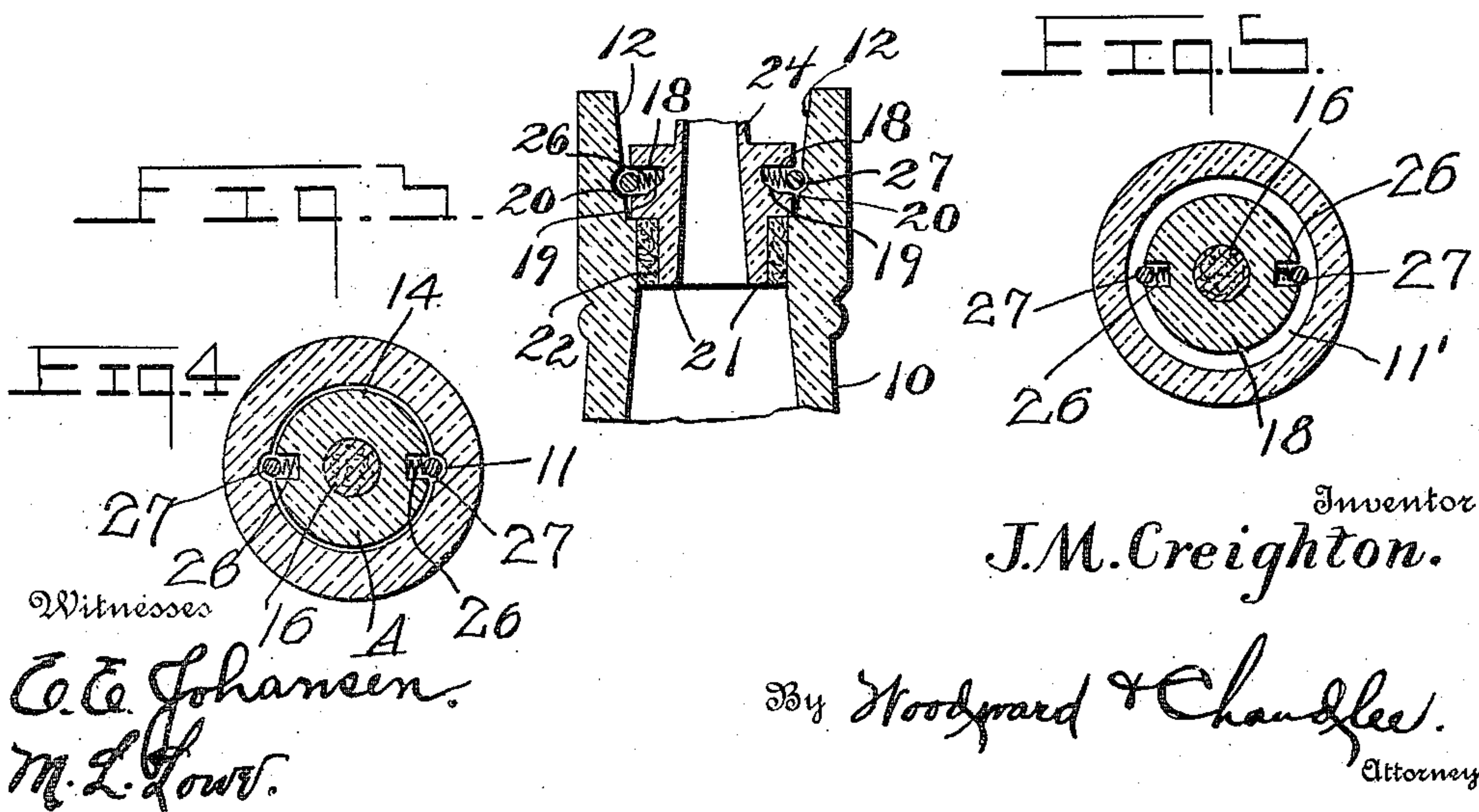
