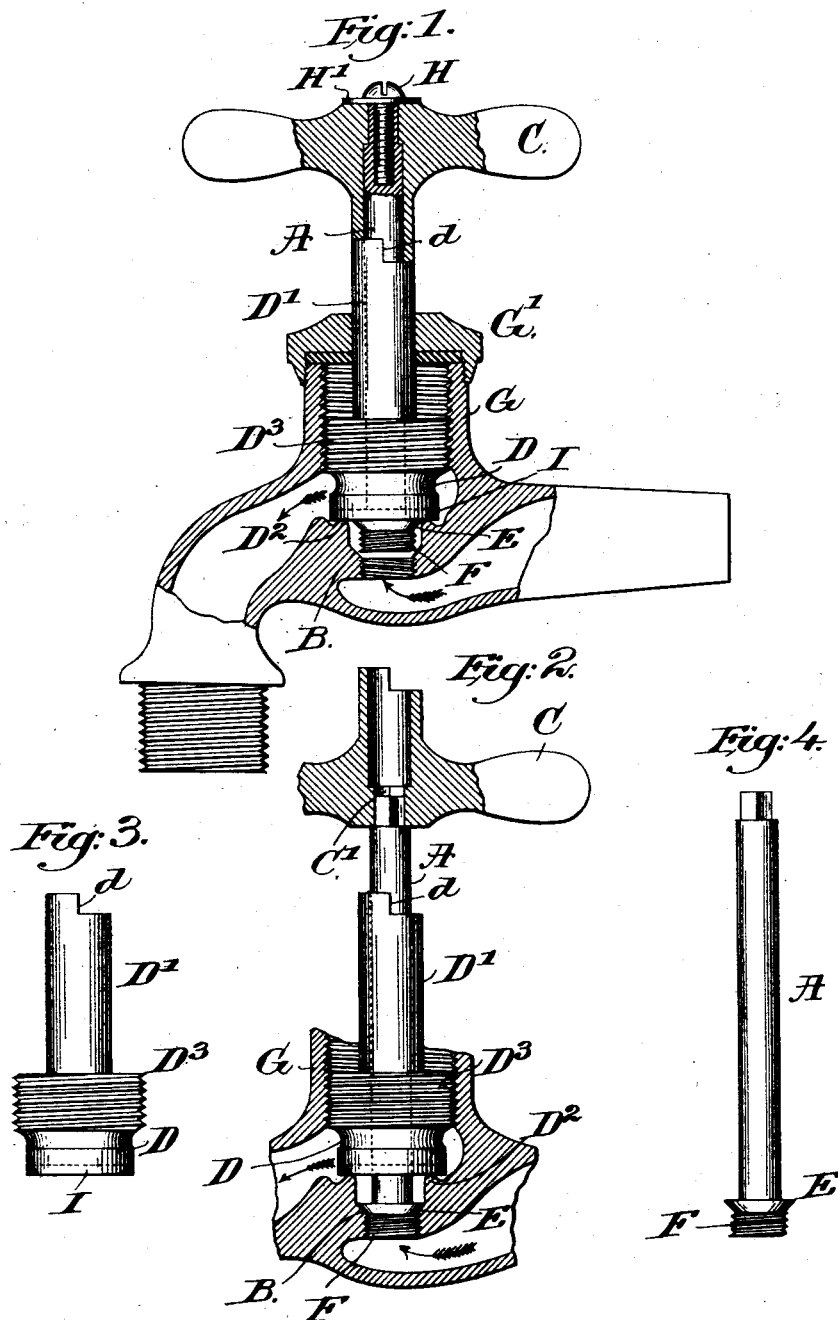


(No Model.)

F. H. BURRILL.
FAUCET.

No. 525,589.

Patented Sept. 4, 1894.



Witnesses:
Edward F. Allen.
Thomas J. Drummond

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UNITED STATES PATENT OFFICE.

FRANK HENRY BURRILL, OF CONCORD, MASSACHUSETTS.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 525,589, dated September 4, 1894.

Application filed February 9, 1894. Serial No. 499,600. (No model.)

To all whom it may concern:

Be it known that I, FRANK HENRY BURRILL, a citizen of the United States, residing at Concord Junction, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Faucets, of which the following is a specification.

This invention relates to cocks or faucets provided with an auxiliary valve for the purpose of shutting off the supply of fluid from the main valve when desired, to obviate the necessity of turning off the supply from the main when access to the valve or its seat is necessary, for the purpose of making repairs or otherwise, and my invention has for its object the production of a more efficient and durable cock or faucet of the class referred to, simple in construction and cheap to manufacture, and without an opening in the lower portion of the main casing or shell.

In accordance therewith my invention consists, in a cock or faucet, of a main valve provided with a hollow spindle, a seat for said valve, an auxiliary valve provided with a stem extended through the spindle, a seat for the auxiliary valve, and detachable connections between said spindle and stem, to retain the auxiliary valve away from its seat, whereby the spindle and stem are normally rotated and moved longitudinally in unison, substantially as will be described.

Other features of my invention will be hereinafter described, and particularly pointed out in the claims.

Figure 1 is a side view, and for the greater part in section, of a cock or faucet embodying my invention, the main and auxiliary valves being shown in normal condition. Fig. 2 is a similar view of the cock or faucet, with the main and auxiliary valves disconnected, and the latter seated to stop the flow of fluid therethrough. Fig. 3 is a detached view of the main valve and its hollow spindle, and Fig. 4 is a similar view of the auxiliary valve and its stem.

