P. WHITE.

COMPRESSION COCK.

No. 169,873. Patented Nov. 9, 1875.

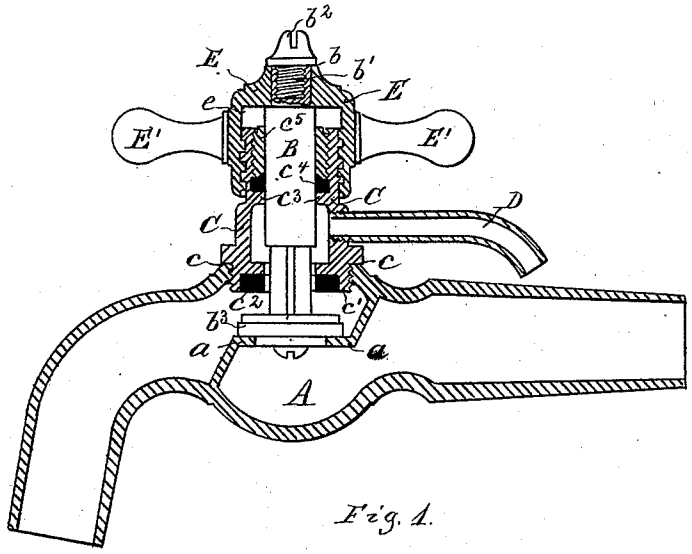

Fig. 1.

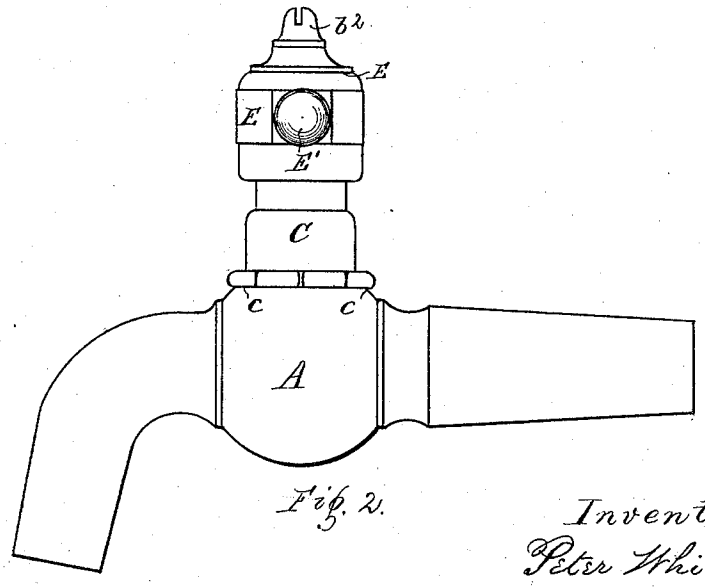

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

PETER WHITE, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN COMPRESSION-COCKS.

Specification forming part of Letters Patent No. **169,873**, dated November 9, 1875; application filed September 13, 1875.

To all whom it may concern:

Be it known that I, PETER WHITE, of St. Louis, in the county of St. Louis and State of Missouri, have invented an Improved Compression-Cock, of which the following is a specification:

This invention relates specially to cocks for discharging liquids or fluids, although the construction principle is applicable also for globe steam-valves and the like, and to valve-cocks in general.

This invention relates to an improved combination of parts, and their arrangement to operate in the manner now to be more fully described.

Of the drawings, Figure 1 is a sectional elevation. Fig. 2 is a side elevation.

A, Figs. 1 and 2, is the shell. This I prefer to make globular, as indicated. In the globe *a* is the valve-seat. The top opening of the globe is screw-threaded, and presents a faced shoulder for a water-tight connection. B is the stem. This I construct so as to present the shoulder *b* at top, (see Fig. 1,) and against which the revolving cap acts to lower the said stem; also, at top of stem it forms a journal-pin, b^1, which passes through the bearing in cap, and is screw-threaded to receive a top screw, b^2. (See Fig. 1.) It is against this top screw that the cap acts against in raising the stem. At bottom the stem carries the valve b^3, as usual, but above this I form the stem partly triangular, (see Fig. 1,) to create passages for the waste to reach the waste-tube. C is the center-piece, Figs. 1 and 2. At its lower end this is screw-threaded under its outer shoulder *c*, (see Fig. 1,) and by means whereof it is secured to the shell A, so that the shoulder *c* shall come tightly in contact with the facing of the shell A, and form a perfectly-tight joint, as indicated in Fig. 1. I construct the center-piece C to present a lower shoulder at c^1, between which and the valve on the stem a packing, c^2, forms a water-tight joint. (See Fig. 1.) Above the tube D the center-piece C has a top shoulder, c^3, to receive a top packing, c^4, which is secured by means of a bushing, c^5, fitted to screw in the top of said center-piece, as shown in Fig. 1. The bushing c^5 compresses the packing c^4 round the stem, and also against the shoulder c^3, and thus forms the upper water-tight joint. Further, I form the center-piece at top to have screw-threads to receive the cap. E is the cap, made generally of the constructive shape shown in Figs. 1 and 2, fitted by its threads to engage the top of the center-piece, and, further, by its shoulder *e*, to actuate the stem when turned by the hand-stems E′.

For operation the above parts are united together as follows: The center-piece C has the upper packing secured by the bushing c^5, and the stem is next passed through center-piece and bushing. (See Fig. 1.) The cap is next secured on the center-piece, so as to engage the shoulder of the stem, the top screw b^2 fitted in the socket at top, which completes the top joint. (See Fig. 1.) Finally, the center-piece is secured on the shell A, and the parts thus constructed and arranged operate as follows: To admit the main pressure it is but necessary to raise the valve from its seat *a*. This is done by unscrewing the cap E, which, in action, presses against the shoulder of the screw b^2, and raises the stem and its valve. The stem is raised until valve closes on the packing c^4, (see Fig. 1,) closing the passage leading to the waste, and thus the main pressure is allowed freely to pass. When the main pressure is to be cut off simply screw down the stem, (by turning the cap.) This causes the cap, by its inner shoulder, to act upon the top shoulder *b* of the stem, and lower same, so that its valve is finally seated upon its seat in the globe, thus closing immediately and effectively the passage of the fluid in the globe. The stem and its valve thus lowered permits the waste to ascend through the passage round the stem into the waste-chamber, to be discharged from waste-tube. Here it will be observed that the waste or fluid cannot possibly reach the operating parts of the screw-connection either between the cap and center-piece or journal-pin and top screw, because of the upper packing being fully compressed by the bushing. The constructive features, therefore, shown and described are of such a nature as to fully and at all times protect the operating parts from the injurious effects of the fluid or its sediments—an advantage of great importance.

Further, perfect joints to close the waste during main pressure is had, as well as the tight joint connecting the parts to the globe.

My improvements are simple in construction, their operation practically effective, the parts are maintained in perfect operating condition longer, requiring less repairs, and otherwise possess superior advantages over the ordinary cocks in use.

What I claim is—

The center-piece C, having shoulder c^1, upper shoulder c^3, lower packing c^2, upper packing c^4, bushing c^5, the stem B, having shoulder b, journal b^1, top screw b^2, the cap E, fitted to revolve on the center-piece, all said parts being combined, with relation to a globe, A, to operate in manner and for the purpose set forth.

In testimony of said invention I have hereunto set my hand in presence of witnesses.

PETER WHITE.

Witnesses:

WILLIAM W. HERTHEL,

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