

(No Model.)

A. L. BERNARDIN.

BOTTLE CAP.

No. 373,796.

Patented Nov. 22, 1887.

Fig. 1.

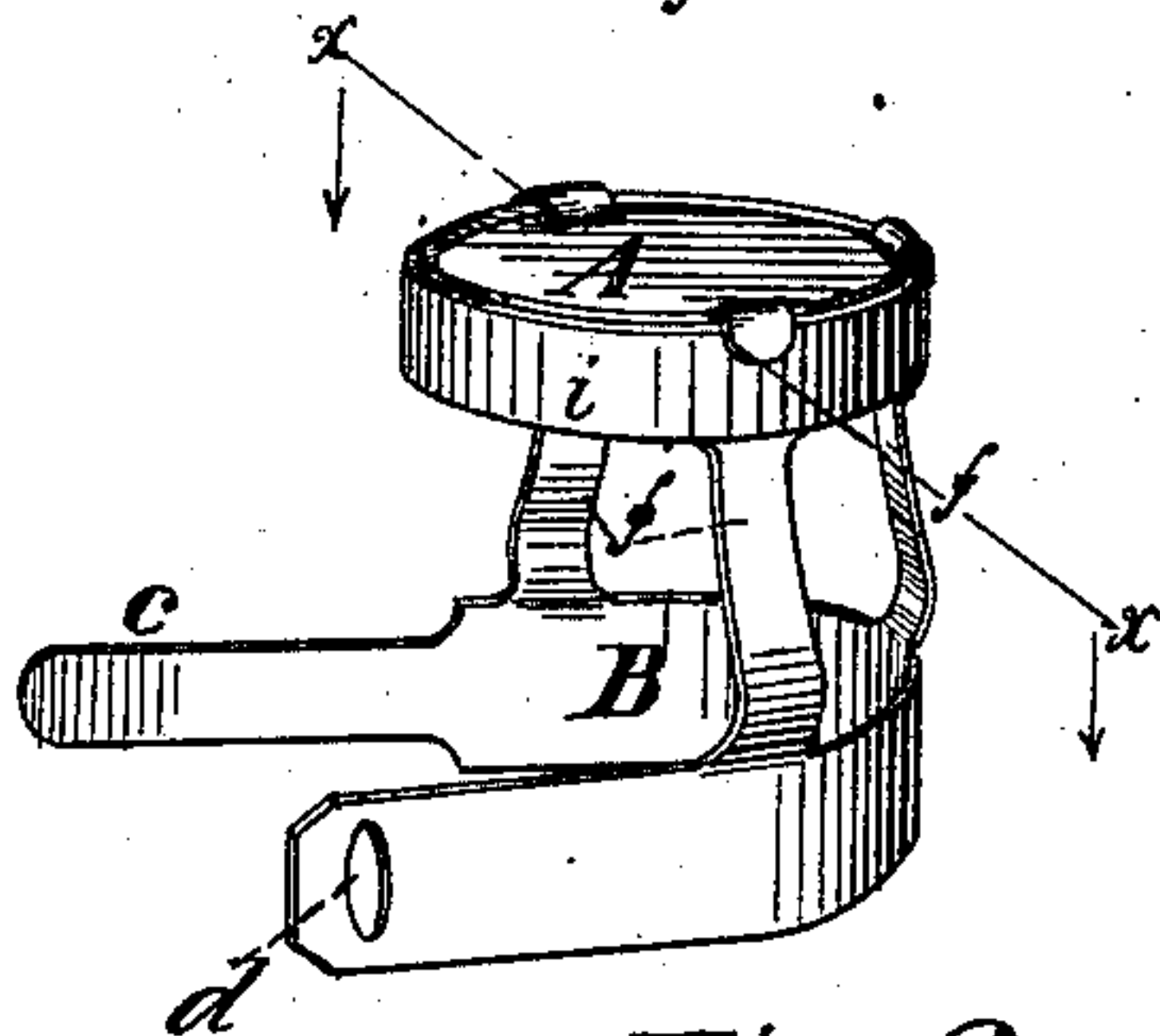


Fig. 2.

