

No. 883,672.

PATENTED MAR. 31, 1908.

W. C. SCHMIDT.
INDICATING BOTTLE.

APPLICATION FILED DEC. 20, 1906. RENEWED AUG. 28, 1907.

Fig. 1.

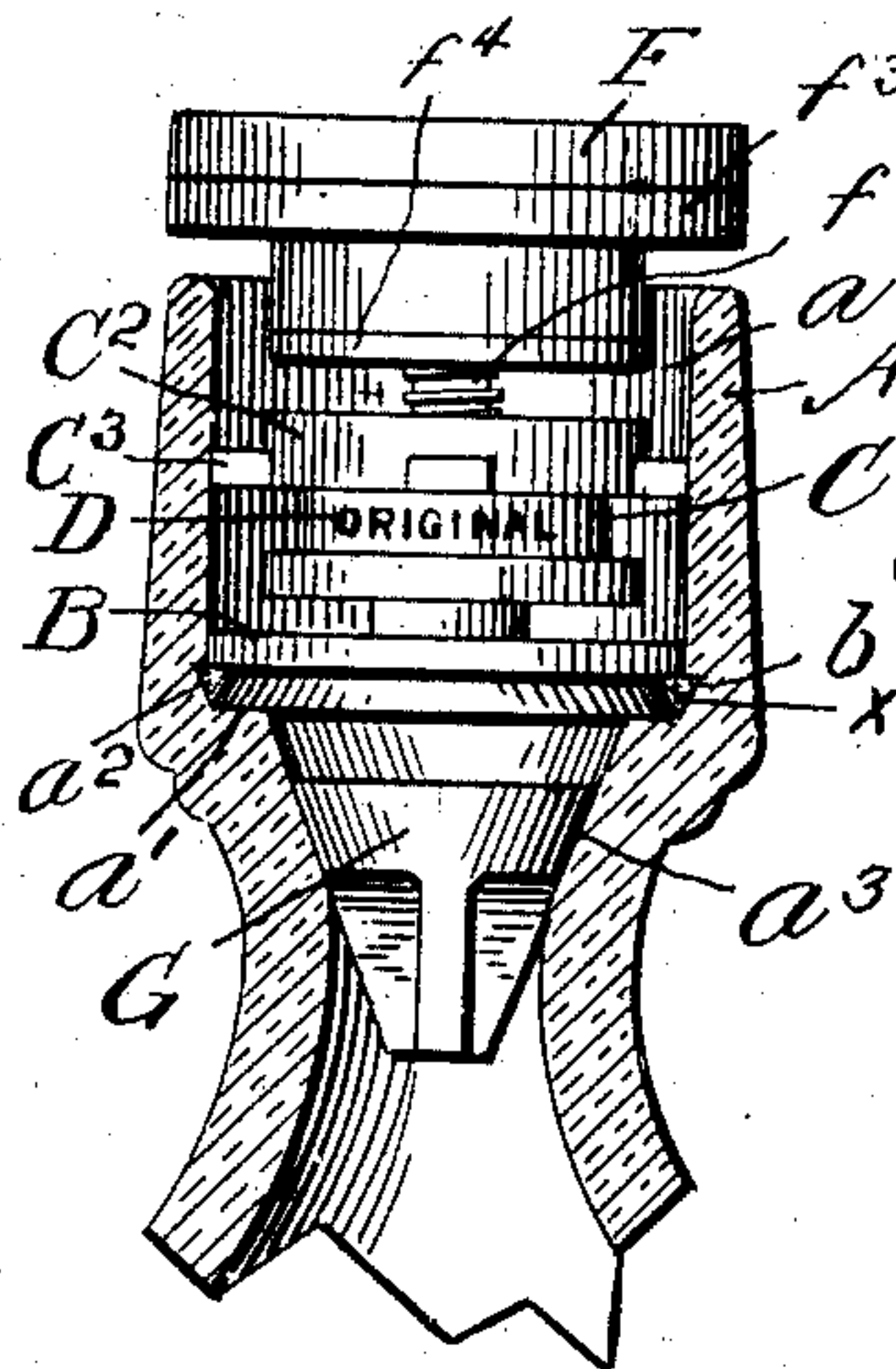


Fig. 2.

