

M. B. DISKIN.
NON-REFILLABLE BOTTLE.
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932,687.

Patented Aug. 31, 1909.

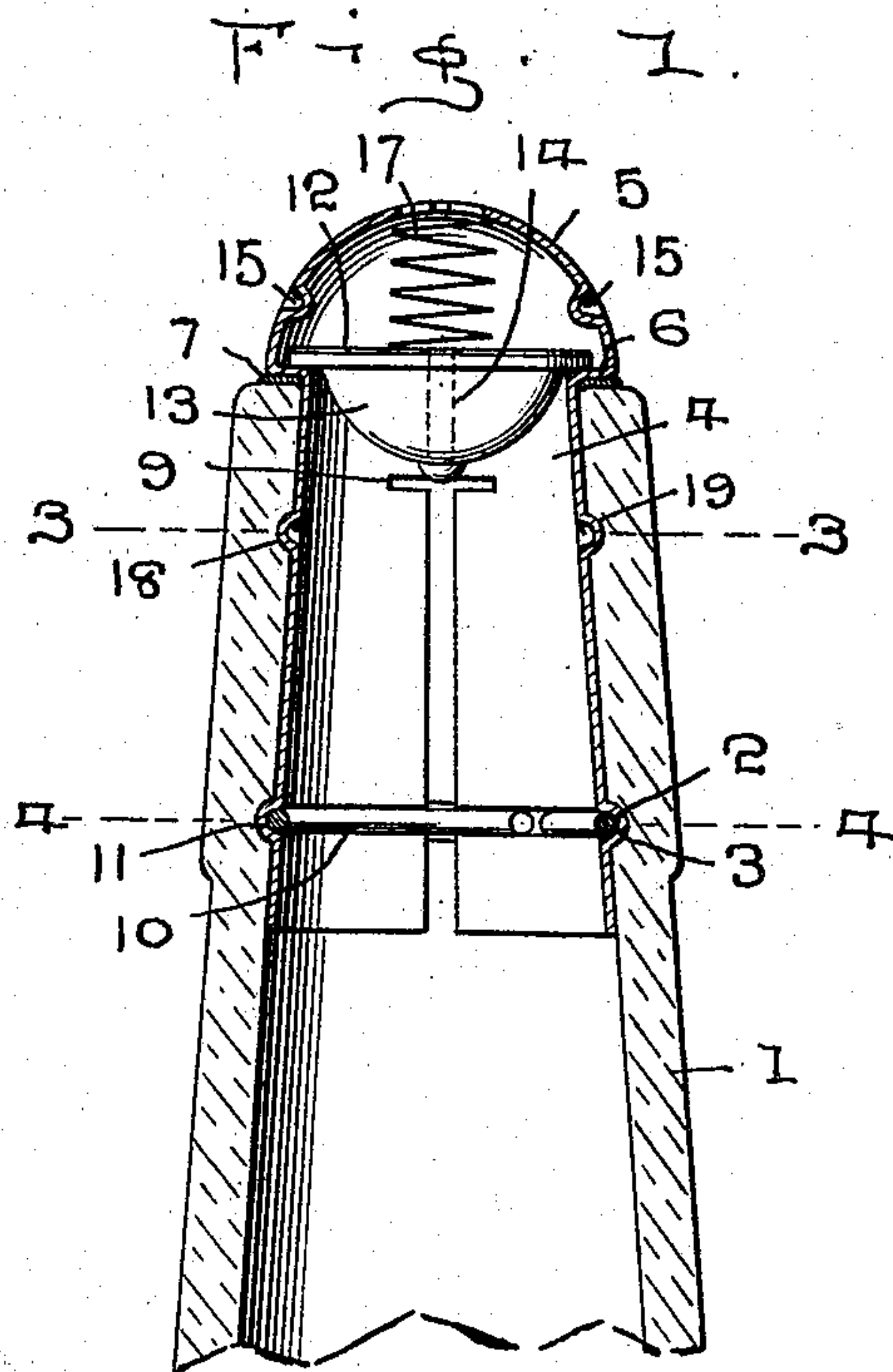


Fig. 3.

