

H. Strater, Jr.,

Globe Valve,

No 46,728,

Patented Mar. 7, 1865.

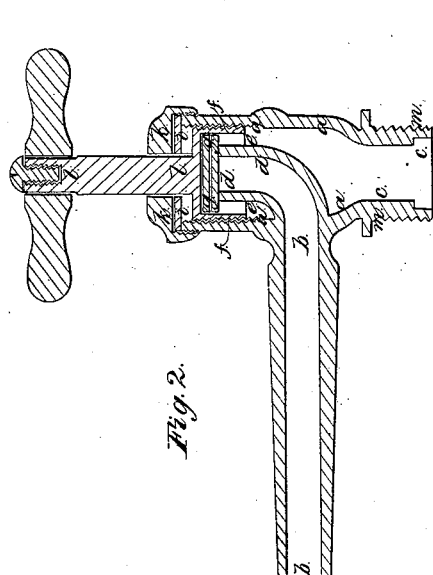


Fig. 2.

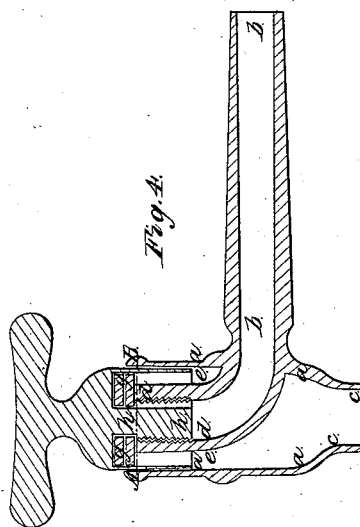


Fig. 4.



Fig. 5.

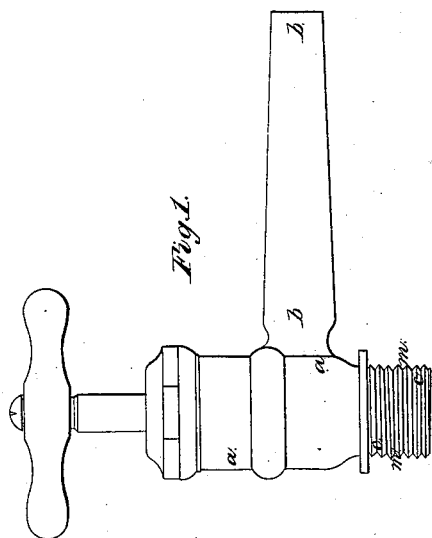


Fig. 1.

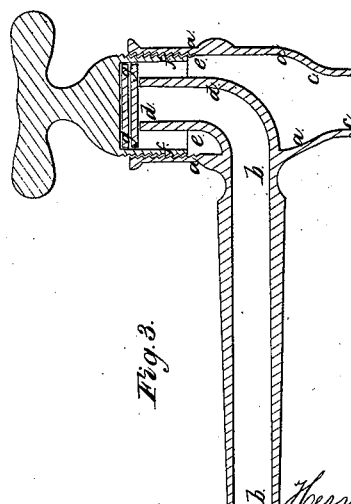


Fig. 3.

Witnesses.

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IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. 46,728, dated March 7, 1865.

To all whom it may concern:

Be it known that I, HERMAN STRATER, JR., of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Faucets; and I do hereby declare that the following description, taken in connection with the accompanying plate of drawings hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The principal objections to the faucets now in use are their liability to leak, their rapid wear, the difficulty in repairing them, and their expensiveness. The liability to leak is, however, the greatest difficulty to be overcome, and although faucets have been constructed to partially obviate this inconvenience, yet the complicated nature and expense of their construction have prevented them from being practically successful. These disadvantages have in a great measure, if not quite, been overcome in my improved faucet, which being of simple construction, as will be hereinafter more fully described, is not apt to get out of repair or leak, and is economical in its cost, as the principal wear is upon the leather or other washer, which can be easily removed and replaced by others at any time, by any person, whether skilled or not, at little or no expense.

