Ladd & Capcutt,

Bottle Stopper.

No. 102,685. Patented May 3. 1870.

Fig. 1.

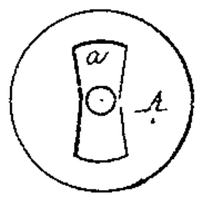


Fig. 2.

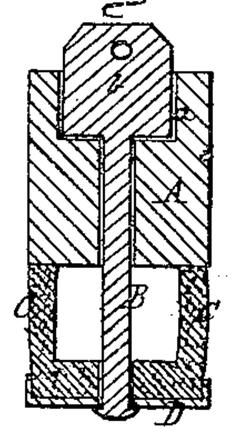


Fig. 3

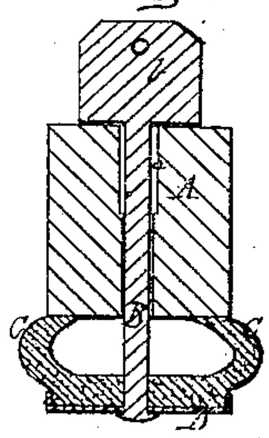
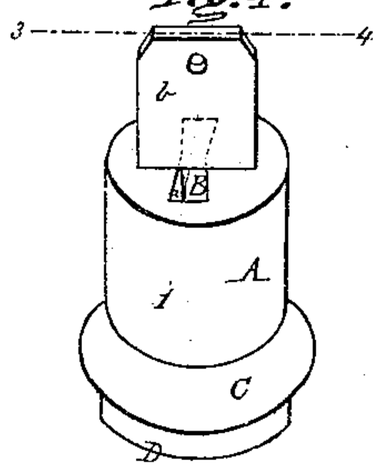


Fig. 4.



Witnesses
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United States Patent Office.

GEORGE W. LADD AND FREDERICK W. COPCUTT, OF NEW YORK, N. Y.

Letters Patent No. 102,685, *dated May* 3, 1870.

IMPROVEMENT IN BOTTLE-STOPPERS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that we, GEORGE W. LADD and FREDERICK W. COPCUTT, both of the city of New York, have invented a new and useful Improvement in Bottle-Stoppers; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains, to make and use our invention, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 is a plan view of the body of our improved stopper;

Figure 2 is a vertical section taken on the line 1 2, fig. 4, of our improved stopper ready for insertion into the bottle;

Figure 3, a vertical section taken on the line 3 4, fig. 4, of the stopper, when operating to keep the bottle closed; and

Figure 4, a perspective view of the same.

The same parts are denoted by the same letters in all the figures.

Our invention has reference more particularly to stoppers for bottles containing soda-water, mineral water, and other effervescent liquids, where it is desirable not only that the bottle should be kept as tightly closed as possible, but also that the stopper should be extracted instantaneously.

Our stopper is composed of a body, A, stem B, rubber C, and plate D.

The body A is perforated for the insertion of the stem B, and is also made with a recess, *a*, for the reception of the head *b* of the stem.

The stem is constructed with a head, *b*, at its upper end, and is so connected at its lower end to the plate D, that the stem and plate are free to turn independently of each other.

The operation is as follows:

The stopper being in the position represented in fig. 2, is inserted into the bottle. The stem is then drawn outward from the neck by suitable machinery, the body of the stopper being held so as to prevent it from coming out with the stem. When the head *b* has been drawn quite out of the recess *a*, it is turned at right angles to its former position into the position shown in figs. 3 and 4. By drawing out the stem, the rubber is compressed in the direction of its length and expanded laterally, so as to press tightly against the inside of the neck of the bottle, and by turning the head, the rubber is prevented from resuming its former position. When the liquid is to be poured out, the bottle is opened by turning the head into the position shown in fig. 2, which at once releases the rubber and allows the stopper to be withdrawn.

What we claim as new, and desire to secure by Letters Patent of the United States, is—

The stopper, consisting of a stem B *b*, body A, rubber C, and plate D, when all these parts are arranged to operate as described.

GEO. W. LADD.
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Witnesses:
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