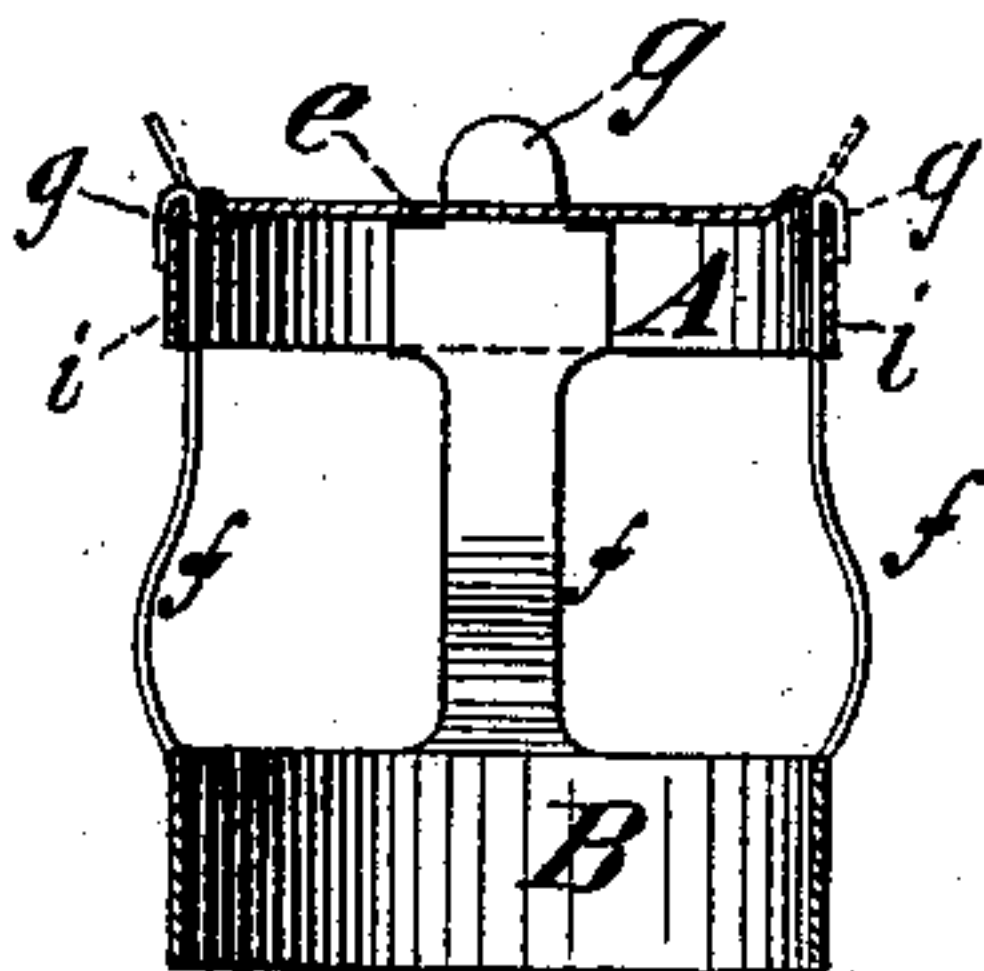


Fig. 3.