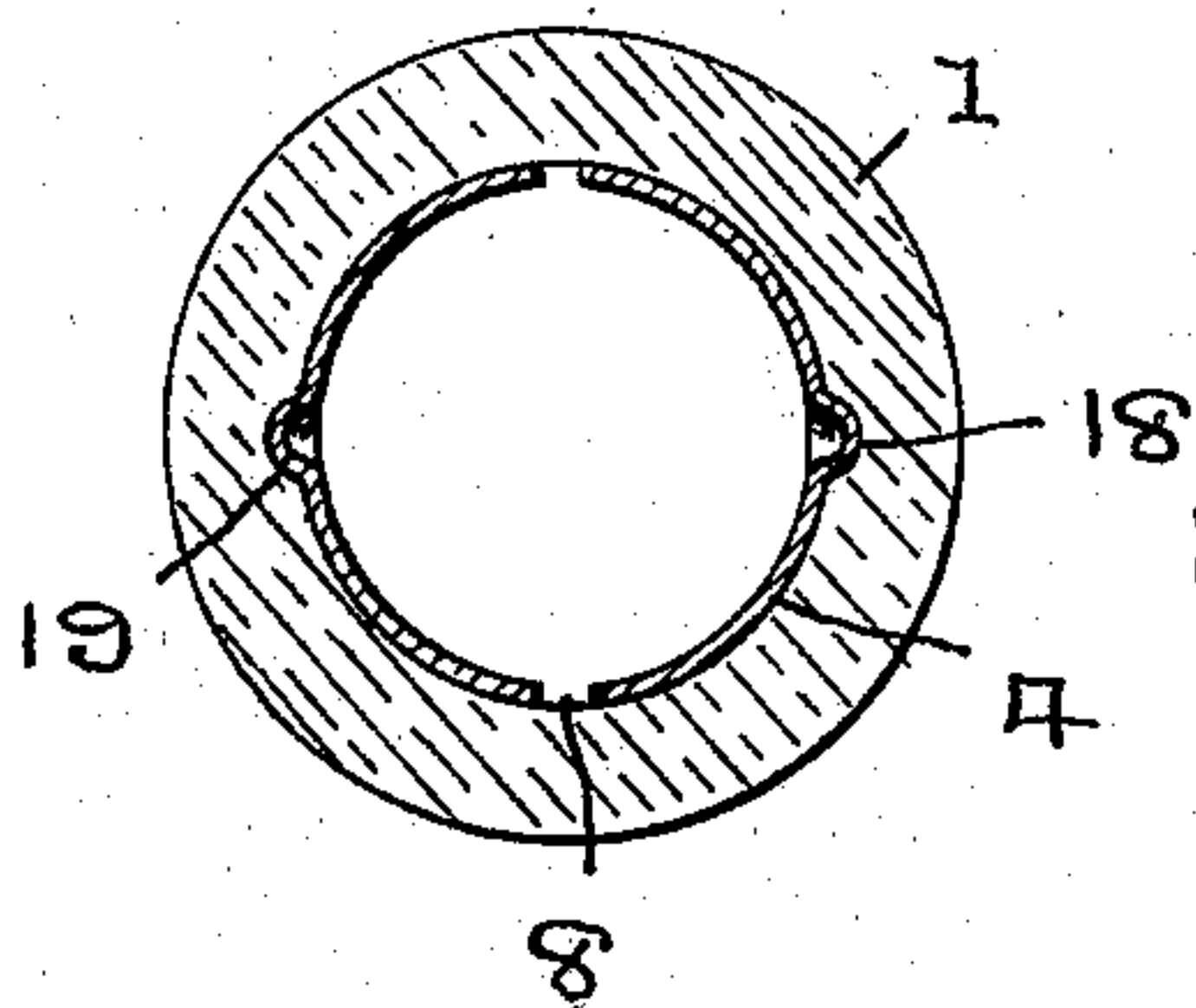


Fig. 2.

