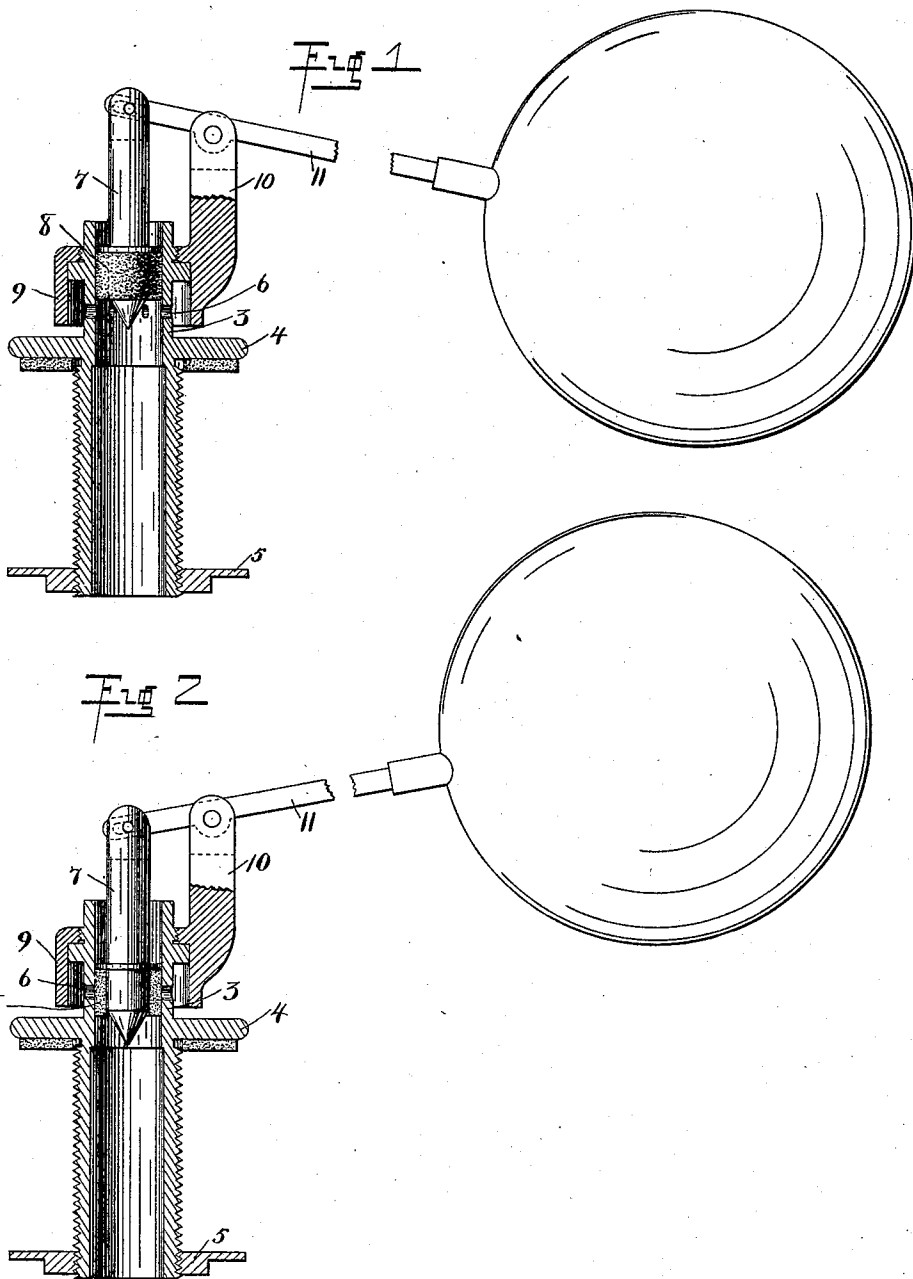


(No Model.)

E. A. STRONG.
WATER COCK.

No. 578,372.

Patented Mar. 9, 1897.



WITNESSES:

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EDWARD A. STRONG, OF INDIANAPOLIS, INDIANA.

WATER-COCK.

SPECIFICATION forming part of Letters Patent No. 578,372, dated March 9, 1897.

Application filed March 30, 1896. Serial No. 585,332. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. STRONG, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Water-Cock, of which the following is a specification.

My invention relates to an improvement in valves, and is designed more particularly for a supply-valve for water-closet flushing-tanks.

The object of my improvement is to provide a valve which may be cheaply constructed and easily repaired and requiring no packing of the valve-stem and no specially-prepared valve-seat.

The accompanying drawings illustrate my invention.

Figure 1 represents a vertical section of my valve, the valve being open and the packing shown in full. Fig. 2 is a like section showing the valve closed and the packing in section.

In the drawings, 3 indicates a tubular valve-casing, which is provided with a radial flange 4 and carrying a clamping-nut 5 for securing the valve-casing in position in a flushing-tank or like structure. Above the flange 4 the valve-casing is provided with a series of radial discharge-openings 6. For the purpose of closing the discharge-openings a plunger 7, carrying an annular elastic packing 8, formed preferably of leather or rubber, is fitted so as to slide vertically in the upper part of the tubular casing. The lower end of said plunger is tapered or otherwise diminished to a point slightly above the lower edge of the annular packing, so that the pressure of water from below the plunger will operate to force the packing outward against the interior of the valve-casing.

For the purpose of directing the flow of water from the openings 6 I apply to the upper part of the valve-casing a hollow cap 9, which surrounds the casing at a short distance therefrom and projects below the openings 6, so as to intercept the streams flowing therefrom. The cap 9 may be provided with a standard 10, to which is pivoted the operating-lever 11, which is connected to the upper end of the plunger, so as to move the plunger longitudinally in the valve-casing to cover and uncover the openings 6.

In operation the lower end of the valve-

casing being coupled to a source of water-supply, the water-pressure exerted against the interior of the packing at its lower edge operates to force the packing outward against the walls of the casing, thus effectually preventing a flow of water past the packing whether the valve be opened or closed.

By this construction a valve is provided which may be easily and quickly repaired, and the necessity for a valve-seat and a separate packing of the valve-stem is avoided.

The above construction may be used in valves for any purpose and the valve-stem operated in any suitable manner.

I claim as my invention—

1. In a valve, the combination of the tubular valve-casing having a radial discharge-opening therein, the plunger mounted in said valve-casing so as to slide longitudinally therein past said discharge-opening, and the annular flexible packing mounted upon and surrounding the plunger, said plunger having a reduced portion extending within the lower edge of the annular packing so as to admit the water-pressure to the interior of the packing, all substantially as set forth.

2. In a valve, the combination of the tubular valve-casing having a radial discharge-opening therein, the plunger mounted in said valve-casing so as to slide longitudinally therein past said discharge-opening, and the annular flexible packing mounted upon and surrounding the plunger, said plunger having a conical lower end, the arrangement being such that the base of said conical end lies above the lower edge of the annular packing, substantially as and for the purpose set forth.

3. In a valve, the combination of the tubular valve-casing having a radial discharge-opening therein, the plunger mounted in said valve-casing so as to slide longitudinally therein past said discharge-opening, the annular flexible packing mounted upon and surrounding the plunger, and the cap 9 mounted upon the valve-casing and provided with a downwardly-extending lip thereby forming a chamber which communicates directly with the radial discharge-opening, substantially as and for the purpose set forth.

EDWARD A. STRONG.

Witnesses:

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