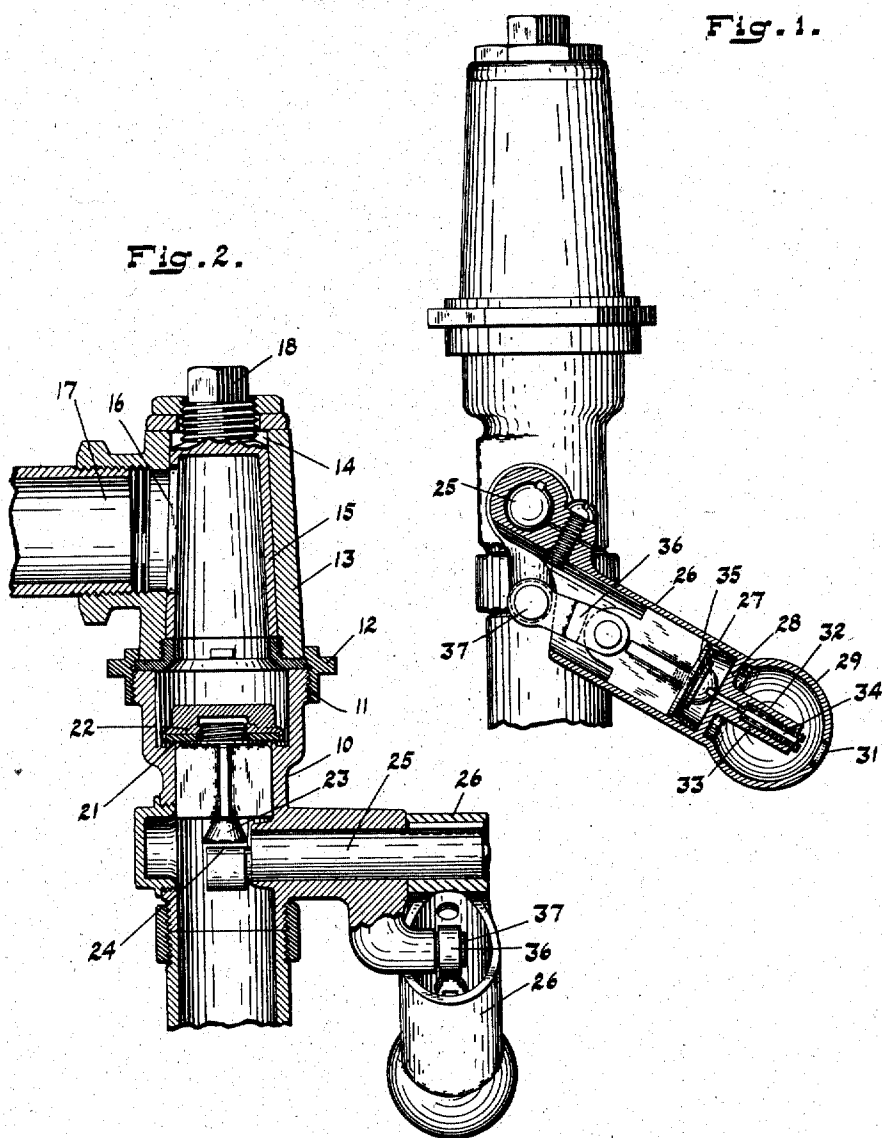


C. A. WULF.
DIRECT PRESSURE VALVE.
APPLICATION FILED MAY 20, 1910.

984,410.

Patented Feb. 14, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES A. WULF, OF INDIANAPOLIS, INDIANA.

DIRECT-PRESSURE VALVE.

984,410.

Specification of Letters Patent.

Patented Feb. 14, 1911.

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To all whom it may concern:

Be it known that I, CHARLES A. WULF, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Direct-Pressure Valve, of which the following is a specification.

The object of my invention is to produce a valve for use in controlling the flow of water, under direct pressure, to a water closet, means being provided to readily regulate the time of flushing flow and for readily withdrawing the controlling valve structure for repair.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation in partial vertical section and Fig. 2 a vertical section through the rock-shaft.

