

(No Model.)

W. SMITH.

BALL COCK.

No. 278,189.

Patented May 22, 1883.

FIG. 1.

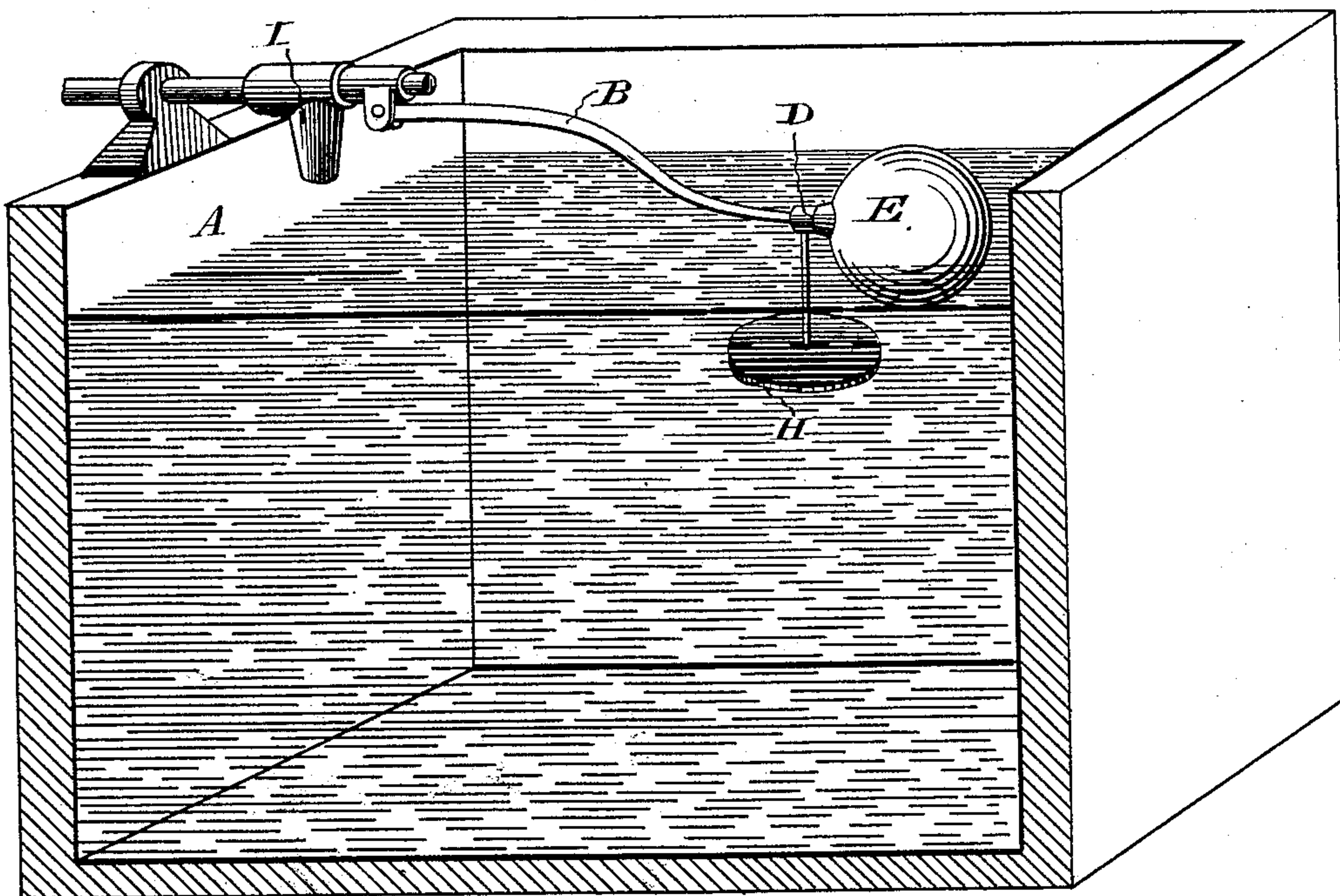
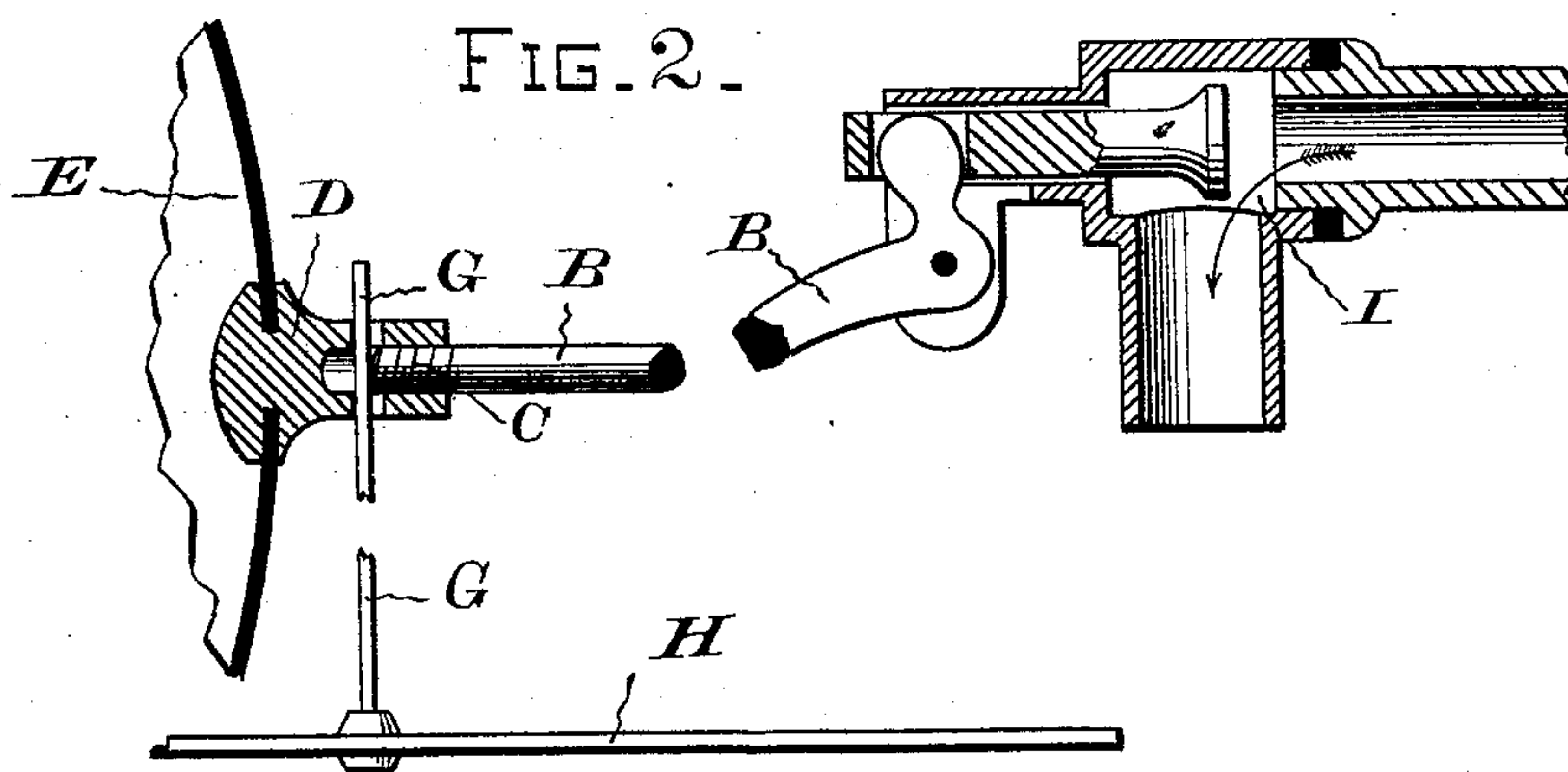