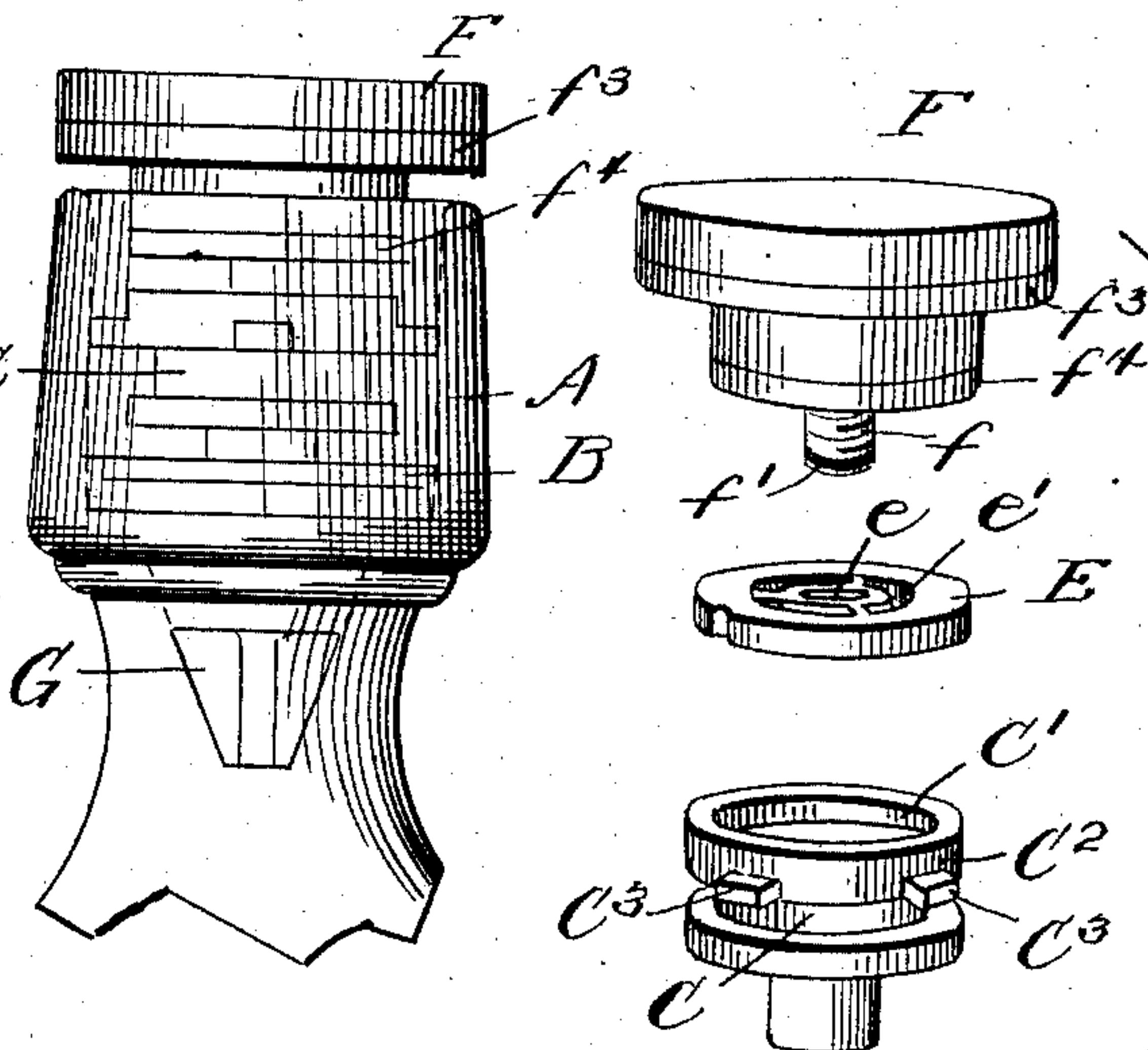


Fig. 3.

