No. 748,042. PATENTED DEC. 29, 1903.

O. C. BERCHTOLD.

NON-REFILLABLE BOTTLE.

APPLICATION FILED MAR. 6, 1903.

NO MODEL.

FIG. 1.

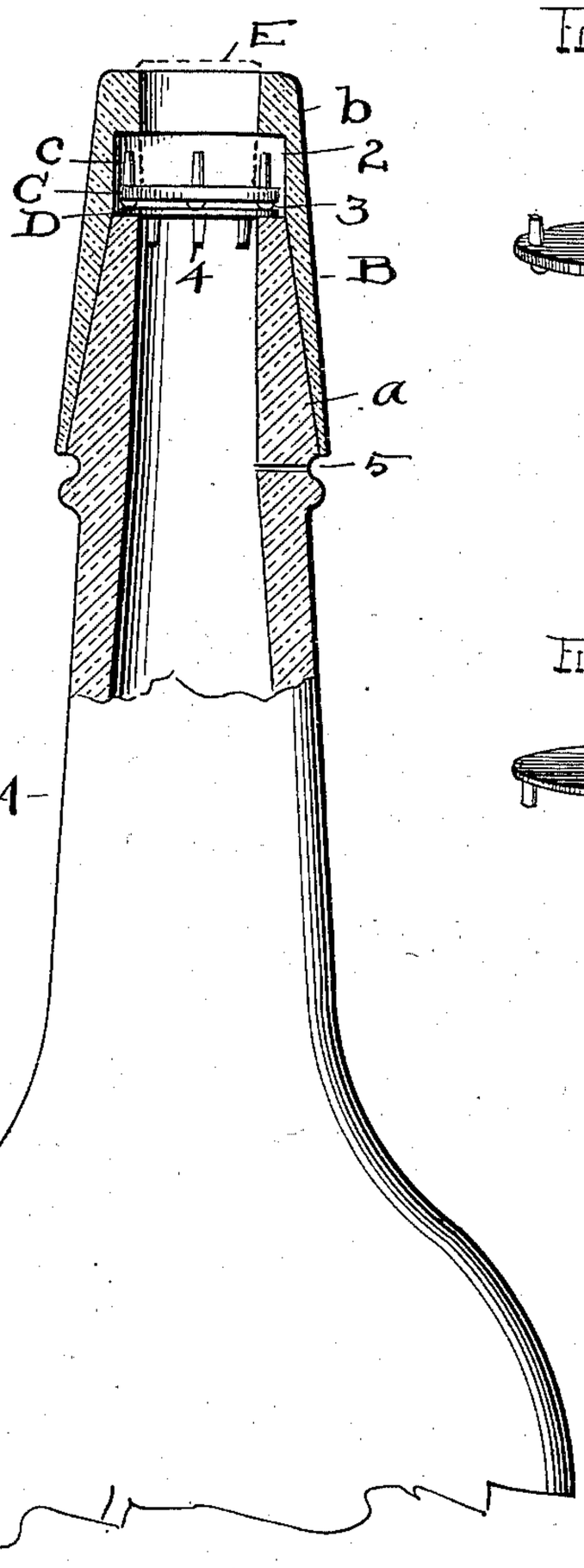


FIG. 3.

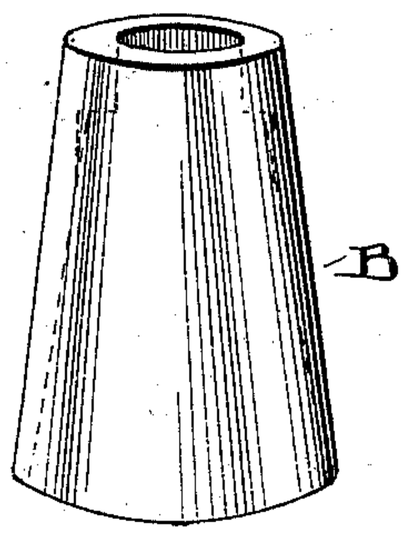


FIG. 2.

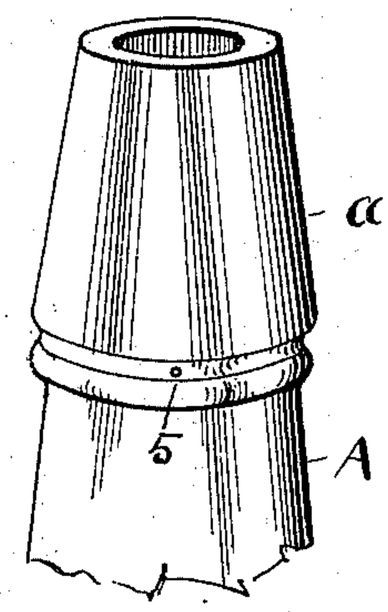


FIG. 4.

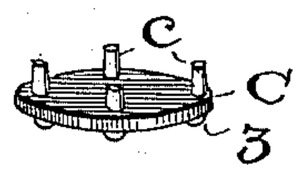


FIG. 5.


ATTEST.

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E. M. Fisher

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BY H. J. Fisher. ATTY

No. 748,042. Patented December 29, 1903.

# UNITED STATES PATENT OFFICE.

OTTO C. BERCHTOLD, OF LAKEWOOD, OHIO.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 748,042, dated December 29, 1903.

