W. G. NICHOLLS.

BOTTLE CAP.

APPLICATION FILED MAY 21, 1917.

1,304,193.

Patented May 20, 1919.

Fig. 1.

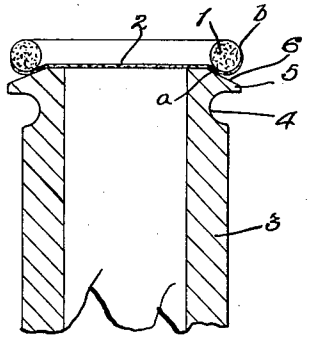


Fig. 2.

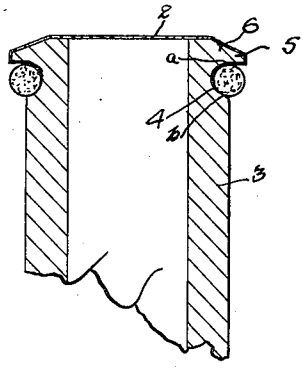


Fig. 4.

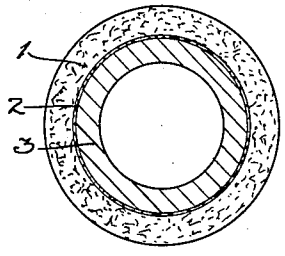
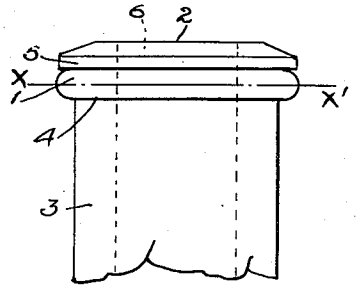


Fig. 3.



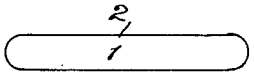


Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM GEORGE NICHOLLS, OF WINNIPEG, MANITOBA, CANADA.

BOTTLE-CAP.

1,304,193. Specification of Letters Patent. Patented May 20, 1919.

Application filed May 21, 1917. Serial No. 169,907.

To all whom it may concern:

Be it known that I, WILLIAM GEORGE NICHOLLS, of the city of Winnipeg, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Bottle-Caps, of which the following is the specification.

The invention relates to improvements in bottle caps and the object of the invention is to provide a removable bottle cap which can be manufactured at small cost and which can be readily applied on or removed from the bottle, the said cap being constructed so that when applied it entirely covers the end of the bottle and provides no lodging place for dust or dirt which can get into the bottle when the cap is being taken off.

With the above object in view the invention consists essentially in a cap formed from rubber and presenting a rubber ring which is spanned by a rubber cover piece, the parts being arranged and constructed as hereinafter more particularly described and later pointed out in the appended claims, reference being had to the accompanying drawing in which:—

Figure 1 represents the appliance in vertical section as it appears resting on the top of a bottle and before being finally closed down.

Fig. 2 represents the same after it has been closed down on to the bottle.

Fig. 3 represents a side view of the cap in the closed down position.

Fig. 4 represents a horizontal sectional view through the neck of the bottle and the cap, the section being taken in the plane denoted by the line X—X′ Fig. 3.

Fig. 5 represents a side view of the cap detached.

In the drawing like characters of reference indicate corresponding parts in the several figures.

The cap comprises a rubber ring 1 which is preferably circular in cross section. The ring carries a rubber cover piece 2 which entirely spans it and can be either formed integral with the ring or cemented to it, depending entirely on the method of manufacturing.

In the drawing I have shown the cover piece as cemented to the ring and in order to provide a good cementing surface the edges of the cover piece have been drawn approximately half way around the ring or say from the point *a* to the point *b*.

In the drawing I have shown the neck 3 of a bottle which has been fitted with a special upper end especially adapted for my cap. The neck presents, at the upper end, a circumscribing semi-circular groove 4 and is provided with an overhanging flange 5 which has the upper face thereof tapering as indicated at 6 to supply a smooth bearing surface.

In applying my cap on the bottle neck it is first placed on the end of the neck with the cover piece resting on the end of the neck and the ring up. One then catches the ring with his fingers and rolls it down until it enters the groove 4. In rolling down, the ring is naturally expanded to pass over the flange 5 and in expanding it stretches the rubber of the cover piece so that when the ring finally contracts into its original position within the groove the cover piece has been considerably stretched so that it lies tightly on the upper end of the bottle in which position it is held firmly by the ring in the groove.

In the closed position of the cap it is to be noticed that the whole end of the neck is inclosed. Accordingly, when the cap is removed, by rolling up the ring, there is no possibility of accumulated dust or dirt getting into the bottle.

While I have shown a special neck construction for this cap, still I wish it to be understood that this is not necessary as the cap can be applied on any of the well known styles of bottles which have an outstanding circumscribing top ridge forming a flange.

The rolling of the ring over the flange to a position beneath it is all that is required to completely cover the opening in the bottle and once the ring is rolled over any such flange it has no tendency to roll back so that the cap remains in the closed position.

What I claim as my invention is:—

1. A bottle-cap comprising a rubber ring and a rubber cover piece spanning the center of the ring and adapted to close the bottle opening, the rubber ring being normally of less diameter than the bottle neck but capable of being expanded with its center so as to be forced downwardly under a project-

ing shoulder of the bottle neck to hold the closure in place, substantially as described.

2. A bottle closure comprising a rubber ring of smaller diameter than the bottle neck and capable of being expanded to force it under a projection on a bottle neck and a film of rubber forming the sole closure means filling the space within the ring and allowing the expansion of the ring as it is forced under the shoulder of the bottle neck, the said film closing the bottle opening.

Signed at Winnipeg this 23 day of April 1916.

WILLIAM GEORGE NICHOLLS.

In the presence of—
GERALD S. ROXBURGH,
ROLAND FOSTER.