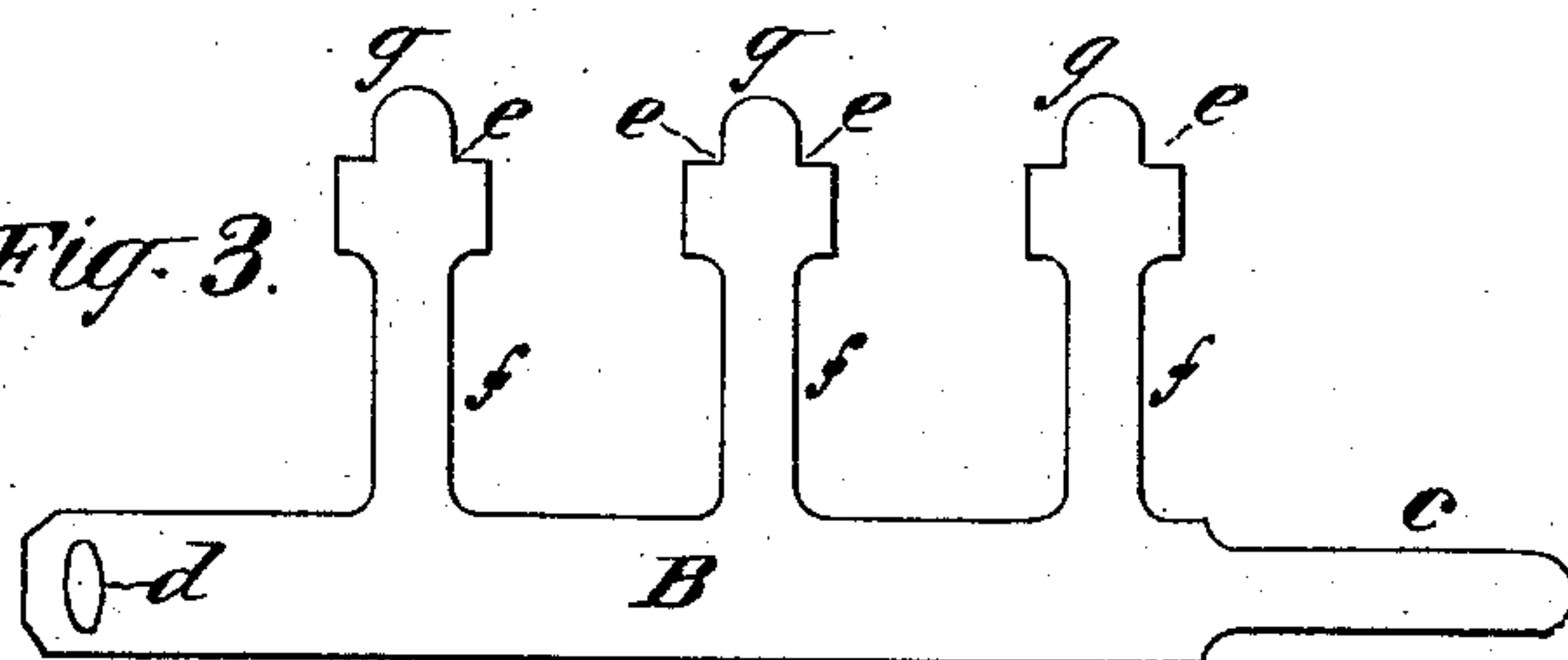


Fig. 4.

