(No Model.)

P. E. EVERETT.

SELF ACTING FAUCET.

No. 408,701. Patented Aug. 13, 1889.

Fig. 1.

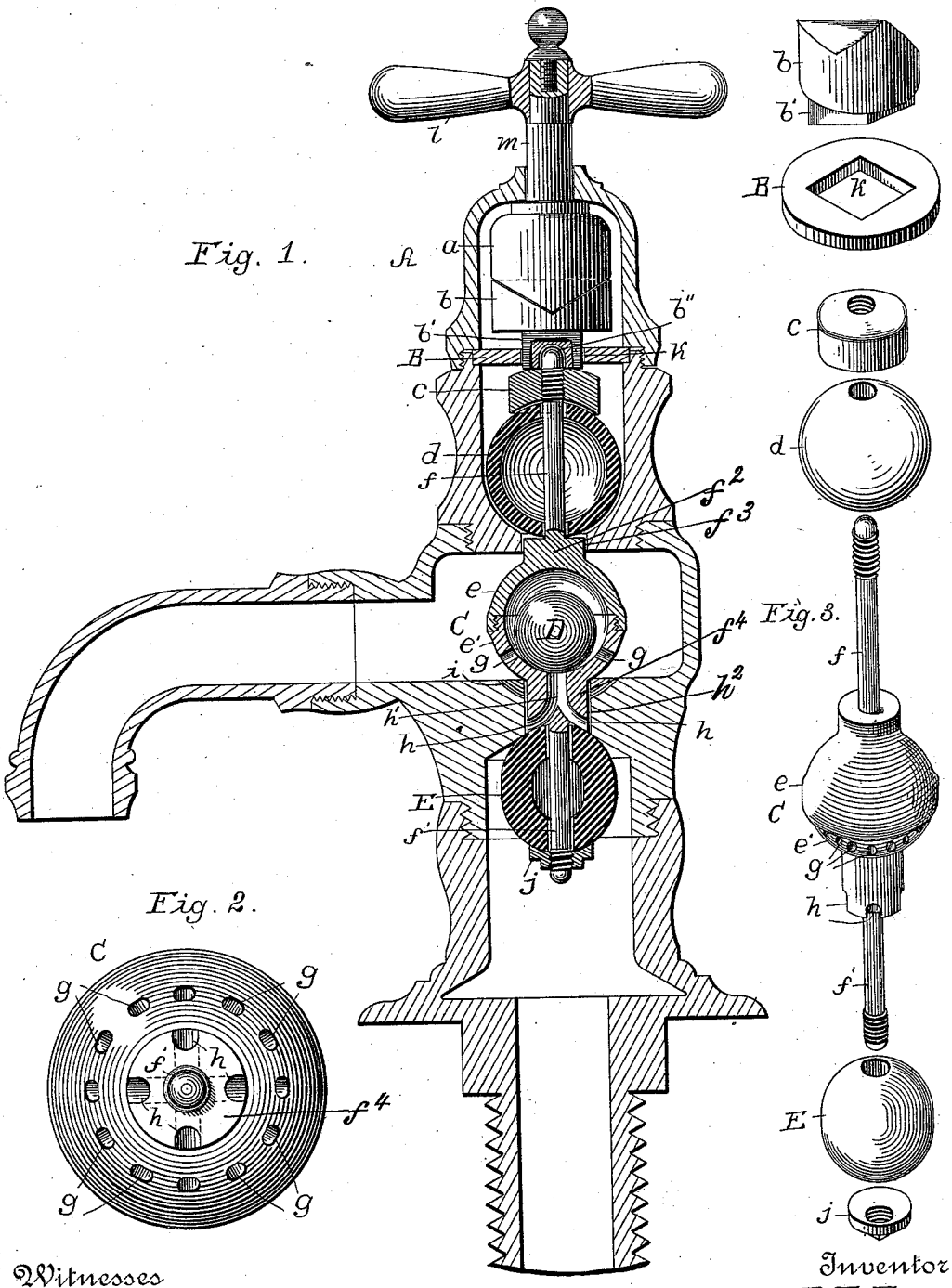

Fig. 2.

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

PIERCE E. EVERETT, OF KANSAS CITY, MISSOURI, ASSIGNOR TO CHARLES DOHERTY, OF SAME PLACE.

SELF-ACTING FAUCET.

SPECIFICATION forming part of Letters Patent No. 408,701, dated August 13, 1889.

Application filed April 3, 1889. Serial No. 305,857. (No model.)

To all whom it may concern:

Be it known that I, PIERCE E. EVERETT, of Kansas City, Jackson county, Missouri, have invented certain new and useful Improvements in Self-Closing Faucets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to certain improvements in water-faucets, more particularly self-closing faucets; and to this end the nature of the invention consists of the novel combination of parts and their construction, as will fully appear from the following description and accompanying illustration, in which—

Figure 1 is a sectional elevation of my improved faucet. Fig. 2 is an enlarged detached under side view of the upper valve, and Fig. 3 is a view disclosing in perspective the various internal or operative parts of my faucet.

In carrying out my invention I employ a suitable body or casing A, which contains in its water-discharge chamber an upper valve C. The valve C consists of two hemispherical hollow sections *e e'*, screwed together, and is seated in a cavity or seat *i* in the bottom of the discharge-water chamber and surrounding the upper end of the passage h^2, terminating in a flared chamber below. The spherical valve C has in its lower section a series of outlet-water passages *g g*, out through which the water passes into the discharge-chamber upon opening the valve.