Referring to Fig. 1, the main valve D is shown as resting on its seat D², and preventing the passage of the fluid through the cock or faucet. The valve is provided with a hollow spindle D', having an enlargement D³, herein shown as threaded, to engage the inter-

nally threaded hub G, the spindle projecting through a cap or closure G' for the hub, and shouldered or stepped at d, Figs. 1 to 3, for a purpose to be described.

An auxiliary valve E, threaded at F, as shown in Figs. 1, 2 and 4, is adapted to be screwed into or away from its seat B, the said seat being shaped to receive the shouldered valve E when it is seated, making the valve tight.

The auxiliary valve seat B is located below the main valve seat D², and interposed between the latter and the inlet portion of the cock or faucet, the passage of the fluid being indicated by the arrows in Figs. 1 and 2.

A stem A is secured to or forms part of the auxiliary valve E, of such diameter that it will easily pass through the hollow spindle D', and projecting beyond the upper end thereof, as shown.

The handle C has a hollow shouldered hub C', to fit over the projecting portion of the stem A, as shown in Fig. 1, the shouldered portions of the hub and the spindle D', being in engagement, whereby rotation of the handle C in one or the other direction will cause similar rotation of the spindle, and movement of the main valve D toward or from its seat, to shut off or turn on the fluid.

A screw H is passed through a washer H' on the handle and into the end of the stem A, drawing the shoulder of the auxiliary valve E up against the under side of the main valve D, and under normal conditions retaining it in such position, the screw H and the handle C forming a detachable connection for the main and auxiliary valves.

From an inspection of Fig. 1 it will be obvious that the auxiliary valve E is always unseated, when connected to the main valve, whether the latter is raised or lowered, and when the main valve is moved away from its seat to turn on the fluid the auxiliary valve is moved in unison therewith and out of the passage-way, so that the latter is practically unobstructed.

The valve D is recessed at I, shown in dotted lines, to receive a suitable washer, which is kept firmly in place by the shouldered portion of the valve E, the stem A passing through a hole in the washer, so that it effect-

ually prevents the escape of any fluid through the hollow spindle D', between it and the stem A.

By the construction described, the objectionable features attendant upon the use of a screw for securing the washer are obviated entirely.

When, for any reason, it is desired to remove or to have access to the main valve, or to the interior of the cock or faucet, without cutting off the fluid at a distant point in the system of piping, the screw H is removed, disconnecting the main and auxiliary valves, and the handle C is reversed, as shown in Fig. 2, and placed on the reduced portion A' of the stem A, which is made square or polygonal, the handle having a correspondingly shaped recess therein, so that it may be used as a wrench.

Rotation of the handle C will cause the auxiliary valve E to move toward its seat B, completely closing it, without moving the main valve D, so that the fluid is shut off at the cock or faucet, and back of the main valve, as shown in Fig. 2. The cap G' can thereafter be removed and the main valve D and its hollow spindle D' taken out, and the interior cleaned, or the valve itself may be repaired.

If a new washer is to be inserted, it is slipped down on the stem A until it rests on the top of the auxiliary valve E, and the main valve and stem replaced. When seated, and the cap G' in place, the auxiliary valve E can be raised into the position shown in Fig. 1, and the handle C reversed. The valves are then again connected by inserting the screw H and the faucet is ready for use.

No skilled labor is required to perform the described operations, and the parts are so few and simple that they cannot get out of order.

By locating the auxiliary valve and its seat as herein described, it is unnecessary to make openings in the faucet shell or casing, for the admission or withdrawal of the auxiliary valve, and this is a most important feature of my invention, for there is no liability to freeze or to leak in a cock or faucet embodying my invention, while in one having such

an opening there is always more or less trouble experienced from leakage, or by freezing in cold weather.

While I have herein shown my invention as embodied in an ordinary cock or faucet, it is obvious that its use is not restricted thereto, for my invention may be applied in other ways and with other forms of apparatus wherein a valve is employed, by adding an auxiliary valve, its seat, and devices to detachably connect the main and auxiliary valves.

I claim—

1. In a cock or faucet, a main valve provided with a hollow spindle, a seat for said valve, an auxiliary valve provided with a stem extended through the spindle, a seat for the auxiliary valve, and detachable connections between said spindle and stem, to retain the auxiliary valve away from its seat whereby the spindle and stem are normally rotated and moved longitudinally in unison, substantially as described.

2. In a cock or faucet, a main and an auxiliary valve seat, a main valve, an auxiliary valve detachably connected therewith and located below the main valve and between it and the auxiliary valve seat, and means to normally maintain said auxiliary valve adjacent to the under side of and movable with the main valve, substantially as described.

3. In a cock or faucet, a main valve provided with a hollow spindle having a shouldered end, an auxiliary valve provided with a stem extended through said spindle, a washer interposed between said valves and retained in place by the auxiliary valve, a handle adapted to fit onto the stem and to engage the shouldered end of the spindle, and a screw to detachably secure the handle to the stem and maintain it in engagement with the shouldered spindle, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK HENRY BURRILL.

Witnesses:

JOHN DWIGHT WILSON,
ALBERTO ETHEL PAYSON.