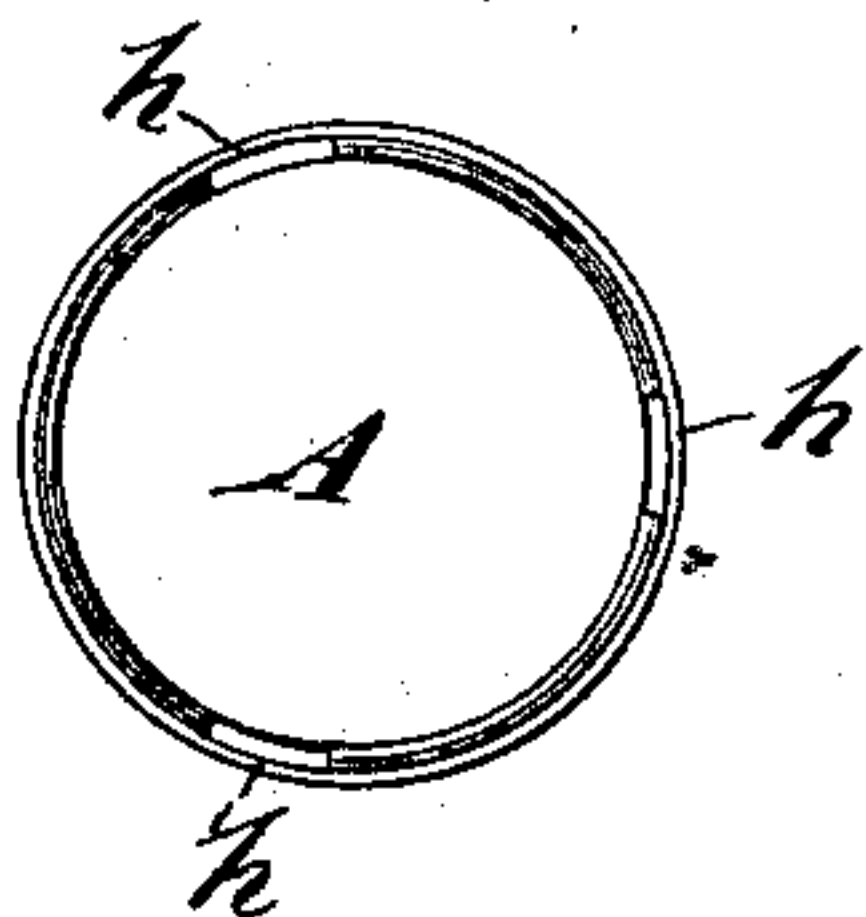


Fig. 7.

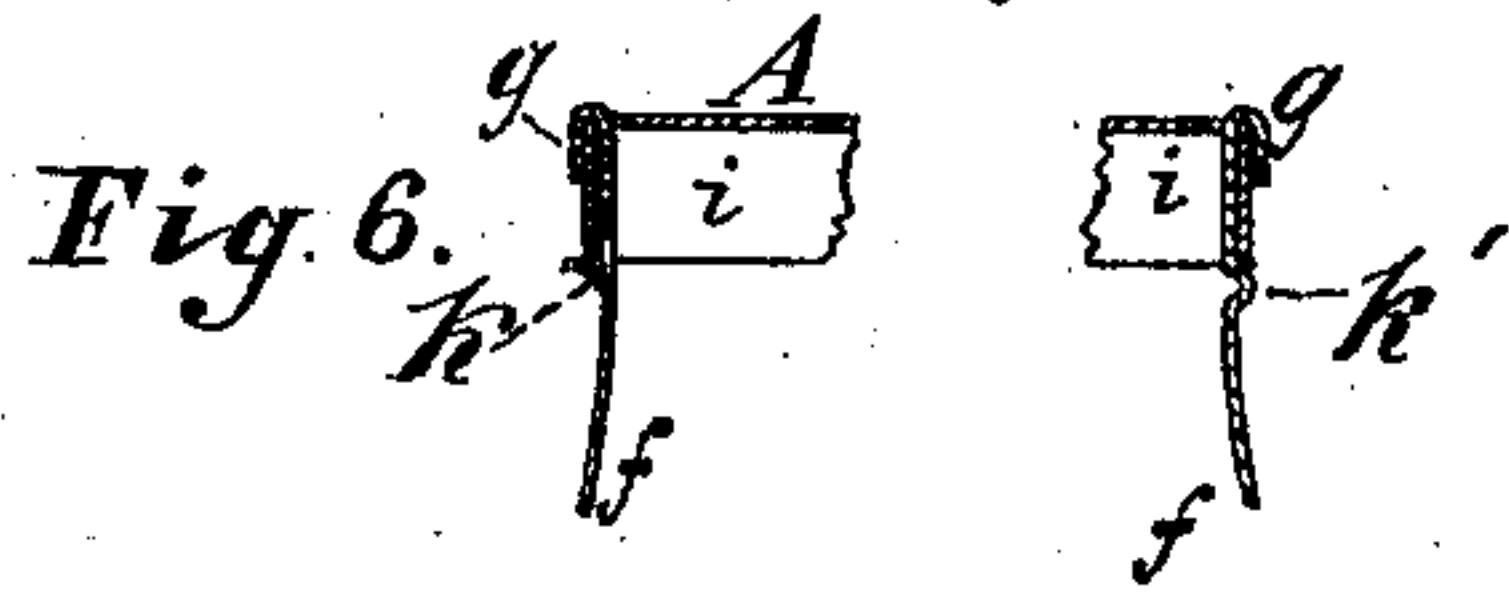
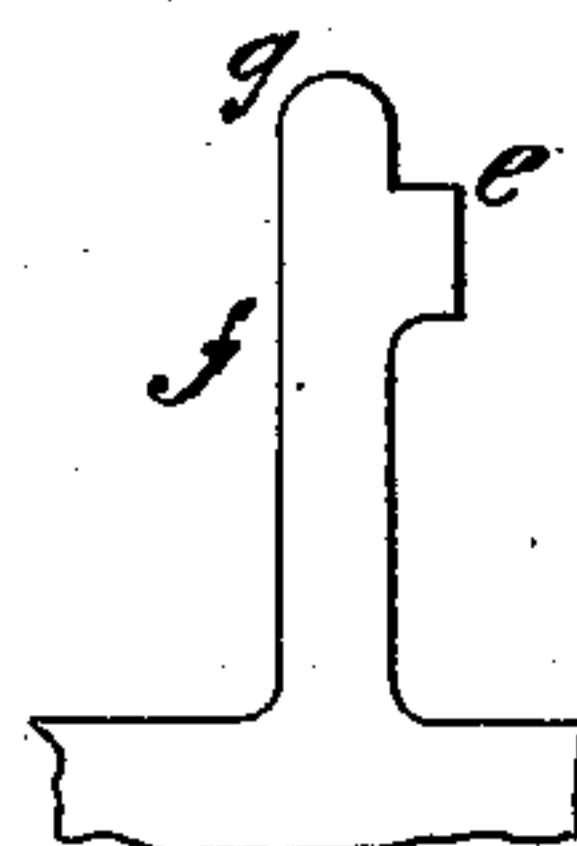


