

(No Model.)

R. P. GARSED.
Cock, Faucet, &c.

No. 243,118.

Patented June 21, 1881.

Fig. 1.

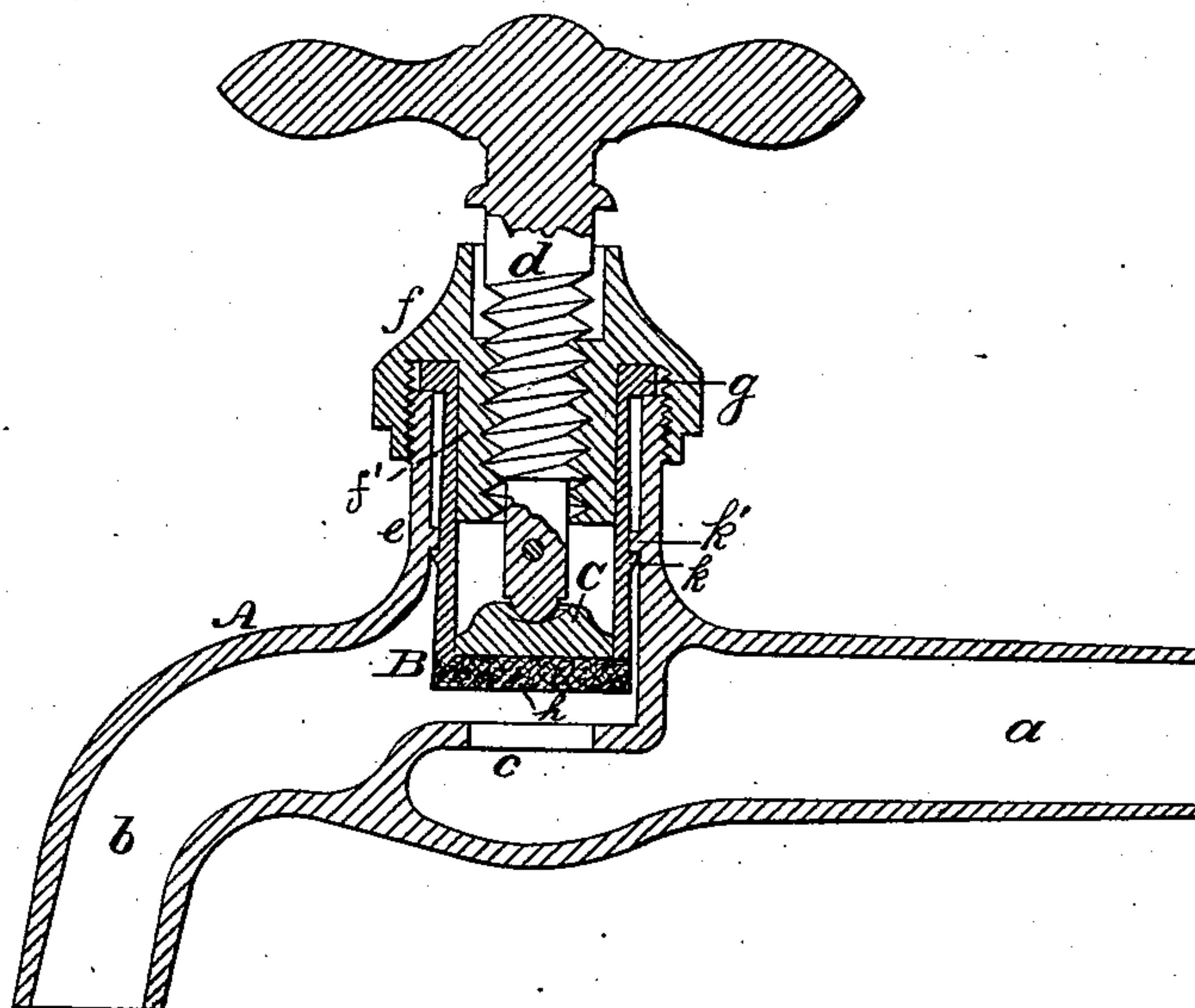


Fig. 2.

