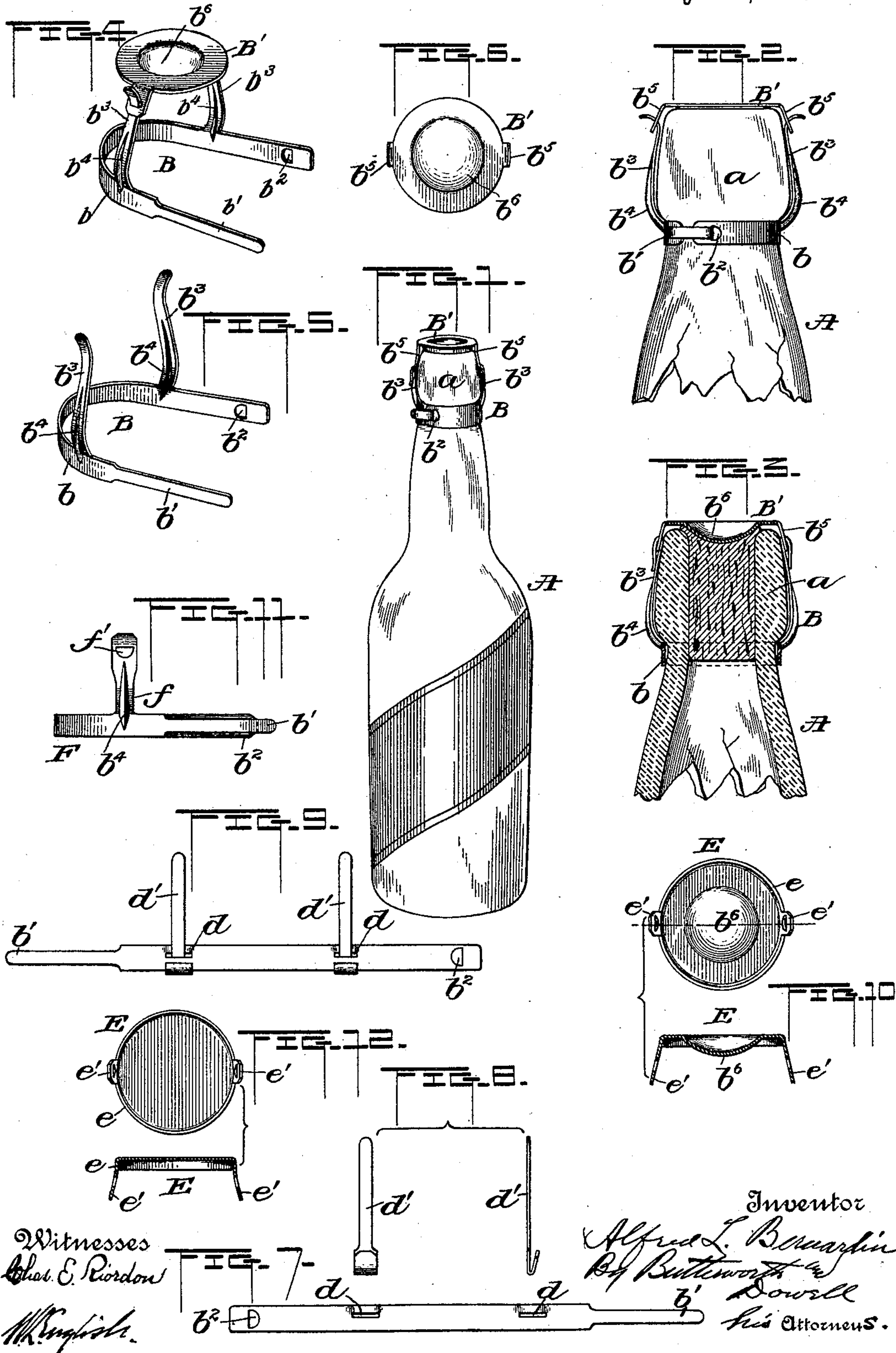


(No Model.)

A. L. BERNARDIN.
BOTTLE CAP AND FASTENER.

No. 587,275.

Patented July 27, 1897.



UNITED STATES PATENT OFFICE.

ALFRED L. BERNARDIN, OF EVANSVILLE, INDIANA.

BOTTLE CAP AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 587,275, dated July 27, 1897.

Application filed September 9, 1896. Serial No. 605,270. (No model.)

To all whom it may concern:

Be it known that I, ALFRED L. BERNARDIN, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Bottle Caps and Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a combined metallic cap and fastener for bottles, but more particularly to cork-retainers employed to fit upon the top of corks applied to bottles where a pressure exists—such, for instance, as on export bottled beer, mineral waters, and soft carbonated drinks.

The primary object of my invention is to provide a bottle cap and fastener adapted to fit and rigidly hold a stopper in the mouth of bottles having heads of various sizes.

A further object is to provide a simple, efficient, and inexpensive bottle cap and fastener, which may be readily formed and assembled and expeditiously applied to bottles, and which is made to conform to the contour of the bottle-heads.

