No. 749,285. PATENTED JAN. 12, 1904.

H. GARDENIER.

WATER SUPPLY VALVE.

APPLICATION FILED FEB. 26, 1903.

NO MODEL.

FIG. 1.

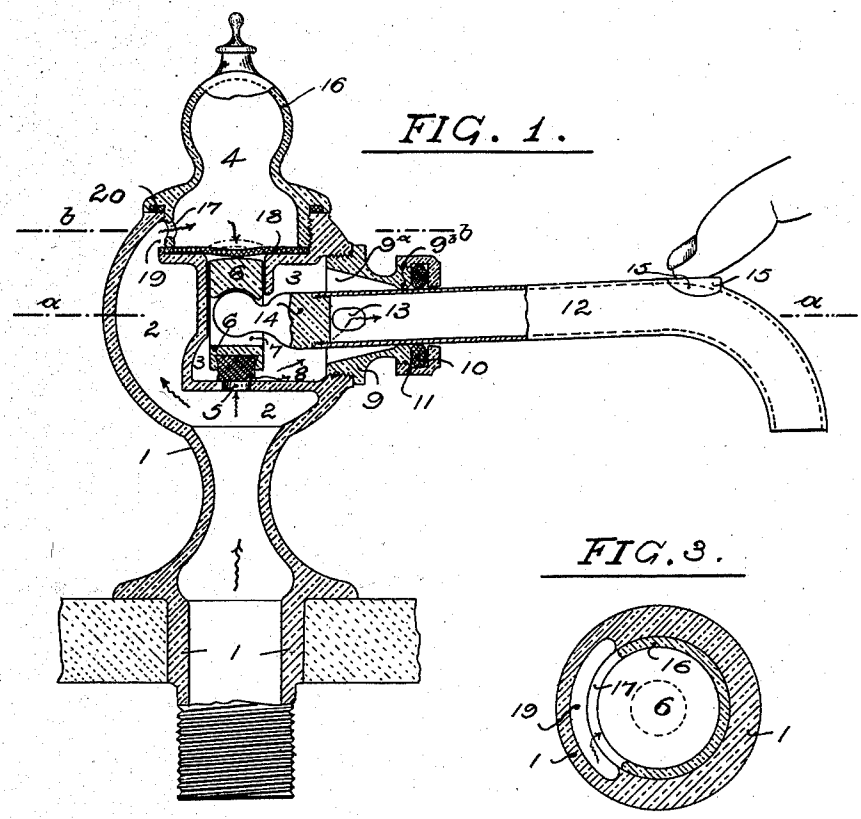
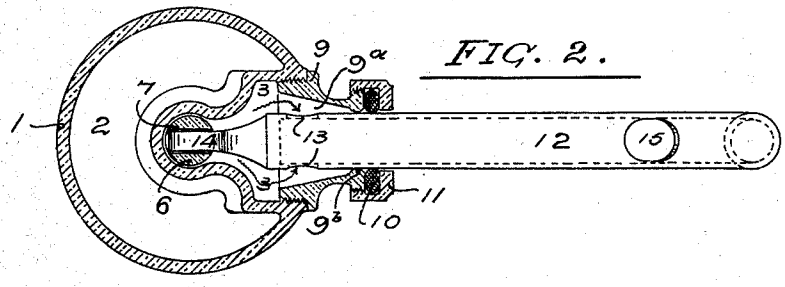


FIG. 3.

FIG. 2.



Witnesses
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No. 749,285. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

HENRY GARDENIER, OF PATERSON, NEW JERSEY.

WATER-SUPPLY VALVE.

SPECIFICATION forming part of Letters Patent No. 749,285, dated January 12, 1904.

Application filed February 26, 1903. Serial No. 145,169. (No model.)

To all whom it may concern:

Be it known that I, HENRY GARDENIER, a citizen of the United States of America, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Water-Supply Valves, of which the following is a specification, reference being had therein to the accompanying drawings.

The objects of my invention are to provide a simple, noiseless, efficient, economical, and durable water-supply valve by means of which water can be let into a lavatory or into a tank at any desired height, which closes automatically, cutting off the supply without any waste of water, and which will not be easily gotten out of order, owing to its simplicity of construction.

