

J. STEPHEN.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JULY 9, 1909.

955,919.

Patented Apr. 26, 1910.

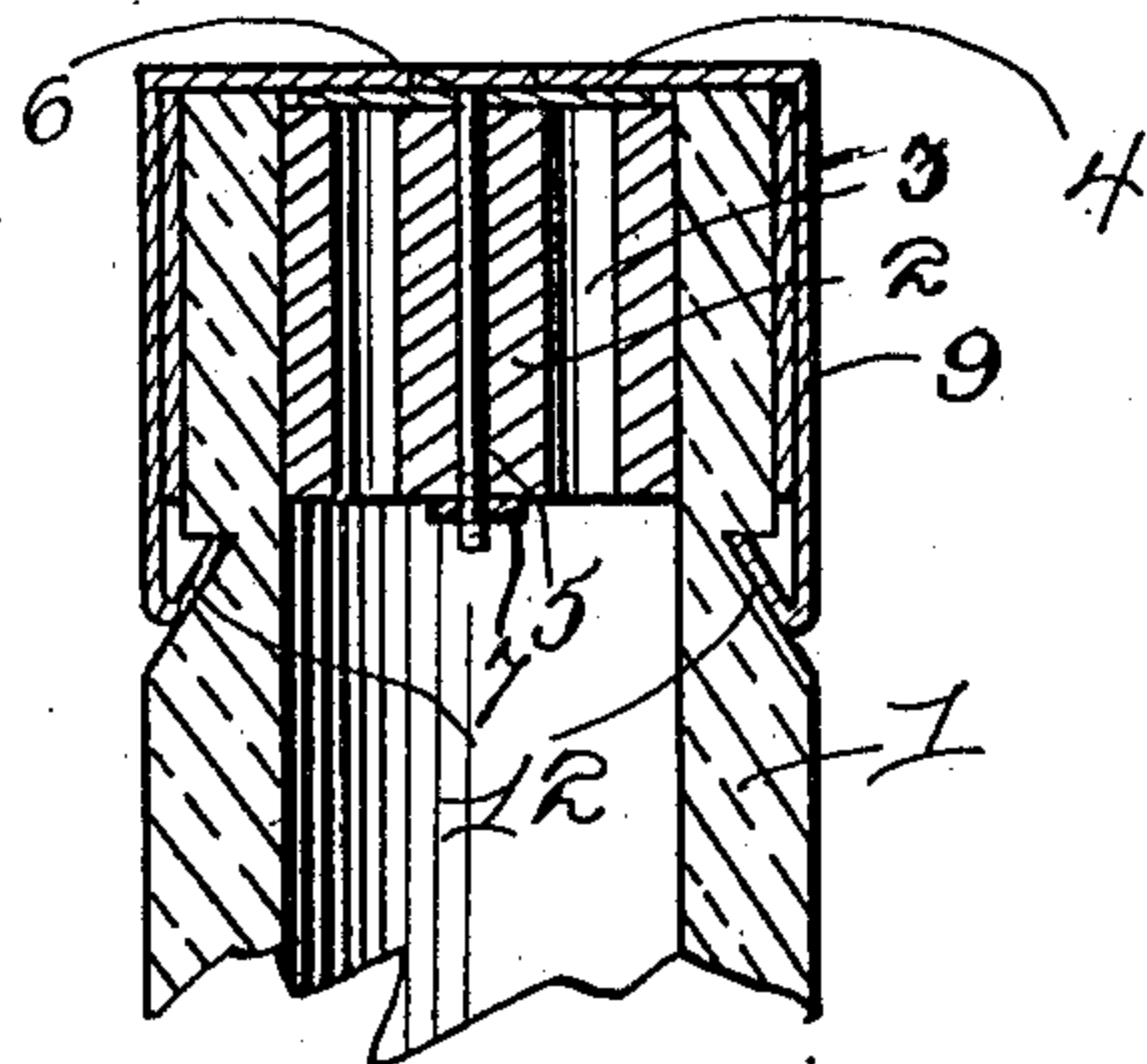
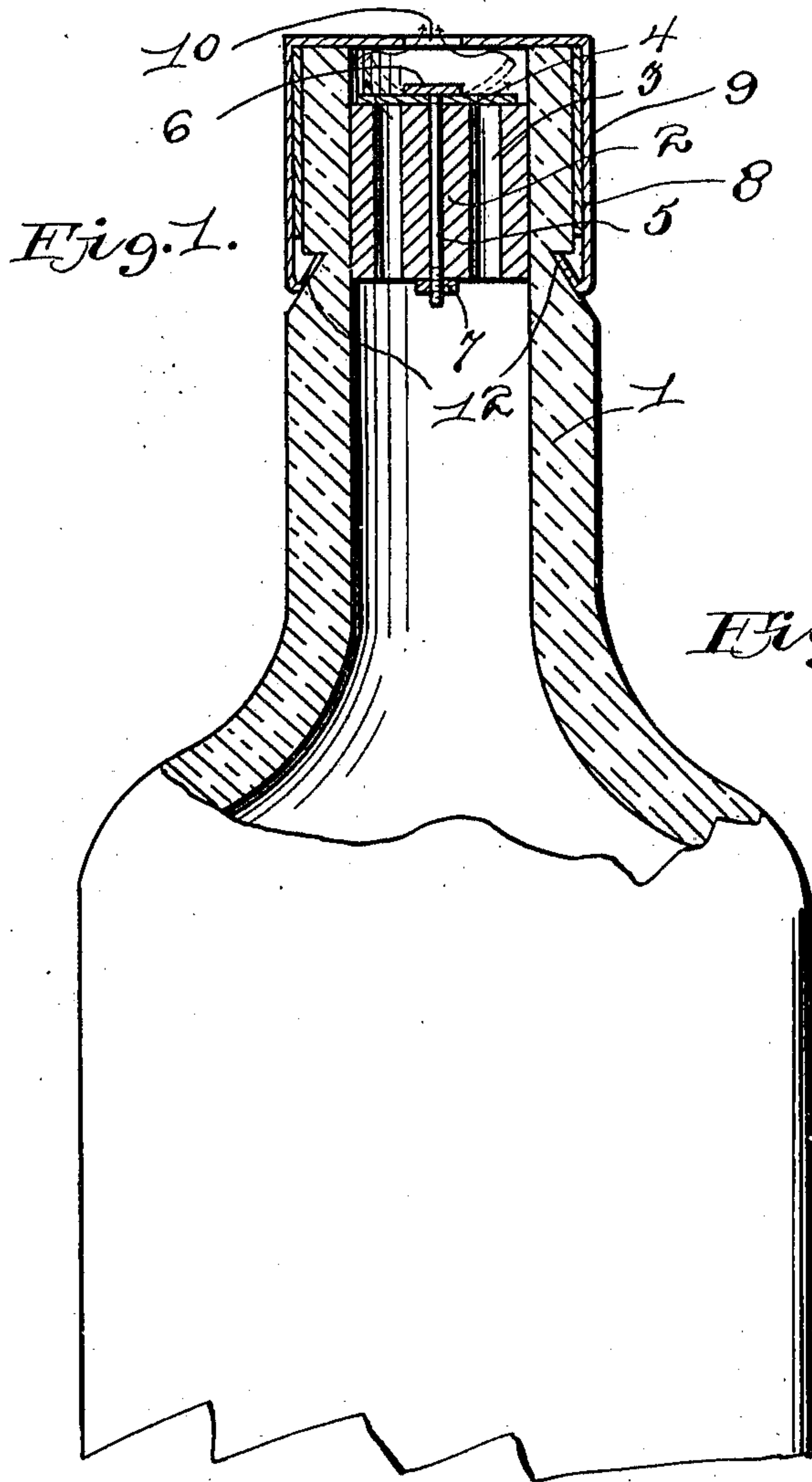


