E. Hamilton,

Cock,

No. 17,624. Patented June 23, 1857.

Fig. 3

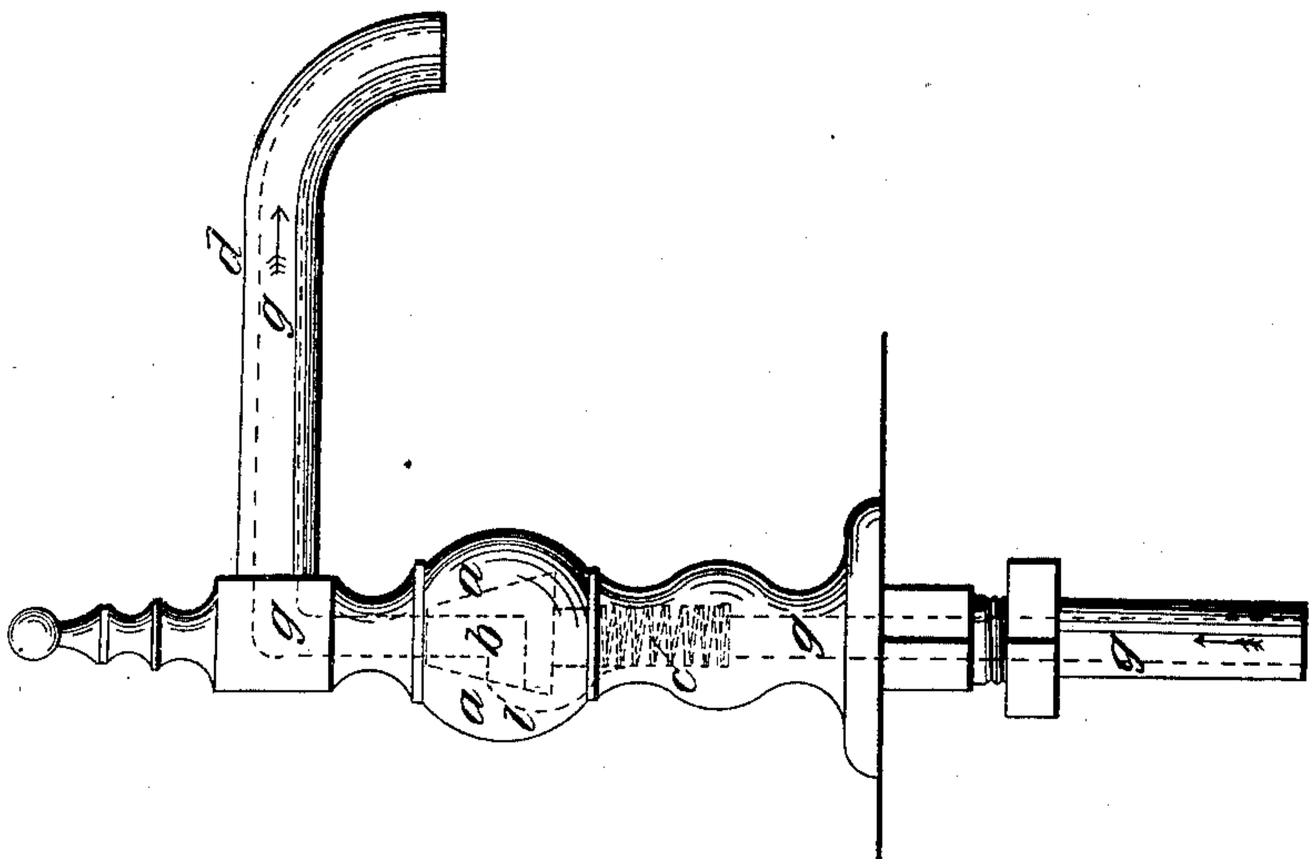


Fig. 1

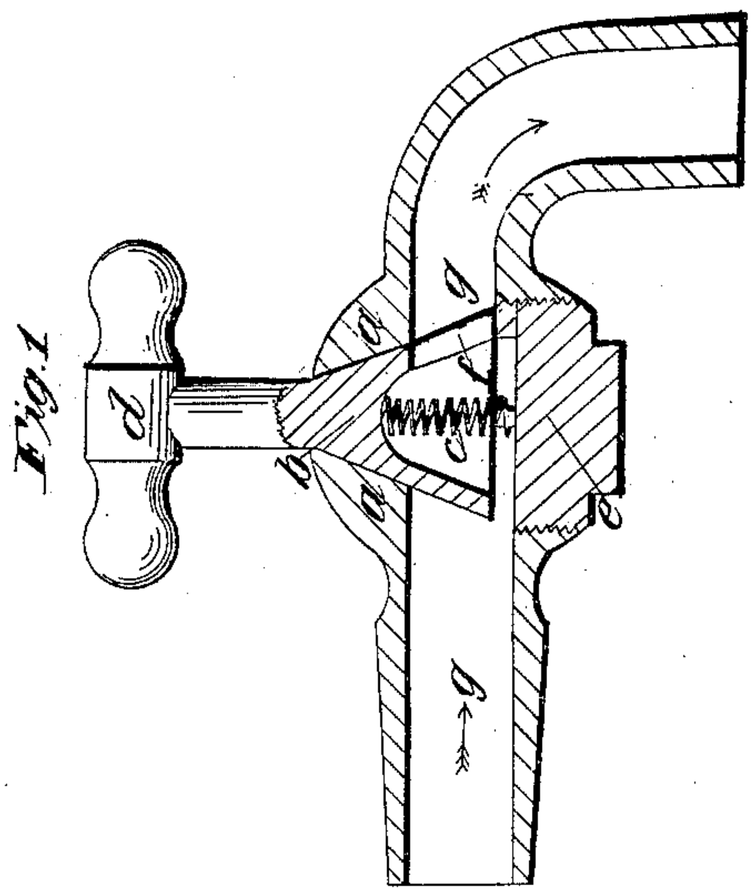
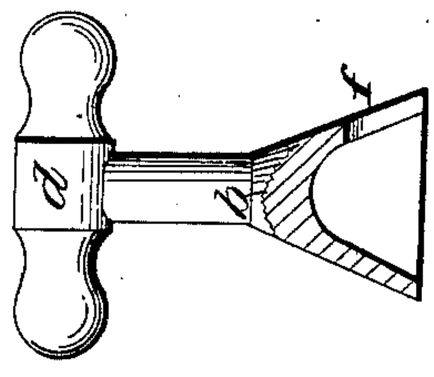


