

No. 658,660.

Patented Sept. 25, 1900.

P. LINDEMEYR.  
BOTTLE STOPPER.

(Application filed Dec. 15, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

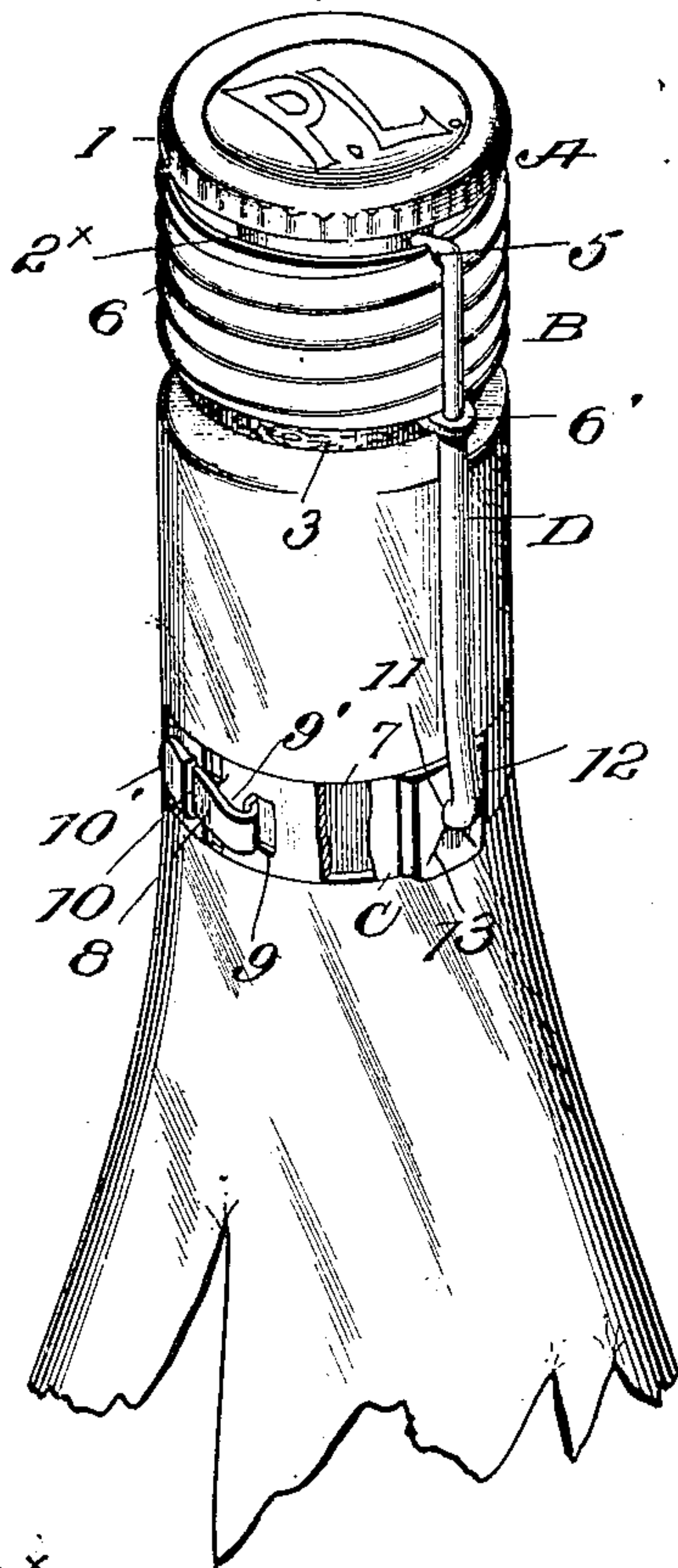
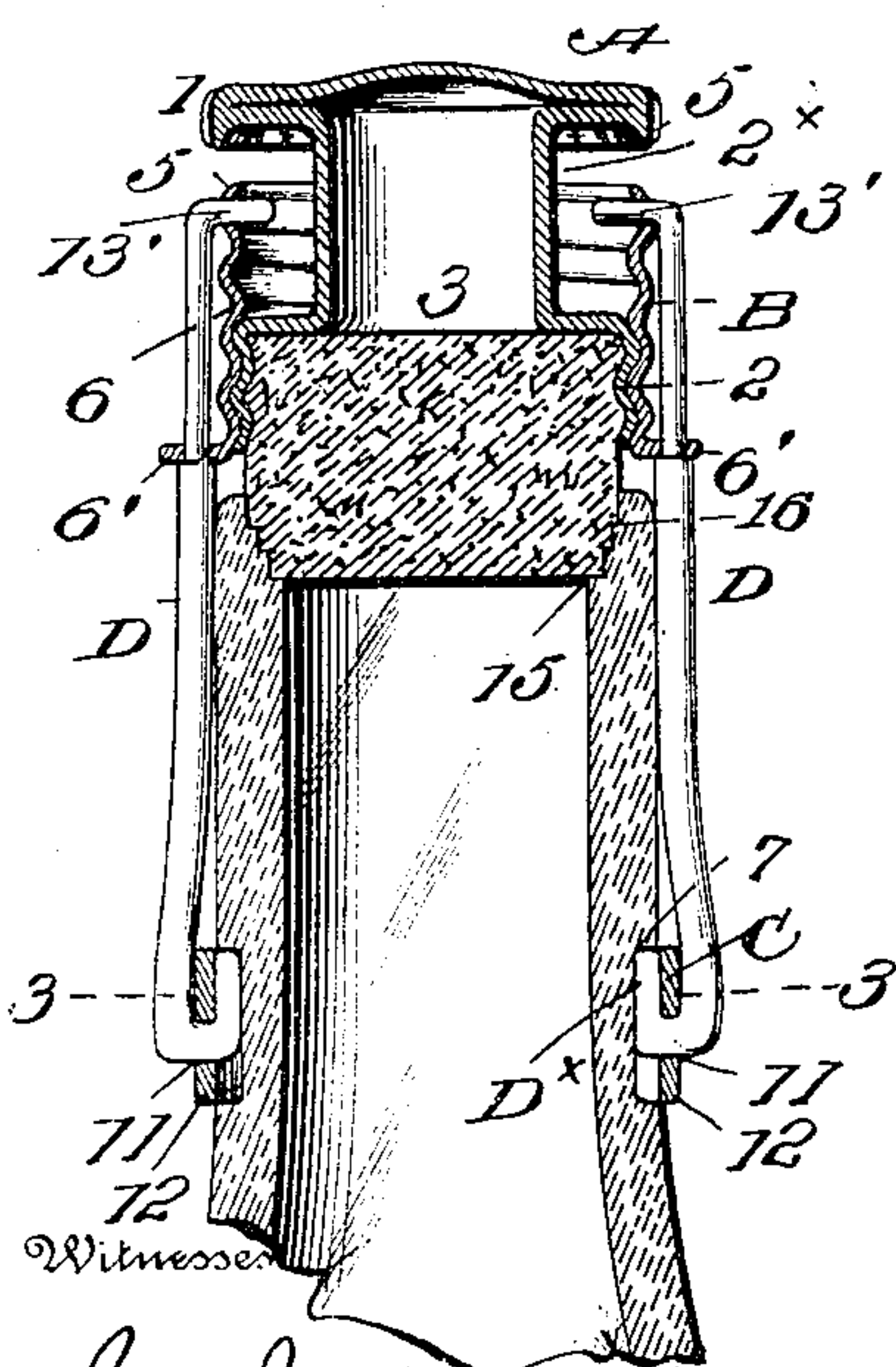


