W. H. HICKS.

Bottle-Stopper.

No. 214,039. Patented April 8, 1879.

Fig 1.

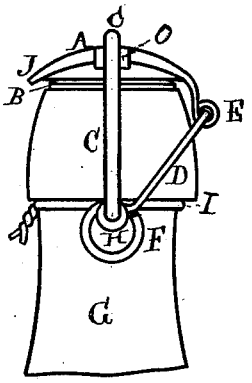


Fig 2.

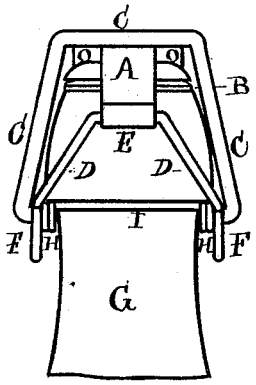


Fig 3.

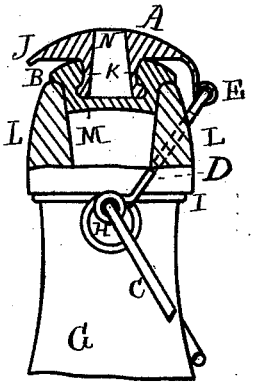
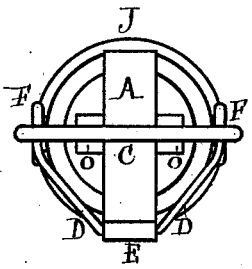


Fig 4.



Witnesses.
E. L. Sherman
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UNITED STATES PATENT OFFICE.

WILLIAM H. HICKS, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **214,039**, dated April 8, 1879; application filed February 13, 1879.

To all whom it may concern:

Be it known that I, WILLIAM H. HICKS, of Brooklyn, county of Kings, and State of New York, have invented new and useful Improvements in Bottle-Stoppers, of which the following is a specification, reference being had to the drawings which form part thereof.

The object of my improvements is to provide a cheap, durable, and effective bottle-closing device; and to this end my invention consists in certain combinations of elements, specifically set forth at the end of this schedule.

In order that persons skilled in the art may understand, make, and use my invention, I will proceed to describe it, referring to the drawings, in which—

Figure 1 is a side elevation of a bottle closed with my device. Fig. 2 is a rear elevation of the same. Fig. 3 is a sectional view of the bottle on its vertical center line, showing the cap-piece and stopper resting on the mouth of the bottle ready to be compressed. Fig. 4 is a top view of the stopper on the bottle.

A is a rigid cap-piece, having its upper flange provided with a strip curved on the top, and projecting beyond the diameter of the bottle-mouth on one side to form a hinge, E, and provided with an annular downwardly-projecting teat, arranged to sustain an elastic or compressible stopper, B, shaped to nearly fit the bottle-mouth. Said stopper B is provided with a flange whose upper surface tapers from its outer circumference upwardly toward its central depression, shaped to fit over the pendent portion of the cap-piece. I is a neck-wire on the neck of the bottle, under its shoulder, having bearings H H, diametrically opposite each other, to hold the pivotal ends of a bail-wire, C, which straddles the bottle-nose, and vibrates freely on the said pivotal bearings from one side of the bottle over its top to the other side.

L represents the nose of the bottle, under the shoulder of which, at its junction with neck G, the neck-wire I is secured. D is a hinge-wire, held at its central portion in bearing E of the cap-piece A, which is broad enough to hold it firmly in position. Its legs straddle the bottle-nose, and are provided with eyes at their ends to surround the pivotal ends of the bail-wire, over which they are placed before the bail-wire ends are entered in their bearings H H in the neck-wire, so that the cap-piece, hinged to the wire D, and bail-wire C all connect to the same central points on the bottle. The curve across the top of the cap-piece over which the bail-wire travels in closing it upon the bottle is of about the radius of the length of the legs of the bail-wire, and is made smooth to offer no obstruction to the movement of the bail-wire over it.

The hole N in the cap-piece is covered at its base by the lower surface or bottom of the elastic stopper. The hinge bearing on the cap-piece is made to close over its hinge-wire after the wire has been placed in it. O O are strips across the cap-piece to support the bail-wire.

The operation of my device is as follows: The cap-piece, bail-wire, and the other parts having been placed on the bottle, as shown in the drawings at Fig. 3, the bail-wire C is thrown over the top of the cap-piece, which compresses the central portion of the taper flange of the elastic stopper down into the space surrounding the pendent flange of the cap-piece, between it and the inner walls of the bottle-mouth, and the outer portion of the flange onto the top of the walls of the bottle-mouth, and into the angle between the two, which secures a tight joint against the escape of the gases from within, as shown at Figs. 2 and 3.

The bottle is opened by throwing the bail-wire off the cap-piece to either side. The pressure from within the bottle throws the stopper off and down against the neck, where it is held while discharging the contents.

The bottle can be opened or closed by the bail-wire from either side, and the curved strip across the cap-piece projects on both sides, to give long travel to the bail-wire over it and to lessen the strain in closing.

Having now described my invention and the manner in which I have embodied it, what I claim as my invention, and desire to secure by Letters Patent, is—

1. In a bottle-stopping device, the combination of a cap-piece curved across its upper

surface, as shown and described, provided with a teat pendent from its under side, and a hinge-bearing on one side, a hinge-wire, as shown and described, jointed to the cap-piece and to the pivotal ends of the bail-wire, with the bail-wire pivoted to the neck-wire, and arranged to straddle the bottle-nose, and to force the cap-piece and elastic stopper against the bottle-mouth, substantially in the manner and for the purposes hereinbefore set forth.

2. The combination of a compound stopper for a bottle, constructed substantially as described, with a bail-wire arranged to swing over its upper surface, and a hinge-wire attached to the cap-piece, both arranged to swing from the same points on the bottle, and arranged to operate substantially in the manner and for the purposes set forth.

W. H. HICKS.

Witnesses:
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