The invention will be hereinafter more particularly described, and then pointed out in the claims at the end of the description.

Referring to the accompanying drawings, forming a part of this specification, Figure 1 is a general perspective view of a bottle having one form of cap and fastener for holding the stopper in the bottle-mouth. Fig. 2 is a side elevation of a portion of a bottle, on a larger scale, of the cap and fastener prior to being locked so as to rigidly hold the stopper. Fig. 3 is a vertical sectional view of the cap and fastener in the position shown in Fig. 1, illustrating how the parts may be locked to the bottle. Fig. 4 is a perspective view of the cap and fastener assembled and in position to be secured to the bottle. Fig. 5 is a detail perspective view of the fastener. Fig. 6 is a detail plan of a preferred form of cap, looking at the underneath or reverse side. Figs. 7 and 8 are detail views of a modified form of fastener; and Fig. 9 is an elevation of the parts shown in Figs. 7 and 8 assembled, but before being struck up or formed, as shown

in Fig. 5. Fig. 10 represents a plan of the reverse side and a vertical sectional view, respectively, of a modified form of cap. Fig. 11 is a detail side elevation of a modified form of fastener; and Fig. 12 represents a plan view of the reverse side and a vertical sectional view, respectively, of another slightly-modified form of cap.

In the drawings, A may designate a bottle having the usual or any preferred form of head *a*, to which a fastener B and a cap B' are adapted to be secured. The fastener preferably comprises a neck-band *b*, provided with a loop end *b'* and an eye or opening *b²*, adapted to be engaged by the loop end for removably securing the fastener to the neck of the bottle in the usual manner, and arms *b³*, extending upwardly from the band, which are either secured to or formed integrally with said band. These arms may be of any desired number and disposed in any suitable way around the neck-band *b*, though I prefer to employ two arms arranged so as to be opposed to each other when the fastener is struck up or formed as shown in Fig. 5. The arms *b³* are preferably curved outwardly from the neck-band for a portion of their length and then inclined inwardly to or near their upper ends in order that said arms may conform approximately to the bulge or shoulder of the head of the bottle and lie flat against or fit the bottle-head snugly, as shown in Figs. 1, 2, and 3, so as to cause the upper edge of the neck-band to abut against the lower surface of said bulge or shoulder and prevent distortion or unnecessary strain upon said band. Each arm may be provided with a rib or depressed portion *b⁴*, which preferably extends from the upper edge of the band along the outwardly-curved portion thereof for a portion of its length, so as to strengthen and retain said arms in their proper shape, and each arm may have its upper end curved outwardly so as to readily engage eyes or openings in pendent ears or projections *b⁵* of the cap B'. This cap is preferably in the form of a disk and has the ears *b⁵* preferably formed integrally therewith, said ears being adapted to be bent or forced inwardly or outwardly in order to increase or decrease the distance between the same, according to the size of the bottle-head. A conical protuberance *b⁶* is preferably pro-

vided centrally of the cap, adapted to fit into a similarly-formed depression in the bottle-stopper in order to spread the cork so as to fit tightly against the walls of the bottle-mouth and to rigidly hold the stopper in the bottle-mouth when the outer ends of the arms are forced or bent downwardly, as shown in Figs. 1 and 3. By this means the fastener is materially strengthened and the fastener and cap adapted to fit bottles having heads of various sizes.

The construction and manner of using the invention will be readily understood from the foregoing description when taken in connection with the accompanying drawings. The parts in use may be assembled and applied to the bottle-head or separately applied, so as to be in the position shown in Fig. 2, and when thus assembled it will be seen that the arms b^3 will approximately conform to the contour of the bottle-head. The upper ends of the arms may now be simultaneously bent or forced downwardly to the position shown in Figs. 1 and 3, so as to lock the cap and fastener together. This bending of the arms draws or forces the band b , so that its upper edge abuts against the under surface of the shoulder or bulge of the bottle-head and forces or draws the cap downward against the bottle-stopper so as to rigidly hold the same in the bottle-mouth.

I thus provide a neat, simple, strong, and efficient bottle cap and fastener which may be readily applied to bottle-heads of various sizes and at the same time provide a fastener which will readily conform to the contour of the bottle-head.

It may be preferable in some instances to make the arms and neck-band separate, so as to avoid the loss of material incident to making the arms and neck-band integral. In Figs. 7 to 9, inclusive, is shown a preferred construction of fastener to accomplish this purpose, though slight changes may be made, if desired. Here the neck-band is provided with the usual eye and loop end and has two or more additional eyes or slits d intermediate its ends and preferably located near the upper edge of said band. The arms d' may have enlarged lower ends bent upwardly, so as to engage the lower edge and embrace the opposite sides of the band when the body portion of said arms are slipped or passed through the eyes or slits d , as shown in Fig. 9. When thus assembled, the blank may be struck up or formed to the shape shown in Fig. 5, which will rigidly hold the arms and neck-band together.

