

No. 678,496.

Patented July 16, 1901.

D. T. KENNEY.
VALVE FOR WATER CLOSETS.

(Application filed Apr. 7, 1900.)

(No Model.)

Fig. 1.

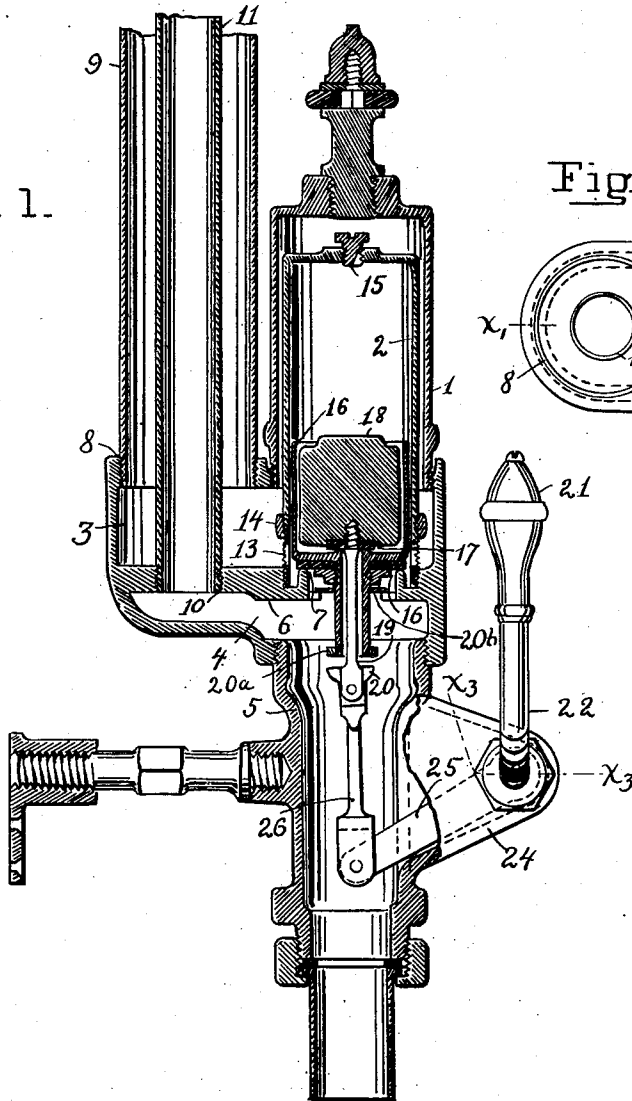


Fig. 2.

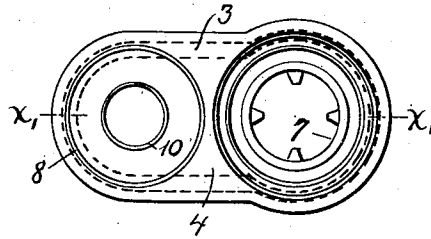
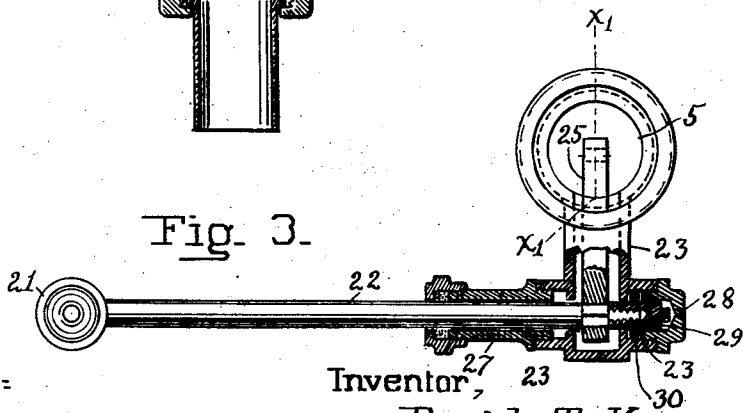


Fig. 3.



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VALVE FOR WATER-CLOSETS.

SPECIFICATION forming part of Letters Patent No. 678,496, dated July 16, 1901.

Application filed April 7, 1900. Serial No. 11,927. (No model.)

To all whom it may concern:

Be it known that I, DAVID T. KENNEY, a citizen of the United States of America, and a resident of the borough of North Plainfield, county of Somerset, and State of New Jersey, have invented certain new and useful Improvements in Valves for Water-Closets, of which the following is a specification.

This invention relates to valves for water-closets such as are shown in my United States Letters Patent Nos. 566,770 and 566,771, both dated September 1, 1896; No. 613,802, dated November 9, 1898, and No. 615,622, dated December 6, 1898. The valve is to be attached to a water-closet bowl and to be supplied with water through a pipe from an overhead tank, and inside the supply-pipe and extending from the level of the water in the tank to the valve is an overflow-pipe, as shown in my Letters Patent No. 566,771.

One feature of the invention consists in the construction of the casting which forms a part of the valve-body and contains the valve with a flushing-chamber and an overflow-discharge chamber.

