

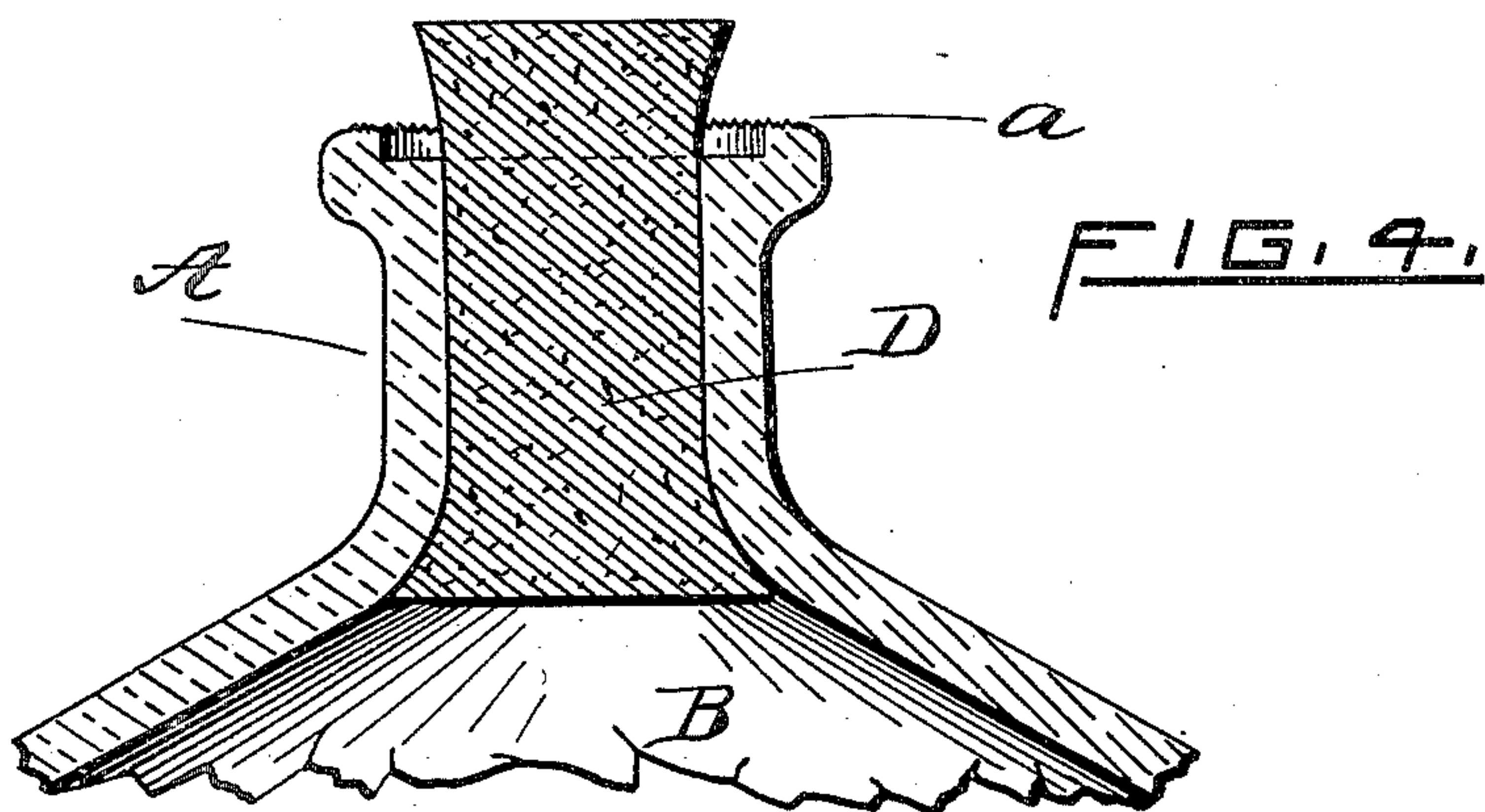
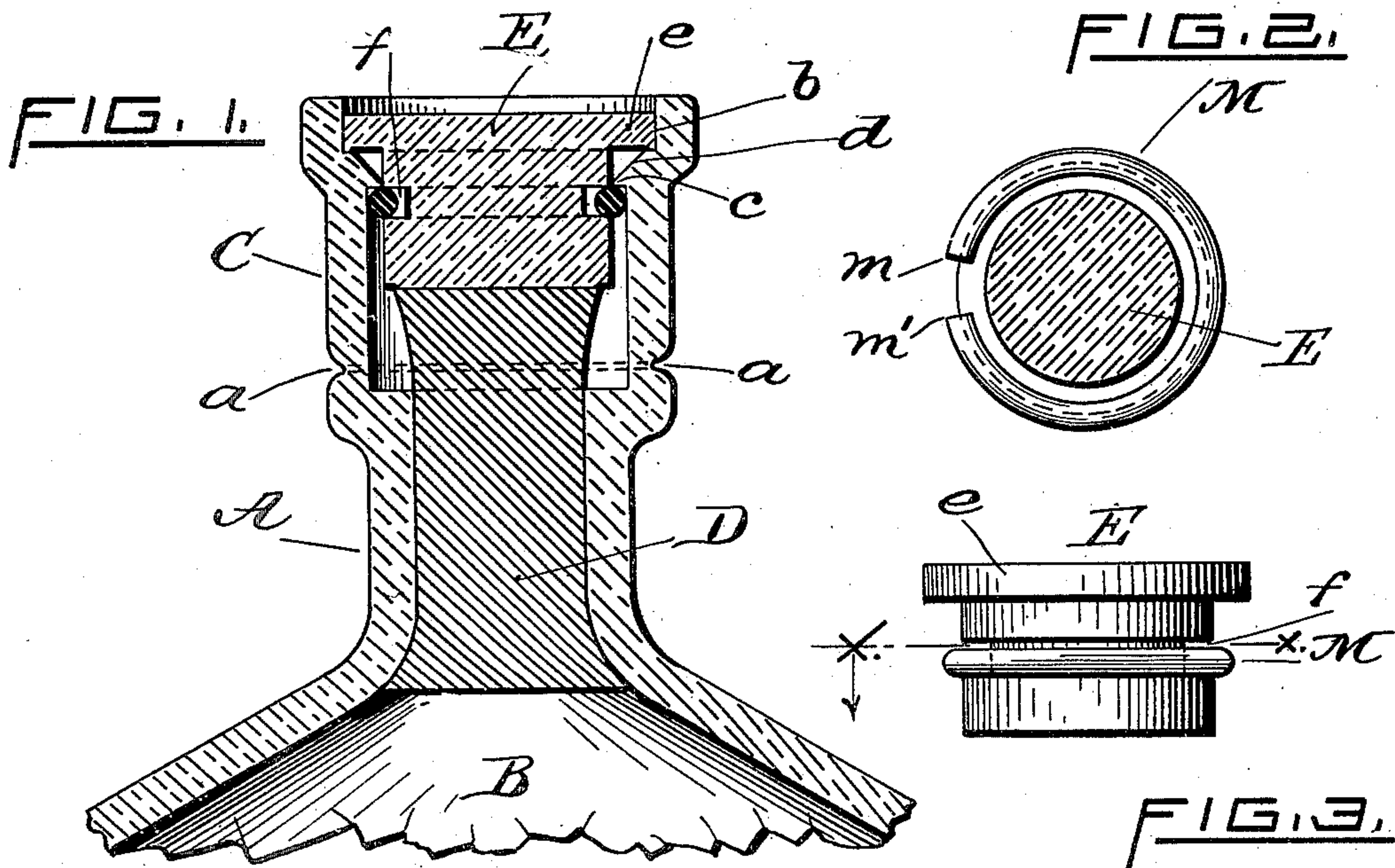
No. 693,601.