FIG. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM SMITH, OF SAN FRANCISCO, CALIFORNIA.

BALL-COCK.

SPECIFICATION forming part of Letters Patent No. 278,189, dated May 22, 1883.

Application filed January 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SMITH, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Ball-Cocks, of which the following is a specification.

My invention relates to improvements in ball-cocks or faucets which are opened or closed by means of a ball floating on the surface of the water of the tank into which the said faucet discharges; and it consists in providing the operating rod or lever of a ball-cock with a thin plate or disk set flatwise in the water and below the surface thereof and attached to the outer end of the lever-rod by means of a vertical rod, for a purpose to be hereinafter more fully described.

In the drawings which are hereunto annexed, and which form a part of this specification, Figure 1 is a perspective view of my improved ball-cock, showing it in position within a reservoir or tank; and Fig. 2 is a longitudinal sectional detail view.

Similar letters of reference are used to indicate like parts throughout both views.

The cock or faucet proper is constructed much in the usual manner, and projects over and discharges into the tank or cistern A.

The lever-rod B is suitably attached to the faucet, and is provided upon its outer end with a screw-thread, C, which enters the boss D, formed upon the hollow air-tight ball E.

The boss D is provided with a transverse aperture, F, into which is passed the upper end of the rod G, and as the lever-rod B is screwed home within the said boss D the inner end thereof will press and bind upon the vertical rod G, and thus securely clamp it in its proper position, as is clearly shown in Fig. 2.

The rod G should be of a length considerably more than the radius of the floating ball E, in order that the flat plate or disk H, to the center of which it is rigidly attached, may be held in a horizontal or flatwise position be-

neath the lower face of the partially-submerged or floating ball E.

It has been found in practice, when the ordinary ball-cocks are used upon reservoirs and tanks in elevated and exposed situations, that when the water has risen sufficiently high within the tank as to cause the supply of water from the faucet to be cut off, the eddying currents of air, by acting upon the surface of the water and upon the floating ball, will cause such a disturbance as will permit of the oscillation of the connecting-rod B and consequent opening and closing of the faucet I, thereby admitting a surplusage of water to the tank, and eventually causing the tank to overflow.

It will readily be seen from the foregoing that by means of the submerged "drag" H, I am better enabled to confine the floating ball more closely to its proper position, and thereby control the action of the valve and prevent "water-hammer" and vibration of the ball, the drag or disk being held in position in the comparatively calm waters beneath the surface, and offers through its broad flat face a greater resistance to either an upward or downward movement.

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

1. In a ball-cock, the combination, with the ball-carrying lever-arm B, of the vertical rod G and submerged disk or drag H, all constructed, arranged, and operating substantially as and for the purpose herein described.

2. In a ball-cock, the lever-arm B, provided with a screw-thread, C, in combination with the perforated boss D of the ball E, and vertical rod G and the submerged disk or drag H, constructed and secured together substantially in the manner specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

WILLIAM SMITH. [L. S.]

Witnesses:

CHAS. E. KELLY,

WILMER BRADFORD.