Sept. 23, 1924. 1,509,339

H. G. CORDLEY ET AL

FAUCET

Filed Feb. 7, 1924

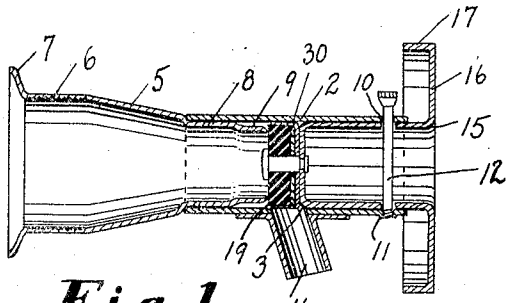


Fig. 1.

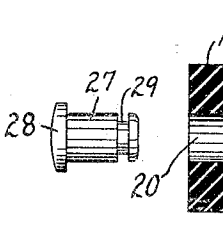


Fig. 3.

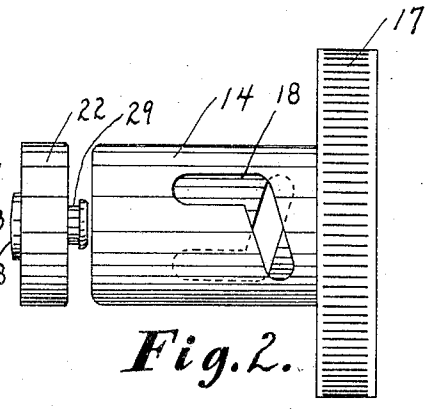


Fig. 2.

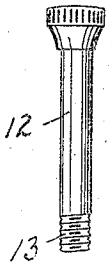


Fig. 5

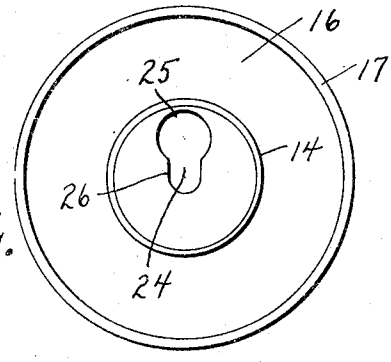


Fig. 4.

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Patented Sept. 23, 1924. 1,509,339

UNITED STATES PATENT OFFICE.

HENRY G. CORDLEY, OF GLEN RIDGE, NEW JERSEY, AND GEORGE R. LONG, OF WATERBURY, CONNECTICUT, ASSIGNORS TO CORDLEY & HAYES, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

FAUCET.

Application filed February 7, 1924. Serial No. 691,245.

To all whom it may concern:

Be it known that we, HENRY G. CORDLEY, residing at Glen Ridge, Essex County, State of New Jersey, and GEORGE R. LONG, residing at Waterbury, county of New Haven, State of Connecticut, both being citizens of the United States, have invented certain new and useful Improvements in Faucets, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof.

This invention relates to faucets and particularly relates to the valves and means for detachably securing them to valve carrying means of faucets and the like, and has for its object to provide a simple and effective form of valve and means for detachably securing it to the device by which the valve is moved into and out of contact with its seat. A further object of the invention is to provide a valve in which the gasket may be readily removed so as to permit both sides to be made use of. A further object of the invention is to provide a simple effective and inexpensive form of faucet of which the main parts may be formed of sheet metal.

With the objects above indicated and other objects hereinafter explained in view, the invention consists in the construction and combination of elements hereinafter described and claimed.

Referring to the drawing:

Figure 1 is a central longitudinal sectional view of a faucet embodying the invention.

Figure 2 is a side view of the valve and valve tube showing them separated.

Figure 3 is a central vertical sectional view of the valve showing the parts separated.

Figure 4 is a rear end view of the valve tube and

Figure 5 is a side view of the pin which holds the valve tube in the shell.

In the drawings 1 indicates the shell of a push faucet having the straight tubular forward portion 2 having discharge opening 3 about which is secured spout 4. To the rear end of this straight tubular portion is a secured a tapered portion 5 increasing in diameter to the rear and having formed integral with it a straight tubular portion 6 interiorly screw threaded and provided at its rear end with a flange 7. Within the rear end of the straight tubular portion 2 and extending forward into it is a ring 8 the forward end of which is reduced in diameter to form an annular seat 9 which is spaced a substantial distance from the interior of the portion 2. Near the forward end of the portion 2 are formed diametrically opposite openings 10 and 11 adapted to receive a pin 12. The material about the lower opening 11 is spread outward so as to receive a screw thread and the pin 12 is screwthreaded at 13 to fit the screwthread of opening 11.

Within the straight tubular portion 2 fits a valve tube 14 closed at its rear end. Into the open forward end of this valve tube extends a central flange 15 of a circular plate 16 the outer edge 17 of which is turned rearward and roughened so as to be readily grasped by the hand. The flange 15 is secured to the end of the valve tube and serves as the means for rotating and sliding it.

Near its forward end the valve tube 14 is provided with opposite bayonet slots 18 adapted to receive the pin 12.

On the rear end of the valve tube is carried a gasket 19 which, when the valve tube is forced into its rearward position, seats itself against the annular valve seat 9.

