N. Jenkins.

Self Closing Cock.

No 48,407. Patented June 27. 1865.

Fig. 1.

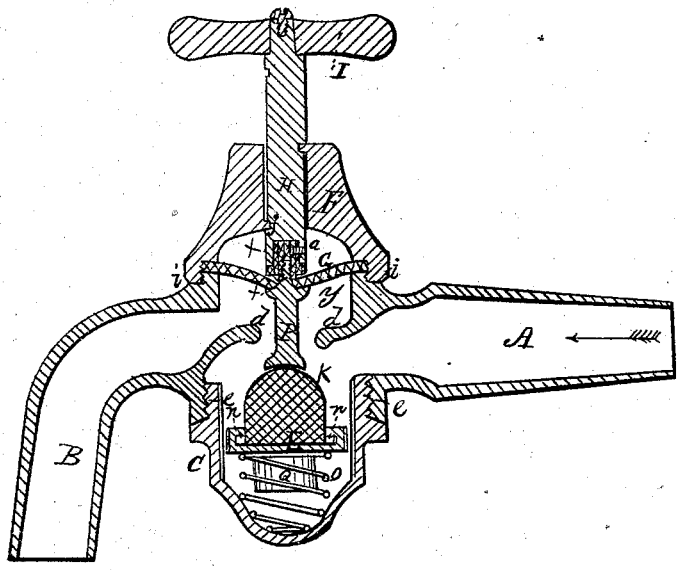
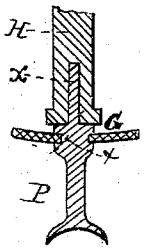


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

NATHANIEL JENKINS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SELF-CLOSING COCKS.

Specification forming part of Letters Patent No. **48,407**, dated June 27, 1865.

To all whom it may concern:

Be it known that I, NATHANIEL JENKINS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Self-Closing Faucets; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a longitudinal central vertical section through the entire faucet; and Fig. 2 is a similar section through the swivel P and diaphragm, showing another method of confining the two.

Like parts are indicated by the same letters in both figures.

The nature of my invention consists in opening a self-closing faucet by means of a screw-follower, H, whose threads are so inclined that the pressure of the water and the spring O under the valve K will be sufficient to rotate said follower, and thereby close the faucet, while at the same time, by means of said inclined screw, it will be easy to open the valve and hold the same open so long as it may be required to let the water run.

My invention further consists in combining with said self-closing valve and screw-follower a swivel, P, to prevent the twisting and friction of the valve, which would otherwise occur.

To enable others skilled in the art to make and use my improvement, I will now proceed to describe the construction and operation of the same.

Fig. 1 represents a longitudinal central vertical section of the faucet, in which A is the inlet, B the outlet, and C the valve-chamber, confined to the center of the faucet by means of the screw *e*.

d is the valve-seat, and K is the valve, of rubber or other suitable material, the bottom of which has a projecting ring or flange, *n*, which enters a corresponding groove in the top of the metallic base L, whereby the two are confined together.

Q is a round shank, extending downward from the center of the base L, around which is placed the spiral spring O, the design of said spring being to force the valve K upward to its seat *d*, where it will be held by the pressure of the water.

H is the follower, passing through the cap F of the chamber Y down to the diaphragm G, which is confined between the bottom of the cap F and the top of the chamber Y by means of the screw *i*, said diaphragm answering also as a packing for the cap. This follower H is provided with a coarse screw thread or threads, *j*, the inclination of which is such that a partial rotation of the same will entirely open the valve, while the upward pressure of the spring O and the water under the valve is sufficient to overcome the friction of said screw-follower and throw it up, thus making a self-closing faucet. The inclination of the screw-thread *j* should be proportioned to the head of water under which the faucet is to be used. The less the head of water the greater the inclination of the thread should be, and vice versa.

P is the cylindrical swivel, the upper end of which is turned smaller and provided with a screw, *f*, which enters the cylinder X, between which the diaphragm G is confined, as clearly shown in Fig. 1; or the diaphragm, being elastic, may be confined to the swivel P by stretching it over the same, and allowing it to snap or contract into the slot *x*, as represented in Fig. 2. This latter cylinder, X, turns freely in its bearing in the lower end of the follower, being kept from dropping out by means of the pin *a*, the inner end of which enters an annular slot in the same, or it may be supported entirely by the diaphragm, as in Fig. 2. The bottom of the swivel P is enlarged and concave, so as to conform to the shape of the top of the valve K, on which it rests, as represented in the drawings.

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

1. The screw-follower H, in combination with the valve of a self-closing faucet, substantially as set forth, and for the purpose described.

2. The combination of the swivel P, screw-follower H, valve K, and spring O, substantially as and for the purpose described.

NATHL. JENKINS.

Witnesses:

N. AMES,

GEO. R. CLARKE.