

UNITED STATES PATENT OFFICE.

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SELF-CLOSING FAUCET.

No. 912,091.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed July 13, 1908. Serial No. 443,357.

To all whom it may concern:

Be it known that I, PATRICK W. DOHERTY, a citizen of the United States, residing at the city of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Self-Closing Faucets, of which the following is a specification.

This invention pertains more particularly to the well known class of self-closing faucets in which the valve is adapted to be opened against the spring arranged to hold it closed by the combined action of two levers on the valve at its opposite sides thereof, a noted example of which is shown and described in the United States Letters Patent issued to me, dated April 6, 1875, No. 161,768.

This invention, in substance, consists in the application to the valve-stem of a wedge-shaped block adapted to be adjustable lengthwise thereon and fixed in its said adjustments and of levers fulcrumed on the faucet at opposite sides of the stem and arranged in relation to said block that when pressed toward each other to work on opposite sides thereof and thereby to open the valve against its spring and that when released to allow the valve to close under the then reaction of its spring; and also in substance consists in a novel fulcruming of said levers all as hereinafter described and pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is, in substance, a front elevation of a basin-faucet but showing some parts in central vertical section. Fig. 2 is a horizontal section, on dotted line 2—2, Fig. 1. Fig. 3 is a horizontal section, on dotted line 3—3, Fig. 1, but with the valve removed. Fig. 4 is a plan view, in detail, at the cap of the faucet with the operating levers detached. Fig. 5 is a side elevation, in detail, of the parts as shown in Fig. 4. Fig. 6 is an isometrical perspective view of the wedge-shaped block detached. Figs. 7, 8, 9 and 10 are views in detail of an operating-lever; Fig. 7 being an upright view of its face toward the valve-stem; Fig. 8 a vertical section, on dotted line 8—8, Fig. 7; Fig. 9 a horizontal section, on dotted line 9—9, Figs. 7 and 8 and Fig. 10 a face view of the lower end.

In the drawings, A is the barrel of a basin-faucet, having a spout B leading off from it at one side, and a downward axial extension D suitably adapted to be fastened in position

on a basin-bowl (not shown) as may be desired, and at its lower end-portion to be connected with a water supply-pipe, (not shown).

E is the valve-plate or disk having a suitable packing-washer F secured thereto, and G is the seat for the valve E. H is the valve-stem. J is the coiled-spring for closing and holding the valve closed on its seat, and against the tension of this spring the valve is opened, as hereinafter appears. K is the attachable and detachable cap-plate or cover for the faucet-barrel A, and through this cap the valve-stem H upwardly passes and extends or projects thereabove, and between it and the valve E the coiled-spring J is confined, end to end, all substantially as well known, except as may hereinafter appear, and therefore needing no more particular description herein.

The upward projection or portion L of the valve-stem H, above the cap-plate E, is screw-threaded, and it is adapted, as for instance, as particularly shown, by a slit M at its upper end to receive a screw-driver to turn it, as and for a purpose which will hereinafter appear.

N is a block or screw-threaded nut, as it were, of wedge-shape and screwed upon the screw-threaded portion L of the valve-stem H with its apex line or edge O toward the cap K.

P is a set-screw to fasten the wedge N to the screw-threaded extension L of the valve-stem H by turning it up against the stem, as shown, Fig. 2.

Q, Q are two levers to operate on the wedge-block N at its opposite corresponding inclining faces R, R, and which are at opposite sides of the projecting-portion of the valve-stem H and are in corresponding planes of inclination to the axis thereof, meeting at the apex line or edge O at an acute angle. The two levers are of corresponding shape and dimensions and each, at its lower end-portion, has an inclining face S to contact with and bear on an inclining face R of the wedge N and above said faces R each lever has a handle T, and at each side of said faces each has a socket or cavity U, having its lower end open and also the central portion of its side W which is toward the block or valve-stem, has a prong or leg X at each side thereof.

Y are fixed parallel struts or posts of the cap-plate K and at opposite sides of the

valve-stem. These struts or posts are rectangular in horizontal cross-section and are suitably shaped and sized for a lever Q to be set thereon by the socket U of its lower end-portion and thus to confine the lever to its bearing on or contact with the wedge-block N as described while permitting the levers at their upper end-portions to be pressed toward each other and to be maintained in their normal position, as in Fig. 1.

The valve E is opened against the tension of its spring J, by pressing the upper ends or handles of the levers Q, Q toward each other and the valve automatically closes by the reaction of its spring on a release of said pressure on the levers. The levers Q, Q in both of their movements, to wit, in the opening and closing of the valve E, swing on the struts or posts Y of the cap-plate K of the faucet-barrel.

It will be observed that there is no pivoting of levers Q, Q on the cap-plate, a quite important feature and again as the levers are fulcrumed they can be readily removed and replaced at pleasure. Again it is obvious that by properly turning the screw-threaded stem H in the screw-threaded bearing-block N the said block N can be adjusted as may be necessary to secure a proper working of the levers thereon and to compensate for wear, etc., and all without detaching the levers from the faucet, &c.

Having thus described my invention, what

I claim and desire to secure by Letters Patent is,

1. In a self-closing faucet comprising a shell or casing, a valve-seat in said casing and a valve to seat on said seat, a valve-stem carrying said valve, a spring adapted by its tension to close the valve and to permit the valve to be opened against said spring tension, the combination of a wedge-shaped block mounted on said valve-stem so that it can be adjusted in its position thereon and of two levers each fulcrumed on said shell and arranged to work on opposite sides of said wedge-shaped block.

2. In a self-closing faucet comprising a shell or casing, a valve-seat in said casing and a valve to seat on said seat, a valve-stem carrying said valve, a spring adapted by its tension to close the valve and to permit the valve to be opened against said spring tension, the combination of a wedge-shaped block mounted on said valve-stem so that it can be adjusted in its position thereon and of two levers each fulcrumed on a fixed strut or post of said shell and arranged to work on opposite sides of said wedge-shaped block.

In witness whereof, I have hereunto set my hand in the presence of two subscribing witnesses.

PATRICK W. DOHERTY.

Witnesses:

CHARLES R. BROWN,
ALBERT W. BROWN.