

J. Powell,
Compression Cock.

No. 99,001.

Patented Jan. 18. 1870.

Fig. 1.

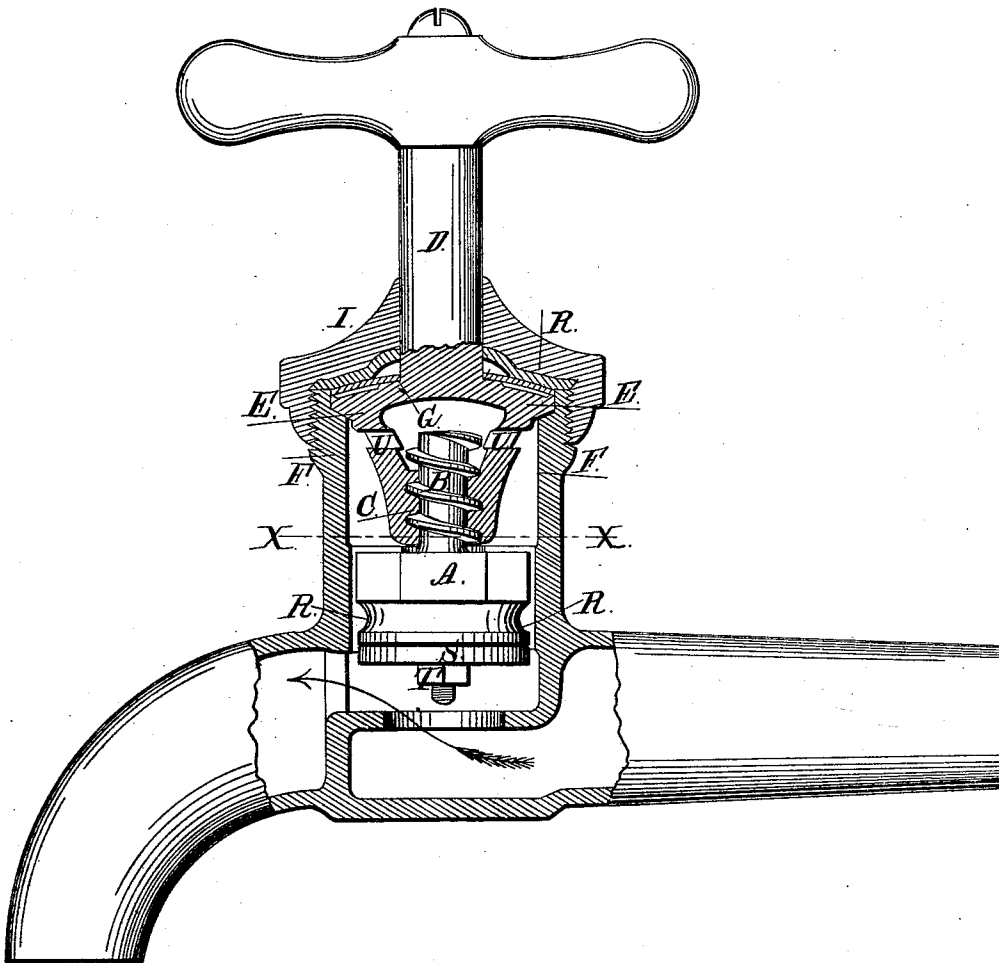
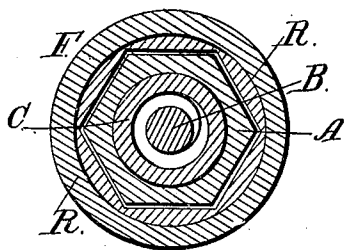


Fig. 2.



Witnesses.

Jas. A. Layman.
Saml. Wright

Inventor.
James Powell.
Knight Bros.
Attorneys

United States Patent Office.

JAMES POWELL, OF CINCINNATI, OHIO.

Letters Patent No. 99,001, dated January 18, 1870.

