

J. MATTHEWS
BOTTLE-STOPPER.

No. 172,757.

Patented Jan. 25, 1876.

FIG. I.

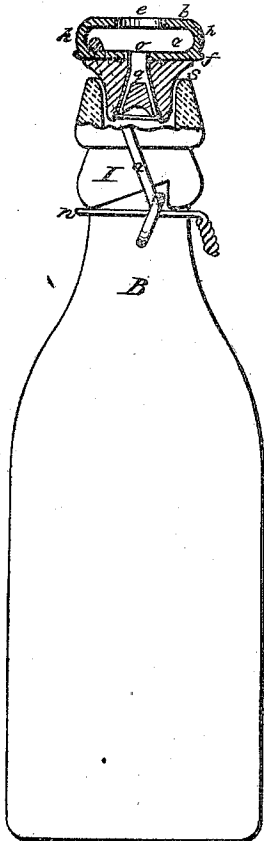


FIG. II.

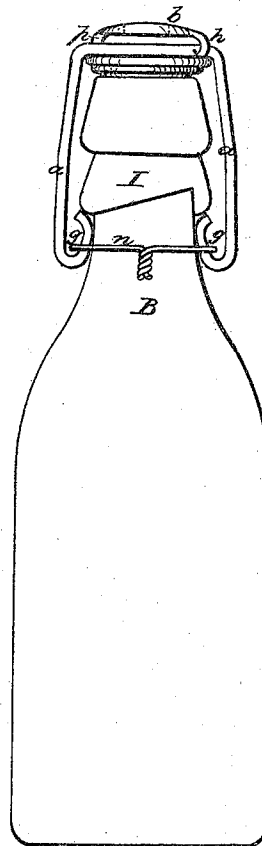
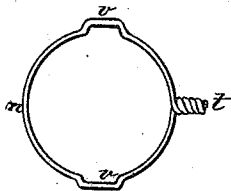


FIG. III.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

JOHN MATTHEWS, OF NEW YORK, N. Y.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **172,757**, dated January 25, 1876; application filed April 5, 1875.

To all whom it may concern:

Be it known that I, JOHN MATTHEWS, of the city, county, and State of New York, have invented certain new and useful Improvements in Closing Bottles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to fastenings and stoppers for bottles, especially for such as are used to contain liquids under pressure.

It consists in a neck-wire crumpled on opposite sides to secure the swinging bail to the bottle-neck; in a swinging bail of a fastener, having its ends bent inward to form loops for the passage of the neck-wire; in setting the loops at an angle to the bail; and in an improved stopper.

The following description will enable those skilled in the art to make and use my invention.

I make the interior of my stopper of metal, as shown by *f* in the drawing, and surround it with rubber, marked *s*, on the top of the stopper.

I support a bridge, *b*, by the posts *p*, and through the space *c*, between the bridge and stopper, I pass the bail *a*, which I secure to the neck of the bottle *B* by passing the neck-wire *n* through the loops *g* in the bail, and twisting and crumpling the same, as shown at *t* and *v* in Fig. 3.

I in the drawing represents the oblique shoulders formed upon the bottle-neck, for which Letters Patent 127,851, dated June 11, 1872, were granted to Joseph Connor, and in connection with which my improvements are especially designed to be used.

e is a perforation in the bridge, to permit the introduction of the filling-tube to the orifice *o* when it is desired to fill bottles through such stoppers.

It is obvious that the bridge may be curved or bent to one side for the same purpose.

It may also be desirable for the bail to be curved.

The orifice *o* is closed by a self-acting valve, *q*.

To open the bottle the operation is as follows:

The loops on the bail being brought to the upper part of the inclines, the stopper may readily be thrown from the bottle-mouth. The bail will more readily swing away from the bottle-mouth if the loops of the bail be set at an angle thereto, and if the bail be turned in the direction shown.

To close the bottle, the operation is reversed, when the plug of the stopper is turned into the mouth of the bottle.

The swinging bail of the fastener is then turned, so that the loops of the fastener travel to the lower part of the inclines on the bottle-neck, so that the stopper will be forced into the bottle-mouth.

In turning the swinging bail of the fastener the ports *p p* act as stops, and also bring the swinging bail over the center of the stopper.

If it is desired to fill bottles closed by such stoppers, I prefer to employ the apparatus patented by me April 29, 1873.

The neck-wire is preferably made of thicker wire than that commonly employed for that purpose.

The space *c* between the bridge and the top of the stopper must be such as to permit within it a rotation of the fastener to press the stopper into the bottle-mouth by means of the inclines.

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

1. A bottle-stopper provided with a bridge, so as to leave a horizontal space or slot, *c*, between the bridge and stopper, within which the swinging bail of the fastener may be rotated to press the stopper into the bottle, as set forth.

2. The combination of a fastener passing between the stopper and bridge, and secured to the bottle-neck with inclines, so that the

stopper is pressed into the bottle by a rotation of the fastener upon the inclines, substantially as described.

3. The combination of the bridge, the swinging bail passing under the bridge, inclines, the stopper, and the bottle-neck, so that the rotation of the swinging bail forces the stop-

per into or upon the bottle-neck, substantially as described.

JOHN MATTHEWS.

Witnesses:

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