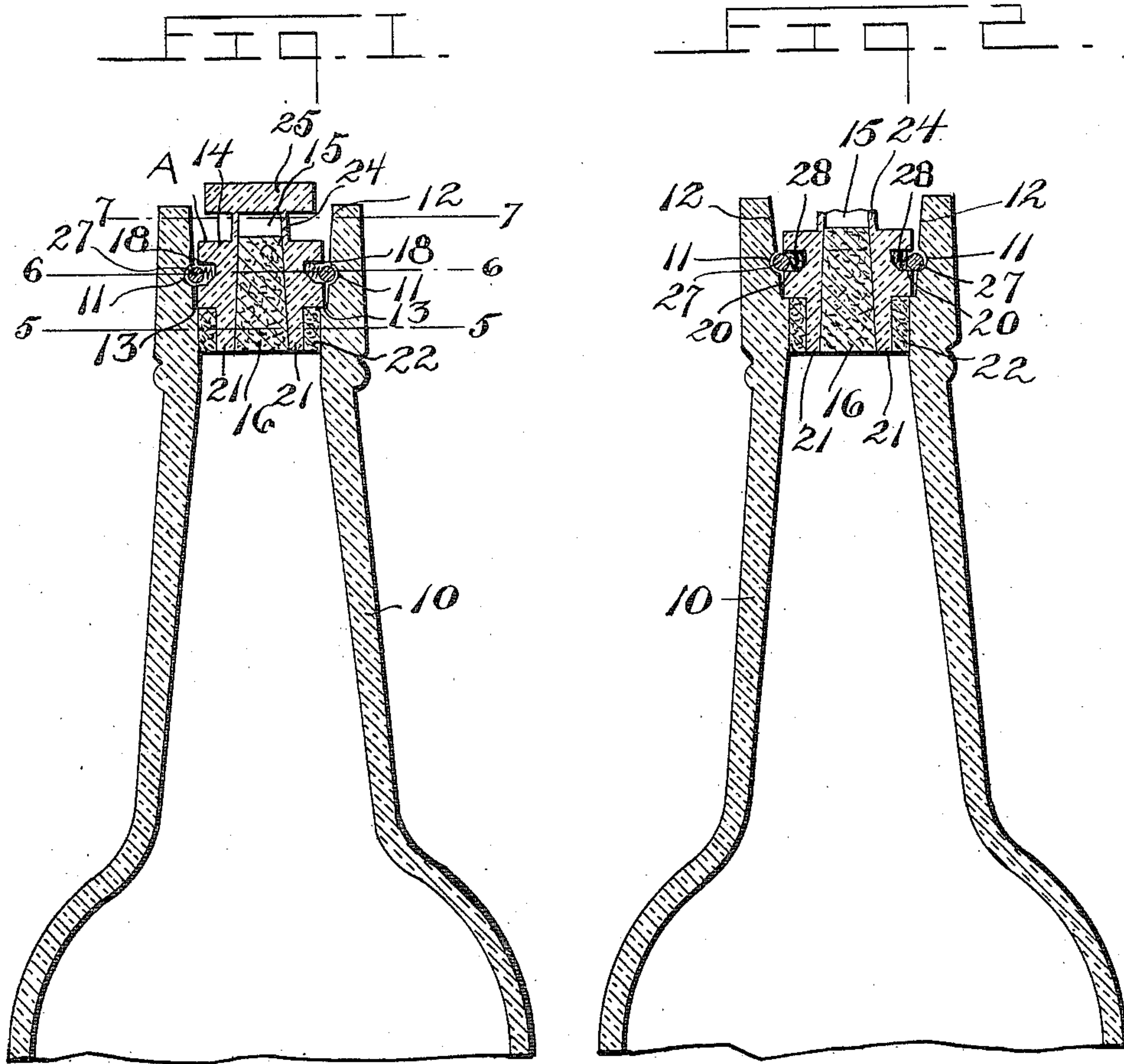


