Oct. 16, 1928. 1,688,198

E. E. McGILL

BOTTLE AND CLOSURE.

Filed May 10, 1926

Fig. 1

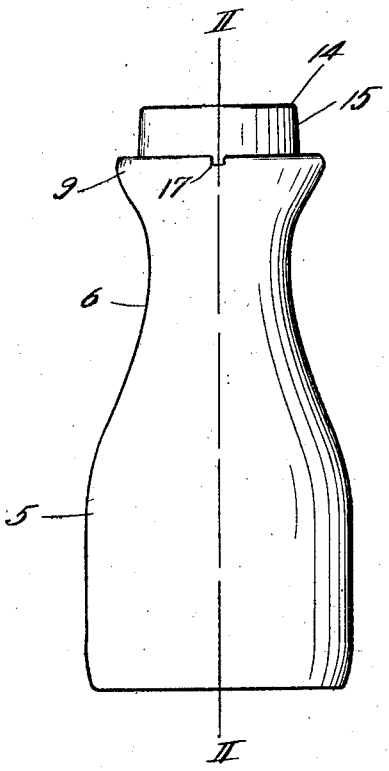
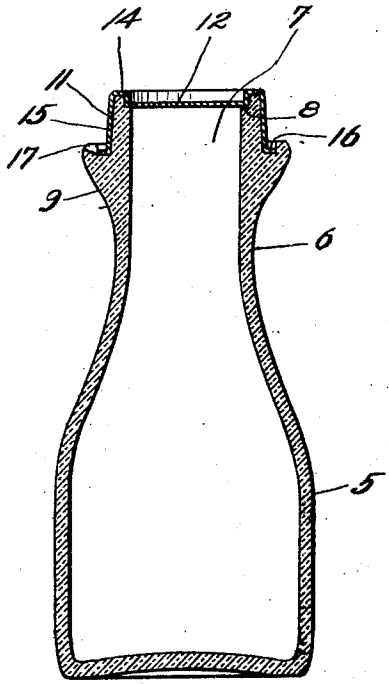


Fig. 2



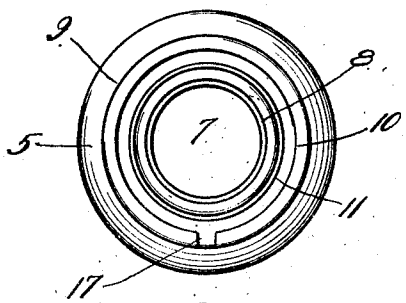


Fig. 3

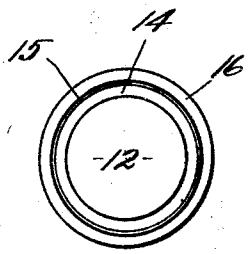


Fig. 4

Witness:

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UNITED STATES PATENT OFFICE.

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BOTTLE AND CLOSURE.

Application filed May 10, 1926. Serial No. 108,045.

The present invention relates to bottles and closures therefor, and aims to provide an improved sanitary closure construction, in which the mouth of the bottle is effectively sealed and the surrounding neck portion of the bottle is protected against contamination in the handling of the bottle.

In the embodiment of the invention in practice, I provide a bottle construction adapted to afford an exterior seat for the bottle cap or closure at some distance below the mouth of the bottle, and for cooperating with this improved type of bottle I provide a novel form of cap or closure element which is adapted to effect the usual sealing function directly at the mouth of the bottle, and also to effect a seal at the exterior of the bottle in conjunction with the exterior seat there provided, and at the same time protect this portion of the neck of the bottle, adjacent to its mouth, from direct contact in the handling of the same.

With this general object in view, I will now more fully describe the invention in detail, by reference to the accompanying drawing illustrating one form of construction which I have devised for embodying the same, after which those features and combinations deemed to be novel will be particularly set forth and claimed.

In the drawing—

Figure 1 is a view in side elevation, illustrating a bottle and closure construction embodying the present invention;

Figure 2 is a central vertical sectional view, taken on the line II—II of Figure 1;

Figure 3 is a plan view of the bottle, with its closure or cap member removed; and

Figure 4 is an inverted plan view of the cap or closure member.

