(No Model.)

J. H. JOHNSON.

FAUCET.

No. 260,030 Patented June 27, 1882.

Fig. 1.

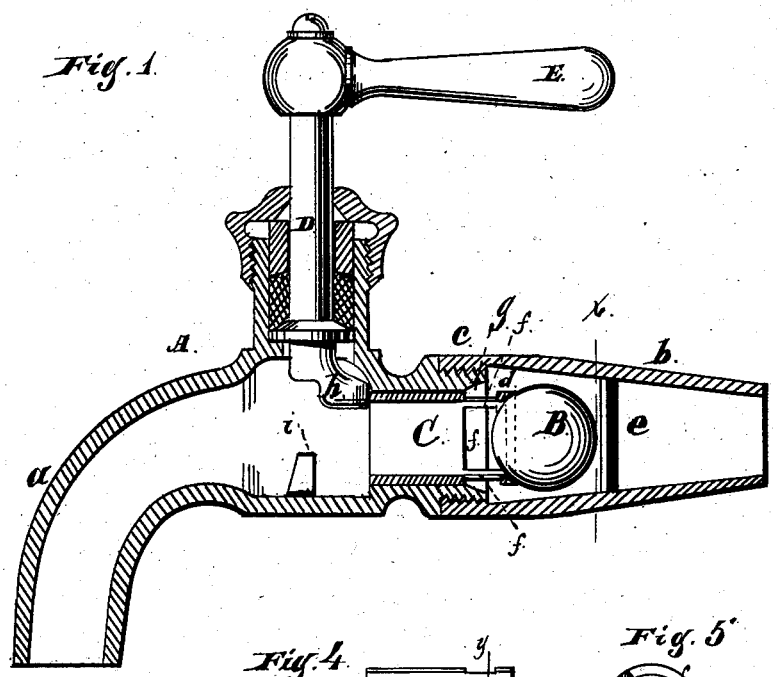


Fig. 3.

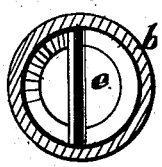


Fig. 4.

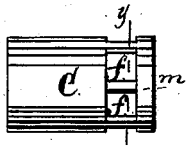


Fig. 5.

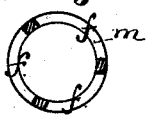


Fig. 6.

Fig. 7.

Fig. 8.

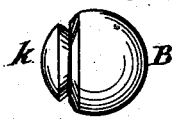


Fig. 2.

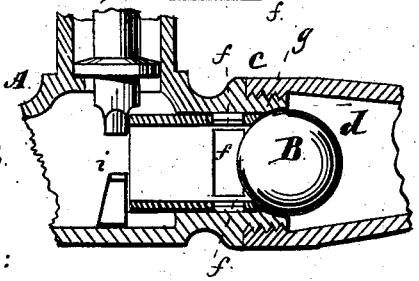
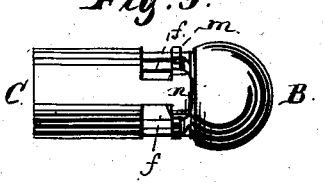


Fig. 9.



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Inventor:

John H. Johnson.

UNITED STATES PATENT OFFICE.

JOHN H. JOHNSON, OF CHICAGO, ILLINOIS.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 260,030, dated June 27, 1882.

Application filed September 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. JOHNSON, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Faucets, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section showing the valve open. Fig. 2 is a similar section showing the valve closed. Fig. 3 is a section at line *x* of Fig. 1. Fig. 4 is a detail, being a side view of the ball-holder. Fig. 5 is a section at line *y* of Fig. 4. Figs. 6, 7, 8, and 9 represent a modification.

My improvement is primarily designed to be used in water-faucets; and it relates to that class of faucets which use a ball-valve.

The construction of faucets having a ball-valve has heretofore been such that when the water is flowing through the faucet the action of the current upon the ball-valve causes it to move about rapidly, striking with considerable force upon the inner walls of its chamber, producing considerable noise, which is objectionable. The leading object of my invention is to overcome this difficulty.

