

(No Model.)

E. TOWERS.
BOTTLE.

No. 603,350.

Patented May 3, 1898.

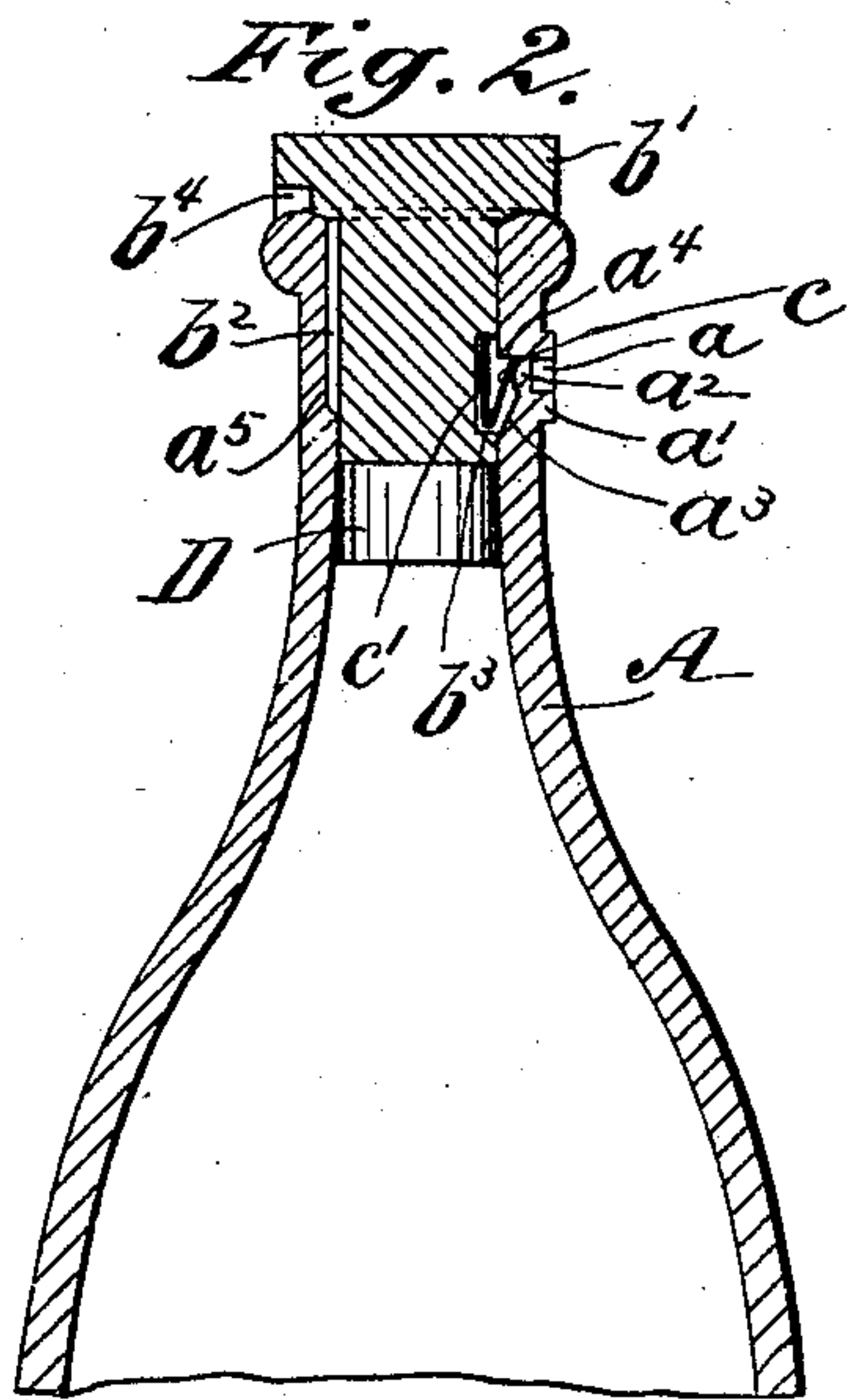
