No. 639,856. Patented Dec. 26, 1899.

H. A. KNIGHT.

BOTTLE STOPPER.

(Application filed July 24, 1899.)

(No Model.)

Fig. 1.

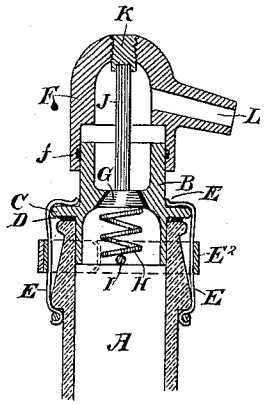
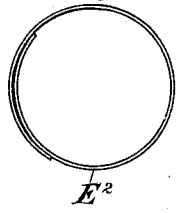


Fig. 2.



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UNITED STATES PATENT OFFICE.

HIRAM ABIFF KNIGHT, OF ALAMEDA, CALIFORNIA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 639,856, dated December 26, 1899.

Application filed July 24, 1899. Serial No. 724,936. (No model.)

To all whom it may concern:

Be it known that I, HIRAM ABIFF KNIGHT, a citizen of the United States, residing in Alameda, county of Alameda, State of California, have invented an Improvement in Bottle-Stoppers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a faucet which is especially designed to be used in connection with bottles containing soda-water or other effervescent liquid which it may be desired to partially draw off without destroying the value of the remainder by allowing the gas to escape.

It consists of the parts and the constructions and combinations of parts hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical section through the faucet and connections. Fig. 2 is a detail of the spring-clasp.

A is a bottle of any suitable description, and B is a stopper, having a flange C projecting outwardly and adapted to rest upon the washer or gasket D, which fits upon the top of the bottle-neck, the lower part of the stopper extending into the neck and being guided and steadied thereby.

Upon each side of the bottle-neck are secured spring-plates E, which extend up on opposite sides of the neck and have the inturned ends, as shown at E'. These ends extend inwardly over the flange C, and thus hold it down firmly upon the gasket and form a tight joint. Whenever it is desired to remove the stopper for the purpose of cleansing it or the bottle, it is only necessary to pull the springs outwardly until the flange is released from them, and it may be removed. The plates E may also be held in position by an elastic clamp E^2 by which they are inclosed.

Surrounding the upper part of the stopper, above the flange and exterior to the bottle, is a cap F, which fits and is slidable with relation to the upper end of the stopper B, and a tight joint is maintained by means of a gasket *f*.

In the lower hollow portion of the stopper B is formed a valve-seat, and a valve G is closable against this seat from below by pressure from within the bottle and also by a spring H, the upper end of which presses against the valve, and the lower end is supported by a pin I, fixed across the lower part of the stopper. A rubber or other rim between the valve and its seat insures a tight joint. A stem J extends upward from the top of the valve, and its upper end is guided and supported by a hollow screw-plug K, fitted into the top of the cap F, and this plug is adjustable in the cap to properly fit the stem when the valve is closed.

L is the discharge-nozzle, projecting from the side of the cap F.

Connection may be made between the nozzle L and the source of supply, so that the liquid which usually contains carbonic-acid gas under considerable pressure may be introduced until the bottle is filled. The valve G will be opened to allow the bottle to be filled and will close when exterior pressure is removed. The bottle is then in condition for use, and by tilting the bottle until the neck and the faucet discharge are inclined downwardly and pressing downwardly upon the cap F it will slide upon the stopper, and through the stem will act to open the valve, so that any amount of the carbonated liquid may be discharged without affecting that which remains in the bottle or removing an undue proportion of the gas. The bottle can thus be discharged a little at a time at intervals and that which remains at the last will be as good as that which was first emptied.

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

1. A bottle-stopper, one portion of which extends into the neck of the bottle, and the other exterior thereto and provided with a surrounding flange, spring-clamps each having one end secured to the bottle-neck and the opposite end free and adapted to spring over said flange to detachably hold the stopper in place, an elastic clamp to embrace the first-named clamps at a point between the ends thereof, a slidable cap having a discharge-nozzle and a valve actuated by said cap.

2. A bottle-stopper having an annular flange and gasket forming a joint upon the top of the bottle, and clamps by which it is held in place, a spring-pressed valve seating

upwardly from the inner end of the stopper and having a stem extending outwardly therefrom, a cap slidable upon the outer end of the stopper and having a discharge-nozzle, the upper end of said cap contacting with the valve-stem to open the valve when the cap is depressed.

3. A bottle-closure comprising a hollow stopper, one end of which fits and closes the bottle-neck, and means for locking it thereto, a valve-seat formed interior to the stopper, with a spring-pressed valve closable upwardly against said seat and having an upwardly-extended stem, a cap fitting and slidable upon the exterior end of the stopper, said cap having a discharge-nozzle, and a screw-plug fitting the top of the cap, its inner end receiving the outer end of the valve-stem and adjustable with relation thereto.

In witness whereof I have hereunto set my hand.

HIRAM ABIFF KNIGHT.

Witnesses:
H. C. DROGER,
JAMES L. KING.