My invention consists essentially in a tubular or hollow plunger or ball-valve support arranged within a faucet-casing, and having a seat to receive a ball or similar valve, whereby the valve will be held away from the walls or sides of the valve-chamber when the said plunger or valve support is so adjusted as to open the valve for permitting the flow of liquid through the faucet.

In the drawings, A represents the faucet-pipe, the general construction of which has no novel feature. As shown, this pipe is made of two parts, *a* and *b*, connected together by a screw-thread at *c*.

B is a ball-valve located in a chamber, *d*, in the part *b*, which is provided with a cross-bar, *e*, to limit the movement of the ball in one direction.

C is a movable hollow tube or plunger, fitting into the contracted end of the part *a* of the faucet, as shown in Figs. 1 and 2. The end of this part C which is toward the valve-chamber is a continuous ring, *m*, and is adapted to receive a portion of the ball.

f are openings in the sides of this part C, through which the water flows when the valve is open.

g is the valve-seat.

D is a stem, having an eccentric, *h*, upon its lower end for the purpose of opening the valve.

E is the handle by which the stem D is operated.

i is a stop on the inside of the part A. This stop is not a necessity, and may be omitted, though I prefer to use it.

The operation is as follows: When the parts are in the position shown in Fig. 2 the valve will be closed, the ball B being forced against its seat *g* by the pressure of the water. By turning the stem D the eccentric *h* will force the part C into the position shown in Fig. 1, opening the valve and permitting the water to flow through the openings *f*, thence through the tube C, to be discharged at the end of the faucet. In this position the action of the water upon the ball B will bring a portion of the ball into the end of the rest or ball-holder C, as shown in Fig. 1, and the pressure of the water upon the ball will hold it in this position, and the ball will be prevented from moving about from side to side in its chamber. When the stem D is turned back to the position shown in Fig. 2 the pressure of the water upon the ball will force the part C into the position shown in Fig. 2, bringing the ball again to its seat and closing the passage.

As shown in Figs. 1 and 2, the ball is not held permanently in the end of the rest C, but is only held there by the pressure of the water.

If desired, the ball-valve might be made substantially as shown in Fig. 8, in which the ball is provided with a neck, and the part *k* can be inserted into the end of the ball-holder or rest C and be there held permanently. In this case the end of the ball-holder or rest C is to have a continuous ring, *m*, as before, and the part *k* of the ball may be forced into such ring, or the ring may have two or more prongs, *n*, to catch over the neck of the ball.

There is no advantage in the modification described; indeed I prefer to use a ball-valve loose, as shown in Figs. 1 and 2, though the object of my invention would be accomplished by the modification described and in substantially the same manner as before.

There are some incidental advantages following from the described construction, among

which I will mention the following: The handle and stem can be turned around entirely without producing any strain or friction on the valve, because the valve-rest is not in any way connected with the stem D. When the water is shut off in the ground it will not be necessary to turn the stem D in order to have air enter the faucet for the purpose of forcing the water out from the pipe, because when the water is turned off the pressure upon the ball-valve will be removed and the ball will be lifted away from its seat. I do not limit myself to the exact construction of the valve rest or holder shown in the drawings.

The water-passage forward of the openings *f* may be varied somewhat in form, especially for basin-faucets, retaining, however, the ring *m*.

The end of the stem D which is within the faucet serves the purpose of a stop to limit the movement of the part E when the valve is closed. In addition to this, the stop *i* may be used as before stated.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a faucet, the combination of the adjustable tubular plunger or valve-support and a ball-valve adapted to a seat in the end of said plunger or support, substantially as described, whereby the ball-valve will be held away from the walls of the casing when liquid is flowing through the faucet, as and for the purposes set forth.

2. In a faucet, the combination of a sliding tubular plunger or valve-support provided with lateral apertures for the passage of liquid, and a valve-seat in advance of said lateral apertures, with a ball-valve adapted to said valve-seat, substantially as described, whereby the valve will be held from the walls of the valve-chamber when liquid is flowing through the faucet, as and for the purposes set forth.

3. In a faucet, a movable rest or holder for a ball-valve, provided with a continuous ring, *m*, forming a seat to receive the ball when the faucet is open, and with openings *f* in the sides for the passage of water, substantially as and for the purposes specified.

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