Fig. 3.

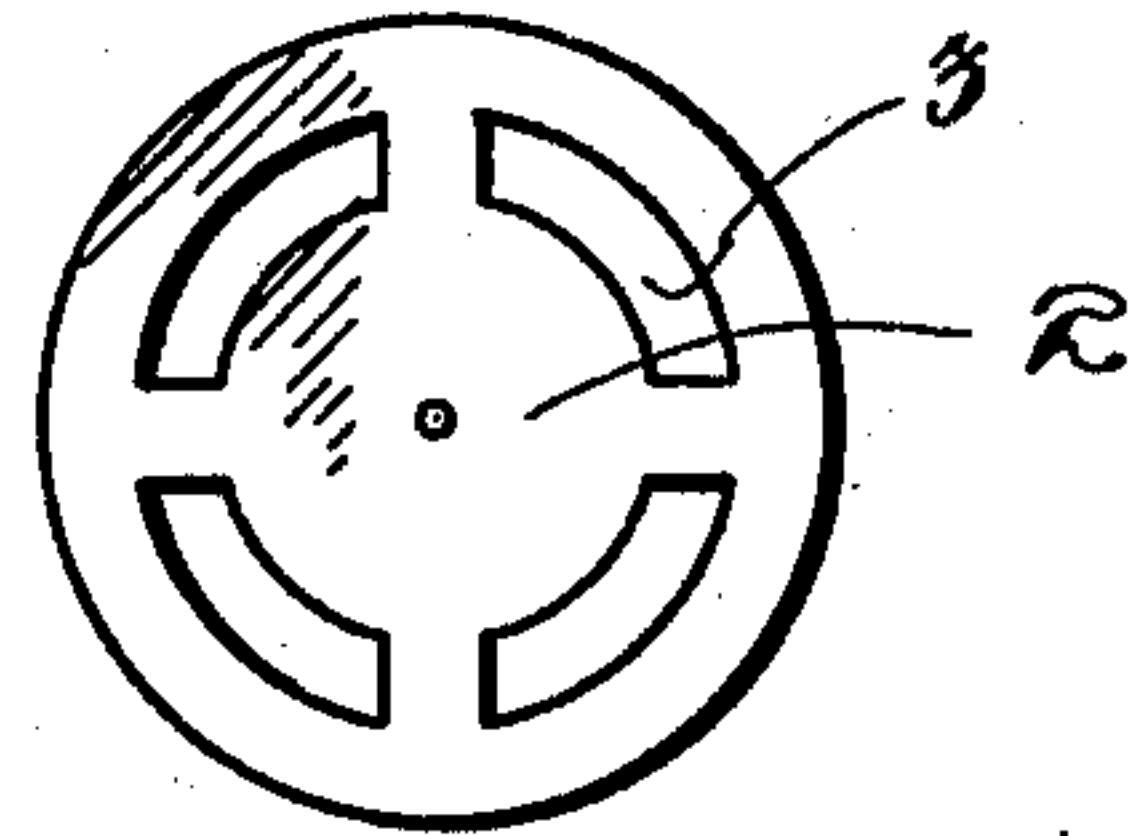
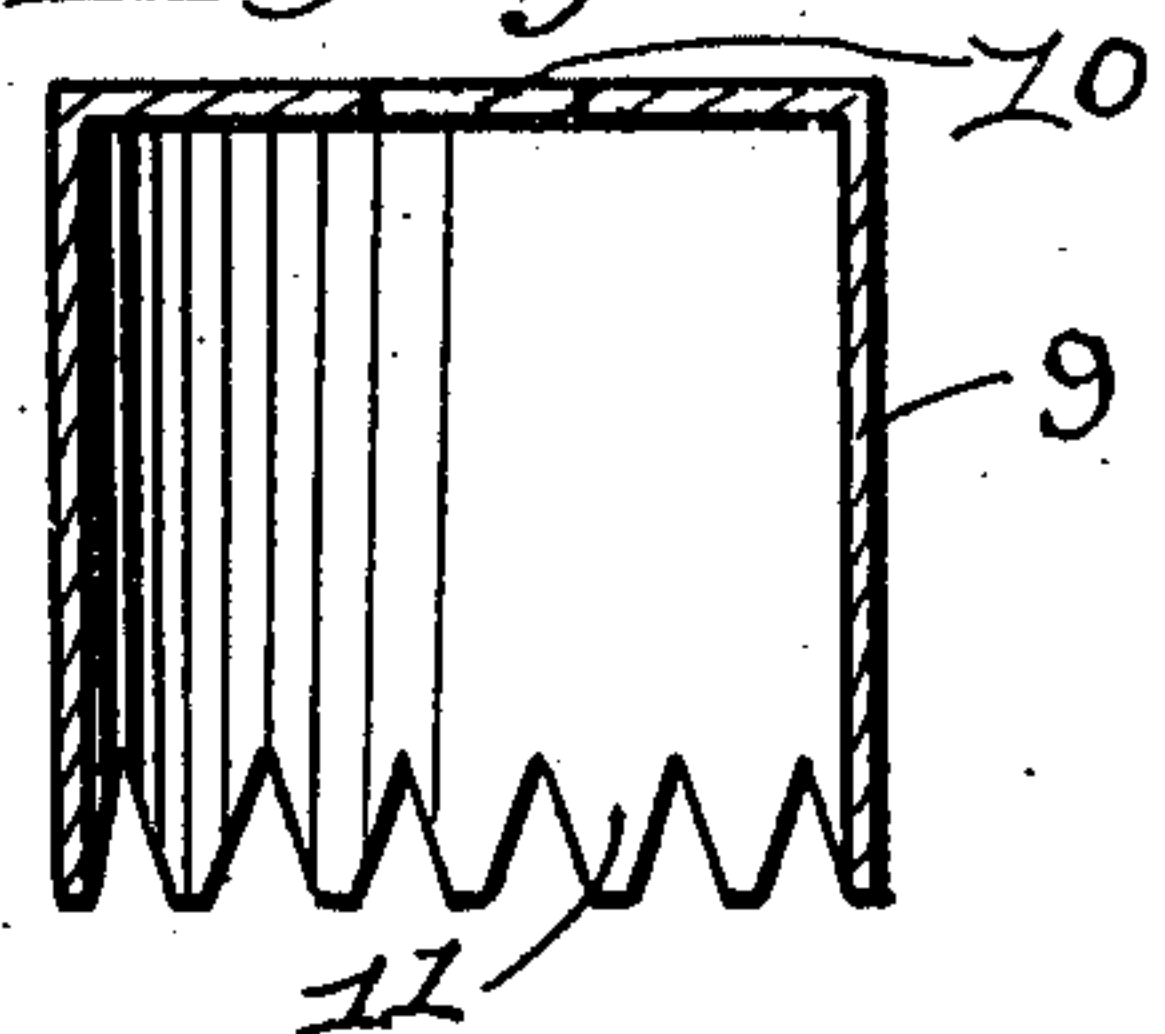