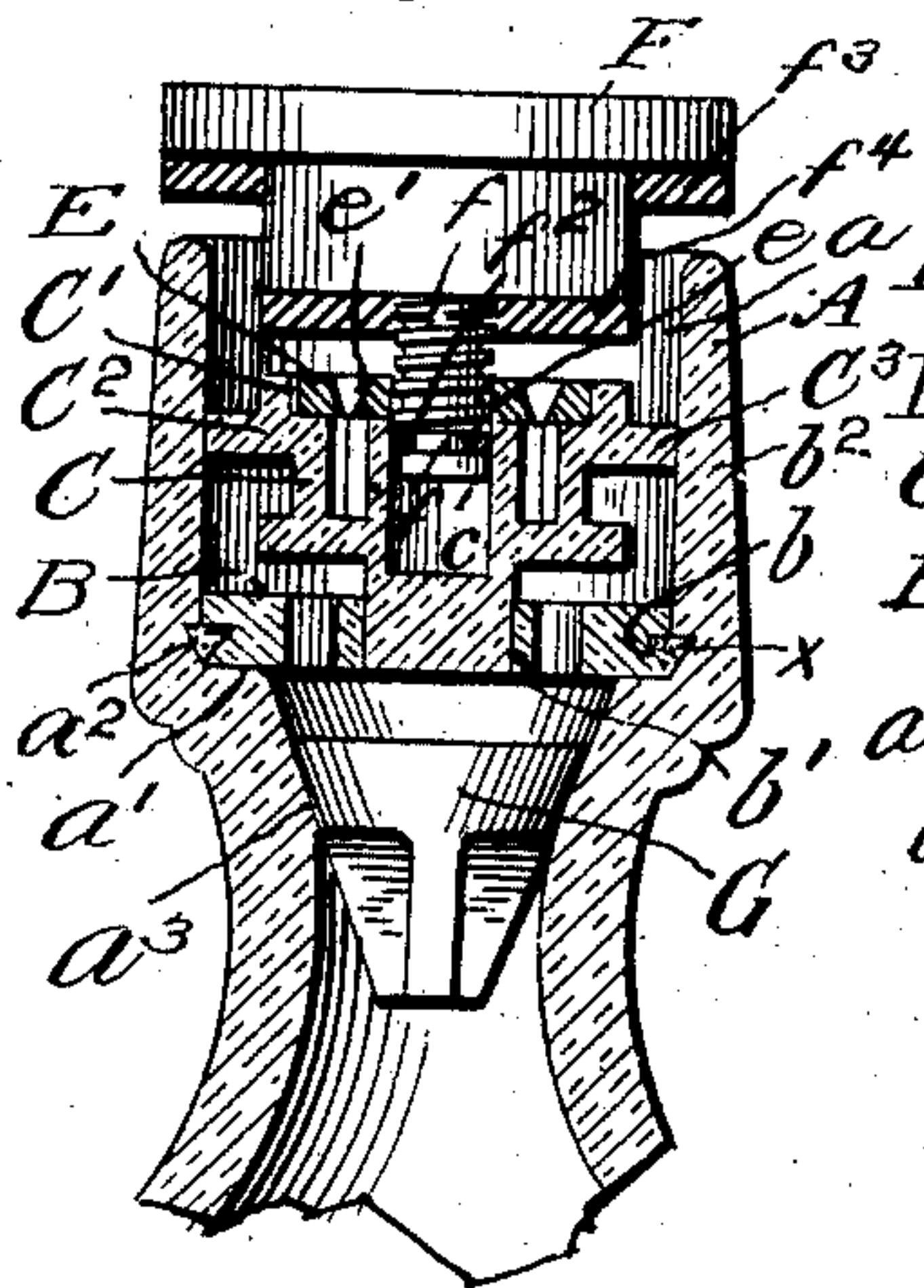


Fig. 5.