Patented Feb. 18, 1902.

C. F. HEATH.  
NON-REFILLABLE BOTTLE.

(Application filed Oct. 28, 1901.)

(No Model.)



WITNESSES.

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# UNITED STATES PATENT OFFICE.

CLARENCE F. HEATH, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO EDWARD E. DODGE, OF SAYLESVILLE, RHODE ISLAND.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 693,601, dated February 18, 1902.

Application filed October 28, 1901. Serial No. 80,335. (No model.)

*To all whom it may concern:*

Be it known that I, CLARENCE F. HEATH, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to bottles adapted to prevent a repeated use after its original closure, and has for its purposes the ends customarily sought by means of devices of this character.

To these ends my invention consists in the novel construction and combination of parts hereinafter described, and illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical central section of my device; Fig. 2, a transverse section of the button or plug on line  $x x$  of Fig. 3, showing spring in elevation; Fig. 3, a side view of the same, and Fig. 4 is a vertical central section of the upper portion of the bottle after the fracture of the head.

Like letters of reference indicate like parts throughout the views.

The construction of my device is as follows:

The neck A of the bottle B is provided with an exterior annular swell, above which is an annular groove  $a$ . Integral with the neck A is a head C, provided at its top with an annular rectangular internal ledge  $b$  above an annular shoulder  $c$ , with a beveled upper face  $d$ . Pressing upon the upper face of the stopper D is a plug or button E, provided with an annular shoulder  $e$  of a sufficient diameter to fit into the ledge  $b$ , but sufficiently thin to allow the surface of the plug E to lie in a slightly lower plane than that of the mouth. A rectangular annular groove  $f$  is formed in the plug-shank at such a point that after insertion the upper groove-surface coincides with the shoulder  $c$  of the bottle-head. In the groove  $f$  of the plug is placed a metallic ring M, of brass or other spring metal, with a section thereof removed, leaving the free terminals  $m$  and  $m'$ . The diameter of the spring-ring M is sufficiently great to allow

compression of the terminals within the groove  $f$  to force the terminals out of the same.

In closing the bottle the stopper D is first inserted. The plug E, with its spring M engaged, is then pushed into the bottle-mouth, and during its downward course the vertical pressure, combined with the guiding form of the internal bevel  $d$ , compresses the spring-terminals  $m m'$  into the channel  $f$ , thus allowing their passage beyond the annular shoulder  $c$ . When this position is reached, the terminals are released from the pressure already described and engage the under face of the shoulder  $c$ , which position of parts prevents any release of the plug. As above suggested, after insertion the face of the plug is sufficiently depressed to prevent successful prying of the same from its bed.

With the exception of the spring M and the stopper D the material of the parts is preferably glass.

To secure the contents of the bottle, the head C is brought into contact with some hard object with sufficient force to fracture the same at its weak point, which is of course along the line of the external groove  $a$ . The removal of the head exposes the stopper D, which can now be readily withdrawn.

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

In a non-refillable bottle, the combination with a head provided with an internal circumferential ledge near its top, of an annular shoulder below said ledge having a beveled upper face, a plug having a circumferential shoulder seated on the aforesaid ledge and a lower external circumferential groove, and a circular metallic ring seated in the latter groove engaging the lower face of the annular shoulder.

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

CLARENCE F. HEATH.

Witnesses:

GEORGE D. ANTHONY,  
HORATIO E. BELLWS.