No. 30,055. PATENTED SEPT. 18, 1860.

J. FARNAN.
FAUCET.

Fig. 2.

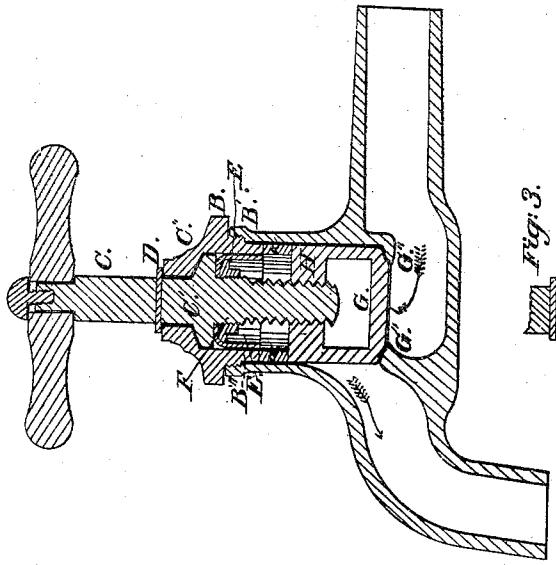


Fig. 3.

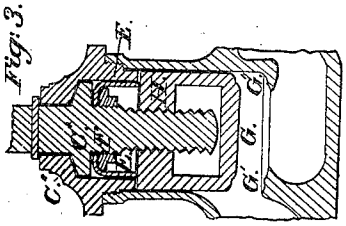


Fig. 5.

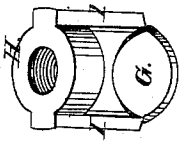


Fig. 1.

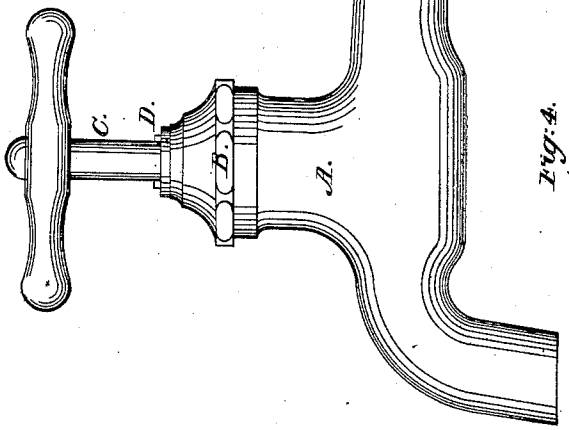


Fig. 4.

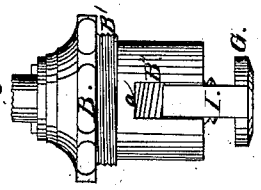
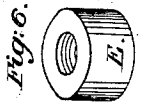


Fig. 6.



Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES FARNAN, OF CLEVELAND, OHIO.

FAUCET.

Specification of Letters Patent No. 30,055, dated September 18, 1860.

To all whom it may concern:

Be it known that I, JAMES FARNAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Faucets for General Purposes; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of the exterior. Fig. 2 is a longitudinal, vertical section, showing the valve closed. Fig. 3 is the same view, with the valve open, and Figs. 4 and 5 are sectional views.

A, Fig. 1, is the body of the faucet.

B, is the cap and stuffing box, which screws into the neck A′, as seen at B′.

C, is the stem that passes through the stuffing box or cap B. At C′ upon this stem, is a circular valve, which fits the valve seat C″ situated above the valve C′, in the cap B.

D, is a pin which passes through the stem C, above the cap B, to keep the valve C′ in contact with its seat C″.

Immediately below the valve C′, is a cup valve E, made of leather, or other elastic substance, which is pressed against the lower side of the valve C′, and held there by a nut F, that screws upon the stem C, below the valve C′. This cup valve E, or more properly, this elastic packing valve, is shown more clearly in detached Fig. 6. The pressure of any fluid upward, will expand the walls of this valve E, pressing them against the inner surface of that portion of the cap, that extends into the body of the faucet, and thus prevents the escape of such fluid around the stem C where it leaves the cap B. The cap B, extends from the screw thread B′ into the body of the faucet, a distance of about two inches, more or less according to its size, as seen at B″ Fig. 4, and thus forms a seat for the valve E, Figs. 2 and 3.