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN STEPHEN, OF VALLEJO, CALIFORNIA.

NON-REFILLABLE BOTTLE.

955,919.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN STEPHEN, a citizen of the United States, residing at Vallejo, in the county of Solano and State of California, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to non-refillable bottles and has for its object the production of an improved bottle of this kind, which is simple in construction, efficient in operation and consists of a comparatively small number of parts.

Another object of this invention is the provision of improved means for facilitating the opening of the bottle for allowing the contents to be discharged therefrom.

20 With these and other objects in view this invention consists of certain novel constructions, combination and arrangements of parts, as will be hereinafter fully described and claimed.

25 In the drawings: Figure 1 is a vertical section of the neck of the bottle showing my invention with the valve in an open position. Fig. 2 is a vertical section of the neck of the bottle showing the valve in a closed or inoperative position. Fig. 3 is a plan view of the stopper, which is adapted to be placed within the neck of the bottle. Fig. 4 is a vertical section of the cap before the same is placed upon the bottle.

35 Referring to the drawings by numerals, 1 designates the neck of the bottle in which is placed a stopper 2, which is provided with longitudinally-extending passage ways 3, which are substantially semicircular in form, and are, preferably, four in number, as shown in Fig. 3 of the drawing. Of course, it will not be necessary to use the exact structure of the apertures, as shown in Fig. 3, but in the present instance it is 45 thought preferable to use the same as illustrated and described. The valve member 4 is placed upon the top stopper 2, and comprises a disk, which is adapted to normally close the upper end of the apertures 3 for preventing the flow of liquid therethrough. The disk is firmly held upon the upper end of the stopper 2 by means of a longitudinally-extending bolt 5, which is provided with an enlarged head 6, which head over-

hangs the upper edge of the disk 4. The 55 bolt member 5 is held upon the stopper by means of a nut 7, which is threaded upon the lower end of the bolt. When the stopper is in the position as shown in Fig. 1 and the position of the bottle is inverted the sides 60 of the disk 4 will assume the position shown in dotted lines, and thereby allow the liquid to flow out through the apertures, as shown by the arrows.

Positioned upon the outer portion of the 65 neck is a cylindrical-filling member 8 and positioned upon this filling member 8 is a cap member 9, which is spaced-apart from the neck by means of said filling member 8. The cap member overhangs the end of the 70 neck of the bottle and is provided with an aperture 10, which is adapted to be filled when the bottle is in its closed position by means of the enlarged head 6 of the bolt member 5, as fully shown in Fig. 2 of the 75 drawing. The lower end of the cap member 9 is provided with a series of tapering tooth-ports 11, which engage a shouldered inclined groove 12, which extends around the outer surface of the neck of the bottle. It 80 will, therefore, be seen that when the portions are bent upwardly, as shown in Fig. 1, so as to engage the groove 12 that the cap 9 will be held firmly upon the upper neck of the bottle, and be prevented from being re- 85 moved therefrom. When the bottle is filled the stopper 2 is adapted to be in a position, as shown in Fig. 2 of the drawing, and therefore, the disk 4 will be firmly held flat upon the upper end of the stopper 2, there- 90 by closing the upper ends of the apertures 3 and preventing the flow of liquid through the bottle. However, when it is desired to empty the bottle of its contents the stopper 2 is pushed inwardly to the position shown 95 in Fig. 1 of the drawing by pushing upon the upper head 6 of the bolt member 5, and when the bottle is reversed or turned upside down the liquid will readily flow through the aperture 3, as previously described. 100

What I claim is:

In a device of the class described, the combination with a bottle, of a cap on the neck of the bottle having a central discharge opening, a stopper movable lengthwise in 105 the neck of the bottle and having longitudinal passageways and a flexible disk valve centrally secured on the top of the stopper

and covering said longitudinal passageways
and said stopper having a short central pro-
jection, said stopper normally being ad-
jacent to the cap, and its projection closing
5 the discharge opening therein, and being
movable away from the cap by a tool pushed
through the discharge opening.

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

JOHN STEPHEN.

Witnesses:

TOBIAS HAGE,
SIGURD BERG.