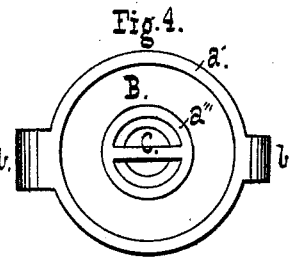
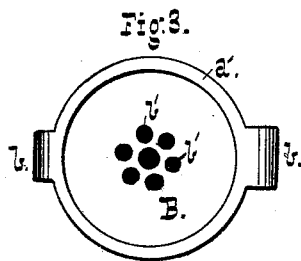
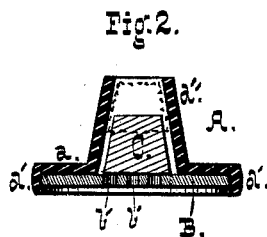
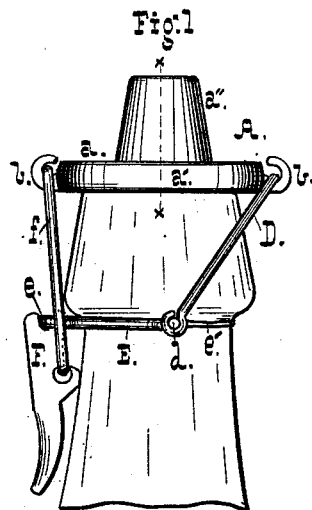


C. S. THOMPSON.
 Bottle-Stopper and Stopper-Fastener.
 No. 215,079. Patented May 6, 1879.



Witnesses,
 W. A. Buttram.
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UNITED STATES PATENT OFFICE.

CHARLES S. THOMPSON, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN BOTTLE-STOPPERS AND STOPPER-FASTENERS.

Specification forming part of Letters Patent No. **215,079**, dated May 6, 1879; application filed October 22, 1878.

To all whom it may concern:

Be it known that I, CHARLES S. THOMPSON, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Bottle-Stoppers; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the stopper applied to an ordinary bottle-neck. Fig. 2 is a sectional view of the stopper on line *x x*, Fig. 1. Fig. 3 is a bottom plan of the stopper, and Fig. 4 a similar view of a modified form of the same.

This invention relates to that class of bottle-stoppers in use upon bottles containing effervescent beverages; and it has for its object to furnish a stopper simple in construction, affording a maximum of security against accidental displacement or leakage, and admitting of the charging of the bottle without the necessity of removing the stopper from its place upon the bottle-neck.

In the accompanying drawings, A represents the stopper, which is preferably spun or struck up from stout sheet metal into the form shown—to wit, that of a disk, *a*—having a circumferential flange, *a'*, and tapering tube *a''*, tangs *b b* being left at the sides for the attachment of the bails. A rubber disk, B, is fitted into the under side of the stopper, as shown in Fig. 2, and is perforated with one or more holes, *b' b'*, at the part which comes directly under the tube *a''*. A ball or plug, C, of a size to fit the tube near its smaller extremity, is placed within it.

In the modification of the stopper shown in Fig. 4, a second flange, *a'''*, is formed on the under side of the same, and, instead of a disk, an annulus of rubber is used, being sprung into place between the flanges *a' a'''*. A bar, *c*, extends across the central orifice to retain the plug C.

The stopper is attached to the bottle by means of a bail, D, around which one of the tangs *b* of the stopper is bent, the ends of the bail being bent around the pivots *d* of the neck-wire E. This latter is provided with a loop, *e*, which serves as a fulcrum for the lever F, and is attached to the bottle-neck by a piece of fine wire, *e'*, in the usual manner.

To the opposite tang *b* of the stopper is attached a link, *f*, which carries the lever F, which latter is provided with a groove for engagement with the loop *e* upon the neck-wire. This loop is made to project a sufficient distance from the bottle-neck to be exterior to the line of traction when the lever F is pressed close to the neck of the bottle, whereby the lever is securely retained in that position.

To remove the stopper, the lever is swung outward until the link *f* clears the loop *e*, when the stopper is released, and may be lifted from the bottle-neck.

To secure the stopper, it is laid in position upon the bottle, and the groove in the end of the lever being made to engage with the loop *e*, the lever is pressed inward until it comes in contact with the bottle.

A salient feature of the stopper consists in the facility which it affords for charging the bottle without removing the stopper. Upon applying the tube *a''* to the nozzle of the bottling-machine, the plug C drops upon the disk B or bar *c*, and affords an entrance for the liquid. When the bottle is full it is simply removed, when the plug is instantly driven into the tube, securely sealing the orifice.

While I have described the stopper as preferably constructed of sheet metal, it may obviously be formed by casting, in the usual way.

The flange *a'*, at right angles to the disk *a*, confers such a degree of strength and stiffness upon the latter, besides serving to secure the rubber washer, as admits of the construction of the stopper from comparatively light sheet metal. The shape of the stopper, moreover, is such as admits of its being struck up in suitable dies, thereby securing great advantages in point of economy, arising as well from the method of manufacture as from the but slight expenditure of material involved.

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

In combination with the flanged disk *a* and tapering nozzle *a''*, the centrally-perforated washer B and plug C.

CHARLES S. THOMPSON.

Witnesses:

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