

(No Model.)

D. R. ASHTON & J. N. SPERRY.  
COCK AND VALVE.

No. 263,091.

Patented Aug. 22, 1882.

Fig. 1.

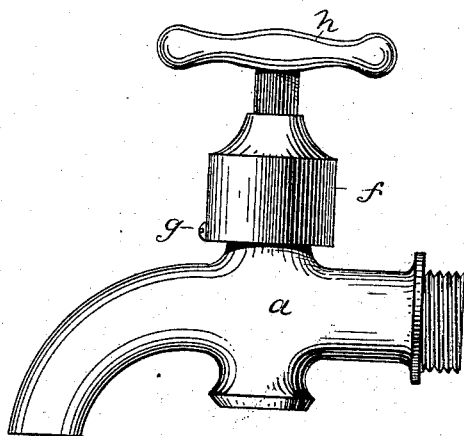


Fig. 2.

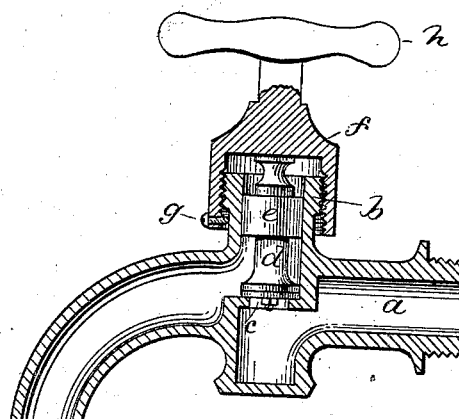


Fig. 3.

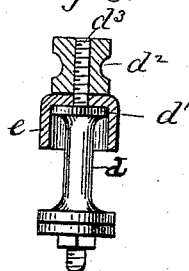


Fig. 4.

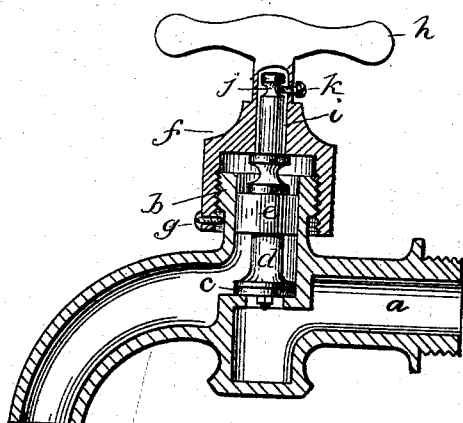
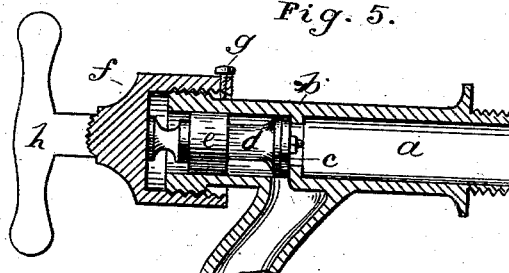


Fig. 5.



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# UNITED STATES PATENT OFFICE.

DAVID R. ASHTON, OF CLAPTON, COUNTY OF MIDDLESEX, AND JAMES N. SPERRY, OF BRIXTON HILL, COUNTY OF SURREY, ENGLAND.

## COCK OR VALVE.

SPECIFICATION forming part of Letters Patent No. 263,091, dated August 22, 1882.

Application filed March 20, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, DAVID REGINALD ASHTON and JAMES NEVILLE SPERRY, subjects of the Queen of Great Britain, residing respectively at Clapton, in the county of Middlesex, and Brixton Hill, in the county of Surrey, both in England, have invented certain new and useful Improvements in Cocks and Valves, (which has not been patented to them, nor to others with their knowledge and consent, in any country,) of which the following is a specification.

Our invention relates to improvements in bib-cocks, stop-cocks, ball-cocks, and other cocks or valves for controlling the passage of gas, steam, water, and other fluids.

The invention consists in the peculiar construction and arrangement of parts, as hereinafter fully described.

Figure 1 is a side elevation of my improved cock. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a detail view, partly in section. Figs. 4 and 5 are sectional views of modifications of the invention.

*a* is the body, of any suitable form, and having the inlet and outlet in any convenient position relatively to the valve and valve-seat, according to the purpose for which the cock or valve is intended.

*b* is the barrel portion of the body, cast in one therewith, through which the valve-spindle passes axially, the barrel being large enough to permit of the valve passing through it.

*c* is the valve, preferably of the usual disk form, or it might be conical, and closing down upon a corresponding seat formed in the body *a*, as usual.

*d* is the valve-spindle, and *e* is a cupped plunger or piston, of metal, leather, india-rubber, vegetable fiber, or other suitable material, fixed upon the spindle *d*, this plunger or piston fitting in the barrel *b* and moving up and down therein with the spindle *d*. The plunger *e* is secured upon the spindle *d*, as shown in section in Fig. 3, between a shoulder, *d'*, formed on the spindle, and a nut, *d''*, screwed upon a part, *d'''*, and forming a head for the spindle, between which and the shoulder *d'* the plunger

is tightly clamped. The barrel *b* is turned true internally and the plunger fits accurately therein.

*f* is a cap inclosing the top of the barrel *b*, and formed with a quick, coarse, internal screw-thread, which works upon a corresponding screw-thread cut upon the exterior of the barrel *b*.

*g* is a set-screw in the cap, the point of which comes under an external shoulder on the barrel to prevent the cap being unscrewed too far. The cap is provided with a cross-handle, *h*, by which it is turned; but it might be a knob or a wheel-handle; or, in the case of a ball-cock, the ball-arm would take its place and the axis of the valve would be horizontal instead of vertical.

In Figs. 1 and 2 the cup *f* is wholly separate from the spindle *e* and merely presses upon the top of the spindle in order to force the valve down upon its seat, the valve being intended to be raised off its seat by the pressure of the fluid alone. Fig. 4 shows a precisely-similar cock, except that the spindle is provided with an extension, *i*, which enters loosely a hole in the cap, and has a neck or groove, *j*, at its upper end, in which the point of a set-screw, *k*, in the handle is received, in order to so far connect the cap to the spindle that, although the former turns independently of the latter, as before, the valve will be raised off its seat by the cap when it is unscrewed, instead of by the fluid-pressure, as before.

Instead of the groove *j* and set-screw *k*, the part *i* of the spindle might be continued quite through the handle and have a nut upon it above the handle.

Fig. 5 shows a cock differing only from that shown in Fig. 1 in the position of the valve and screw-cap relatively to the inlet and outlet, the term "screw down" being herein intended to include a screwing in any direction.

Having described the nature of the said invention and the manner of performing the same, I declare that what I claim is—

1. The combination, with the body *a*, provided with the externally-screw-threaded barrel *b* and the internally-screw-threaded cap

*f*, of the valve-spindle *d*, provided with the shoulder *d'* and the screw-threaded extension *d<sup>2</sup>*, the cup-shaped plunger *e*, resting on said shoulder, and nut *d<sup>3</sup>*, substantially as and for  
5 the purpose set forth.

2. The combination, with the valve-spindle *d*, provided with the shoulder *d'* and the screw-threaded extension *d<sup>3</sup>*, and the nut *d<sup>2</sup>*, of the cup-shaped plunger *e*, resting upon the

shoulder of the valve-spindle, substantially as 10  
and for the purpose set forth.

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Witnesses:

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