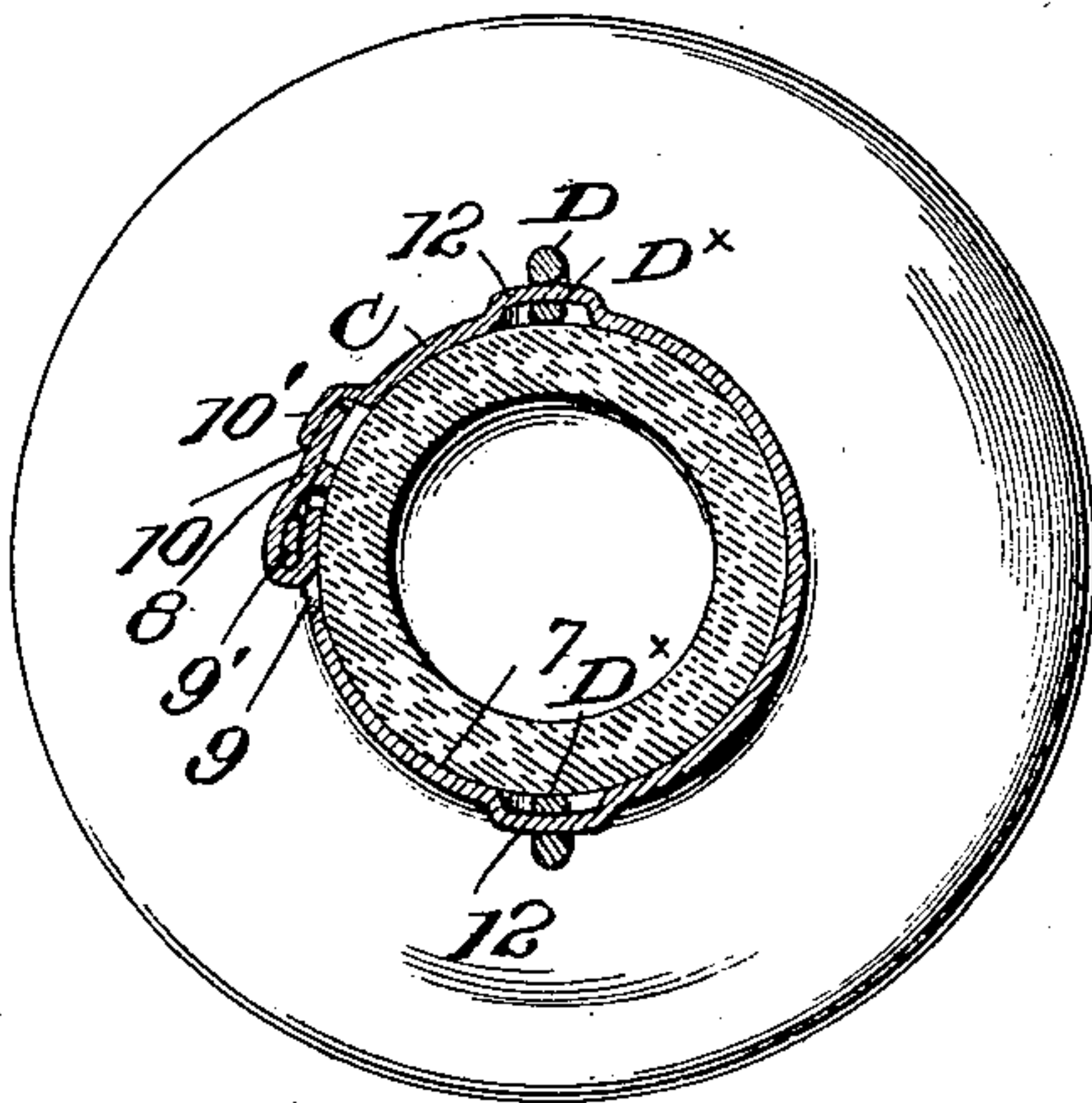
Fig. 2.