In Fig. 4, at *a* is shown a slot in the downward extension B″ of the cap B, there being one in the opposite side also, not shown in the drawing, and in this slot the valve G, moves up and down, as the stem C is turned to the right or left, the slot preventing the valve from rotating. This valve G is operated by means of a left hand screw, upon the lower end of the stem C, which passes through the center of the extension of the cap B, B″, and into the nut H, situated upon the top of the arms I, I, that connect the nut H, with the valve G, the arms I I, sliding in the slot *a*, in the extension B″. The valve G is pressed upon the valve seat G′, by turning the stem to the right, and the valve and seat, being ground together make a perfect joint. By turning the stem C to the left, the valve G is raised from the seat G′, and allows the free flow of the fluid through the faucet, as indicated by the arrows. The valve G, may be made of elastic material, if desired.

When this faucet is designed for water only, (cold water) the valve G may be faced with elastic material, and the elastic packing valve E, may be made of leather. For steam purposes or hot water, the valve G should be of metal and the elastic valve E, may be made of felt, cloth, or similar material.

In my improvement, the chamber into which the slotted tube B″ extends into the body of the faucet, being cylindrical, the arms I, Figs. 4 and 5 being bounded by the segment of a circle having the same radius as the chamber inclosing B″, and the valve G and seat G′ being also circular, it follows that the valve G, can be ground to fit steam tight upon its seat G′, which cannot be done in either of the faucets patented by E. Stebbins or J. C. Macdonald.

In my improvement, the extension of the cap B, inside of the body of the faucet, as seen at B″, forms a tube of suitable dimensions, to allow the use of a cup valve E, which is not the case with any construction with which I am acquainted. The form of the cap B, and its extension B″, into the body of the faucet, enables me to form the metallic valve C′, upon the stem C, and to fit it to its seat C″, in the cap B, by grinding the valve upon the seat, thus making it water or steam tight, independent of any elastic packing, an advantage not gained by any other arrangement known to me.

In water and steam faucets, the part most subject to failure and leakage, is around the stem. In my improvement the valve C′, having the upper side convex, and the seat C″ concave, the friction the valve C′ is subjected to in opening and shutting the valve G, tends constantly to tighten the valve C′, and the thickness of the valve C′ and seat C″, is such, that a number of years constant use, will not destroy them, the upward con-

vex surface of the seat, tending constantly to keep the stem C, concentric with the cap B.

The pressure of water or steam, being always upward, or in the valve C′, the constant tendency is to keep the valve C′ tight, which, on hydrants, or street washers cocks, is a matter of much importance, as in such situations, they first fail, when constructed in any of the known methods. In this particular, my construction and improvement, is much superior to that of Stebbins, for the reason that his is so constructed, that it cannot wear to the amount of $\frac{32}{100}$ of an inch without permitting the water to pass through the stuffing box or cap.

In my improvement, the waste hole in the tube of the cap, is at the top of the slot, so that when the valve is raised, the water way of the cock is full open, the nut H, of the valve covers the waste hole perfectly tight, so that there can be no leakage while the water is running. This is not the case in Stebbin's. In my improvement, the valves and their seats can be metallic and ground water tight, which cannot be done in either Stebbin's or Macdonald's.

When the valve G is raised, the action of the water tends to press the cup valve firmly against the inner walls of the extension of the cap, as seen at E, E Fig. 3, and this, in addition to the action of the valve C′, prevents the escape of the water.

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

The cap B, with its extension B″, valve C′, cup valve E, and the valve G, when these several parts are constructed, arranged and operated, substantially as, and for the purpose set forth.

JAMES FARNAN.

Witnesses:
J. Brainerd,
W. H. Bumáge.