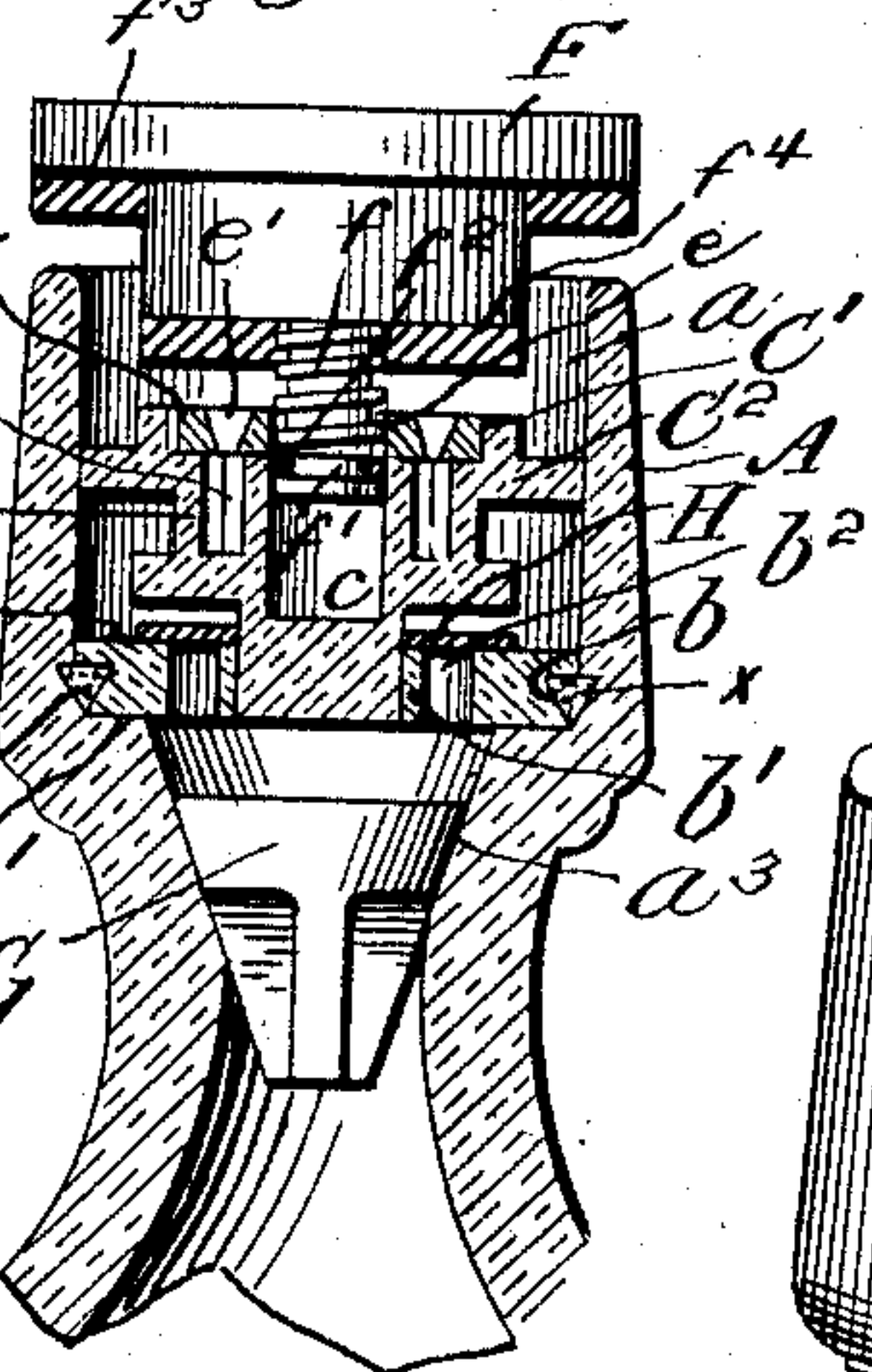
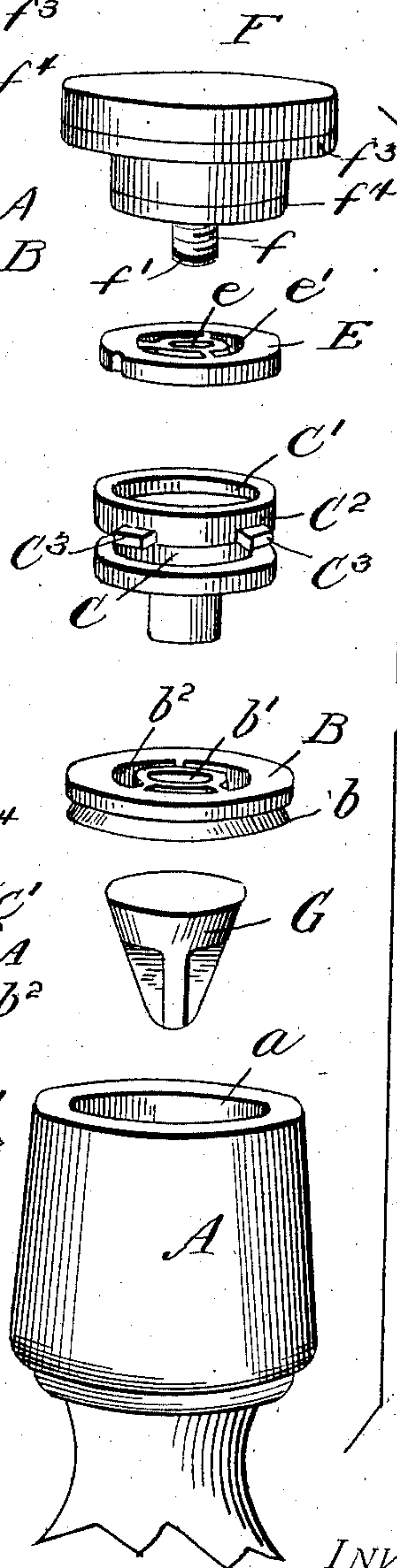