Application filed March 6, 1903. Serial No. 146,546. (No model.)

*To all whom it may concern:*

Be it known that I, OTTO C. BERCHTOLD, a citizen of the United States, residing at Lakewood, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in non-refillable bottles, substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation, partly in section vertically, of the upper portion of the bottle with my improved mechanism in working position thereon. Fig. 2 is a perspective elevation of the upper portion or neck of the bottle. Fig. 3 is a perspective elevation of the outside sleeve; and Figs. 4 and 5 are perspective elevations of the inner disks, as hereinafter fully described.

As shown, A represents a bottle of a common pattern having a head *a*, and B is a sleeve or outside head-covering adapted to fit over the head proper of the bottle and tapered to conform to the outline thereof, substantially as seen in cross-section, Fig. 1. The said sleeve B is made of glass and is comparatively slight or thin in cross-section, so that in a very true sense it is merely a shell where it passes over the head of the bottle and is formed with a supplemental head *b* of its own and for the bottle adapted to receive an ordinary cork for closing the bottle, and within this head and the head of the bottle itself a recess or chamber 2 is formed to receive the check mechanism, which prevents refilling. The sleeve B is permanently fastened upon head *a* by means of suitable glass-cement or its equivalent, which, in effect, makes the sleeve an integral portion with the bottle and inseparable therefrom.

The size of chamber or space 2 is designed to be just large enough to give requisite freedom in pouring out the bottle past the back-check devices, but which also is small enough with the parts therein to effectually prevent refilling of the bottle. To these ends I employ two disks C and D, placed together in said chamber. Disk C is preferably of glass and has several stop projections *c* on its top to engage against the bottom of head *b* of sleeve-head B and prevent the disk from moving in that direction beyond the limitations necessary to promote pouring out of the liquid, while on the bottom of this disk are a series of small lugs 3, which rest down upon disk D and fix a free space between. Said disk C is made of a size slightly less than the width of chamber 2, so as to leave a space about the same, through which the outflowing liquid may pass when the bottle is poured, and the said lugs 3 on the bottom of said disk prevent adhesion of the two disks together and prevent possible manipulation of the lower disk through or by means of the upper one. Otherwise and if said disks did adhere it would be possible to enter a stick or the like with adhesion on its end and by lifting the disks gradually fill the bottle, especially if the bottle were inclined to let out air at the same time. Disk D has downward projections or fingers 4 on its bottom, which serve as guides and confine it to an up-and-down movement, but which never entirely leave the head of the bottle. This disk is adapted to rest down flat and close upon the head of the bottle and, in effect, seals the same, and a cork E (dotted lines) closes the bottle. Disk is preferably of aluminium or some light substance which any kind of liquid will not effect and which will respond freely in operation. Now I have found that with the parts made and arranged as shown it is impossible to fill a bottle after it has been emptied; but I have also found that it is impossible to pour any liquid out of the bottle thus equipped when filled, and this brought me to the necessity of providing a vent for the bottle, which in this instance is a small orifice 5, placed at the base of the head *a*, through which I obtain a sufficient admission of air to promote a free pouring of the liquid; but the vent is good only for pouring out, and I cannot fill the bottle by any means known to me, and I have also found that there is no danger whatever of leakage when the bottle is filled, even if it be laid upon its side with the vent down or in any other relation, so that the vent will not endanger leakage from the bottle under any circumstances when the bottle is corked;

but if thought best it can be sealed for shipment.

It will be seen that this invention comprises a well-known style of bottle, and it may be adapted to other well-known styles as well, so that I can furnish the supplemental head B and check-disks C and D, and they can be placed on the bottle after it has been filled.

Both disks C and D are closed entirely across their surfaces and are of a size to have room about their edge for a free outflow of liquid. If lugs like 3 were on the top of the lower disk, they would serve the same purpose as the present lugs do, and ribs would answer as well. Projections or stops equivalent in function to projections *c* on disk C might be formed on the inside of sleeve-head B, in which case the said disk might be smooth over its top surface, and any suitable guide may be used on the bottom of disk D.

Parts C and D are referred to as "checks" or "check-disks," because they check or prevent filling of the bottle.

What I claim is—

1. A bottle having a vent-orifice in its neck and a cap B sleeved over the head of the bottle and provided with a chamber 2, in combination with two separate disks in said chamber one of which has projections separating it from the other, the lower disk provided with downward-centering projections and the upper disk having a series of short projections *c* about its edge, and the middle top portion of said upper disk being plain and smooth to prevent gripping the same through the mouth of said cap, substantially as described.

2. A non-refillable bottle having a vent-orifice in its neck, and a cap made in a separate piece fitted upon the head of said bottle, in combination with a pair of separate substantially flat disks supported one upon the other within said cap on the top of the bottle proper, said disks having stop and guide projections, respectively, on opposite sides, substantially as described.

3. A non-refillable bottle consisting of a bottle proper provided with a head open through the middle and a cap sleeved permanently thereon and provided with a chamber over said head, and means within said chamber to prevent refilling of the bottle consisting of two separate parts constructed to prevent adhering together, one of said parts having projections spacing it from the surface of the other part, substantially as described.

Witness my hand to the foregoing specification this 2d day of March, 1903.

OTTO C. BERCHTOLD.

Witnesses:
R. B. MOSER,
R. ZBORNIK.