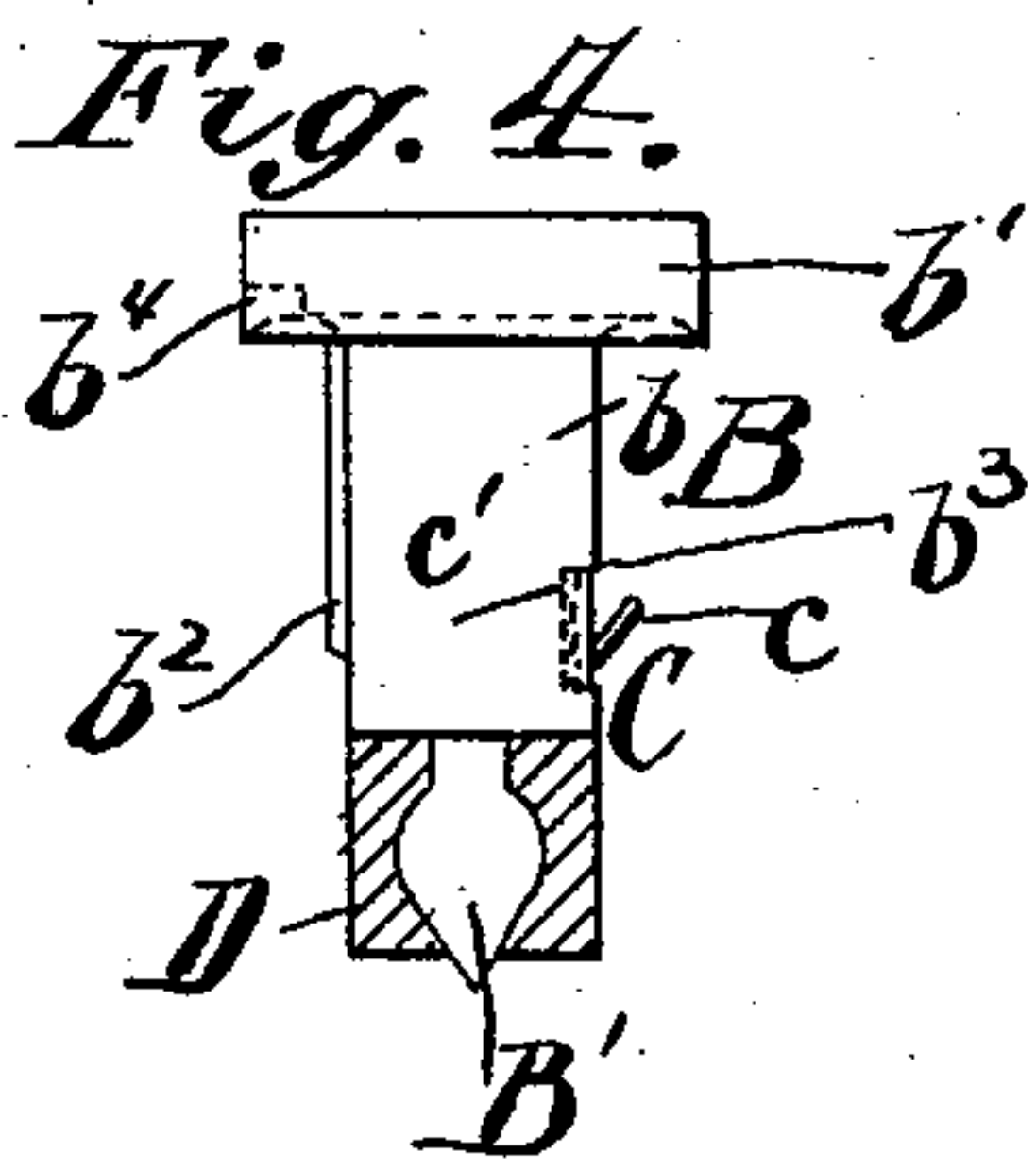
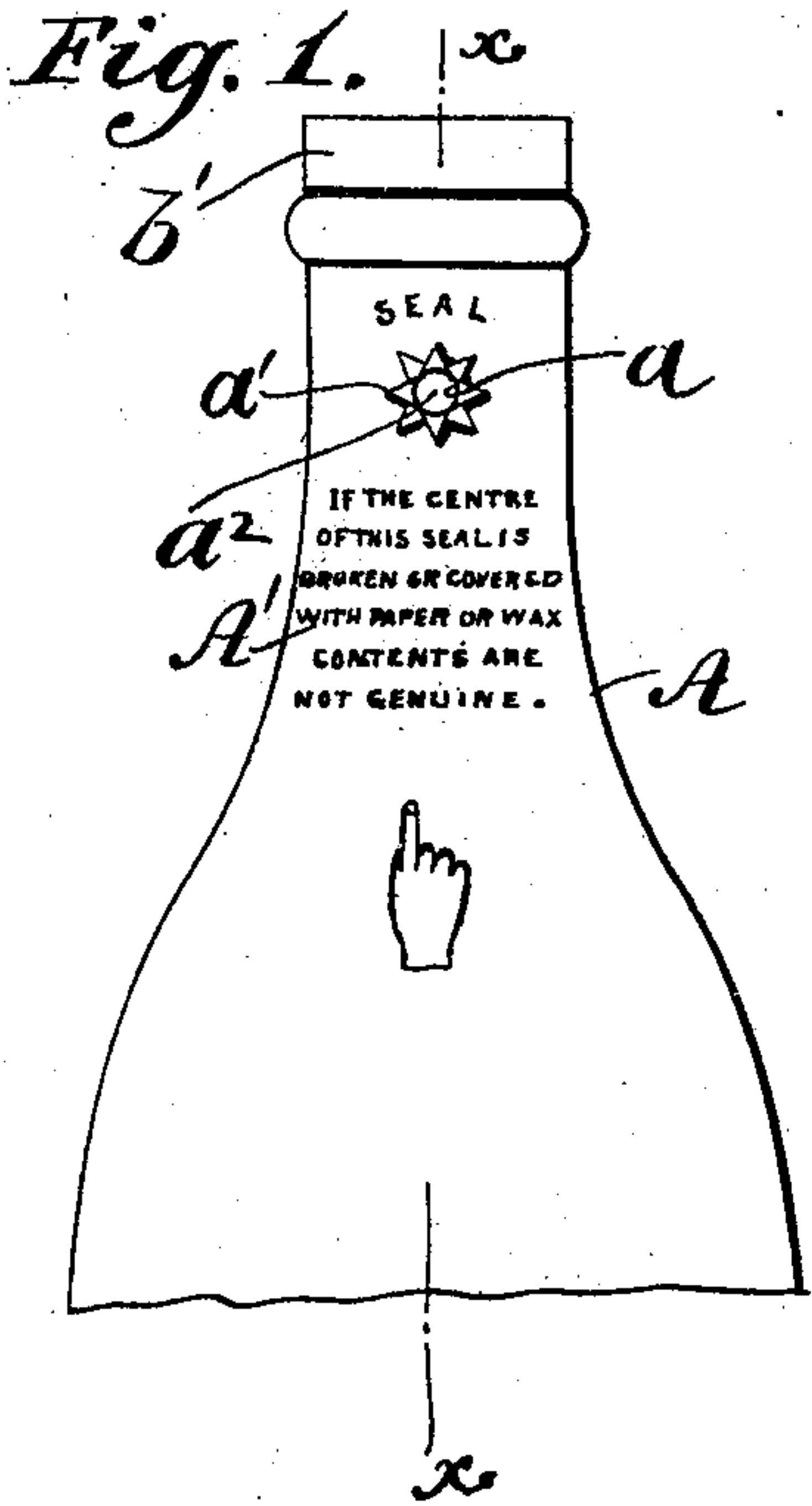
