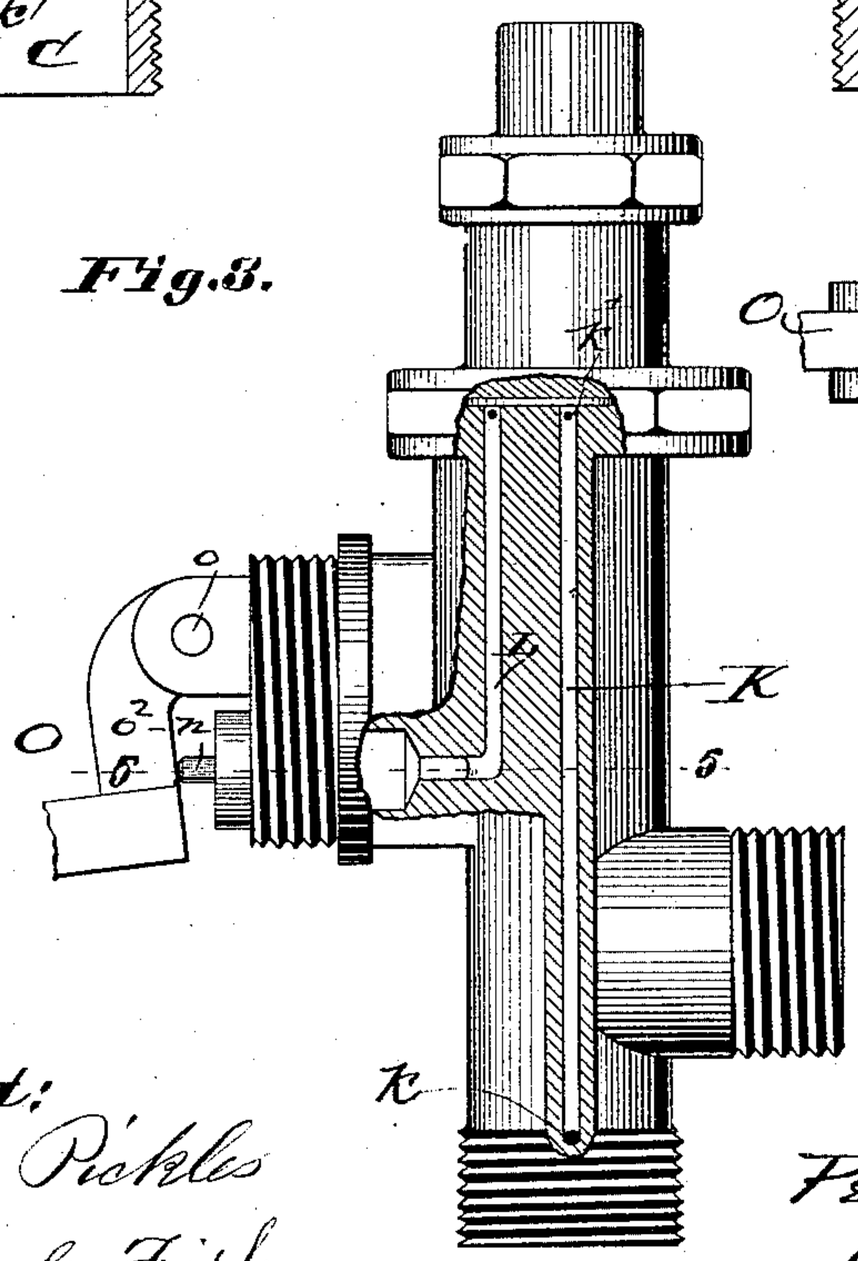


Fig. 4.

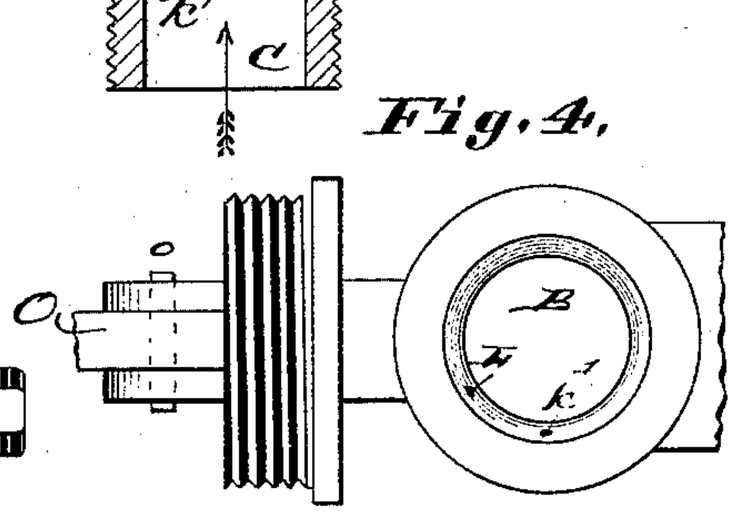
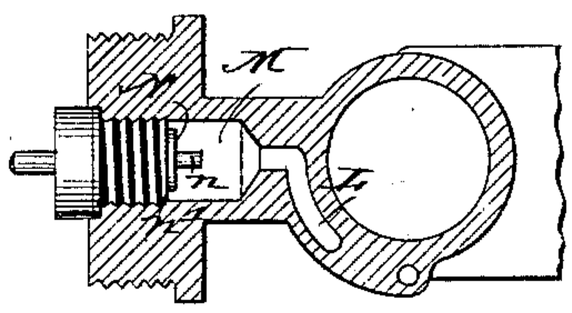