Witnesses

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Fig. 3.



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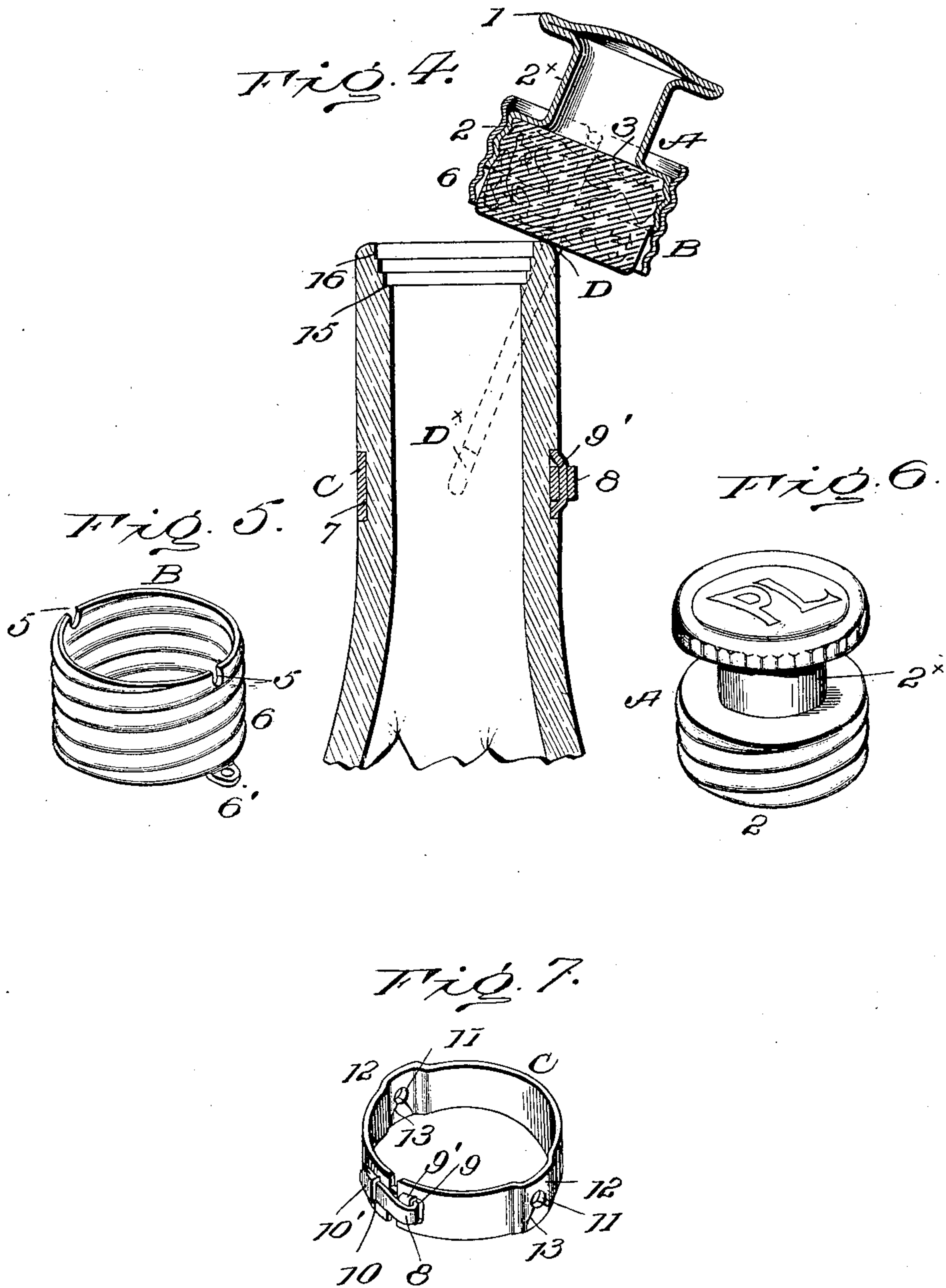
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# UNITED STATES PATENT OFFICE.

PHILIP LINDEMEYR, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE  
MARYLAND STOPPER COMPANY, OF SAME PLACE.

## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 658,660, dated September 25, 1900.

Application filed December 15, 1899. Serial No. 740,466. (No model.)

*To all whom it may concern:*

Be it known that I, PHILIP LINDEMEYR, a resident of No. 1823 West Baltimore street, city of Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Bottle-Stoppers; 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 pertains to make and use the same.

The invention relates to bottles and bottle-closures, and more particularly to the class of bottle-closures popularly known as "lightning" stoppers, which have a pivoted support for a cork-holder fixed on the bottle and which remain connected to the bottle after it is unstoppered or uncorked.

The objects of the invention, which are manifold, comprise simplicity and economy of construction, facility of application to and removal from bottles, and ease and certainty in operation.

The invention consists in the construction hereinafter described and pointed out.

In the accompanying drawings, Figure 1 is a perspective of a bottle-neck with the improved device applied thereto. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a horizontal section on line 3 3 of Fig. 2. Fig. 4 is a longitudinal section, the bottle being indicated as unstoppered. Fig. 5 is a perspective of a case for a cork-holder. Fig. 6 is a perspective of a cork-holder. Fig. 7 is a perspective of a band for securing the device to a bottle-neck.

The improved stopper comprises a cork, a holder A for the cork, a case B for the holder, a band C to fasten the device to the bottle, and wires D to pivotally connect the band and case. The holder A, made of tin or other sheet metal, is of cup-form and provided with a milled or corrugated head 1 and with a screw-threaded flange or body 2. Between this threaded flange and head is an upper portion 2<sup>x</sup>, having a smaller diameter, producing a recess, as shown. This construction provides a shoulder whereby the holder may be securely engaged by an inward projection connected with the case and whereby the cork may be held against pressure tending to force it into the upper part of the holder. The cork

3 can be conveniently secured in this holder by screwing it when in moist condition into said holder. The head 1 is preferably formed, as shown in Fig. 2, to adapt it to ride upon the upper end of the case B when the holder is screwed down to its lowest situation. Obviously the holder-head could be made to fit within the upper end of the case, as indicated in Fig. 4. The upper end of the cork-holder head, which may be either flat, convex, or concave, can be ornamented or marked in any usual or desired manner.