Referring now to said drawing in detail, this shows an ordinary type of receptacle in the form of a bottle 5, such as used for bottling milk or the like, and which is formed with the neck portion 6 terminating in the mouth 7 surrounded by the usual annular seat or depression 8, against which is press fitted the usual form of fiber or cardboard cap (not shown) for sealing the bottle and its contents.

In the improved construction, I form the neck portion of the bottle with an annular external enlargement 9 at some distance below the mouth 7 of the bottle, in order to provide an external, shallow groove or depression 10 extending entirely around this enlarged portion 9 and facing upwardly toward the mouth of the bottle. The portion 11 of the neck of the bottle between the groove or depression 10 and the mouth is preferably tapered slightly, as represented in Figure 2.

For sealing the bottle as thus constructed, I provide a cap or closure member which can be manufactured from cardboard or fiber material, by simple stamping means, resulting in a central counter-sunk portion 12 which takes the place of the usual circular cap in common use, this portion 12 being surrounded by a beaded or rolled portion 14 adapted to embrace the margin of the mouth 7 of the bottle, while the central portion 12 has its outer margin fitted against the seat or depression 8, as shown in Figure 2. The beaded or rolled portion 14 of the cap member also carries an outer tapering portion 15 adapted to embrace the tapering portion 11 of the neck of the bottle between its mouth and the enlargement 9. This outer portion 15 of the closure member terminates in an outwardly projecting lip or flange 16 which is designed to fit snugly within the groove or depression 10 with which it effects a tight external seal entirely around the bottle.

The enlarged portion 9 is provided with a notch 17 communicating with the groove 10, to permit the insertion of a suitable pointed instrument for engagement with the margin or lip portion 16 of the closure member, in removing the same from the bottle.

The unsanitary character of the usual form of bottle, such as used for milk and the like, and the caps provided therefor, is well known and understood. The contents of the bottle seep out around the margin of the cap, forming little sumps that attract flies and other insects and resulting in a quite unsanitary condition and with no protection against the milk which has seeped out reentering the bottle after it has become thus contaminated. Nor is any protection at all afforded the neck portion of the bottle during the handling of the same before the contents are used.

In my improved construction, these objectionable features are overcome, and moreover new advantages are obtained with a view to providing an entirely safe and sanitary closure means. Not only is the mouth of the bottle as effectively sealed as in the usual construction, by means of the central portion 12 of my closure member, but the neck portion is both sealed and protected entirely from the seat or depression 8 to the

groove 10 in the enlarged portion 9 of the neck of the bottle. This safeguards against any of the contents of the bottle gradually seeping out as far as the edge or margin of the cap or closure. Hence, no messy condition is allowed to be created around the mouth or neck of the bottle, and the usual bait or attraction for flies and the like is eliminated. But, in addition to this feature, the main advantages of this improved form of construction are the safeguarding against the chance of impurities finding their way into the contents of the bottle, and the protection of the margin of the bottle adjacent to its mouth against contamination by direct contact with the hands of the person on its way to the consumer. That is to say, the exterior of the neck portion of the bottle between the mouth and the groove 10 is entirely protected by the outer portion 15 of the cap member, so that this is preserved in a perfectly sanitary and safe condition, an advantage of obvious importance when it is considered that it is common practice to simply remove the cap or closure member and drink the contents directly from the bottle, under which circumstances the need for cleanliness of the exterior portion of this part of the bottle and entirely around the same cannot be overemphasized.

It is apparent that not only may the improved cap or closure member be readily and cheaply manufactured, but the bottle itself with the modification thereof needed for adapting its use to the improved form of closure member may be manufactured as readily and economically as the form of bottle in present use. While I have illustrated and described what I regard as the preferred form of embodiment of the proposed improvements, I desire to reserve the right to make such changes and modifications as may fairly fall within the scope of the appended claim.

What I claim is:

A bottle having its mouth formed with an annular cap seat or depression, the neck of the bottle having an external enlargement spaced some distance below said mouth and formed with an annular groove, said neck being tapered between said enlargement and the mouth of the bottle, and a cap closure member having its central portion depressed or counter-sunk to fit against said cap seat or depression and its outer portion embracing the neck of the bottle between its mouth and said enlargement, the margin of said member being formed with a lip seated in said groove.

In witness whereof I hereunto affix my signature.

ELWIN E. McGILL.