This gasket 19 consists of non-metallic material such as rubber, bakelite or other suitable material and has a central opening 20 through it. Between the gasket 20 and the circular disk 21 is a washer 30 of leather which acts as a seat for the gasket 20. Both the gasket 20 and the washer 30 fits against a circular disk 21 of metal having an annular, rearwardly extending flange 22 at its periphery. The disk 21 has a central opening 23.

In the rear end of the valve tube 14 is a central opening 24 and an opening of larger diameter 25 near its periphery with a slot 26 connecting the two openings 24 and 25 thus forming a key hole slot.

The opening 20 in the gasket, 19; the opening 31 in the washer 30; the opening 23 in the disk 21 and the opening 25 near the periphery of the rear end of the valve tube are all of substantially the same diameter and are adapted to receive a pin 27. This pin 27 has at its rear end a head 28 and near its forward end is provided with an annular groove 29 and its length from the

forward face of the head 27 to the rear edge of the annular groove 29 is equal to the combined thickness of the gasket 19, the washer 30, the disk 21 and the rear end of the valve tube. In assembling the valve the gasket and washer is placed against the disk 21 with its periphery within the flange 22 and the pin is passed through the openings 20, 31 and 23. The end of the pin is then passed through the opening 25 in the rear end of the valve tube which brings the annular groove 29 in line with the end of the valve tube and the pin is then pressed toward the centre of the end of the valve tube. The slot 26 is of less width than the diameter of the pin but is of such width that its sides engage the annular groove 29 and the diameter of central opening 24 is equal to the width of this slot.

So long as the disk 21 is in line with the valve tube the edges of the central opening 24 will engage the annular groove 29 and the valve will be held to the valve tube to move with it. As the valve tube fits the interior of the straight tubular portion 2 of the shell so long as the valve and valve tube is within the shell the valve will be held to the valve tube. As the pin 12 extends through the bayonet slots 18 it serves to hold the valve tube in the shell while permitting it to slide and to be rotated as may be necessary to force the gasket 19 against its seat and to release it and draw it forward to open the faucet.

The gasket 19 being a flat disk is readily reversible so that if one face becomes worn the pin 27 may be withdrawn, the gasket turned over and the pin again inserted.

By unscrewing the pin 12 and withdrawing it the valve tube and valve may be readily withdrawn from the shell and when withdrawn the valve may be moved radially of the valve tube to cause the forward end of pin 27 to move outward through the slot 26 into line with the opening 25 when it will slip out through this opening and the valve will be disengaged from the valve tube.

The valve tube 14 is preferably formed in one piece with its closed end. All of the parts of the faucet shown, except the gasket 19, the pin 27 and the pin 12 may be readily formed from sheet metal by ordinary methods of stamping, drawing or spinning and may be secured together as shown by brazing or soldering.

While the valve and the means for securing it to the valve tube is particularly adapted for use in a construction in which the valve tube is of sheet metal as shown, the same securing means may be used with valve carrying means of other construction.

Having thus described our invention what we claim is:—

1. In a faucet an outer shell consisting of an outer member of straight tubing and an inner member of straight tubing having towards its forward end a portion of reduced diameter adapted to fit within the rear end of the outer member, having its forward end portion so reduced in diameter as to leave between it and the interior of the outer member an annular space, and having its end adapted to serve as a valve seat, and a plug movable in the inner portion of the outer member, and adapted at its inner end to receive a pin which holds the valve securely against the end of the plug said valve being adapted to fit the valve seat on the end of the inner member, and having bayonet slots formed in said plug, and a pin, screwthreaded at its lower end, carried by the outer member extending through the bayonet slots of the plug.

2. In a faucet an outer shell consisting of an outer member of straight tubing and an inner member of straight tubing having towards its forward end a portion of reduced diameter adapted to fit within the rear end of the outer member, having its forward end portion so reduced in diameter as to leave between it and the interior of the outer member an annular space, and having its end adapted to serve as a valve seat, and a plug movable in the inner portion of the outer member, and provided at its inner end with a key hole slot adapted to receive a pin which holds the valve, substantially encased in an enclosure, securely against the end of the plug, said valve being adapted to fit the valve seat on the end of the inner member, and having bayonet slots formed in said plug, and a pin, screwthreaded at its lower end, carried by the outer member extending through the bayonet slots of the plug.

3. In a faucet an outer shell consisting of an outer member of straight tubing and an inner member of straight tubing having towards its forward end a portion of reduced diameter adapted to fit within the rear end of the outer member, having its forward end portion so reduced in diameter as to leave between it and the interior of the outer member an annular space, and having its end adapted to serve as a valve seat, and a plug movable in the inner portion of the outer member, and provided at its inner end with a key hole slot adapted to receive a pin which holds the valve, a washer interposed between the valve and the valve enclosure, and the valve enclosure securely against the end of the plug, said valve being adapted to fit the valve seat on the end of the inner member, and having bayonet slots formed in said plug, and a pin, screwthreaded at its lower end, carried by the outer member extending through the bayonet slots of the plug.

In testimony whereof we hereunto affix our signatures.

GEORGE R. LONG.
HENRY G. CORDLEY.