In the spherical upper valve C is contained a loosely-playing solid rubber ball or cushion D, which, rising with the water as the latter is admitted thereinto, impinges against the top of the valve-chamber, and thus acts or serves in the capacity of an air-cushion to prevent the water striking suddenly or forcibly against or hammering the top of the valve-chamber.

Each of the upper valve-sections *e e'* is cast with an extension constituting the valve-stem *f f'*. Said sections, however, are first cast, the upper one with a shoulder or enlargement f^2, entering a passage f^3 in a section of the body A, while the lower valve-section has an enlargement f^4 entering the passage h^2. In the enlargement f^4 is a central passage *h'*, connecting with the chamber of the valve C and branching off into a number of lateral passages *h h*, opening through the enlargement f^4 at its lower corner edges. These passages *h* receive and supply the water, when the valve is opened, to the central passage *h'*, permitting the water to enter the chamber of the valve, and thence to pass out through the water-outlet apertures or passages *g*.

Upon the lower extension *f'* of the valve-stem is fitted the lower valve, which is in the form of a hollow rubber or elastic cushion or packing E, being held thereon by a nut *j*, and normally resting at its upper end in a concavity in the lower end of the enlargement f^4 and against or around the lower edges of the passage h^2, thus normally closing said passage water-tight. The lower valve E being hollow, lessens the jar or concussion which it would otherwise have, as it is seated against the lower edges of the passage h^2. It will thus be seen that two valves are provided—an upper one and a lower one—each being mounted to be moved simultaneously. Moving either valve to its seat cuts off the water; hence the open position is attained when the valves are in the middle of their stroke.

Upon the upper extension of the valve-stem is placed a hollow rubber or elastic ball or spring *d*, which rests at its lower surface upon the enlargement f^2 of the valve C, and also against the shell, while its upper surface rests against a concave nut *c*, screwed upon said valve-stem extension. The said hollow rubber ball *d* thus packs the joint between the main water-passage and the upper cavity of the shell.

Upon the extreme upper end of the valve-stem or its upper extension is fitted a rectangular cap *b''*. This cap rests in a rectangular chamber of a correspondingly-shaped lug *b'*, fitting in a rectangular aperture K of a horizontal disk or partition B in the body or casing A, and is cast upon the under side of a cam *b*. The face of the cam *b* has a double incline upon its opposite sides, the inclines meeting at their lowest points and about cen-

trally of the cam. The lug b' serves to guide and hold the cam b from turning as it is acted upon.

a is a second or upper cam adapted to coact with and rest upon the lower cam b, being correspondingly shaped upon its lower side edges. The upper cam a is actuated by a handle or lever l, suitably fitted or secured upon an upward cylindric extension or stem m of the cam a. It will further be seen that by turning the handle or lever l in the required direction—to the right—the cam a will so actuate the cam b that a downward movement will be imparted to the latter, which will cause its lug b', embracing the capped upper end of the valve-stem, to press said stem also downwardly, and at the same time compress the hollow elastic ball or spring d. This movement of the valve-stem of course will open the faucet—*i. e.*, move the lower valve E away from the lower side of the passage h^2, and project the lower end of the valve-extension f^4, with its ports or passages, into the water-way or chamber below, and thus permit of the passage of water up through said ports and the central passage h' into the valve, the ball or cushion D rising with the inflowing water, and thus preventing it (the water) from hammering the top surface or wall of the valve-chamber. By continuing the aforesaid movement of parts the valve C will be received into the cavity or depression i in the water-discharge chamber around the passage h^2, the passages g g will be closed, and thus the water will be cut off. When pressure or the hand is removed from the handle or lever l, the recoil action of the compressed ball or spring d will at once and automatically lift the various aforesaid parts, among them the valve E, seating the latter over the inlet end of the passage h^2, thus preventing the water entering the passages of the valve, and also cutting off the flow of water from the faucet.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a faucet, the combination, with the shell or casing, of a stem and valve operating therein, the lower cam b, having the rectangular lug b' upon its under side, and detachably connected to the upper end of the stem, the guiding-partition B, removably clamped in position and having a rectangular opening K, in which the rectangular lug operates, and a handle and connections, substantially as set forth.

2. In a faucet, the combined valve and stem formed of two hollow hemispheres connected together, and each having a stem section or extension, in combination with a shell, handle, and connections, substantially as set forth.

3. In a faucet, the combined valve and stem consisting of two hollow hemispheres or sections connected together, and each having a stem section or extension, one valve section or hemisphere having an enlargement provided with a central passage connecting with the chamber of the valve and branching out through said enlargement into lateral passages, in combination with a shell, handle, and connections, substantially as set forth.

4. In a faucet, the hollow apertured upper valve having an enlargement at one side provided with a central passage branching into lateral passages through the corner edges of said enlargement, a stem-extension projecting from said enlargement, the lower valve E, fitted upon said stem-extension, in combination with a shell, handle, and connections, substantially as shown and described.

5. In a faucet, the hollow valve and the solid elastic ball or cushion D, loosely arranged within said hollow valve, in combination with a shell, handle, and connections, substantially as set forth.

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

PIERCE E. EVERETT.

Witnesses:
F. G. FISCHER,
A. A. HIGDON.