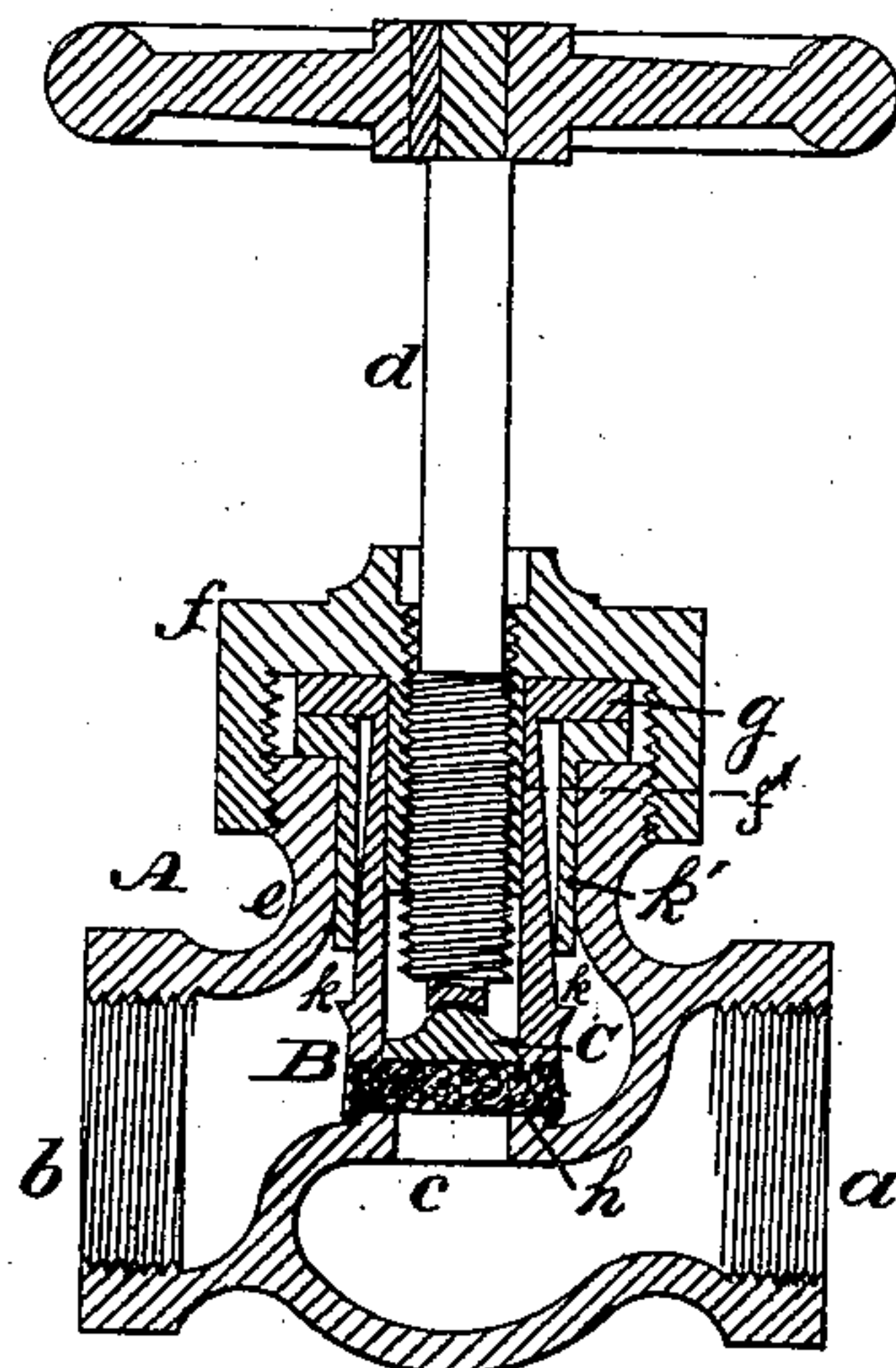


Fig. 4.