Another feature of the invention is in the construction of a chambered bracket at the side of the valve-body which incloses the lever for lifting the valve.

The novel elements in these features are hereinafter particularly described and specifically claimed.

In the accompanying sheet of drawings, which form a part of this specification, Figure 1 is a vertical section through the axis of the valve except the chambered bracket on the lines $x'x'$ of Figs. 2 and 3. Fig. 2 is a top view of the casting which contains the flushing-chamber and the overflow-discharge chamber. Fig. 3 is a top view of the discharge-pipe, with the chambered bracket broken away, on the line x^3x^3 of Fig. 1.

The valve-body is made up of a valve-cap 1, a cylindrical casing 2, forming a retardation-chamber, a casting which contains a flushing-chamber 3 and overflow-discharge chamber 4, and another casting constituting the discharge-pipe outlet-chamber 5, these parts being screwed together. The casting in which is the flushing-chamber and the overflow-discharge chamber may be made in

one piece with the discharge-pipe, but the construction shown is more convenient. The flushing-chamber and the overflow-discharge chamber are separated by a horizontal partition 6, which forms the bottom of the flushing-chamber and the top of the overflow-discharge chamber. The main-valve opening 7 is through this partition. In the upper wall of the flushing-chamber there is an inlet-orifice 8, into which the flushing-pipe 9 is screwed, and the casting forming the flushing and discharge chambers is also provided at its upper end with an orifice to receive the valve-cap. In the partition between the flushing-chamber and the overflow-discharge chamber is an overflow-inlet orifice 10, which is smaller than the inlet-orifice in the upper wall of the flushing-chamber and lying below it and concentric with it, so that the overflow-pipe 11 can pass down through the flushing-pipe and flushing-chamber from the tank and screw into the overflow-inlet orifice and discharge into the discharge-chamber. The discharge, both from the overflow-discharge chamber and through the main valve, is into the discharge-pipe and thence through the outlet 12 into the bowl.

The construction and operation of the valve are substantially as in my United States Letters Patent No. 655,771. The cylindrical casing 2 surrounds the main-valve opening. This casing is provided with flushing-ports 13, which admit the water from the flushing-chamber to the valve. The opening through these ports is adjustable by a ring 14, which screws up and down on the outside of the casing. At the top of the casing is an adjustable passage 15. The main valve 16 fits suitably and slides vertically in the casing. The valve is hollow and has a valve-seat 17, which opens through the valve into the flushing-pipe. A relief-valve 18 closes this valve-seat. The valve-stem 19 passes through this valve-seat and the tubular extension of the main valve and is attached to the relief-valve. Projections 20 on the valve-stem engage the lower end of the tubular extension to lift the main valve. On the lower end of the tubular extension is screwed a collar 20^a, which engages and lifts the controller 20^b. The purpose of the controller is to check the

rapidity of the flow when the valve begins to close, as is explained in connection with the valve described in my Patent No. 613,802.

The valve is operated from a handle 21, the handle-shank 22 of which passes through openings 23 on the sides of the chambered bracket 24, which is cast on the side of and opens into the flushing-pipe of the valve-body. That part of the handle-shank which is within the chambered bracket is squared and fits a lever 25, which is connected, through the link 26, to the valve-stem. The handle-shank is supported in two bearings. One of the bearings is an extension-bearing 27, which is screwed to or otherwise fitted to the opening in one side of the chambered bracket. The other bearing is a cap-bearing 28, which is screwed or otherwise fitted to the opening in the opposite side of the chambered bracket. The openings on the two sides are of identical construction, so that the extension-bearing and the cap-bearing can each be screwed into either opening and can therefore be reversed, so that the parts can be put together with the handle either on the right side or the left. The cap-bearing supports an extension piece or nut 29, which is screwed to the end of the handle-shank and holds the lever in place on the handle-shank. The extension-piece is provided with a collar which lies between a thrust-seat formed by a counterbore in the opening in the chambered bracket and a thrust-seat formed by an end of the cap-bearing. When the parts are reversed, the collar bears against the thrust-seat in the opening on the other

side of the chambered bracket, as the opening on the other side is counterbored in the same way to provide for such a reversal of the parts. On account of the construction of the thrust-seat will be identical on both sides of the chambered bracket.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A valve-body casting, having a transverse partition forming flushing and overflow-discharge chambers therein, and having a flushing-inlet orifice and a valve-cap orifice in its one end, the transverse partition having a discharge-inlet orifice therein opening directly into the overflow-discharge chamber and being smaller than and registering with the flushing-inlet orifice, the partition also having a valve-opening therein, substantially as described.

2. The combination of a chambered bracket with openings of identical construction in the two sides and each provided with a thrust-seat, an extension-bearing and a cap-bearing, each of which may be fitted to either opening in the chambered bracket, a handle-shank, which is fitted to the extension-bearing, an extension-piece to the handle-shank, which is fitted to the cap-bearing, and a collar which is fitted to engage either of the thrust-seats, substantially as described.

Signed by me in New York city on the 6th day of April, 1900.

DAVID T. KENNEY.

Witnesses:

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