

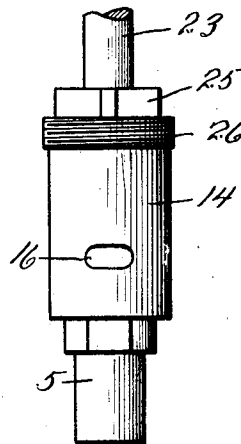
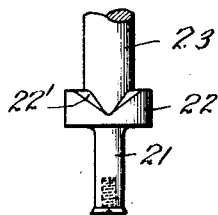
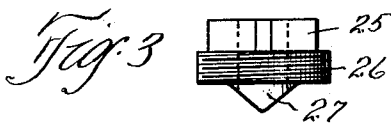
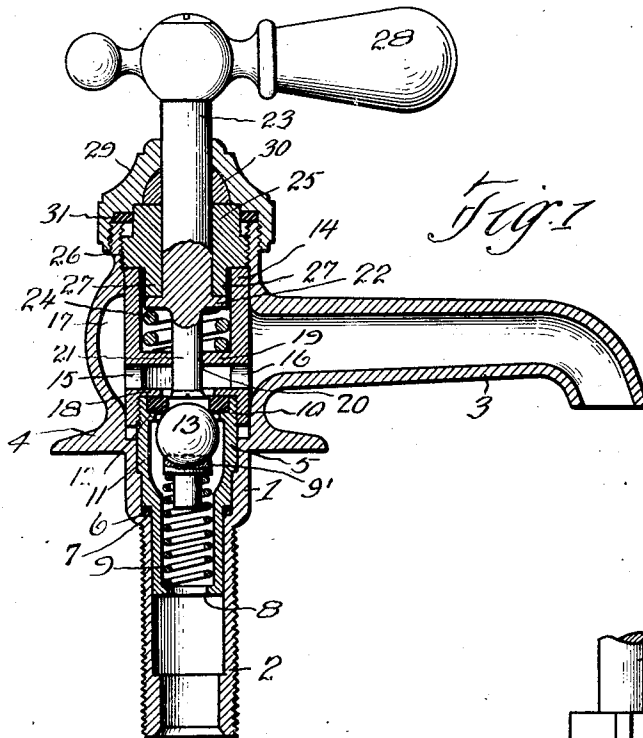
May 15, 1928.

1,669,651

L. BLOCH

SELF CLOSING BASIN COCK

Filed July 31, 1926



Inventor

Leon Bloch

By *Hull Brock & West*

Attorney

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UNITED STATES PATENT OFFICE.

LEON BLOCH, OF CLEVELAND, OHIO, ASSIGNOR TO THE REPUBLIC BRASS COMPANY,
OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

SELF-CLOSING BASIN COCK.

Application filed July 31, 1926. Serial No. 126,246.

This invention relates to self-closing cocks and one of the objects of the invention is to provide a basin cock in which the valve closes under pressure in the direction of flow of the liquid.

Another object of the invention is to provide a self-closing cock of the character described in which the valve, valve seat and valve actuating mechanism are removable through the top of the casing as a unit without disconnecting the casing from the source of water supply.

A further object of the invention is to provide a basin cock of the character described which may be readily assembled and disassembled and which is well adapted for quantity production at comparatively low cost.

Further objects of the invention will appear as the description proceeds and by reference to the accompanying drawing in which Fig. 1 is a vertical sectional view of my improved basin cock; Fig. 2 is a detail view in side elevation of the tubular member which encloses and supports the valve and valve actuating mechanism; and Figs. 3 and 4 are enlarged detail views in side elevation of parts of the valve actuating mechanism.

In the preferred embodiment of my device I provide a hollow casing 1 having a threaded lower end 2, a spout 3 and a base 4, preferably formed integral therewith. Removably fitted within the casing 1 is a hollow tubular member 5 having an annular shoulder 6 which engages a complementary shoulder 7 formed on the casing. The lower end of the member 5 is provided with an intumed annular flange 8 which receives and supports a coil spring 9, the purpose of which will hereinafter appear. The upper end of the member 5 is exteriorly threaded as shown at 10 and is provided on the interior with an annular shoulder 11 on which rests a washer 12. Secured to the spring 9 is a valve receiving member 9' on which rests loosely a ball valve 13. The washer 12 serves as a packing and also as a valve seat for the ball valve 13. The ball valve 13 is urged toward its seat by the pressure of the incoming liquid. The spring 8 serves merely as a support for the valve 13 and for preventing chattering of the valve.

Threadedly secured to the member 5 is an annular member 14 provided with ports 15 and 16 leading to the discharge chamber 17. The member 14 at its lower end is provided

with an interior annular flange 18 which fits over and engages the washer 12 and holds the same in place. The member 14 is also provided with a partition 19 having an opening 20 therein. Extending through the opening 20 and slidable therein is a valve stem 21 having an enlarged portion 22 and an upwardly extending portion 23.