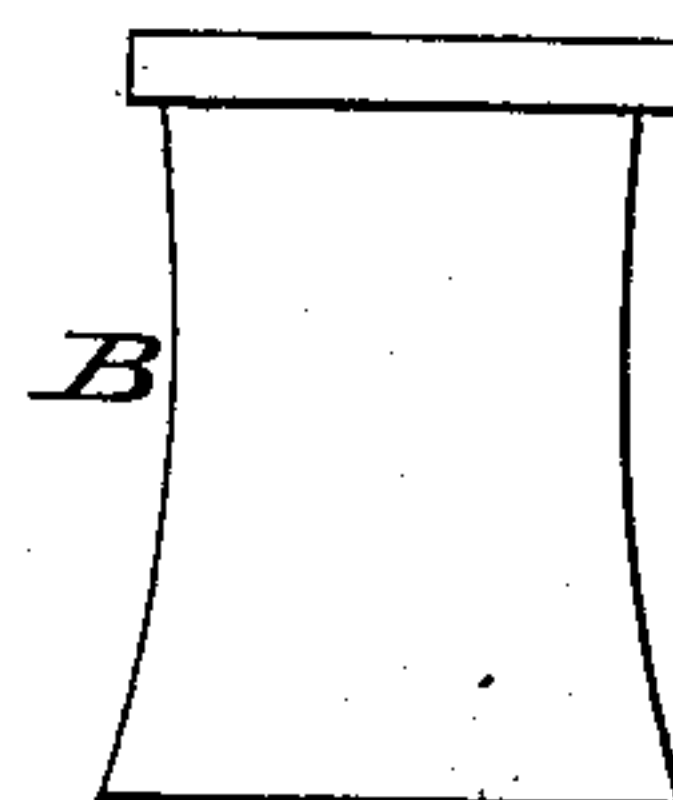


Fig. 3.



Witnesses:

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COCK, FAUCET, &c.

SPECIFICATION forming part of Letters Patent No. 243,118, dated June 21, 1881.

Application filed November 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. GARSED, a citizen of the United States, residing at Norristown, in the county of Montgomery and State of Pennsylvania, have invented a new and useful Improvement in Cocks, Faucets, Valves, &c., which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 is a longitudinal vertical section of the cocks, &c., embodying my invention. Fig. 2 is a longitudinal vertical section of a valve embodying my invention. Fig. 3 is a view of a detached portion thereof. Fig. 4 is
15 a side elevation of a modification of the valvular thimble embodying my invention.

Similar letters of reference indicate corresponding parts in the several figures.

20 My invention consists of the stem of the cock, having at its lower end a shoulder whereby the base of the valve is presented true to its seat.

It also consists of the expansible valve having a flange at top which is clamped by the
25 screw-cap, and preventing shifting inwardly by the collar within the valve continuous of said cap.

It also consists of a combination of parts forming an improvement in cocks.

30 It also consists of an expansible valve of the form of a thimble, the body whereof is of elastic material, and the base of hard material integral with said body and closed or impermeate, whereby the wearing-surface of the
35 base is strong and durable.

It also consists of means for preventing leakage between the valve and surrounding wall.

Referring to the drawings, A represents a
40 cock or valve, having an inlet-branch, *a*, an outlet branch or spout, *b*, a valve-seat, *c*, a screw-stem or plunger, *d*, and a branch, *e*, receiving said stem or plunger and sustaining the screw-cap *f*.

45 From the upper edge of the branch *e* is suspended a thimble or tubular valve, B, formed of soft rubber or other elastic material, having a top flange, *g*, which sets on the edge of the branch and is clamped by the cap *f*, and a
50 closed bottom, *h*, the latter (and contiguous

portion, if desired) being formed of inelastic, hard, or vulcanized material properly connected to the remaining portion of the valve.