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM C. SCHMIDT, OF RICHMOND, VIRGINIA.

INDICATING-BOTTLE.

No. 883,672.

Specification of Letters Patent.

Patented March 31, 1908.

Original application filed July 13, 1905, Serial No. 269,518. Divided and application filed December 20, 1906, Serial No. 348,746. Renewed August 28, 1907. Serial No. 390,554.

To all whom it may concern:

Be it known that I, WILLIAM C. SCHMIDT, citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Indicating-Bottles; 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 improvements in bottles and more particularly to that class known as indicating bottles, and is a division of my former application for Letters Patent of the United States filed July 13, 1905, Serial No. 269,518.

The object of my said improvement is to produce a bottle stopper which will indicate any attempt to refill the bottle after the original contents thereof have been poured out.

In carrying out my said invention, I employ a transparent stopper of the kind hereinafter described and locate therein a soluble or other perishable indicating ribbon or the like which may bear therein a trade mark or some symbol to indicate that the contents are original and which will be destroyed when the bottle is refilled.

In order that my invention may be clearly understood I have illustrated one form thereof in the accompanying drawing and a full and exact description thereof is contained in the annexed specification.

In the accompanying drawing, Figure 1 is a front elevation of my improved stopper located in the neck of a bottle, the bottle neck being shown in section. Fig. 2 is an elevation of my improved device with the indicator removed showing the effect of an attempt to refill the bottle. Fig. 3 is a vertical section through my improved device. Fig. 4 is a perspective view of my improved device, the several parts thereof being separated, and Fig. 5 is a view similar to Fig. 3 showing a bouyant valve applied to the stopper.

In the several views, like letters of reference designate similar parts of my improved device.

A in the drawing, designates the bottle

provided with the cylindrical mouth *a* which is provided at its lower end with the annular flange *a'* and groove *a²*.

B indicates a circular disk constructed to snugly fit into the mouth *a* and rests upon the flange *a'*, said disk being provided with an annular groove *b* directly opposite the groove *a²*, forming a recess which is preferably filled with cement *x* to lock said disk to the bottle. The disk B is preferably provided with the central orifice *b'* and other apertures *b²* for the purposes hereinafter described.

C designates a cylindrical portion provided at one end with a longitudinal cylindrical recess *c* and adapted at its other end to fit into the orifice *b'* of the disk B. The portion C may be secured or locked to the disk B in any desirable manner as by cementing the joint or if preferred may be made integral therewith. Around the upper part of the cylindrical portion C is a cup-shaped portion *C'* which is preferably made integral therewith, the top of said cup-shaped portion *C'* being flanged outwardly on a level with the top of the portion C and provided with an annular bead *C²* and the lugs *C³* adapted to engage the walls of the mouth of the bottle to retain the portion *C'* in the center thereof and yet provide passages for the outflow of the contents of the bottle.

D designates the indicator preferably comprising a readily soluble substance and adapted to bear a trade mark or other suitable symbol to indicate that the contents of the bottle are original. This indicator is preferably in the form of a ribbon and is fitted into the recess formed between the portions C and *C'*. Although I prefer to make the indicator of a soluble substance, such as paraffin or preparation of chalk, it is obvious that a ribbon made of other substances, such as thin tissue paper, would accomplish the same result, for as soon as the tissue paper became saturated with inflowing fluid, it would sink to the bottom of the recess and become practically invisible.

E is a disk fitting with the annular bead *C²* and resting on the end of portions C and *C'*, said disk E being retained in position by any suitable means. The disk E is provided with the central threaded orifice *e* and the other apertures *e'*, the latter being made therein to

permit inflowing liquid to come in contact with the indicator.