My improvements are represented in the accompanying plate of drawings. Figure 1 is an elevation of my improved faucet. Fig. 2 is a central longitudinal vertical section of the same. Figs. 3 and 4 are central longitudinal vertical sections of faucets in which modifications of the same general principles represented in Figs. 1 and 2 are embodied. Fig. 5 is a horizontal section through line A B, Fig. 4.

a a a in the drawings represent the principal chamber or tube of the faucet, connected with which is the supply pipe or tube *b b* and exit pipe or tube *c c*. The supply-pipe *b b* extends some distance above its horizontal axis into the main tube *a a a*, so that this extension-tube *d d* forms at its curve nearly a right angle with the supply-pipe *b b*, leaving

a chamber, *e e*, between the tube *d d* and the outer tube, *a a a*. *f f* is a hollow screw-plug having a screw-thread cut upon its outer periphery, which works in a female screw formed on the inner surface of the tube *a a a*. Within this screw-plug *f f* is closely inserted a washer, (of leather or other material,) *g g*, which forms the seat of the valve, and which, when the plug *f f* is screwed down, comes to a bearing upon the top of the extension-tube *d d*. By turning the screw-plug *f f* so as to lift its seat from the tube *d d*, the water will have a free passage up through the extension-tube *d d* into the chamber *e e* and thence down through the exit-pipe *c c*. By screwing down the screw-plug *f f* the washer *g g* is firmly pressed upon its bearing on the top of the extension-tube *d d*, thus closing the faucet.

From the foregoing description it will be seen that there is no possibility for leakage when the faucet is closed, as the water or other liquid passes up through the extension-tube *d d*, and presses against the washer *g g*, and if, from the washer not fitting tightly, or from any other cause, there should be any leakage between the washer *g g* and the extension-tube *d d* the water or other liquid is obliged to pass down over the extension-tube *d d*. And as there is no upward pressure on the little water that might thus escape, it cannot possibly force itself up through the screw-plug *f f* and the outer tube, *a a*, but necessarily finds its exit down through the chamber *e e* and out through the mouth of the pipe *c c*.

Modifications of my improvements, embodying the same general principles of the faucet above described, are represented in Figs. 2, 4, and 5.

In Fig. 4 the plug *f f*, instead of being entirely hollow and screwing into the outer tube, *a a*, as above described, is made plane on its outer periphery so as to fit into the outer tube, *a a a*, and has in its center a stem or screw-plug, *h h*, of the shape shown in Fig. 5, which works in a female screw on the inner surface of the extension-tube *d d*. Over this stem *h h*, and within the space between it and the outer plug, *f f*, the washer *g g* is inserted. By screwing or unscrewing the stem or screw-plug *h h* the faucet is closed or opened, and the same results heretofore described are effected. The stem or screw plug *h h*, Fig. 4, is cut away, as

shown in Fig. 5, so as to allow the free passage of the water into the chamber *e e*.

In Fig. 2 another modification of my invention is shown. To prevent the possibility of leakage from any extra or back pressure of the water, which might be produced by the attaching of a hose, or other cause, an additional washer, *i i*, Fig. 2, is inserted within a hollow cap or top piece, *k k*, which has a screw-thread on its inner surface that works in a female screw on the outer periphery of the tube *a a a*. Through this cap and washer, and working independently of them, a stem or handle, *l l*, passes. Affixed to the bottom of this stem or handle is a hollow screw-plug, *f f*, which operates in the same manner as that represented in Fig. 3, and heretofore described. *m m*, Figs. 1 and 2, represent the screw, to which a hose may be attached.

If the vertical portion of the supply-tube did not extend a considerable way above the horizontal axis of the same, it will be evident that the water or other fluid would not have a suf-

ficient distance to travel before it reached the space between the screw plug or valve and the chamber in which it turns, whereas, by my improvement the whole upward force of the water is first received by the washer in the valve, and has to pass downward before it can reach the said space.

Next to its efficiency, I claim for this faucet its extreme simplicity, differing as it does from the ordinary cup-valve in little beyond the arrangement of the follower, and the adaptation of the improvement to other portions of an apparatus of this kind.

Having thus described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

The arrangement of the traveling socket and extension-tube, operating together substantially as described.

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Witnesses:

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