On the bottom *h* of the valve B is placed a button, C, of metal or other hard material, 55 formed with a concavity to receive the convex or rounded end of the stem *d* or convexity when said end is depressed or concave for centering purposes. The lower end of the stem *d* (see Fig. 1) has a shoulder, which is 60 adapted to abut against the flat portion of the upper face of the button C, which surrounds the central concavity or convexity of said button, whereby, while the point of the stem centers itself on the button, the shoulder of the 65 stem, bearing against the button, serves to right the latter should there be any irregular motion or position other than one truly right-angular to the valve-seat, and thus the base of the valve B is presented true to the valve-seat. 70 The downward extension *f'* is integral with the cap *f*, and forms an enlarged guiding-surface for the stem *d*; and as the cap *f* is immovable when in position the said extension *f'* is likewise immovable, and so the rotation of the 75 stem imparts no movement to the extension *f'*, whereby there is no twisting of the tubular valve B.

On the periphery of the thimble B is a projecting ledge, *k*, which, when the valve is open, 80 is adapted to abut against a shoulder or ledge, *k'*, projecting from the inner face of the branch *e*. The part *f'* of the cap through which the stem *d* passes is of length to reach the inside of the thimble or valve B, at a point near the ledge 85 *k*, in order to hold the flange *g* in position and assist in keeping the ledge *k* against the ledge *k'*.

The operation is as follows: When the valve is opened, as in Fig. 1, and is to be closed, the 90 stem *d* is rotated so as to descend and thereby press against the button C and expand or stretch the thimble B, thus forcing the base of the latter against the valve-seat, said button preventing the stem injuring the bottom 95 *h* of the thimble. When the valve is to be opened the stem *d* is rotated so as to rise; and the thimble, owing to its elasticity, and uncontrolled by the stem *d*, contracts and so leaves the valve-seat, whereby the latter is un- 100

covered and opened. When the ledge *k* reaches the ledge *k'* it abuts thereagainst with pressure and forms a closed joint, which prevents upward leakage between the thimble and branch *e*. Leakage between the top of the thimble and branch is prevented by the flange *g*, which is clamped to said branch by the cap *f*, this provision of the thimble also obviating packing for the stem or plunger *d*.

10 When the valve is used for steam purposes the ledge *k'*, Fig. 1, may be dispensed with, and in lieu thereof I may employ a metallic thimble, *k'*, Fig. 2, which is interposed between the elastic thimble B and branch *e*, and provided with a flange at top, which is clamped to the flange
15 by the cap; but the ledge *k* abuts against the bottom edge of said thimble *k'* and operates similar to that hereinbefore described.

The employment of the thimble *k'* facilitates the displacement of the thimble B, as the
20 former may be readily removed with the latter from the branch *e*.

The thimble B may be of cylindrical, conical, or other suitable hollow form.

25 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The cock, &c., provided with the elastic valve B, the loose button C, and the stem *d*, the

latter having a rounded and shouldered lower end, substantially as and for the purpose set forth. 30

2. The cap *f*, having a downward extension, *f'*, integral with it, in combination with the suspended tubular valve B, formed with a top flange, *g*, and the branch *e* of the cock, where-
35 by said flange is clamped to the branch and prevented from shifting inwardly by the extension *f'*, substantially as and for the purpose set forth. 40

3. The expansible valve B, with flange *g*, loose button C, with rounded top and flat bottom, cap *f*, with downward extension *f'*, and operating-stem *d*, combined and arranged as described, for the purpose set forth. 45

4. The thimble or tubular valve B, having a body formed of soft elastic material, and an imperforate bottom, *h*, of inelastic material, integral with said body, substantially as and for the purpose set forth. 50

5. The expansible valve B, with ledge *k*, and the branch *e*, with abutment *k'*, substantially as and for the purpose set forth.

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Witnesses:

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