Fig. 6.

Fig. 5.



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# UNITED STATES PATENT OFFICE.

ALFRED L. BERNARDIN, OF EVANSVILLE, INDIANA.

## BOTTLE-CAP.

SPECIFICATION forming part of Letters Patent No. 373,796, dated November 22, 1887.

Application filed March 4, 1887. Serial No. 229,676. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED L. BERNARDIN, of Evansville, Vanderburg county, Indiana, have invented certain new and useful Improvements in Bottle Caps or Stoppers, of which the following is a specification.

My invention relates to that class of bottle caps or stoppers designed to hold a common cork in the neck of the bottle, and which consists of a metallic cap fitting over the top of the cork, with a neck-band buckled around the neck of the bottle and connected to the cap by a series of arms. Caps of this kind are shown in former patents issued to me March 24, 1885; and my present invention is a special improvement on the device shown in one of said patents—No. 314,358. In the said patent the flange of the cap had lateral slots, and the tips of the arms on the neck-band were passed laterally through said slots from the inside of the flange, and were then bent down upon the outside of the flange, thus securing the neck-band and cap together.

In my present improvement I form the cap with slots vertically in the flat top thereof near the flanged edge, while the arms of the neck-band have shouldered tips with tenon-prongs extending from the shoulder; hence, in putting the cap and neck-band together, the prongs pass vertically through the slots in the cap, while the cap rests upon the shoulders, and the prongs are finally bent down over the edge of the flange, thus securing the cap and band together in a very simple and firm manner. This construction has the great advantage that it is simple and more economical to produce by machinery, and is more secure than the former constructions; and my invention therefore consists, mainly, in the features above outlined, as hereinafter fully set forth.

In the drawings annexed, Figure 1 gives a perspective view of my improved bottle cap or fastener, and Fig. 2 is a vertical section thereof on line *x x*. Fig. 3 is a plan view of the neck-band portion flattened out or as it appears when first cut from sheet metal. Fig. 4 is a plan view of the flanged cap portion. Figs. 5, 6, and 7 are modifications.

Referring to the drawings, A B indicate the two parts of the stopper or fastener, A being the cap part, which fits over the cork, and B

the neck-band, which buckles around the neck of the bottle. The neck-band is formed at one end with a buckling tongue, *c*, which is adapted to buckle into a slot, *d*, at the opposite end of the band when the device is fastened on the bottle in the usual manner, as will be understood. From the upper edge of the band three arms, *f*, extend to connect with the cap. These arms have shoulders *e* at the tips, and a short tenon-prong, *g*, extending at right angles from the shoulders. Now, the cap A is stamped up with a pendent flange or rim, *i*, and with three slots, *h*, made vertically through the flat top of the cap close to the flanged rim thereof, as well shown in Figs. 1 and 4.