The stem 21 is normally urged upwardly by a coil spring 24. The upper end of the casing is both interiorly and exteriorly threaded as shown in Fig. 1. Slidably mounted on the stem 23 is a member 25 which is exteriorly threaded as shown at 26 to engage the interior threads on the casing 1. The member 25 is provided with a pair of oppositely disposed downwardly extending projections 27 which normally engage in notches 22' in the enlarged portion 22. The stem 23 extends upwardly and is adapted to receive a handle 28. The upper end of the casing is closed by a cap 29 having a suitable packing 30 and a gasket 31. The water supply pipe is attached to the threaded lower end 2.

Operation.

The pressure of the water normally urges the ball valve 12 to its seat assisted by the slight pressure of the spring 9. When the handle 28 is turned in either direction the enlarged portion 22 is also rotated. It will now be clear that as the member 25 is stationary, that when the handle is rotated the projections 27 riding out of notches 22' will depress the stem 21 into engagement with the ball valve 12 and force the same away from its seat against the tension of spring 9 and allow the water to pass through the ports 15 and 16 into the discharge chamber 17 and out the discharge spout 3. When the handle is released the spring 24 will return the handle to normal position and the ball valve 12 will return to its seat.

All of the parts may be readily removed from the casing 1 by removing the cap 29 and unscrewing the member 25.

It will now be clear that I have provided a self-closing cock which will accomplish the objects of the invention as hereinbefore stated.

Having thus described my invention, what I claim is:—

1. In a self-closing cock, a hollow casing having one end open and its opposite end

adapted to be connected to a source of water supply, an outlet leading from the casing, an annular member secured within said casing, said annular member having an inwardly projecting shoulder thereon, a washer detachably secured to said shoulder and defining a valve seat, a valve arranged within said casing and adapted to engage said valve seat, means for actuating said valve, said valve and valve actuating means being removable through the open end of said casing and means normally closing the open end of said casing.

2. In a valve of the class described, a casing having one end open and its opposite end adapted to be connected with a source of water supply, a tubular member arranged within said casing, said tubular member comprising a pair of detachable sections, a washer clamped between said pair of sections and defining a valve seat, a valve adapted for engagement with said valve seat, means for actuating said valve, said tubular member, valve seat and valve actuating means being removable through the open end of said casing, and removable member normally closing the upper end of said casing.

3. In a valve of the class described, a hollow casing having its upper end open and its lower end adapted for connection with a source of water supply, an outlet leading from said casing, a tubular member secured within said casing and consisting of a pair of sections detachably secured together, a washer secured between said pair of sections and providing a valve seat, an upwardly closing valve adapted to engage said valve seat, said tubular member having ports communicating with said outlet, valve actuating means carried by said tubular member adapted to be depressed to move said valve away from its seat whereby to allow water to flow through said casing and tubular member to said outlet opening and removable means normally closing the upper end of said casing and holding said tubular member in place, said valve actuating means and tubular member being removable through the open upper end of said casing.

4. In a valve of the class described, a hollow casing having its upper end open and its lower end adapted to be connected with a source of water supply, an outlet leading from said casing, a tubular member secured within said casing and consisting of a pair of telescoping sections detachably secured

together, a washer secured between said pair of sections and providing a valve seat, said tubular member also being in open communication with said outlet, an upwardly seating valve arranged within said tubular member and means normally urging said valve towards its seat, a valve stem slidably mounted in said tubular member, means for depressing said valve stem to open said valve and means normally holding said valve stem out of engagement with said valve, said tubular member and valve actuating means being removable through the open end of said casing as a unit and means normally closing the upper end of said casing.

5. In a valve of the class described, a hollow casing having its upper end open and its lower end adapted to be connected with a source of water supply, an outlet leading from said casing, a tubular member secured within said casing and adapted to be removed through the open upper end thereof, said tubular member having an annular shoulder formed on the interior thereof, an annular gasket disposed adjacent said annular shoulder and forming a valve seat, an upwardly seating valve arranged within said tubular member and normally urged toward said valve seat by a spring, said tubular member having ports communicating with said outlet, means carried by said tubular member for actuating said valve and removable means normally closing the upper end of said casing and holding said tubular member in place.

6. In a self-closing cock, a hollow casing having one end open and its opposite end adapted to be connected with a source of water supply, an outlet spout communicating with the interior of said casing, a tubular member arranged within said casing and having a pair of inwardly projecting flanges thereon, an annular member detachably secured between said pair of flanges and defining a valve seat, a valve arranged within said casing and adapted to engage said valve seat, means for moving said valve away from its seat, said valve seat, valve and actuating means being removable from said casing as a unit, and means for closing the open end of said casing.

In testimony whereof, I hereunto affix my signature.

LEON BLOCH.