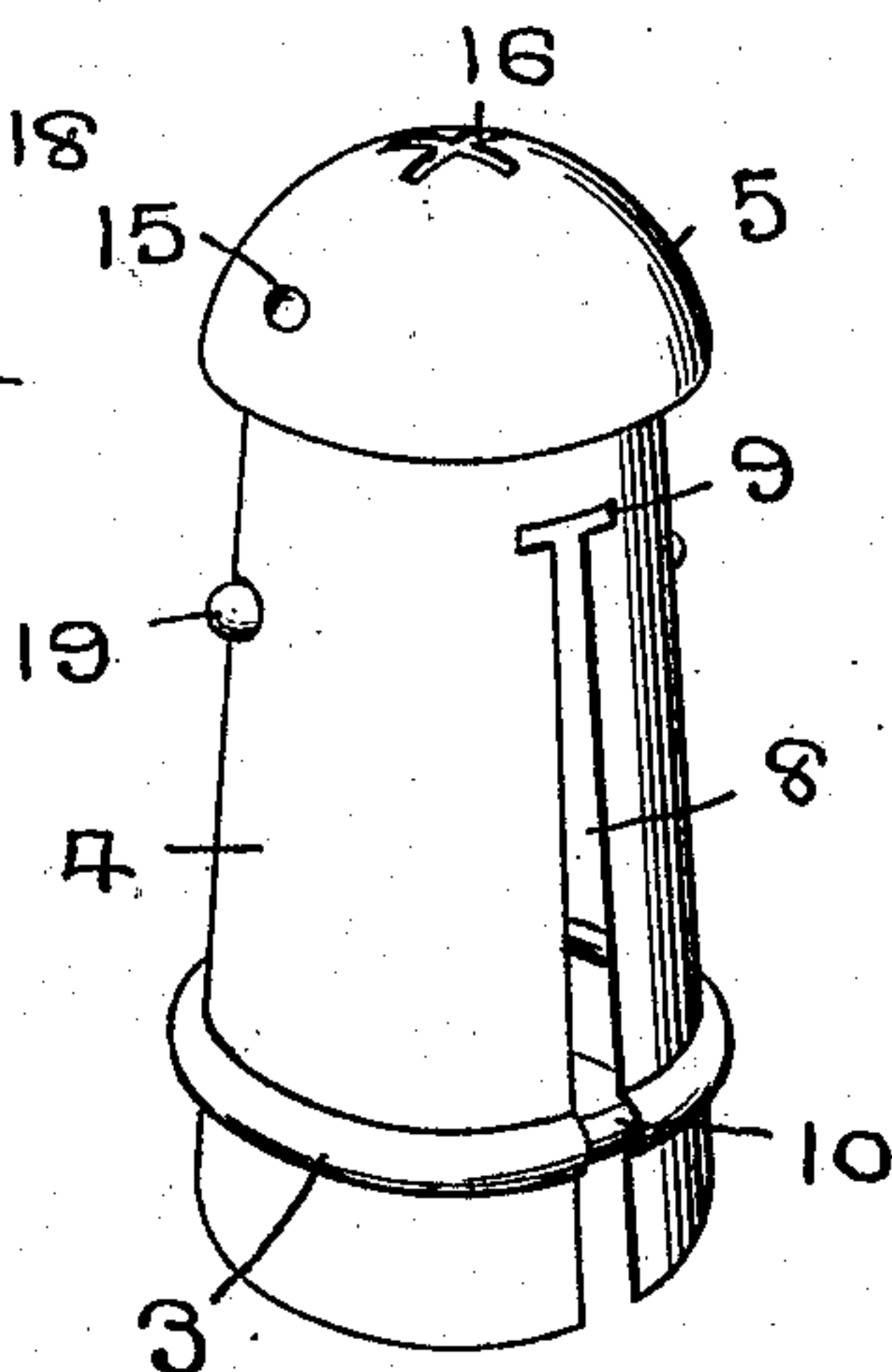
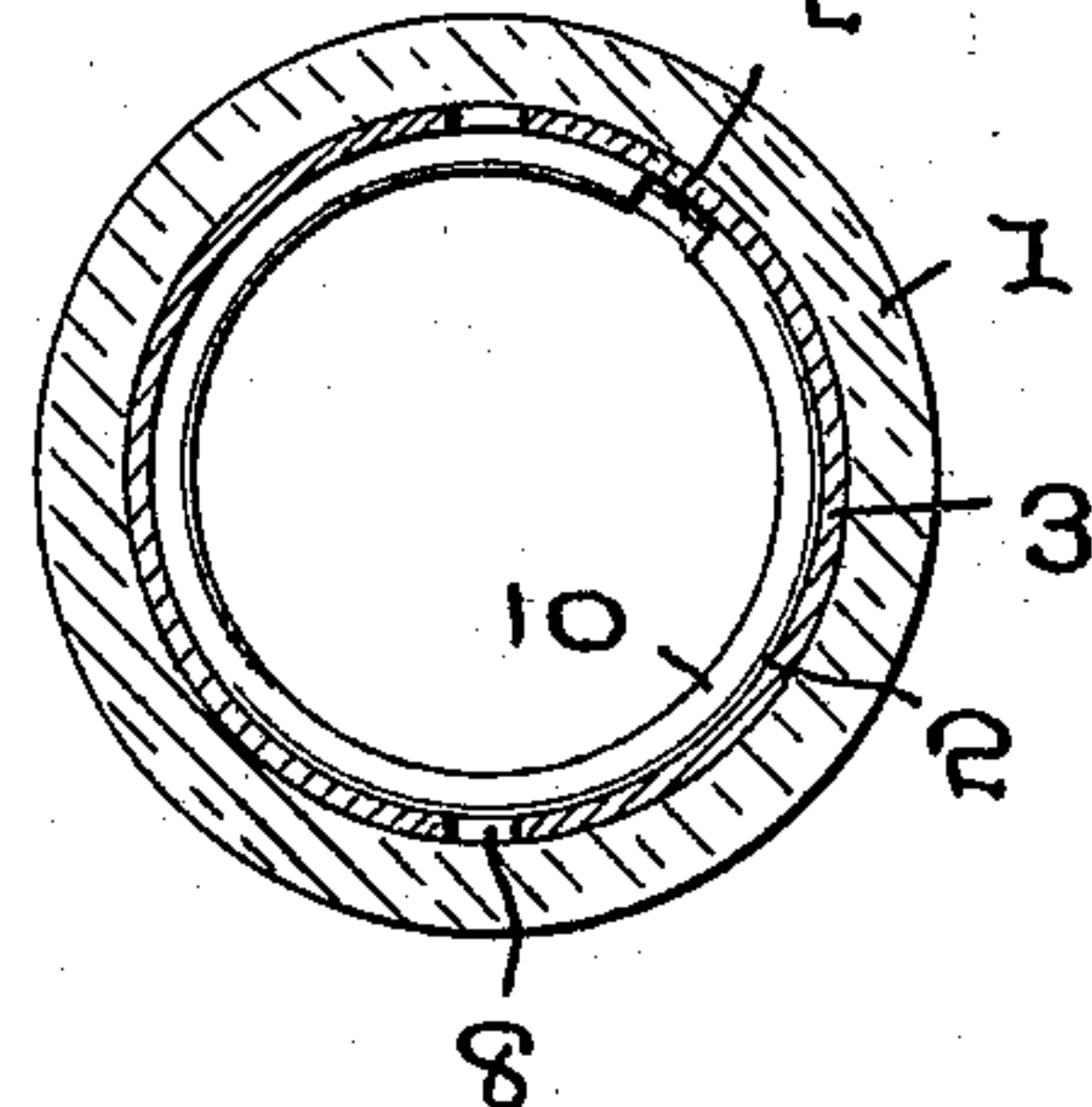


