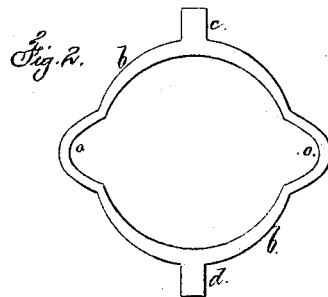
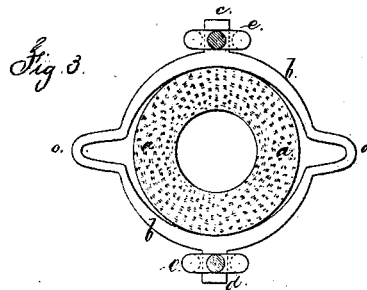
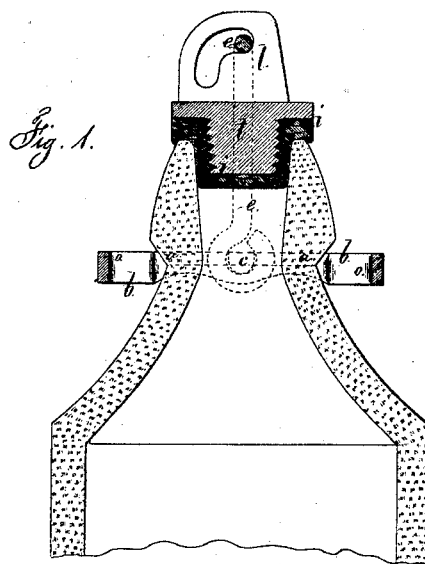


*F. Schlich,
Ball-Stopper.*

No. 112,185.

Patented Feb. 28. 1871.



Witnesses

Chas. H. Smith

Geo. A. Walker

Friedrich Schlich

Lemuel W. Perrell atty

UNITED STATES PATENT OFFICE.

FREDRICH SCHLICH, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND
ADRIAN FEYH, OF SAME PLACE.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **112,185**, dated February 28, 1871.

To all whom it may concern:

Be it known that I, FREDRICH SCHLICH, of the city and State of New York, have invented and made a new and useful Improvement in Fastenings for Bottle-Stoppers; and the following is declared to be a correct description of the same.

Fastenings for bottle-stoppers have been made of a wire loop that swings upon a wire neck-band surrounding the upper end of the bottle beneath a head or shoulder. This neck-band is very liable to bend and to fail under the pressure to which the stopper is subjected, especially with soda or mineral waters.

An open clasp of metal has also been used having upon it projecting lugs for the swinging bail. The ends having the half-pieces of the lugs upon them are liable to be bent or broken, and where the neck is larger than usual these pieces cannot be brought sufficiently close to pass through the eye of the bail.

My invention consists in a malleable-iron ring having studs for the bail and a projecting bow on one or two sides, which bow is to be closed after placing the ring over the neck of the bottle, said bow forming a solid connection from one part of the band to the other, and keeping the ring or band firmly to the neck, independent of the projecting lugs.

In the drawing, Figure 1 is a vertical section of the bottle and fastening. Fig. 2 is a plan of the band before it is closed around the neck; and Fig. 3 is a sectional plan of the neck with the band secured thereto.

The bottle has a projection around the end, leaving a neck at *a* for the reception of the malleable cast-metal collar *b*. Said collar is

formed with the projecting lugs *c d* for the eyes at the end of the swinging loop or bail *e*, that secures the stopper *i*.

The stopper is made with a wing or wings, *l*, having cam-shaped openings for the bail *e*, substantially similar to those in my patent of September 5, 1865, and the india-rubber stopper *i* is made similarly, so far as taking a bearing upon the end and interior of the neck; but said elastic stopper entirely incloses and is fastened upon the projection *t* of the cap by the periphery of such projection having grooves around it, either in a screw form or straight, into which the rubber becomes embedded sufficiently to hold it firmly.

The band or collar *b* is made in the form of a ring, with bows or loops *o* on one or two sides.

The collar is made in the form shown in Fig. 2, and after it is put over the neck of the bottle this bow is to be closed or pressed together and the collar tightened upon said neck, so as to clasp the same; and the bow being at a different part of the collar or ring to the lugs *c d*, they can be made strong and rigid, so as to sustain the strain to which they are exposed.

I claim as my invention—

The collar or band *b*, made as a closed ring, with the projecting lugs *c d* and bow or loop *o*, to be closed by bending after the band is placed upon the bottle, as set forth.

Signed by me this 30th day of September, A. D. 1870.

FREDRICH SCHLICH.

Witnesses:

GEO. D. WALKER,
CHAS. H. SMITH.