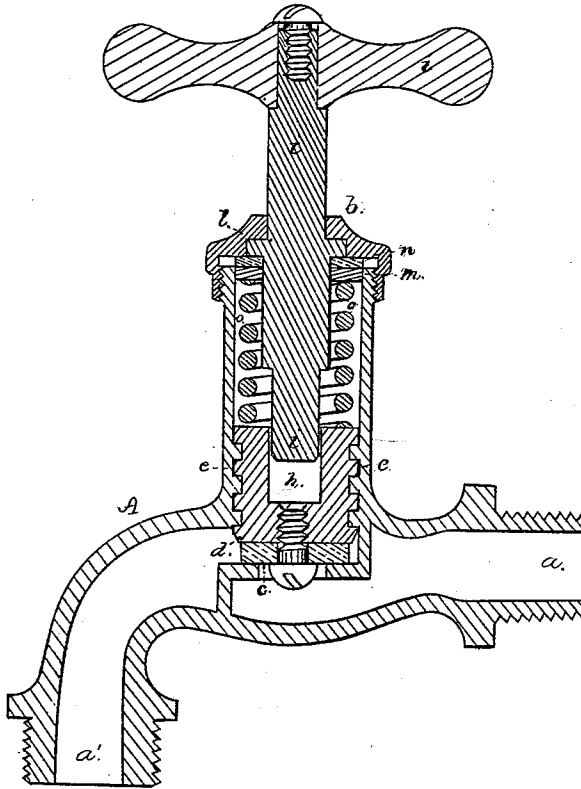


D. C. STILLSON.  
Self-Closing Faucets.

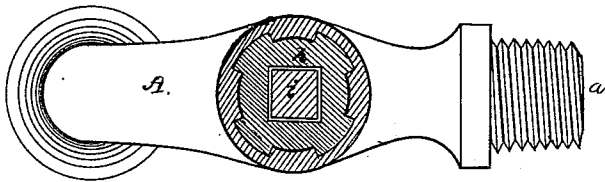
No. 166,483.

Patented Aug. 10, 1875.

*Fig. 1.*



*Fig. 2.*



Witnesses  
Geo Gray  
J. C. Hale

Daniel C. Stillson  
by his attorney  
J. P. Hale

# UNITED STATES PATENT OFFICE.

DANIEL C. STILLSON, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN SELF-CLOSING FAUCETS.

Specification forming part of Letters Patent No. **166,483**, dated August 10, 1875; application filed July 3, 1875.

### CASE B.

*To all whom it may concern:*

Be it known that I, DANIEL C. STILLSON, 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 thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

In such drawing, Figure 1 is a central, vertical, and longitudinal section of a faucet constructed in accordance with my invention. Fig. 2 is a horizontal section taken through the valve and its operating-key.

The object of my invention is to provide a simple and efficient self-closing faucet, my invention belonging to that class in which the valve is raised from its seat by a rotative movement of the key, and without any longitudinal motion thereof; and my invention consists in the peculiar construction, combination, and arrangement of the parts, as hereinafter referred to and claimed.

In the drawing, A denotes the body or case of the faucet, *a* and *a'* being the induction and eduction passages thereof. *b* is the cap, which screws on the neck or upper end of the valve-case. *c* is the valve-seat, and *d* the valve, the same having a leather or other suitable washer or packing affixed to its face by means of a screw extending axially through it, and into the body of the plug or valve. The valve *d* has a male screw, *e*, formed on its outer surface, such screw working in a corresponding female screw formed in the lower walls of the valve-chamber, as shown in Fig. 1. In the upper end of the valve, and axially thereof, a deep rectangular socket, *h*, is made, such serving to receive the lower correspondingly-shaped end of the detached valve stem or key *i*. This stem extends down through the cap *b*, and has an annular shoulder or washer, *l*, formed thereon, such shoulder fitting into a correspondingly-shaped chamber made in the under surface of the cap. *m* is a loose metallic washer disposed on the said stem, and *n* is a leather washer arranged between the washers *l* and *m*, the washers *m* and

*n* being of a somewhat larger diameter than the washer *l*, the leather washer serving to pack the joint of the latter washer. *o* is a spiral spring, which is coiled around the lower part of the key *i*, its lower end resting on the top of the valve, and its upper end against the sliding washer *m*.

From the above it will be seen that the valve-operating key has no longitudinal movement, but only a rotary, or partially rotary, one, and that the key is not rigidly affixed to the valve, but has its lower end formed square or angular in cross-section, to correspond with the socket formed in the valve, the end of the key, when the valve is closed, not extending to the bottom of the valve-socket, so that, when the valve is raised by the action of the key and screw, the valve will slide freely upward on the end of the key.

It will also be seen that by the application or arrangement of the spring—viz., so as to impinge against the valve and the sliding washer—such spring not only serves to keep the valve firmly upon its seat when free from the action of the key, but when the latter is rotated to raise the valve the increased stress of the spring operates to force the movable washer and its packing into firmer contact with the under face of the cap, and thus insure a perfectly tight joint around the stem of the key when the valve is open.

Having described my invention, what I claim is—

In a self-closing faucet, the valve *d*, having a screw-thread cut on its outer surface, and provided with a socket, *h*, into which the angular end of the valve-key *i* is fitted, said key having a fixed disk or washer, *l*, and a loose washer, *m*, with a packing, *n*, interposed between the two, a spring, *o*, enveloping the said key, and resting at one end against the washer *m*, and at its other end upon the superior end of the valve *d*, the whole being arranged and operating together as described, and for the purpose specified.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

DANIEL C. STILLSON.

Witnesses:

F. P. HALE,  
F. C. HALE.