Fig. 4.



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NON-REFILLABLE BOTTLE.

932,687.

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To all whom it may concern:

Be it known that I, MOSES B. DISKIN, citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Non-Refillable 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.

My invention relates to new and useful improvements in non-refillable bottles and my object is to provide a device which will prevent the bottle from being refilled after being once emptied.

A further object is to provide a device which may be introduced into the bottle at any time.

A further object is to provide means for permanently retaining the device within the bottle, and a still further object is to provide means for holding the device against rotation.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings forming part of this application, Figure 1 is a central sectional view through the upper portion of a bottle neck, showing my improved non-refilling device attached thereto. Fig. 2 is a perspective view of the non-refilling device removed from the bottle. Fig. 3 is a sectional view as seen on line 3—3, Fig. 1. Fig. 4 is a sectional view as seen on line 4—4, Fig. 1.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the neck of a bottle, which may be constructed in the usual or any preferred manner, within which neck is formed a circumferential groove 2, on which is adapted to be seated a rib 3 formed around a stopper 4, said stopper being preferably formed of metal and hollow.

The upper end of the stopper 4 is preferably semiglobular to form a head 5 and said head being of greater diameter than the stopper 4 to form a shoulder 6 which shoulder is adapted to rest on a gasket 7 positioned on the upper end of the neck 1, thereby providing a non-leaking union between the stopper and the neck of the bottle.