The invention consists of the novel construction, combination, and arrangement of the different parts, as hereinafter described and claimed, and as shown in the drawings, which form a part of this specification and in the various figures of which similar letters of reference indicate like parts.

Figure 1 of the drawings is a vertical sectional view through a valve embodying my invention and illustrating its use. Fig. 2 is a cross-sectional view on the line *a a* in Fig. 1, and Fig. 3 is a cross-sectional view on the lines *b b* in Fig. 1.

My valve-casing is constructed to form three separate chambers—the supply-chamber 2, the outlet-chamber 3, and the air-chamber 4—the supply-chamber having means of communication with the other two chambers, which are non-communicating.

Communication between the chambers 3 and 4 is prevented by means of the flexible disk 18, made of rubber or other suitable material and which is held at its circumference between the upper wall of the chamber 3 and the bottom of the upper portion 16, which is screwed into the main body portion 1 of the valve-casing.

The portion 16 is provided with an opening or port 17 to register with opening 19 in wall of chamber 2, through which the water may pass from chamber 2 to the air-chamber 4. The opening 5 in the bottom wall of the chamber 3, when not closed by the rubber plug 8, which is secured in the bottom of the piston or plunger 6, permits the water to flow from chamber 2 to chamber 3.

The piston 6 at its upper portion is surrounded by the walls of the chamber 3, which guide the piston in its vertical movements. A vertical slot 7 is provided in the piston to admit the end of the plug 14, which is secured in the inner end of the tubular lever 12. Said tubular lever 12 has inlet-openings 13 and is held and supported in the annular orifice 9^b of the portion 9, which is screwed into the body portion 1 of the valve-casing, and its interior 9^a is cone-shaped and forms a part of the chamber 3.

A rubber ring 10 surrounds the tubular lever 12 at the orifice 9^b and is held in place by the nut 11, which is screwed onto the portion 9, making a tight joint, but permitting the lever 12 to tilt, as required, to raise the piston 6 when the button 15 on the lever 12 is pressed down.

A rubber or lead washer 20 or other material serves to make a water and air tight joint between the body portion 1 and the upper portion 16 of the valve-casing.

This invention is an improvement upon the invention described in my former patent, dated May 21, 1902, No. 674,696, for water-supply valves.

In the present invention the water enters the chamber 2 and through the port 17 into the upper chamber 4 above the flexible disk 18. The air and water in the upper chamber tend to assist the flexible disk in holding the piston 6 down to close the port 5 in the bottom of the inner chamber 3. When the outer end of the tubular lever 12 is depressed by the finger, the inner end or plug 14 of the tubular lever 12 causes the piston 6 to rise against the flexible disk 18 and open the port 5 in the bottom of the outlet-chamber 3, thereby permitting the water to pass from the supply-chamber 2 to the outlet or inner chamber 3 and thence through the tubular lever 12 to the lavatory.

With this description of my invention and the operation thereof, what I claim, and desire to secure by Letters Patent, is—

1. The valve-casing having an air-chamber,

a supply-chamber and an outlet-chamber, and means of communication between the said chambers, in combination with a vertically-movable valve member to admit and cut off the supply of water to the outlet-chamber, a flexible disk separating the air-chamber from the outlet-chamber and adapted normally to hold said valve member down to close the communication between the water supply and outlet chambers, and a tubular outlet-lever fulcrumed in the mouth of the outlet-chamber to operate said valve member and carry off the water, substantially as set forth.

2. The combination with a valve-casing forming three separate communicating chambers, an air-chamber, a supply-chamber and an outlet-chamber, of a port forming a valve-seat in the bottom of the outlet-chamber, a cylindrical guide in the upper portion of said chamber having an opening opposite said port, a valve member movable vertically in said guide, a flexible disk separating the air-chamber and the outlet-chamber and normally holding said valve member down to close said port, and means for raising said valve member to open said port, substantially as set forth.

3. The combination of the valve-casing, the movable valve member, the guide for the same, and the flexible disk, with the tubular outlet-lever, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY GARDENIER.

Witnesses:

JOHN F. KERR,

MINNIE L. DILL.