IMPROVEMENT IN COMPRESSION-COCKS.

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

To whom it may concern:

Be it known that I, JAMES POWELL, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Compression-Cock; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

This is an improvement in the class of faucets known as compression-cocks, in which the plug or valve is elevated and depressed, without turning on its axis, by the simple rotation, without end movement, (reciprocation,) of a cylindrical stem, having screw-connection with the plug or valve, wholly within the cock-body or neck; and

My improvement consists in a form and construction of such cocks, securing compactness, together with economy of workmanship and material, and exemption from injury by frost, &c.

In cocks of this class, the valve-plug is formed with projections on its sides, which, engaging with corresponding depressions in the sides of the chamber or barrel, prevents the plug from turning either to the right or left, by the action of the screw-stem; while the plug is being opened or closed, thus preventing any lateral wear of that portion of the plug which impinges on the seat. I preferably make the plug, and its chamber in the case, of hexagonal form, for this purpose.

It has also been customary to construct such plugs or valves in the form of a nut, or interiorly screw-threaded cup, engaging with a male screw at the lower end of the stem; but such plugs are liable to fill up and become choked, and in cold weather to be burst by the congelation of the water within them. I arrange the female screw in the lower end of the stem, and the male on the plug, being thus enabled to make the latter solid, and to connect the female with the interior of the case, for the supply of water thereto, and its discharge therefrom, thus obviating said difficulties, and simplifying the construction of the cock.

It has been usual, also, to support the screw-stem to its place within the chamber or barrel of the cock by means of a disk or washer placed under the stem-collar. This disk or washer I preferably dispense with, and make my stem-collar of sufficient diameter, and of such conical form as to rest upon a corresponding conical seat on the summit of the neck, arranging the packing above said flange or collar, between it and the cap. By arranging the packing thus, the flange is adapted to be supported on the case, as stated, while the packing may be gotten at without removing the stem, and is made to form an elastic support for the stem against upward pressure.

Figure 1 is an axial section of a cock, embodying my improvement.

Figure 2 is a horizontal section, at the line X-X.

In cocks made after my plan, the plug A is made entirely solid, and hexagonal, or any non-circular form, to fit a corresponding chamber, R, and is surmounted by a male screw, B, which occupies the hollow interiorly screw-threaded lower extremity C of the cylindrical stem D, said stem being supported in its place within the chamber by extending its collar E to the full diameter of the neck F, so that it rests upon a conical shoulder formed within the chamber, and to which the collar is accurately fitted and ground water-tight.

Above this collar, a flexible metallic plate, G, is placed, which presses downward against the collar E, and upward against a rubber or other flexible gasket, H, which hugs the under surface of the cap I, which cap is dished on its under side, so as to enable the gasket to assume a cup-shape around the stem, and thus insure a water-tight joint, which is much more easily effected with a simply cylindrical stem, having a rotary motion only, than with a stem which screws in and out through the cap.

The plug A may have a customary sole, S, of leather or caoutchouc, secured by a screw, T.

By constructing the stem's lower extremity in the form of an interiorly screw-threaded inverted cup, the danger of clogging or bursting is altogether avoided, the water flowing readily and completely away from the screw-threaded parts the instant that the cock is closed.

To facilitate still further the escape of the water, the inverted cup may be traversed by orifices U.

A plug of six sides is preferred, to one of eight or more sides, because less liable to turn, and to one of four sides, because occupying less room.

I claim herein as new, and of my invention—

1. In the described combination, in a compression-cock, the solid non-rotary plug or valve A B, and the non-reciprocating rotary stem C D, constructed as represented and described, for the purposes set forth.

2. In combination with a collar, E, seated on and closing the neck F of the cock, as described, the metallic washer G and gasket H, arranged between said collar and the cap I of the cock, as shown, for the purposes set forth.

In testimony of which invention, I hereunto set my hand.

JAMES POWELL.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.