The stopper 4 is preferably flared from its

intersection with the head 5 to its lower free end to fit the contour of the interior of the neck of the bottle and in order to readily introduce the stopper into the neck of the bottle, the wall of said stopper is provided with vertical slots 8 and horizontally disposed slots 9 at the upper ends of the slots 8 and when the stopper is being introduced into the bottle, the lower end of the stopper is depressed and entered into the bottle. As the stopper descends, the contracted wall thereof will gradually expand and cause the rib 3 to enter the groove 2 and in order to positively lock the stopper within the neck of the bottle, a split ring 10 is introduced into the open end of the stopper and rests in the channel 11 provided by extending the wall of the stopper to form the rib 3 and as the ring is constructed of spring metal, the tension thereof will cause the rib to snap into the groove when the stopper has been properly seated in the neck of the bottle.

The head 5 is provided with a valve 12, which is adapted to normally rest on the shoulder 6 and when so rested forms a complete seal for the bottle, the lower face of the valve having a semi-globular base 13, which is preferably formed of rubber, cork or like material and is held in engagement with the valve in any preferred manner, as by means of a rivet 14.

The head 5 is provided on diametrically opposite sides with inwardly directed projections or studs 15, which are adapted to engage the edges of the valve 12 when the bottle is tilted to discharge the contents of the bottle, and by always turning the bottle until the studs are horizontally disposed, they form a pivot for the valve and permit the bottom portion thereof to swing outwardly and form a clear passage for the contents of the bottle, although it will be understood that the valve is of less diameter than the diameter of the interior of the head to form a space therearound through which the contents of the bottle may pass should the valve not be tilted. The apex of the head 5 is provided with narrow slits 16, through which the contents of the bottle may be discharged, said slits being so arranged and of such size that an object could not be introduced into the head and the valve lifted from its seated position and the valve is normally held in its seated position by means of a spring 17, the upper end of which rests against the upper portion of the head 5, while the opposite end

thereof rests on the valve 12, the tension of said spring being such, however, as to permit the valve to leave its seat when the bottle is tilted and the weight of the contents of the bottle directed against the valve.

The stopper 4 is held against rotating movement within the neck 1 by providing seats 18 at diametrically opposite points on the interior wall of the neck, in which are adapted to be seated teats 19 formed by striking out portions of the wall of the stopper 4, said teats being so positioned as to enter the seats 18 simultaneously with the entrance of the rib 3 in the groove 2.

In view of the fact that my improved stopper is constructed of sheet metal and shaped in the usual form of stamping machine or die, it can be very cheaply and quickly constructed and readily introduced into the neck of the bottle. It will further be seen that by constructing the stopper of metal, it will be comparatively indestructible and may be again used by breaking the neck of the bottle and releasing the stopper and it will likewise be seen that it will be impossible to refill the bottle after the contents thereof has been emptied, as the tension of the spring will hold the valve firmly seated as long as there is no weight pressing against the valve from the interior of the bottle.

What I claim is:

1. A device of the character described, comprising a tubular stopper adapted for insertion into a bottle neck, having a semi-globular head having its base offset from the stopper proper, said head being provided with discharge openings in its rounded surface and a valve adapted to seat upon shoulders formed by the offset between said head and the body of the stopper, said valve having a depending semi-globular extension upon its under side adapted to be received within the body portion of said stopper, and resilient means for the automatic retention of said valve seated.

2. A device of the character described, comprising a tubular stopper adapted for insertion within the bottle neck and having its outer end formed with an offset semi-globular head, said head having upon its rounded surface inwardly extending teats, said head also having discharge openings through its central portion, said stopper having its body portion flared inwardly and provided with circumferential ribs for engagement with corresponding recesses in the bottle neck, said stopper having longitudinal slots therein with their upper ends terminating in transverse slots, a split spring ring received by the depression formed by one of said ribs, a valve seated upon the shoulder formed by the offset head portion of said stopper, and resilient means for the retention of said valve seated.

3. A device of the character described, comprising a tubular stopper having an offset semi-globular head, said head having inwardly extending teats, and also provided with discharge openings in its central portion, said stopper having its body portion flared inwardly and provided with annular ribs adapted to engage like recesses in the bottle neck, said stopper having longitudinal slots therein terminating at their upper ends in transverse slots, a split ring seated in the depression formed by one of said ribs, a valve adapted to be seated upon a shoulder formed by offsetting said head of said stopper, said valve having depending from its lower side a semi-globular portion fitting within the body of said stopper and a resilient means for the retention of said valve seated.

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

MOSES B. DISKIN.

Witnesses:

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