Fig. 6.



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UNITED STATES PATENT OFFICE.

PETER WHITE, OF ST. LOUIS, MISSOURI.

WATER-CLOSET VALVE.

SPECIFICATION forming part of Letters Patent No. 285,191, dated September 18, 1883.

Application filed October 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, PETER WHITE, of St. Louis, Missouri, have made a new and useful Improvement in Water-Closet Valves, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a longitudinal section, the valves being closed; Fig. 2, a similar section, the valves being open; Fig. 3, a side elevation, partly in section, the view being taken from the opposite side to that of Figs. 1 and 2; Fig. 4, a top view of the main-valve chamber, the cap being removed; and Fig. 5, a cross-section taken upon the line 5 5 of Fig. 3.

The same letters of reference denote the same parts.

The present invention relates partly to the means for limiting the movement of the main valve and partly to the mode of operating the relief-valve.

Referring to the drawings, A represents a valve embodying the present improvement.

B represents the chamber of the main valve.

C represents the inlet to, and D the outlet from, the valve. E represents the main valve, seating downward at *e*. The valve-stem E′ is provided with the cup-leathers F, G, and H.

I is a plug screwed into the cap J of the chamber B, so as to come above the top of the valve-stem E′. This plug serves to limit the movement of the valve E. When it is desired to have the valve E open wider, the plug is screwed upward in the cap, enabling the valve-stem E′ to rise higher in the valve-chamber, and when it is desired to shorten the movement of the valve E the plug I is screwed farther down in the cap J.

K is the passage in the shell *b* of the valve-chamber B, through which the main water-pressure passes from beneath the valve-seat *e* to above the cup-leather G, the inlet to such passage being at *k*, Figs. 1, 2, 3, and the outlet therefrom being at *k′*, Figs. 2, 3, 4.

L is another passage in the shell *b*, leading from the valve-chamber B above the cup-leather G to the chamber M, in which the relief-valve N is contained.

O represents the float-lever. The float is not shown, as its construction is well understood, the float being such as is ordinarily used in water-closets, and similar to that shown in Letters Patent previously granted to me, saving as modified to enable it to operate the relief-valve, as hereinafter described. The lever is pivoted at *o*, and the end *o′* of the lever engages in the ordinary manner in the slot *e′* of the valve-stem E′. There is an offset at o^2 in the float-lever, and when the float falls the offset o^2 encounters the stem *n* of the relief-valve N, causing the valve N to be lifted from its seat *n′*. The water then flows from above the cup-leather G through the passage L into the chamber M and past the valve N to without the valve, relieving the pressure above the cup-leather G. The float-lever, continuing to fall, operates to lift the valve-stem E′ and to unseat the valve E, bringing the parts into the position shown in Fig. 2. In closing the valve E, the water having lifted the float, the water-pressure operates first to close the relief-valve N, after which the main valve E is seated. The cup-leathers G and H confine the water in the portion B′ of the valve-chamber, and the cup-leather F prevents the water from passing above the outlet D. The plug I is also furnished with the cup-leather I′, for the purpose of packing the plug. A suitable cap, I^2, serves to inclose the plug I and to complete the valve at the top. By means of the passage e^2 the water-pressure above and below the cup-leather H is equalized, the water, in seating the valve E, passing upward through the passage e^2 to above the stem E′.

I claim—

1. The combination of the valve A, having chamber B, provided with the passages L K, the valve E, the stem E′, the cup-leathers F G, and the relief-valve N, with the float-lever O, having the offset o^2, substantially as described.

2. The combination, in a water-closet valve having chamber B, provided with passages L K, of the valve E, the stem E′, the cup-leathers F G, the cap J, the plug I, the relief-valve N, and the float-lever O, substantially as described.

3. The combination of the valve A, having chamber B, the stem E′, having the passage e^2, and the cup-leather H, substantially as described.

4. The combination of the valve A, having chamber B, the cap J, the stem E′, and the cup-leather H, substantially as described.

PETER WHITE.

Witnesses:
C. D. MOODY,
CHARLES PICKLES.