In the drawings, 10 indicates the main body of the valve provided at its upper end with a threaded portion 11 adapted to receive the coupling ring 12. The ring 12 is carried by the main body 13 of a stop cock of peculiar formation having a taper bore 14 in which is mounted a hollow tapered valve 15 having an opening 16 in one side adapted to register with the supply inlet 17. The upper end of valve 15 is projected and provided with a squared end 18 by means of which it can be readily turned.

Formed in the main body 10 near its upper end is a valve seat 21 and mounted loosely within the main body 10 is a valve 22 adapted to seat upon seat 21. At its lower end valve 22 is provided with a projection 23 adapted to be engaged by a cam 24 by means of which the valve may be raised and held from its seat. Cam 24 is carried by rock-shaft 25 journaled in main body 10. Secured to the outer end of shaft 25 is a lever 26 within which is formed a dash-pot cylinder 27 having an end wall 28 which lies some distance from the end of the lever. For purposes of ornament the end 29 of lever 26 is enlarged into a ball which is hollow and perforated at 31. Within the hollow ball 29 and integral with wall 28 is vent tube 32 which leads into cylinder 27, and mounted in the tube 32 is a needle valve 33 which may be adjusted to control the effective area of the vent tube. The end of tube 32 and valve 33 lie entirely within the ball 29 so that the end of valve 33 is only accessible by passing a screw driver or other suitable instrument through hole 31. By

this arrangement the lever 26 is in such condition that it may be readily polished and yet the polish used for the purpose cannot possibly become lodged around the vent passage 34 of the valve 33. If some sort of provision of this kind is not made, I find that janitors are very likely to stop up the vent passage 34 and thus prevent proper operation of the structure.

Mounted in the cylinder or dash-pot 27 is a piston 35 to the outer end of which is pivotally connected a link 36 pivoted upon a pin 37 formed integral with the casing 10, as shown, eccentric to the axis of shaft 25, the arrangement being such that, as lever 26 is swung upwardly to bring cam 24 into engagement with valve 22 so as to raise said valve from its seat, piston 35 will be drawn outwardly in the cylinder, air passing freely into the cylinder around the packing of the piston. The time of the return movement of the lever, which is due both to its unbalanced weight and to the pressure of the water upon valve 22, will be controlled by the speed of outflow of air from cylinder 27 through the vent tube 32 and passage 34.

I claim as my invention.

1. The combination, with a main casing having a valve seat formed therein, of a valve mounted in the casing and movable toward and from the seat, a rock-shaft journaled in the casing, means carried by the shaft for engaging the valve and raising it from its seat, an operating lever secured to the shaft and having a dash-pot cylinder formed therein at an angle to the shaft with a vent passage leading from the outer end of the cylinder within a chamber formed in the outer end of the lever, a valve for controlling said vent passage, said valve having its accessible end within the chamber at the outer end of the lever, a plunger mounted in the dash-pot cylinder, and a connection between said plunger and the casing eccentric to the rock-shaft.

2. The combination, with a main casing having a valve seat formed therein, of a valve mounted in the casing and movable toward and from the seat, a rock-shaft journaled in the casing, means carried by the shaft for engaging the valve and raising it from its seat, an operating lever secured to the shaft and having a dash-pot cylinder formed therein at an angle to the shaft with a vent passage leading from the outer end of the cylinder, a valve for controlling said

vent passage, a plunger mounted in the dash-pot cylinder, and a connection between said plunger and the casing eccentric to the rock-shaft.

- 5 3. The combination, with a main casing having a valve seat formed therein, of a valve mounted in the casing and movable toward and from the seat, a rock-shaft journaled in the casing, means carried by the
10 shaft for engaging the valve and raising it from its seat, an operating lever secured to the shaft and having a dash-pot cylinder formed therein at an angle to the shaft with

a vent passage leading from the outer end of the cylinder, a plunger mounted in the dash-pot cylinder, and a connection between said plunger and the casing eccentric to the rock-shaft. 15

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, 20 this sixth day of May, A. D. one thousand nine hundred and ten.

CHARLES A. WULF. [L. S.]

Witnesses:

ARTHUR M. HOOD,
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