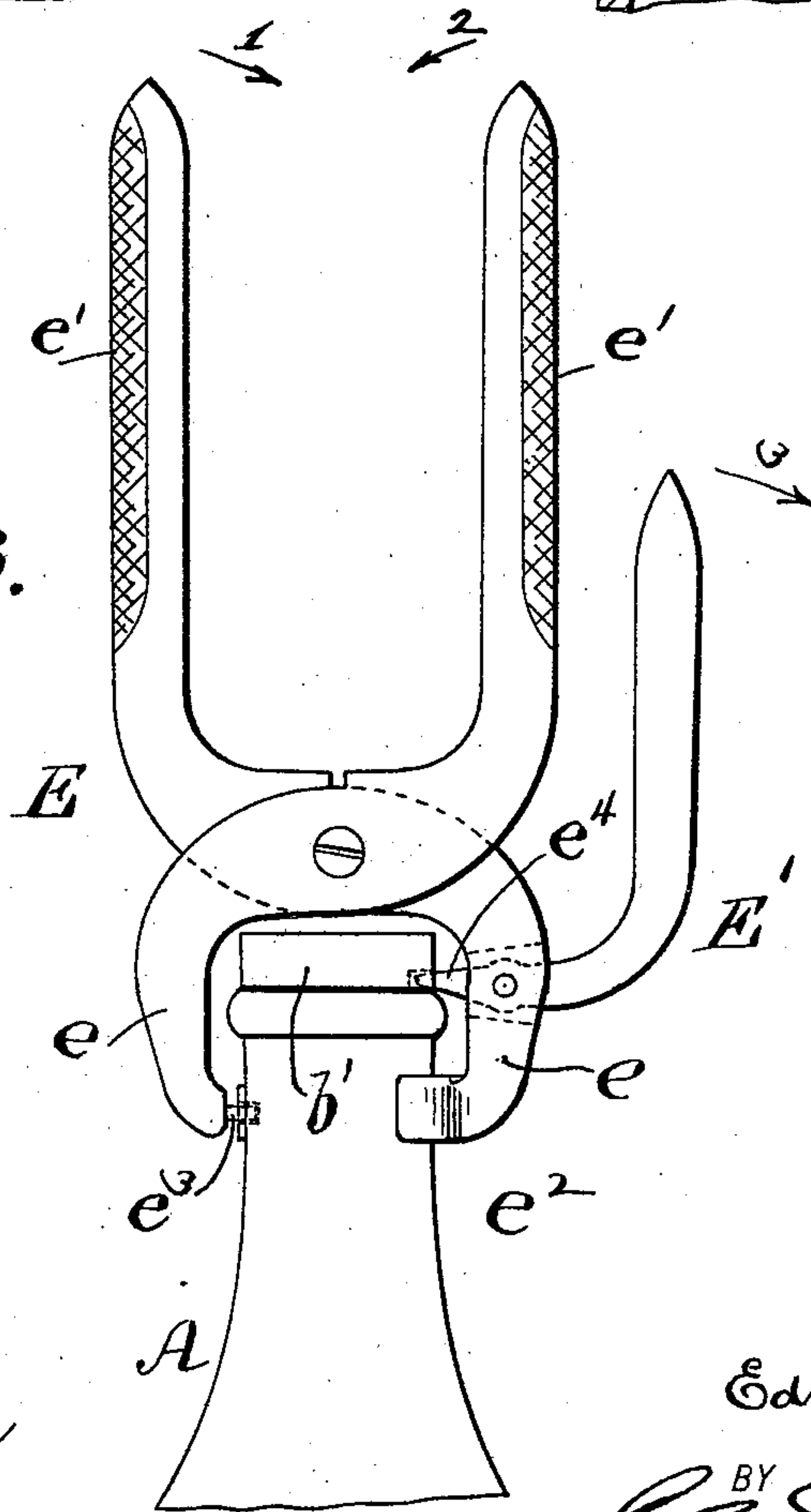