Fig. 2



UNITED STATES PATENT OFFICE.

EDWARD HAMILTON, OF CHICAGO, ILLINOIS.

VALVULAR ARRANGEMENT FOR FAUCETS, &c.

Specification of Letters Patent No. 17,624, dated June 23, 1857.

To all whom it may concern:

Be it known that I, EDWARD HAMILTON, of Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Water, Steam, and Fluid Cocks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a sectional view of the cock. Fig. 2, is a sectional view of the valve. Fig. 3 is a sectional view showing the application of the valve to a basin cock.

The same letters indicate like parts in all the figures.

This invention consists in the employment of a hollow conical perforated valve, in the manner hereinafter described.

In the accompanying drawings *a* (Fig. 1) represents the valve seat; *b* represents the rotary conical shaped valve, capable of being turned by handle *d*, in valve-seat *a; e* is a cap fitted with a screw about its periphery, closing the orifice at the bottom of chamber or valve-seat *a*, through which valve *b* is introduced into its seat. The interior of valve *b* is hollow and open at the base; *c* is a spiral spring with one end resting on cap *e* and the other pressing up against valve (*b*) to keep it in its seat when not so kept in its seat by the pressure of any confined fluid; *f*, (Fig. 2), is an orifice in valve *b* to admit the passage of the fluid when the valve is properly turned for that purpose; *g g*, is the water-way through the cock and the direction of the current therein is indicated by the signs ⟶ ⟶. The space between the base of valve *b* and cap *e* is sufficient to admit the free passage of the fluid underneath valve *b*, from water-way *g*, and up into the hollow interior of valve *b*.

To open the cock for the passage of the fluid, valve *b* is turned by handle *d*, till orifice *f*, in the side of valve *b* is brought coincident with water-way *g*, on the side toward the mouth of the cock. To close the cock and stop the passage of the fluid valve *b* is turned around sufficiently to bring orifice *f* out of coincidence with water-way *g*.

Fig. 3 represents the application of the valve above described to a basin-cock—the mechanical construction of the same being substantially similar to the preceding; *a* being the valve seat, and *b* a conical-shaped valve rotating therein; *c*, is a spiral spring holding valve *b*, in its seat; *g*, *g* is the water-way through the cock—the direction of the current therein being indicated by the signs ⟶ ⟶; *d*, is the handle for turning valve *b*, and which also operates as a spout for discharging the fluid at the mouth *h*. The base, however, of valve *b*, is closed instead of being open as in Fig. 1; and the fluid instead of passing into valve *b* at the bottom, as in Fig. 1, is conducted into valve *b*, at the orifice *f*, through a channel or duct *i*, *i*, in the side of chamber *a*, indicated by the dotted line, Fig. 3.

To open the cock and discharge the fluid valve *b* is turned around by handle *d* until orifice *f* in valve *b* is brought coincident with channel *i* in the side of valve seat or chamber *a*. To close the cock and stop the flow of the fluid valve *b* is turned sufficiently to carry orifice *f* past duct *i*.

The following useful results arise from my improvement: 1st. The pressure of the water assists to keep the valve in its seat and renders the cock perfectly tight. 2d. Unlike most cocks the valve and valve seat do not become leaky by wear when in use; but as the valve rotates in its seat, and is more or less pressed upward into its seat by the water while being turned, the valve and seat by the act of use are ground together and always kept smooth and even.

I do not claim, broadly, the employment of conical valves in water cocks; nor do I claim, broadly, the arrangement of valves in such a manner as that the pressure of the fluid shall keep the valves tight in their seats. An example of both these features may be seen in C. A. Fauty's faucet, 1853. But

What I claim as new in water cocks and desire to secure by Letters Patent, is—

The employment of a hollow conical perforated valve (*b*), in the manner, substantially, as described.

EDWARD HAMILTON.

Witnesses:
WILLIAM K. SEELEY,
FRANCIS IVES.