The holder-case is a cylinder conveniently made of sheet-tin. It is provided on its upper edge with notches 5 and with perforated ears 6' to provide for the connection therewith of pivoted connecting-wires D, as will be described.

The case B is screw-threaded, as indicated at 6, to receive the cork-holder A. In operation this holder is screwed up or down in the case to seat or unseat the cork. The latter extends below the holder and its case and into the bottle-neck, as its objects and use require.

The band C embraces a suitable groove 7 in the bottle-neck. One end is provided with one or more flexible tongues 8, preferably rounded at the free end. 9 and 10 denote openings to receive the tongue, which in use is first passed under the offset 9' and through opening 9 and is then bent back and its free end entered in hole 10 and pushed under the offset 10'. The band, with its ends free, can be expanded to permit its application to the bottle-neck within the groove 7, the tongue 8 being subsequently manipulated to fasten the ends detachably together.

The wires D, formed as shown in Fig. 2, are entered in holes 11, formed in offsets 12 of the fastening-band.

To provide for entering the bent-wire ends D<sup>x</sup> in the holes 11, the lower part of the offsets are slitted, as at 13, to outline lips that can be bent outwardly and leave room behind them for the introduction of said ends. The lips are subsequently bent back to their original situation and lock the wires in place in their bearings 11. The wires extend through the ears 6', and their upper ends are provided with hooks 13', that engage the cork-holder



case in the notches 5. These hooks act as stops to prevent the holder from being screwed out of the case, and they also stop the holder in a downward direction, provided said holder is not stopped by the case itself.

The various parts having been assembled upon a bottle, as above indicated and as represented in Fig. 1 of the drawings, the cork can be pressed into the bottle-neck to effectually seal it by screwing down the cork-holder. By unscrewing the holder the cork will be withdrawn from the throat of the bottle, and the holder and its case can be swung to one side, entirely removing the cork and its holder and holder-case from the bottle-mouth, as usual in this class of stoppers. These parts swing about the lower ends of the wires, which are pivotally held in the holes 11.

It is obvious that the screw connection of the cork-holder and holder-case enables the cork to be pressed into the bottle-neck with great force. By preference a shoulder 15 is formed in the interior of the neck to stop the cork and subject it to endwise compression. This avoids to some extent the friction which would otherwise exist, which friction operates to resist the drawing of the cork. Further, it results in a lengthwise compression of the cork, which assists in its removal. One or more auxiliary shoulders 16 may be used. These provide for the lateral expansion of the cork and cooperate with shoulder 15 to resist an excessive thrust of the cork into the bottle. In some cases the bottle-throat may be flared upwardly and outwardly to the lip to stop the inward thrust on the cork. Any person can apply the device to the bottle or remove it therefrom, no skilled labor being required and no tool other than pliers or the like. Further, but little force is required to screw home the holder carrying the cork into the bottle-neck to effect its thorough seating and an effective sealing of the bottle, and it can be easily unscrewed and, together with the case, swung away from the bottle-mouth.

Obviously the cork-holder and its cork can be moved in or out by manipulating the case, band, and connecting-wires as one, these parts being thereby suitably rotated about the bottle-neck—as, for example, the cork-holder having been screwed down to or near to its final situation in the neck, the wires, case, and band can be grasped by the hand and rotated to force the cork in and further compress it, if desired. This is effected by such operation without rotating the holder and cork, which if rotated under some possible circumstances may injure or displace the cork by excessive friction between it and a rough or exceptionally-formed bottle-throat. In any case the firm hand-grasp permitted by the construction makes the screwing home of the cork or its withdrawal by unscrewing its holder very easy and convenient. The construction entirely obviates the too sudden and explosive opening incident to the use of prior devices.

The various parts are each adapted for manufacture by machinery with but few operations. The screw-threads and the milling or equivalent roughening of the holder-head will be formed in the sheet metal as indicated and by any known or appropriate means.

The advantages of the improved construction as compared with devices which require skilled labor for their application to bottles and the removal of which from broken or other bottles is difficult and impracticable are obvious, as also are other advantages, such as hereinbefore indicated.

