

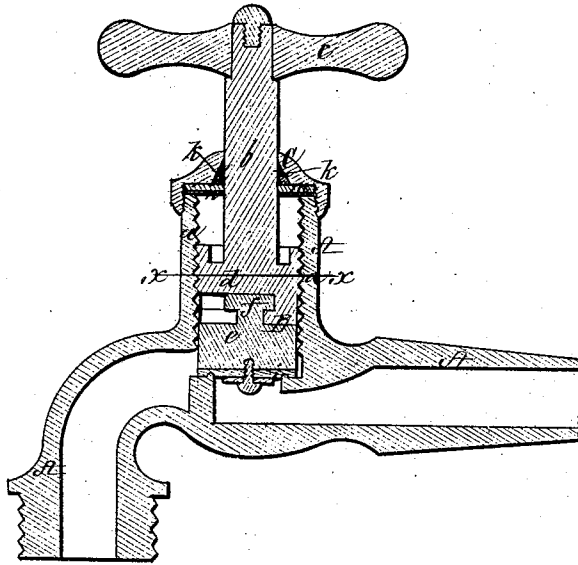
*Serrinlage & Bate,*

*Faucet.*

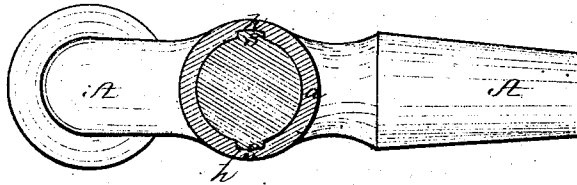
*No. 110292.*

*Patented Dec. 20. 1870.*

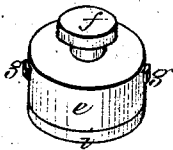
*Fig. 1.*



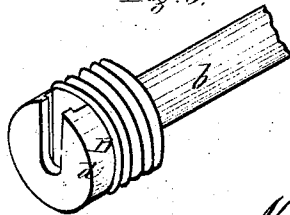
*Fig. 2.*



*Fig. 4.*



*Fig. 3.*



*Witnesses,  
J. C. Schumacher  
W. Cambridge*

*Inventors  
Matthew Serrinlage  
Wallace H. Bate*

# United States Patent Office.

MATTHEW SCRANNAGE, OF MEDFORD, AND WALLACE H. BATE, OF EAST SOMERVILLE, MASSACHUSETTS.

Letters Patent No. 110,292, dated December 20, 1870.

## IMPROVEMENT IN FAUCETS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that we, MATTHEW SCRANNAGE, of Medford, in the county of Middlesex and State of Massachusetts, and WALLACE H. BATE, of East Somerville, in the county and State aforesaid, have invented certain Improvements in Valves or Stop-Cocks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a longitudinal vertical section through the center of our improved stop-cock.

Figure 2 is a horizontal section on the line *x x* of fig. 1.

Figure 3 is a perspective view of the upper portion of the plug and its spindle.

Figure 4 is a perspective view of the lower portion of the plug.

This invention relates to that class of cocks known as "compression cocks," and consists in providing the upper portion of the interior of the cap with a conical or tapering recess for the reception of a packing surrounding the spindle, in combination with a washer also surrounding the spindle, whereby, when the cap is screwed down, the packing will be compressed into the recess and pressed tightly against the spindle, thereby enabling us to dispense with the ordinary stuffing-box and nut above the cap.

The washer may be recessed without departing from the spirit of our invention.

To enable others skilled in the art to understand and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawing—

*A* represents the body or shell of the cock as we prefer to use it, within the vertical portion *a* of which is fitted the plug *B*, which is provided with a spindle, *b*, secured rigidly thereto, this spindle passing up through the cap *C* and having secured to its upper end a cross-bar or handle, *c*, by which it is turned.

The plug *B* is composed of two portions, *d e*, connected together by a swivel, *f*, the upper part *d* being provided for a portion of its length with a screw-thread which fits into a corresponding thread on the interior of the cock, so that it may be raised and lowered by turning the handle *c*.

The lower portion *e*, which is not provided with a thread, is of such diameter as to admit of its being moved freely up and down by the portion *d* to which it is connected; but it is prevented from turning around therewith by projections *g g*, which slide in grooves *h h*, on the interior of the cock.

A washer, *i*, of rubber or leather, is secured to the under side of the portion *e* so as to insure a tight joint when forced down upon the valve-seat.

It is evident that instead of the projections *g g* some other equivalent device may be employed to prevent the portion *e* of the plug from turning around; for instance, it may be of an oval or angular form in cross-section, that portion of the interior of the cock in which it works being made to correspond thereto.

The lower portion of the plug being thus effectually prevented from turning upon the valve-seat, all liability of friction and wear from this cause is avoided, which advantage is combined with that of having the screw-thread upon the outside of the plug, thus securing a larger and firmer bearing, and enabling us to produce a stronger and more durable cock than where a spindle provided with a screw-thread passes through the plug.

The cap *C* acts as a stuffing-box, being provided with a conical or tapering recess, *k*, for the reception of the packing *l* which surrounds the spindle *b*.

The lower portion of the packing rests on a flat metallic washer, *m*, which surrounds the spindle and forms the bottom of the stuffing-box, the washer *m* resting upon a leather washer, *n*, on the upper end of the shell *A*, and thus, as the cap *C* is screwed down, the packing is compressed between it and the washer *n*, and forced into the recess *k* and tightly against the spindle *b*; and the necessity of an ordinary stuffing-box and nut above the cap is thus avoided and the cost of the cock proportionately reduced.

We are aware that a cock has been constructed having a plug made in two parts, connected together by a swivel, but as no provision was made to prevent the lower portion from turning around if the two portions from any cause adhered together, the lower one would revolve, and thereby produce friction and wear.

We are also aware that a cock has been provided with a plug formed in one piece, and of an angular form in cross-section, so as to allow it to have a vertical motion only, but in this case the plug was operated by a screw-spindle passing through it.

To these devices we lay no claim; but

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination of the cap *C* with its recess *k*, the spindle *b*, packing *l*, and washer *m*, all constructed and applied to a cock, substantially in the manner and for the purpose set forth.

Witness our hands this 4th day of February, A. D. 1870.

MATTHEW SCRANNAGE.  
WALLACE H. BATE.

Witnesses:

P. E. TESCHEMACHER,  
W. J. CAMBRIDGE.