Fig. 3.



WITNESSES:
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UNITED STATES PATENT OFFICE.

EDMUND TOWERS, OF YONKERS, NEW YORK, ASSIGNOR OF THREE-FOURTHS
TO JOHN GIBNEY AND JOHN C. S. WEILLS, OF SING SING, NEW YORK.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 603,350, dated May 3, 1898.

Application filed January 12, 1897. Serial No. 618,974. (No model.)

To all whom it may concern:

Be it known that I, EDMUND TOWERS, a citizen of the United States, and a resident of Yonkers, county of Westchester, and State of New York, have invented certain new and useful Improvements in Bottles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to improvements in bottles and means for closing them, the object thereof being to prevent reuse thereof after they have been emptied of their original contents. The bottle is so constructed that after it is filled and corked it is necessary to break away a portion thereof before removing the contents, whereby the bottle loses its distinctive appearance, and reuse thereof in its original shape is prevented.

By the use of this invention certain frauds now practiced upon the public and manufacturers of proprietary compounds can be prevented.

The invention will be hereinafter fully described, and specifically set forth in the annexed claim.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical elevation of my improved bottle having the lower portion thereof broken away. Fig. 2 is a vertical sectional elevation taken on a line xx of Fig. 1. Fig. 3 is a vertical elevation of the upper portion of the bottle, showing the same in combination with a tool adapted for opening; and Fig. 4 is a detail view of the stopper or cork adapted for closing the bottle.

In the practice of my invention I provide the neck A of an ordinary bottle with a recess a , which said recess is preferably surrounded by a star-shaped flange a' and is closed at its inner end by means of a disk a^2 , which said disk forms an integral part of the bottle-neck and has a convex inner face. The bottle-neck is further provided with a recess a^3 , located in the inner surface of the neck thereof, directly opposite to the recess a . This said recess a^3 is extended upwardly at an angle from the inner surface of the neck of a bottle, whereby a shoulder a^4 is provided. The bottle-neck is also provided upon its inner sur-

face, at a point diametrically opposite to the recess a , with a groove a^5 .

As a means for closing the bottle after it is filled I provide a stopper B, which comprises a cylindrical portion b and a head b' . Projected radially from one side of the stopper is a tongue b^2 , and located opposite thereto, within the cylindrical portion of the stopper, is a recess b^3 . Within this recess is placed a bow-spring C, which comprises a short arm c and a long arm c' . The head of the stopper has a recess b^4 therein for engagement with a tool for opening the bottle, as will be hereinafter described. In combination with the said stopper, which is composed of some non-flexible material, preferably glass, I use a flexible cork D, which said cork may be secured to a downwardly-projected stud B' of the stopper B, or it may be made separately, as illustrated by Fig. 2 of the drawings.

In the operation of the invention the bottle is filled to any desired height, and the cork and stopper are then inserted therein, the tongue b^2 of the stopper and the short arm c of the bow-spring engaging, respectively, with the groove a^5 and the recess a^3 of the neck of the bottle. This said short arm, being in contact with the shoulder a^4 , will prevent the removal of the stopper by any other means than breaking away the disk a^2 and forcing the short arm c inwardly.

As a means for opening the bottle I provide a tool E, which comprises jaws e , adapted to be forced toward each other by means of handles e' . One of the jaws e has a segmental projection e^2 thereon, and the opposite jaw has a projecting stud e^3 thereon for engagement with the aperture a of the bottle. The tool is further provided with a pivotally-attached lever E' , which has a pointed projection e^4 thereon for engagement with the recess b^4 of the stopper-head. In the operation of this tool it is placed upon the neck of the bottle in the position illustrated by Fig. 3 of the drawings. The jaws e are then carried toward each other by pressing the handles e' in the direction of the arrows 1 and 2. This action will break away the disk a^2 and at the same time force the short arm of the spring C inwardly to a sufficient distance to allow the stopper to be removed. Then to start the

stopper the lever B' is forced upwardly in the direction of the arrow 3, whereby the stopper is moved upwardly for a sufficient distance to allow the short arm of the spring C to engage
5 with the inner wall of the neck of the bottle above the line of the shoulder a^4 . The stopper and cork can then be readily removed and the bottle emptied.

As a warning to the public the bottle should
10 be supplied upon the neck thereof with an announcement A', comprising, preferably, the following matter: "If the center of this seal is broken or covered with paper or wax, the contents are not genuine;" but I do not con-
15 fine myself to this specific form of warning.

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

The combination of a bottle having a recess
20 formed within the outer surface of the neck thereof and a recess formed within the inner surface of said neck, these said recesses being

separated by means of a thin disk forming an integral part of the neck of the bottle, said neck also having a groove therein, located 25 opposite to the said recess; with a bottle-stop- per having a tongue thereon for engagement with the groove of a bottle-neck, and a recess therein located opposite to said tongue for holding the bow-spring, the outwardly-ex- 30 tending arm of said bow-spring engaging with the inner recess of the neck of the bottle, said stopper also having a recess within the head thereof for receiving a tool for opening the bottle, substantially as shown and described. 35

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 11th day of January, 1897.

EDMUND TOWERS.

Witnesses:

EDGAR L. RYDER,
OMAR N. SAGE.