The neck-bands, as shown in Fig. 3, are of course first stamped up flat from one piece of sheet metal; and it will be noted that the form shown can be stamped with little waste of metal, as the arms of two successively-cut bands may intermesh in position on the metal sheet, and thus economize material. The bands, after thus being cut flat, as seen in Fig. 3, are bent or curved into a semicircular or U shape, which will bring the prongs *g* on the three arms in correspondence with the three slots *h* in the cap. To now put the neck-band and cap together, it is only necessary to slip the flanged cap over the tips of the three arms, so that the prongs or tenons *g* project through the slots *h*, while the shoulders *e* abut against the under side of the cap, and thus support the cap firmly on the arms, preventing any possible downward movement or displacement of the cap. The prongs *g*, which first project up from the slotted top of the cap with a slight outward divergence, as shown by full and dotted lines in Fig. 2, are finally bent or clinched down over the flanged edge, as seen in Figs. 1 and 2, thus securing the cap firmly to the neck-band B, and thereby completing the device, as seen in Fig. 1, in which condition it is ready for use.

It may now be appreciated that this construction is a material improvement on my former caps, in that it is simpler in the construction and in the manner of engagement of the two parts, for it is obviously easier to have the prongs on the arms pass up through vertical slots in the top of the cap than out through lateral slots in the flange. Furthermore, the



cap is held more securely and accurately on the arms of the neck-band, as it is embraced positively between the positive shoulders *e* and the bent or clinched end of the prongs *g*,  
 5 which is a very certain and secure engagement. This manner of engagement is also better adapted to be performed by automatic machinery, as it is a simple operation to place the slotted caps over the pronged arms, after  
 10 which the prongs may be clinched automatically by the descent of a tubular plunger, which will bend the prongs down over the edge of the cap, as shown in my application for patent, No. 227,107, filed February 10, 1887.

15 Instead of having the seating-shoulder *e* extend on each side of the tenon-prongs *g*, giving the tip of the arms a cross shape, the shoulder may be only on one side, giving the tip an L shape, as seen in Fig. 5; but the leading form  
 20 is preferable, as will be obvious.

Any other stop on the arms to prevent the cap from moving in a downward direction might be used instead of the shoulder *e* without departing from the main features of my  
 25 invention. For example, a tongue or protuberance, *k* or *k'*, stamped out of the arms *f*, might engage the lower edge of the flange of the cap, as seen in Figs. 6 and 7; but the shoulders *e* are preferred.

30 What I claim is—

1. An improved bottle cap or fastener consisting of a cap with vertical slots in the top thereof near the edge, with a neck-band having projecting arms, the tips of which are passed  
 35 up through said slots and bent downwardly

over the top of the cap, substantially as set forth.

2. In a bottle cap or stopper, the combination of the following elements: a flanged cap with vertical slots near the edge, a neck-band 40 with arms extending to the cap, a stop on the arms to engage the cap against downward movement, and prongs or tenons on the cap passing up through the slots and bent downwardly over the edge of the cap to prevent the  
 45 upward movement of the cap from the arms, substantially as herein set forth.

3. A bottle cap or cork fastener consisting of a neck-band with extending arms having shoulders and prongs at the tip, with a cap 50 having slots through the top, through which the prongs are passed, with the shoulders abutting upon the under side of the cap and the prongs clinched down over the edge of the cap on the upper side, substantially as set forth. 55

4. A bottle cap or cork fastener consisting of the flanged cap A, with slots *h*, combined with the neck-band B, having arms *f*, with the prongs *g* and shoulders *e*, arranged and connected substantially as shown and described. 60

5. The combination, with the slotted cap A *h*, of the neck-band B, having the slot *d*, tongue *c*, and the arms *f*, with terminal prongs *g* and shoulders *e*, substantially as shown and described.

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