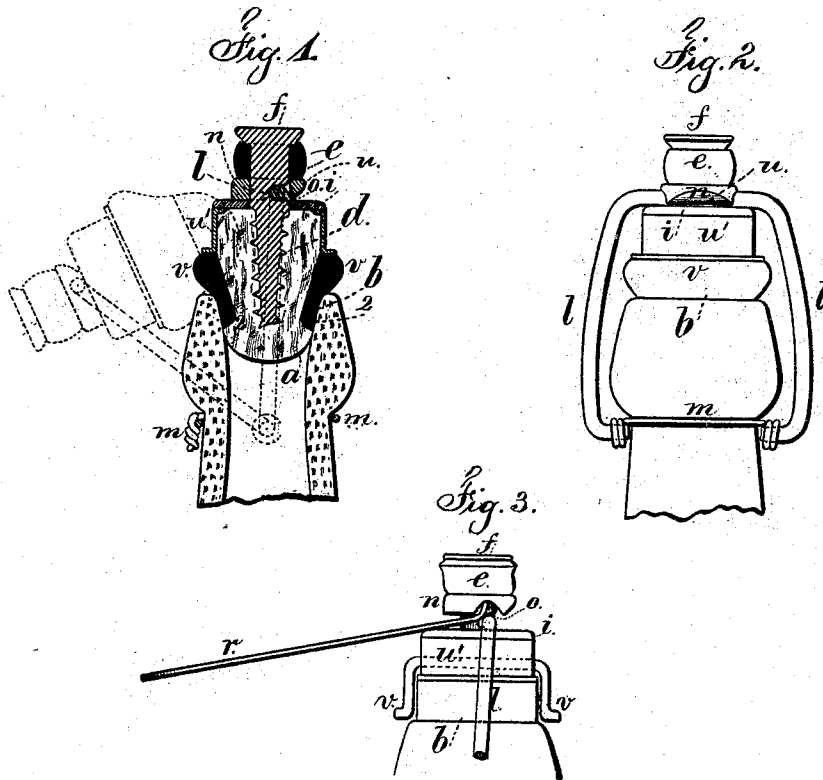


P. MILES.
BOTTLE STOPPER.

No. 178,019.

Patented May 30, 1876.



Witnesses

Chas. A. Smith
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Inventor

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per L. W. Serrell.

att.

UNITED STATES PATENT OFFICE.

PURCHES MILES, OF NEW YORK, N. Y.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **178,019**, dated May 30, 1876; application filed December 30, 1875.

To all whom it may concern:

Be it known that I, PURCHES MILES, of the city and State of New York, have invented an Improvement in Bottle-Stoppers, of which the following is a specification:

Bottle-corks are usually inserted through the charging-tube of the filler when effervescent liquids are used. The plunger that acts upon the cork often injures the same.

My invention is made for protecting the surface of the cork or stopper from injury, and I make the fastening that secures the stopper to the bottle in such a manner that the stopper may be disconnected from the bail to allow the former to be inserted through the filling-tube of the bottling-machine.

In the drawing, Figure 1 is a vertical section of the fastening complete, and Fig. 2 is an elevation of the same.

The cork *a* is made with a shoulder, 2, around the tapering sides, and an elastic sleeve, *b*, of india-rubber is applied around the cork, in order that the combined rubber and cork stopper may be fitted tightly into the bottle with but little pressure, because the rubber surface comes into contact with the glass, and there is an end of cork, against which the liquid in the bottle comes in contact, and the india-rubber does not come in contact with the contents of the bottle sufficiently to influence the flavor.

To prevent the pressure of the plunger in the bottling-machine injuring the cork, I insert a screw, *d*, into the upper end of the cork, against which the plunger acts, and said screw, running into the cork a sufficient distance, is not pressed into the cork by the plunger, but the screw stiffens the cork and carries it into the bottle. This screw is made with a flat head, or nearly flat, head, for the plunger to act against. Where the ordinary bail is used this screw may be a wood-screw with a head. I have shown this screw as sufficiently long to receive the spring *e*, that may be a short section of india-rubber tubing, inserted between the screw-head *f* and the locking-washer *n*, so as to press said washer *n* toward the stopper.

The bail *l* is fastened to the bottle by the neck-band *m*, and swings as usual, and it is of a length to pass above the stopper *a b* into

a notch, *o*, in one side of the screw *d*, so that the pressure will be taken upon the screw instead of the upper end of the stopper. To prevent the bail slipping out of the notch *o* the lock-washer *n* is employed, and it has notches upon its under face, so as to straddle the bail when pressed upon it by the spring *e*.

By this construction the stopper and bail are connected, and the former swings upon the latter in opening and closing the bottle.

It is to be understood that the parts are placed in the positions shown by dotted lines in Fig. 1 when swinging the stopper over into its place upon the neck of the bottle; but if the stopper is to be inserted through the filling-tube of a bottling-machine, the lock-washer is raised by a forked lever, *r*, with bent prongs, that is inserted beneath said washer, as seen in Fig. 3, so as to liberate the bail from the notches of the washer, and allow it to be swung aside. After the stopper has been forced into the bottle the bail is turned up over the stopper and pressed into place, and in so doing it runs under the incline *u* and raises the lock-washer, and then the same springs back to place, and holds the bail into the notch of the stem *d*.

If the parts thus far described alone were used there would be a risk that the stopper might tip or easily be knocked aside and turn into the position shown in Fig. 1 by dotted lines, and the pressure of the gases in the bottle would promote this movement. To prevent this I employ the bearings *v* or stops upon the stopper. These are shown as a shoulder upon the india-rubber, that has to be compressed on one side or the other of the cork before the stopper can be pressed aside to open the bottle. I prefer that these bearings *v* be of india-rubber; but they might be in the form of blocking-pieces made of the ends of the wire *v*, Fig. 3—that is, turned around to bring the ends of the wire at the top of the bottle, or turned aside to allow the stopper to be tipped or pressed aside in opening the bottle.

The metallic thimble *w*, pressed upon the cork *a*, and the washer *i*, also serve to protect the cork and retain the rubber in place.

I claim as my invention—

1. The screw *d*, passing from one end of the

cork nearly through the same, to stiffen the cork, and form a bearing for the plunger that forces the stopper to place, such screw having a flat head of smaller diameter than the cork, as set forth.

2. The combination of the stopper, bail *l*, and stem *d*, having the notch *o* for the bail, as set forth.

3. The locking-washer *n*, in combination with the stem *d*, bail *l*, and stopper, substantially as set forth.

4. The combination, with the bail *l* and stopper, of the bearings *v*, to retain the stopper in an upright position, as specified.

Signed by me this 23d day of December, A. D. 1875.

PURCHES MILES.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.