No. 630,315. Patented Aug. 8, 1899.

P. BARCLAY.

AUTOMATIC FAUCET.

(Application filed Oct. 12, 1898.)

(No Model.)

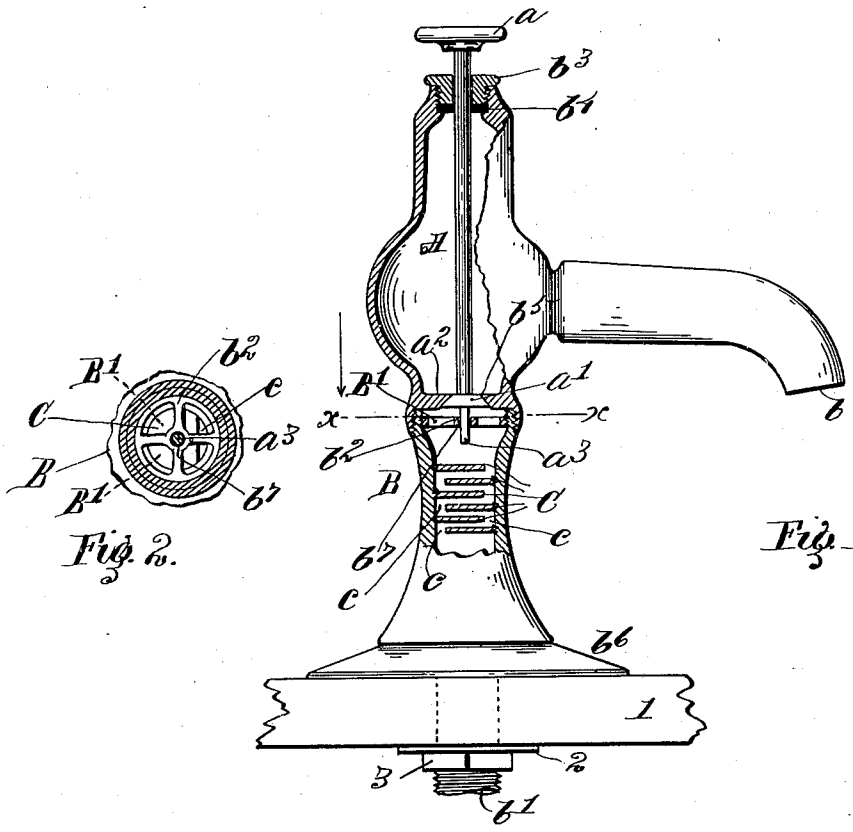


Fig. 1.

Fig. 2.

Witnesses

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AUTOMATIC FAUCET.

SPECIFICATION forming part of Letters Patent No. 630,315, dated August 8, 1899.

Application filed October 12, 1898. Serial No. 693,340. (No model.)

To all whom it may concern:

Be it known that I, PETER BARCLAY, of Boston, county of Suffolk, State of Massachusetts, have invented an Automatic Faucet, of which the following is a specification.

The object of my invention is to effect a faucet, automatic in its operation, that will permit a discharge by the mere pressing of a button and that will effect when the button is released a stoppage of the discharge by the pressure of that controlled to pass through the faucet without the aid of any other kind of force, which I attain in the following manner.

Figure 1 is a vertical section of my invention; and Fig. 2 is a cross-section on line $x\,x$, showing the hand-manipulating button-valve-operating stem-guide b^2.

A represents my hand-manipulating button-operating-stem valve, a the hand-manipulating button, and a' the valve portion, which is designed to contact the valve-seat a^2 of the faucet-body.

a^3 is a reduced portion of my valve at its lower end, which freely passes through the guide, as shown in Fig. 1.

B denotes my automatic valve-faucet body, of which b is the discharge portion, b' the supply portion, and b^2 a perforated guide for the valve-stem of my automatic valve A, and b^3 is a removably-fitted packing-nut, which also acts as a stem-guide, as well as to effect an efficient pressure on the packing b^4, surrounding the hand-manipulating stem. This nut is in threaded engagement with the top portion of my faucet-body, as shown by the drawings.

The vertical movement of my valve is controlled by coming in contact with the surface of the valve-seat when the button a is not pressed down.

b^5 represents the valve-seat, and b^6 the base of the faucet-body, which is shown to engage the table 1, the under part of which the washer 2 contacts, against which the nut 3, in threaded engagement with the feed-end portion of the faucet, thrusts the washer hard against the under surface of the table, so as to firmly hold the faucet in its proper position.

The faucet-body is shown to be in three portions united together by each being in threaded engagement with the other, as shown by Fig. 1, the purpose of which is merely to conveniently permit the efficient finishing of the interior surfaces to effect a satisfactory movement of the movable parts within.

B′ represents the perforations in the stem-guide, and b^7 the opening in the perforated valve-guide for the valve-stem end to enter. These perforations in the guide are for the purpose to permit the water to have free discharge through them.

C represents horizontal disks fitted within the feed passage-way in a horizontal manner below the stem-valve, as shown. These disks are for the purpose of breaking the direct flow of the water to arrest any tendency of a water-thump in the water valve or pipe that may be caused by the flowing and cutting off of the water. These disks cut off a great part of the passage-way and only permit the water to flow through a small opening at one end, and it will be observed that these openings c through the disks are, in their series at one side, then at the other side, respectively, compelling the water to flow in a zigzag manner. These water-thump-preventing disks may be perforated to attain the same result as the disks just described.

My automatic valve A can be made of aluminium or any other suitable metal. The former is more preferable by reason of its very light weight. The valve is shown to be conical in design, but that is optional, as any other efficient design will be as effective as the one shown.

It is the essence of this my invention to attain a valve-faucet, automatic in its operation, that requires no springs to assist it in its operation—only the pressure of that which is intended to pass through the faucet. The perforated guide prevents the operator pressing the valve-operating stem down too far.

The use and operation of my valve-faucet are as follows: We will assume that my faucet is used for the discharge of water. To draw water from my faucet, all that has to be done is to press down on the manipulating-button and the water will pour out of the discharge passage-way of my faucet in a quantity according to the distance the button is pressed down. To stop the flow of the water, the operator has merely to let go of the button and the pressure of the water behind the valve A forces the valve against its seat, and thus cuts

the water off. When the button is pressed down, the water travels upward through the perforations of the valve-guide, through the valve-seat opening, and out through the discharge-way *b*. When the button is released, the pressure of the water forces my valve A up and cuts off the discharge.

Having described my invention, I claim—

An automatic valve-faucet, consisting of a faucet-body having a feed and discharge passage-way in circuit with each other, a perforated guide to guide the vertical movement of the valve *a'*, the top of the valve-faucet body being designed to receive an adjustable packing-nut, and valve-operating-stem packing, and having above the horizontal guide a valve-seat portion, the adjustable packing-nut in efficient engagement with the faucet-body, the packing held by the faucet-body and engaged by the packing-nut, a vertically-movable operating-stem valve passing through the adjustable packing-nut, the packing, and the perforated stem-guide, the valve portion of the stem-valve being between the perforated guide and the valve-seat portion of the faucet-body, the valve *a'* designed to efficiently engage the valve-faucet seat, and engaging the perforated valve-guide b^2, a series of disks fitted horizontally in the feed passage-way of the faucet below the stem-valve guide, such disks having respectively small openings through them, the area of the respective holes through the respective disks being respectively less than the area of the feed passage-way, substantially as and for the purpose described.

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Witnesses:

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