I may, if desired, provide a cap E with a conical protuberance and a peripheral flange e , having pendent ears e' thereon, as shown in Fig. 10, or the cap may be made without the conical protuberance and provided with a peripheral flange having pendent ears or projections, as shown in Fig. 12. I prefer, however, to make the cap in the form of a disk, so as to adapt the cap to fit various

sizes of bottle-heads, which is not the case when a pendent flange is used, for should the bottle-head be larger than the pendent flange cap the pendent flange would necessarily rest on the outer edge of the bottle-lip instead of on the cork, in which case the cork would be allowed to be pushed up by the inward pressure to the extent of the depth of the pendent flange of the cap.

In Fig. 11 the arms f of the fastener F are provided with eyes or openings f' , adapted to be engaged by ears or projections arranged on the cap.

It is obvious that the outward edges of the ears or projections immediately to the side of the eyes or openings may be bent slightly inwardly, so as to bear against the bottle-head in order that the ends of the arms of the fastener may have sufficient room to pass freely between the ear and the bottle-head without binding when the ends of the arms are pulled or forced downwardly to fasten the cap to the band. Other changes may be made and some of the parts may be dispensed with or others substituted therefor without departing from the spirit of my invention.

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

1. A combined bottle cap and fastener comprising a band adapted to be removably secured to the bottle-neck and provided with arms projecting upwardly therefrom, together with a cap adapted to fit over the bottle-mouth and provided with pendent ears adapted to engage with the aforesaid arms; one of said engaging portions being provided with an eye and the other with a tongue fitting said eye and forming therewith a telescopic connection adapting the cap and band to be drawn toward each other when the arms and ears are locked together, whereby the device may be used with bottle-necks of different sizes for securing and holding a stopper within the bottle-mouth, substantially as described.

2. A bottle cap and fastener, comprising a cap adapted to fit over the mouth of a bottle, and a band adapted to be removably secured to the bottle-neck and provided with upwardly-projecting arms having their upper ends adapted to engage portions of the cap and be locked thereto; said arms being curved outwardly from the band so as to conform approximately to the curvature of the bulge or shoulder of the bottle-head and provided with ribs extending a portion of their length so as to strengthen the arms and retain them in their proper shape, whereby the arms may fit snugly against the bottle-head and the fastener rigidly held to the bottle, substantially as described.

3. A bottle cap and fastener, comprising a cap adapted to fit over a bottle-mouth and provided with pendent ears or projections having eyes therein, a band provided with a loop end and an eye or opening adapted to be engaged by said loop end so as to be remov-

ably held to a bottle-neck, and arms extending upwardly from said band and engaging the eyes of the pendent ears so as to draw the band and cap toward each other when the ends of said arms are bent or forced over so as to lock the arms and ears together; whereby the cap and fastener may be made to fit bottle-necks of various sizes and rigidly hold a stopper in the bottle-mouth, substantially as described.

4. A stopper-fastener comprising a disk-shaped cap adapted to fit over the mouth of a bottle and provided with pendent ears or projections having eyes or openings therein, a band provided with a loop end and an eye or opening adapted to be engaged by said loop end so as to be removably held to the neck of a bottle, and arms extending upwardly from the band and engaging the eyes in the pendent ears of the cap, said arms being curved outwardly from said band so as to conform approximately to the curvature of the bulge or shoulder of the bottle-head and provided with ribs extending a portion of their length so as to strengthen the arms and retain them in their proper shape, whereby various adjustments may be secured and the stopper rigidly held in the bottle-mouth, substantially as described.

5. A bottle cap and fastener, comprising a band provided with a loop end and an eye or opening adapted to be engaged by said loop end so as to be removably held to the neck of a bottle, arms extending upwardly from said band, and a disk-shaped cap adapted to fit over the bottle-mouth and having pendent ears or projections thereon adapted to be engaged by the ends of said arms, said cap being

provided with a conical protuberance adapted to spread the upper portion of the stopper tightly against the walls of the bottle-mouth, whereby various adjustments may be secured and the cap and fastener rigidly held to the bottle so as to retain the stopper in the mouth thereof, substantially as described.

6. A stopper-fastener comprising a disk-shaped cap having a conical protuberance adapted to fit over the mouth of a bottle and engage a depression in the bottle-stopper so as to spread its upper portion tightly against the walls of the bottle-mouth, said cap being provided with pendent ears or projections extending outwardly from the periphery of the cap and having openings therein, a band provided with a loop end and an eye or opening adapted to be engaged by said loop end so as to be removably held to the neck of a bottle, and arms having outwardly-curved outer ends extending upwardly from the band and adapted to engage the eyes in the pendent ears of the cap, said arms being curved outwardly from said band so as to conform approximately to the curvature of the bulge or shoulder of the bottle-head and provided with ribs extending a portion of their length so as to strengthen the arms and retain them in their proper shape, whereby various adjustments may be secured and the stopper rigidly held in the bottle-mouth, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED L. BERNARDIN.

Witnesses:

R. H. HUTCHINSON,
EARLE BENNETT.