J. M. CREIGHTON.
BOTTLE STOPPER.
APPLICATION FILED DEC. 27, 1909.

983,211.

Patented Jan. 31, 1911.



UNITED STATES PATENT OFFICE.

JOHN M. CREIGHTON, OF LANCASTER, OHIO.

BOTTLE-STOPPER.

983,211.

Specification of Letters Patent.

Patented Jan. 31, 1911.

Application filed December 27, 1909. Serial No. 535,100.

To all whom it may concern:

Be it known that I, JOHN M. CREIGHTON, a citizen of the United States, residing at Lancaster, in the county of Fairfield and State of Ohio, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

This invention relates to bottles, and more particularly to bottle stoppers, and has for its object to prevent the refilling of bottles of a distinctive character with mixtures in imitation of those originally dispensed therein, or at least to make such refilling so difficult as to be unprofitable.

Another important object is to provide a novel means of making the contents of a bottle so equipped available.

A very important object is to provide such a device which may be assembled very quickly and without the use of special machinery.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific structure shown and described may be made within the scope of the claim without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a fragmentary view of a bottle equipped with my device in sealed position, Fig. 2 is a similar view showing the flangible seal removed, Fig. 3 is a similar view with the sealing portion removed, Fig. 4 is a similar view on line 6—6 of Fig. 1, Fig. 5 is a view similar to Fig. 4 of a modified form of the device.

Referring to the drawings, there is shown a bottle which may be of any suitable form or material, and is provided with a neck 10 having the slightly diverging side portion 12, in which there are formed the small notches 11, and below which there is provided the annular stop shoulder 13, as shown. Inserted within the outer end of the neck, there is the stopper member A which comprises the lock stopper 14 provided with the outwardly flared passage 15 closed at the outer end and carrying the sealing member 16 as shown.

The lock stopper is annular in form and provided with a plurality of peripheral recesses 18 somewhat reduced at their inner ends and provided with the downwardly

and outwardly inclined lower faces 19, the outer portions of which extend horizontally as shown at 20. The lower portion of the stopper 14 is reduced peripherally to form a stem 21 around which is engaged a collar 22 of resilient material adapted to form a seal between the inner walls of the neck 10 and the lock stopper when engaged therein. A shoulder 23 is thus formed above the collar 22 which shoulder is adapted to engage upon the shoulder 13 within the bottle neck when the recesses 18 in the lock stopper are in registry with those 11 upon the inner side of the neck. The lock stopper carries upon its upper side the attenuated annular wall 24 which forms a continuation of the circumscribing portion of the passage 15 and superposed thereon is the cap 25, the cap wall and stopper 14 all being formed integral. Seated at the inner ends of the recesses 18, there are small springs 26, and balls 27 are disposed in the outer portions of these passages, against which the springs bear and force the balls partly into the recesses 11, approximately one-half of the ball projecting into the respective opposed recesses.

The springs may be replaced by any suitable resilient material such as rubber, pulp, or the like, as represented at 28 in Fig. 2.

In Fig. 5 there is shown a further modification of the device in which the recesses 11 are replaced by an annular groove 11' extending entirely around the inner surface of the bottle neck, whereby little difficulty would be experienced in disposing the recesses 18 in registry therewith.

In use, the bottle being formed either with the annular groove 11' or the notches 11, the bottle may be filled in the usual manner with whatever compound, composition or mixture desirable. The lock stopper 14 is then provided with the cork or seal 16 and the collar 22, after which the resilient material either in the form of a spring or other material is disposed in the recesses 18, after which the balls 27 are presented in the recesses, and the lower portion of the lock stopper inserted in the neck. As the recesses 18 come into alinement with the top of the bottle, the balls are pressed inwardly so that they may pass within the neck of the bottle, and the downward movement of the lock stopper is continued until the balls snap outwardly into the recesses 11 of the neck. Movement of the stopper outwardly

is then prevented by the engagement of the balls against the upper side of the recesses 11, as will be understood.

When it is desired to use the contents of the bottle, a slight blow will remove the cap which, owing to its being of a much greater thickness than the wall 24 will come off integral, leaving the passage 15 completely clear, after which the cork 16 may be removed in any suitable manner.

It will be understood that any other form of central opening and closure therefor may be provided, in connection with a detachable member carrying the balls arranged to engage in recesses in the neck portion.

What is claimed is:

A device of the class described comprising a container having an outlet passage provided with a circumferential recess, a stopper movable in the passage and located below the discharge end of the bottle, peripheral recesses in the stopper adapted to reg-

ister with the first named recess, oppositely located balls carried in the last named recesses, means for resiliently holding and forcing said balls into the first named recess when registered with the second named recess, said stopper having a central passage, and an attenuated annulus forming an integral part therewith and circumscribing one end of the passage, and a cap integrally formed therewith and constructed to close the outer end of the passage, the upper end of which is normally located above the discharge end of the bottle, said cap being thicker than and projecting laterally from said annulus to remain unbroken when struck for fracture of the latter.

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

JOHN M. CREIGHTON.

Witnesses:

E. L. BOONE,

C. M. HORN BROOK.