I am aware that a rubber plug having a laterally-enlarged base has been compressed upon a bottle-lip by screwing down a plug-holder, and I do not claim such device. My improvement in this particular relates to bottles closed by a cork entered in the bottle-neck and also to necks provided with a cork-seat below the bottle-lip to provide for effectually stopping the cork and to obviate in part lateral compression of a considerable part of the cork by providing space for expansion by means which also affords stops supplemental to that provided at the foot of the cork. Such compression is best effected by the use of the special stop in the bottle-neck and by the rotation of the case and cannot be effected by manipulating the cork-holder for the reason that sufficient power cannot be applied by the fingers, and if otherwise applied and in connection with subsidiary seats or shoulders it would tear the cork by its rotation. The band, wires, and case as constructed and joined by me afford a good handhold and permit the convenient application of great force to move the cork directly down into the bottle-neck without twisting and tearing the same. The band has an important office in this function, since it holds the wires in both directions circumferentially and prevents the twisting or bending of them, as would occur were their lower ends not oppositely stayed, and thereby held in place.

Having thus described my invention, what I claim is—

1. A bottle having in the interior of its neck a shoulder to provide a seat for the end of the cork, and one or more auxiliary shoulders each circumferentially larger than the first-named shoulder to supplement its action and provide space for the lateral expansion of the cork without obstructing its removal.

2. A bottle having in the interior of its neck a shoulder to provide a seat for the end of the cork, and one or more auxiliary shoulders each circumferentially larger than the first-named shoulder to supplement its action and provide space for the lateral expansion of the cork without obstructing its removal, and mechanism to force the cork against the several shoulders.

3. The combination with the holder, a cork screwed therein, a case, a band, and the case and band connecting wires, of a bottle hav-



ing a shoulder to hold the band, and having within its neck a shoulder to provide a seat for the end of the cork whereby the band, wires and case can be rotated to force a cork upon such seat.

4. The combination with the holder, case, band, and the case and band connecting wires, of a bottle having a shoulder to hold the band, and having within its neck a shoulder to provide a seat for the end of the cork whereby the band, wires and case can be rotated to force a cork upon such seat, and one or more shoulders of greater diameter to supplement the shoulder first named and also provide for the lateral expansion of the cork.

5. The combination of the cork-holder, a cork screwed therein, the holder-case, the closed band entirely surrounding the bottle-neck, and the case and band connecting wires with a bottle having a shoulder to hold the band, substantially as described.

6. In a bottle-stopper, a holder, a holder-case having a screw-thread connection with the holder, and means for fastening the case to a bottle, said holder having a head of larger diameter than the upper end of the case to overhang the same and engage its upper edge on the outside thereof.

7. The combination of the case provided with screw-threads formed in the metal to receive a screw-threaded holder, a cork screwed into said holder, a band, and a connection between the band and case, said band and connection being rotatable about the neck of a bottle and the case rotatable about the cork-holder, said cork-holder being movable against the bottle-lip to seat the cork, all substantially as set forth.

8. In a bottle-stopper, a cork-holder, and a holder-case, both having similar external and internal screw-threads impressed in sheet metal, and a cork screwed into the holder.

9. In a bottle-stopper, the combination of a cork-holder case, a hollow cork-holder movable endwise in the case, a cork screwed into said holder, and a rigid stop to prevent the upward withdrawal of said holder from the case.

10. In a bottle-stopper, the combination of a cork-holder case, a cork-holder movable end-

wise in the case and a stop to prevent the upward withdrawal of said holder from the case, said stop comprising an inward projection connected to the case, and a recess in the holder.

11. For use in a bottle-stopper, a cork-holder case, a cork-holder having an end portion into which a cork is screwed, and an adjacent portion of less diameter than said end portion to provide an inwardly-projecting shoulder to stop the cork and to engage an inward projection connected with the case to prevent withdrawal of the holder from the case.

12. In a device for stopping bottles, the spool-shaped cork-holder formed from a single piece of sheet metal and having a head and a cork-holding end, and an intermediate connecting part of less diameter than the said cork-holding end.

13. A band for supporting by means of wires bottle-stopper devices, said band having offset portions provided with perforations and with flexible lips adjacent said perforations, whereby they may be temporarily enlarged to receive the wire ends.

14. A band for attaching stoppers to bottles having a flexible tongue and openings adjacent its ends and having the metal offset adjacent said openings whereby the tongue can be passed under an offset and through one opening and bent back and its end entered in the other opening and extended behind the proximate offset.

15. In combination the cork-holder, the case, the band, and the connecting-wires having their upper ends bent, said case being provided with ears to receive the wires, and with notches to receive the said wire bends.

16. In combination, the cork-holder and case having movable connection with each other, the band, and the connecting-wires, said wires constituting stops to limit the movements of the holder in the case.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

PHILIP LINDEMEYR.

Witnesses:

DAVID W. GOULD,  
G. W. BALLOCH.