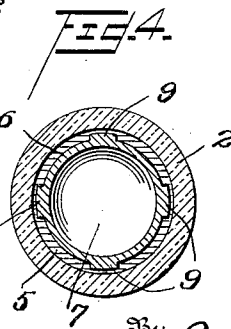
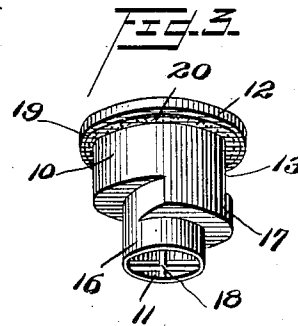
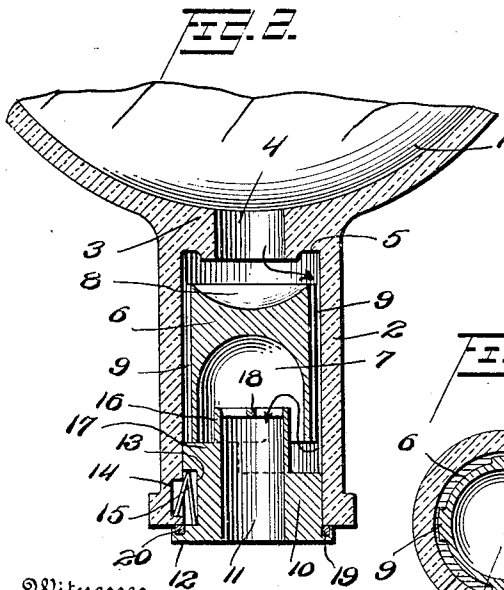
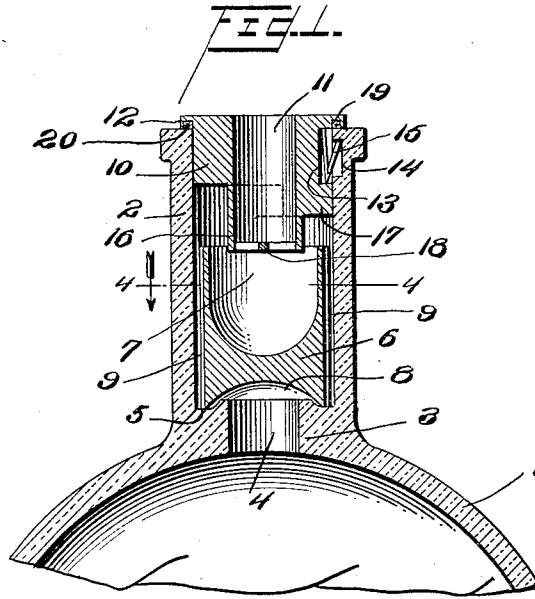


C. E. & H. P. TUCKER.
 NON-REFILLABLE BOTTLE.
 APPLICATION FILED NOV. 23, 1911.

1,042,622.

Patented Oct. 29, 1912.



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UNITED STATES PATENT OFFICE.

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VIRGINIA; SAID CLARENCE E. TUCKER ASSIGNOR TO SAID HOWARD P. TUCKER.

NON-REFILLABLE BOTTLE.

1,042,622.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed November 23, 1911. Serial No. 661,915.

To all whom it may concern:

Be it known that we, CLARENCE E. TUCKER and HOWARD P. TUCKER, citizens of the United States, residing at Cherrydale, in the county of Alexandria and State of Virginia, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

Our invention relates to improvements in non-refillable bottles, the object of the invention being to provide an improved bottle and closure therefor, which will be of simple inexpensive construction, which will permit the contents of the bottle to be readily poured out and which will prevent the bottle from being refilled.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings: Figure 1, is a view in longitudinal section illustrating our improvements in normal position. Fig. 2, is a similar view showing the bottle inverted. Fig. 3, is a perspective view of tubular plug 10, and Fig. 4, is a view in section on the line 4—4 of Fig. 1.

1, represents a bottle having an integral neck 2, and an internal enlargement 3 at the juncture of the bottle and the neck, said enlargement having a central opening 4 for the passage of liquid, and an annular groove 5 in the outer face of said enlargement forming a depressed valve seat. Against this seat 5, our improved valve 6 is normally positioned. The valve 6 is in the form of a cylindrical plug having a relatively large recess 7 in its outer end, and a relatively small recess 8 in its inner end. This recessed inner end provides a circular end on the valve to engage the seat 5, and longitudinal flanges or enlargements 9 are provided on the outer faces of the valve which spaces the body of the valve from the internal wall of the bottle neck, and allows the free passage of liquid around the outside of the valve when the latter is not upon its seat.

In the outer end of the bottle neck, a tubular plug 10 is located. This plug has a central passage 11 for liquid, and is made with an external annular flange 12 at its outer end to bear against the end of the bottle neck and limit the inward movement

of the tubular plug. This plug 10, adjacent its outer end, is of a diameter to snugly fit the bottle neck, and is provided in one side with a recess 13 which is adapted to be positioned opposite a recess 14 in the bottle neck.

In assembling the plug, a V-shaped spring 15 is positioned in the recess 13, and when the plug is forced into place, this V-shaped spring expands so that one member engages the upper wall of recess 14, while the other member of the spring engages the upper wall of recess 13, thereby securely holding the plug against removal. The inner end of the plug is cylindrical and is reduced in diameter as shown at 16, and between this reduced inner end 16, and the larger diameter of the plug 10, at one side of the plug, an integral enlargement 17 is provided. This enlargement 17 is curved concentric with the plug and extends partly around the plug and acts to limit the movement of the valve 6 when the bottle is inverted. The reduced end 16 normally projects into the recess 7, so that an instrument cannot be inserted through the hollow plug around the outside of the valve.

Fig. 1 shows the parts in normal position.

Fig. 2 shows the bottle inverted with the valve 6 supported against the enlargement 17. When in this position, the liquid from the bottle takes the course shown by the arrows, which is around the outside of the valve 6, thence up through the recess 7 and down through the hollow plug. When the bottle is inverted, the valve will by gravity assume its closed position, and no liquid can be poured into the bottle.

To prevent a suction implement or other tool from being inserted through the passage 11, cross bars 18 are located in the inner end of the passage as clearly shown. To prevent any possibility of leakage, the inner face of the flange 12 is made with a groove 19 to receive a circular ring or gasket 20, preferably of cork, which is pressed tightly against the end of the bottle neck when the parts are in closed position.

Various slight changes might be made in the general form and arrangement of parts described without departing from our invention, and hence we do not limit ourselves to the precise details set forth, but consider ourselves at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

5 The combination with a bottle, a cylindrical neck thereon, and an internal annular enlargement in the neck forming a passage for liquid, of a plug secured in the end of the neck and having a passage therethrough, a tubular extension on the inner end of said
10 plug forming a part of said passage, a cylindrical valve in said neck having a recess in its end, appreciably larger than the restricted end of the plug, longitudinal enlargements on the valve spacing it from
15 the bottle neck and guiding its longitudinal

movement, and said plug made with an integral shoulder at one side only, engaged by the end of the valve and limiting the movement of the valve when the bottle is inverted, said shoulder terminating short of the lower end of the extension, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CLARENCE ELMER TUCKER.
HOWARD PAYNE TUCKER.

Witnesses:

MILBURN J. DONOHUE,
JAMES A. DONOHUE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."