

E. M. CALEF.
NON-REFILLABLE BOTTLE.
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1,017,204.

Patented Feb. 13, 1912.

Fig. 1.

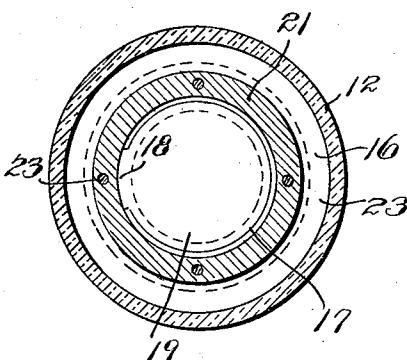
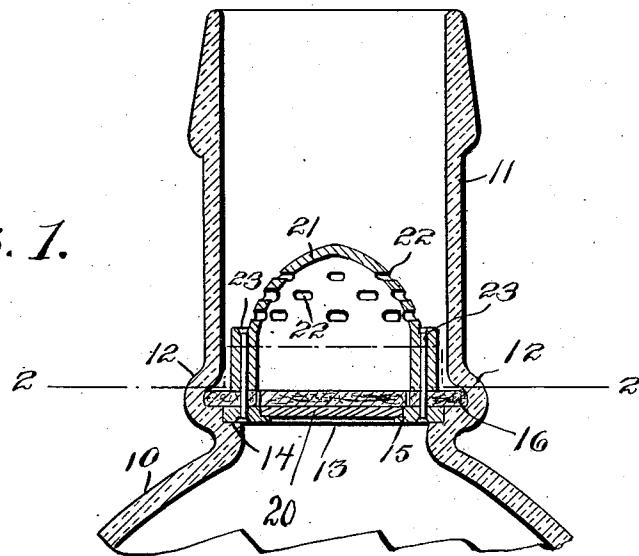


Fig. 2.

Witnesses
W. P. Woodson

Juana M. Fallin.

Inventor
E. M. Calef.

By *A. A. Tracy*, Attorney.

UNITED STATES PATENT OFFICE.

EDWIN M. CALEF, OF HILLSBORO, OREGON.

NON-REFILLABLE BOTTLE.

1,017,204.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWIN M. CALEF, citizen of the United States, residing at Hillsboro, in the county of Washington and State 5 of Oregon, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to improvements in non-refillable bottles, and has for one of its 10 objects to improve the construction and increase the efficiency and utility of devices of this character.

With this and other objects in view the invention consists in certain novel features of 15 construction as hereinafter shown and described and then specifically pointed out in the claim, and in the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a vertical sectional view of 20 the neck and a portion of the body of the bottle of the improved construction; Fig. 2 is a transverse section on the line 2—2 of Fig. 1.

Corresponding and like parts are referred 25 to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The improved device requires a special construction of the neck of the bottle and in 30 the drawings the body of the bottle is represented at 10 and the neck at 11, the neck being formed with an annular bulge or enlargement 12 and contracted slightly between the bulge and the body, as shown at 35 13. By this arrangement the contracted portion it will be noted is smaller than the interior of the neck 11 and an annular shoulder 14 provided between the neck 11 and the body of the bottle. The attachment 40 whereby the contents of the bottle is protected comprises an annular member 15 of metal, glass, porcelain, or other suitable material, and slightly smaller in its upper diameter than the neck portion of the bottle, 45 but larger than the contracted aperture 13 so that the member 15 may be located upon the shoulder 14, as shown in Fig. 1. Bearing upon the member 15 is a disk or plate 16 of rubber, leather, leatherized canvas, or 50 other suitable pliable material, the member 16 corresponding in diameter or slightly larger than the interior of the bulge 12. The central portion of the disk 16 is cut through, 55 preferably in nearly a complete circle, as illustrated at 17 in Fig. 2, leaving a portion 18 of the material at one side to form a

hinge, the cut out portion constituting a valve 19 which is slightly greater in diameter than the opening through the member 15 and is seated upon the latter when closed, 60 as illustrated in Fig. 1.

Bearing over the disk 16 is a cap 21 having a dome like upper portion provided with a plurality of apertures 22, the apertures being arranged horizontally to prevent the insertion of a wire from above to open the valve. The parts 15—16—21 are rigidly connected, 65 as for instance by rivets 23, or other suitable fastening devices. The member 21 may be formed of any suitable material, such as 70 metal, glass, porcelain, or the like, and corresponds substantially in diameter at its lower portion with the member 15, thus leaving a portion of the pliable member 16 projecting, as shown in Fig. 1. The united 75 parts 15—16—21 constitute an attachment which may be forced into the neck of the bottle until the member 15 rests upon the shoulder 14, the pliable member 16 yielding to the downward pressure applied to the attachment until the interior of the bulge 12 is 80 reached when the reaction of the member 16 will cause it to return to its former position and thus lock the attachment in the bottle.

The member 15 is provided with an annular shoulder in its upper face surrounding the opening therethrough, and bearing upon this shoulder is a combined weight and protector device 26 of metal or compound capable of resisting the action of the contents of 85 the bottle such as acids or the like, and which would otherwise injuriously affect the rubber or other pliable material of which the member 16 is constructed, the member 26 thus performing the twofold function of a 90 weight to cause the positive seating of the valve and likewise as a protector to the relatively soft material of the valve.

It will thus be obvious that a simply constructed attachment is produced which when 100 inserted into the bottle will effectually prevent the introduction of any liquid, but will at the same time permit the contents of the bottle to be freely discharged through the valve when the bottle is inverted.

Having thus described the invention what is claimed as new is:

A bottle having an annular inwardly directed bearing shoulder in its neck and provided with an annular inwardly opening 110 channel next to the shoulder, an annular rigid member corresponding substantially in