F is the stopper provided with the screw threaded stem f having an annular groove f' around the end thereof. The stem f is screwed into the threaded orifice e in disk E and to prevent it from being withdrawn therefrom, a small ring f^2 is sprung into the groove f' thereof, whereby the stopper F can be withdrawn far enough to permit the outflow of the contents, but not far enough to give access to the interior of the stopper, thus preventing any chance of fraud. In order to prevent the contents from coming into contact with the indicator or from escaping in case the bottle is inverted, I provide the stopper with washers f^3 and f^4 of suitable material to form air tight connections when the stopper is screwed into the mouth of the bottle.

G is a conical shaped valve located in the conical shaped portion a^3 of the neck of the bottle and is adapted to permit the outflow of the contents but prevents inflowing fluid from passing into the bottle.

In Fig. 5 I have illustrated the same construction as already described with the addition of a buoyant washer H, located between the bottom of the cup-shaped portion C and disk B. This washer H also tends to prevent the inflow of fluid but permits the outflow of the contents.

The parts of my device not otherwise described are preferably constructed of a transparent material such as glass but the substance of the part is not material to my invention except that the cup-shaped portion C' must be transparent in order that the indicator may be visible.

From the foregoing description, the operation of my improved device will be readily understood and is as follows: Granting that the indicator has been placed in the cup-shaped portion C', it is apparent that the outflowing liquid will pass the valve G, flow through the apertures b^2 , pass the cup shaped portion C' and thence out the mouth of the bottle, without coming in contact with the indicator. However, when liquid was forced into the bottle, the conical valve would prevent it from passing into the body of the bottle, whereupon the mouth would be filled with fluid which would find its way through the openings e' and coming into contact with the indicator would destroy the same, indicating the bottle had been tampered with.

What I claim and desire to secure by Letters Patent is:—

1. An indicator of the kind described comprising a perishable substance adapted to be readily destroyed by liquid, substantially as described.

2. An indicator of the kind described,

comprising a readily soluble substance, substantially as described.

3. In a bottle of the kind described, the combination with an indicator comprising a perishable substance, of means whereby inflowing fluid will be forced into contact with said perishable indicator, substantially as and for the purpose described.

4. In a bottle of the kind described, the combination with an indicator comprising a soluble substance, of means whereby inflowing fluid will be forced into contact with said indicator substantially as and for the purpose described.

5. In a bottle of the kind described, the combination with an indicator comprising a perishable substance, of means for protecting said indicator during the outflow of the contents of the bottle and means whereby inflowing fluid will be forced into contact with said indicator, substantially as and for the purpose described.

6. In a bottle of the kind described, the combination with an indicator comprising a perishable substance, of a transparent compartment provided with an opening to receive said indicator, said compartment being adapted to protect said indicator during the outflow of the contents of the bottle and means whereby inflowing fluid will be forced into contact with said indicator, substantially as and for the purpose described.

7. In a bottle of the kind described, the combination with an indicator comprising a perishable substance, of a transparent compartment provided with an opening to receive said indicator, said compartment being adapted to protect said indicator during the outflow of the contents of the bottle, and a valve adapted to permit the outflow of the contents of the bottle but adapted to prevent refilling of the bottle whereby inflowing fluid is forced into contact with said indicator, substantially as and for the purpose described.

8. In a bottle of the kind described, the combination with a circular disk fitting into the mouth of the bottle and permanently secured thereto, said disk being provided with openings to permit the outflow of the contents of the bottle, of a transparent cup-shaped compartment secured to said disk, an indicator in said compartment, means for preventing access to said indicator, and a washer resting upon said disk to normally close the openings therein and adapted to permit only the outflow of the contents, whereby inflowing fluid is forced into contact with said indicator, substantially as and for the purpose described.

9. In a bottle of the kind described, the combination with a circular disk fitting into the mouth of the bottle and permanently secured thereto, said disk being provided with

openings to permit the outflow of the contents, of a bouyant washer constructed to rest upon said disk to prevent inflowing fluid to pass through the openings therein, a
5 transparent cup-shaped compartment, an indicator in said compartment and a non-detachable stopper adapted to prevent access to said indicator and said buoyant washer,

substantially as and for the purpose set forth.

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

WILLIAM C. SCHMIDT.

Witnesses:

A. H. HATKE,
EDW. SCHAAF.