

Sept. 4, 1928.

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R. N. STEWART

BOTTLE CAP

Filed Dec. 14, 1926

Fig. 1.

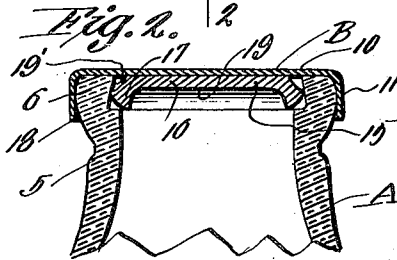
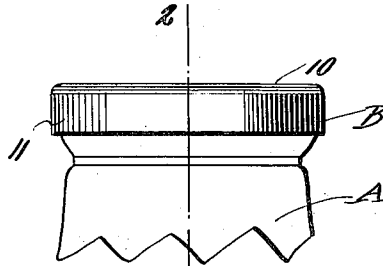
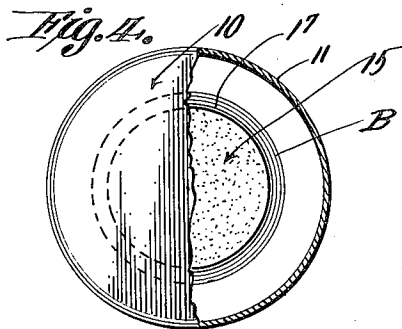
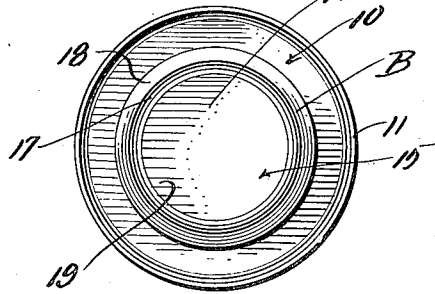


Fig. 3.



WITNESSES
Curry & Spring

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UNITED STATES PATENT OFFICE.

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BOTTLE CAP.

Application filed December 14, 1926. Serial No. 154,777.

This invention appertains to milk bottle caps of the sanitary type, and one of the primary objects of the invention is to provide a bottle cap including a body portion
5 molded of a low grade of material, such as wood pulp and the like, and a protecting skirt formed of cardboard or paper connected with the body for overlying the bead of the bottle, so as to prevent the settling of
10 dust or dirt on the pouring lip of the bottle and the entrance of foreign matter into the bottle.

Another salient object of the invention is the provision of a bottle cap including a
15 body molded from wood pulp or the like, having a novel sealing flange or lip which is adapted to be forced into the bottle neck on the cap, the flange forming an effective means for gripping the bottle neck and for
20 effectively sealing the bottle and for preventing the accidental displacement of the cap from the bottle.

A further object of the invention is the provision of a bottle cap including a molded
25 body portion having a novel locking flange which is of a slightly greater diameter than the smallest diameter of the bottle neck, the flange being rounded on its lower face so that the same will be permitted to spring up
30 when the cap is being forced in the bottle, the rounded surface acting to center the cap in the bottle irrespective of whether the neck is molded true or not.

A further object of the invention is to provide a bottle cap having a body constructed
35 from molded material, which is applied to the bottle neck in a plastic state, whereby the body will be formed to the neck or mouth of the bottle and thereby conform to the
40 exact shape thereof irrespective of the fact whether the bottle is molded true or not.

A further object of the invention is the provision of a molded bottle cap having a
45 locking flange provided with a gripping face for engaging the locking flange so as to prevent accidental displacement thereof from the neck.

A further object of the invention is the provision of a novel bottle cap for engaging
50 the bottle neck at three distinct points so as to form a triple seal, the cap being also formed so as to provide air spaces at different points so as to prevent the creeping of moisture around the neck.

55 A still further object of the invention is

to provide a bottle cap of the above character which can be manufactured and placed upon the market at a low cost.

With these and other objects in view, the invention consists in the novel construction,
60 arrangement and formation of parts, as will be hereinafter more specifically described, claimed and illustrated in the accompanying drawings, in which drawings

Figure 1 is a fragmentary side elevation
65 of a neck on a bottle showing my improved cap applied thereto,

Figure 2 is a section taken on the line
2—2 of Figure 1, showing the cap in position in the bottle neck,
70

Figure 3 is a bottom plan view of my improved cap, and

Figure 4 is a top plan view of the cap showing the protecting skirt partly broken
75 away and in section.

Referring to the drawings in detail, wherein particular reference characters designate corresponding parts throughout the several views, the letter A indicates a milk
80 bottle of the ordinary character and B the novel improved milk bottle cap therefor.

As stated, the milk bottle A is of the conventional form and includes the usual neck
5 having the pouring lip 6 and the interior annular seat 7 against which is normally fitted
85 the usual closure cap or disk.

The improved milk bottle cap comprises an upper cap portion 10 and an inner stopper
90 portion 15. The upper cap portion 10 is preferably formed from paper or cardboard and is of such a diameter as to completely cover the lip 6 and is provided with a depending annular skirt 11 for extending
95 over the bead and thus completely covering the bead. This prevents a settling of dust or dirt on the bead and assures the cleanliness of the bead for pouring substances.

The stopper portion 15 of the cap is preferably made from molded stock, such as
100 wood pulp, or the like, and includes a disc-shaped body 16 and an annular depending and laterally disposed flange or lip 17.

This lip or flange 17 forms, approximately, the most salient feature of the invention,
105 and it is to be noted that the outer edge of the lip is provided with a rounded face 18, while the upper portion of the lip provides a shoulder 19 for gripping contact with the inner face of the neck.

In accordance with this invention the 110

stopper portion 15 is secured to the cap portion 10 so that the same can be handled as a single unit and the body or stopper can be secured to the cap 10 by suitable adhesive if desired.

In use of the improved cap, the same is forced on the bottle by an automatic capping machine, and the lower inner edge of the stopper fits upon the seat 7 while the upper edge fits against the inner face of the neck as hereinbefore stated. Thus, the stopper itself forms a double seal with the bottle neck. The cap portion rests against the upper edge of the bead and forms the third seal. A space between the cap and the body or stopper forms an air seal so as to prevent the seeping of moisture past the cap.

In actual practice, the diameter of the flange of lip is greater than the narrowest diameter of the lip, so that the cap will have to be sprung in position. While the cap is being placed in position, the rounded face 18 of the flange or lip contacts with the inside diameter of the neck and the flange extends upwardly so as to slip into the neck. This rounded face also centers the body and permits the effective use thereof on molded bottles in which the necks are not true.

An important feature of the invention is the formation of the chamber 19 on the inner face of the stopper or body, which allows for expansion of the milk in the bottle. It is to be noted that the chamber 19 extends above the bead of the usual bottle cap and thus a greater space is allowed in the milk bottle than when an ordinary disk or cap is used therewith. This is important in a bottle of this character, and assures that the stopper will not be forced off of its position by the expansion of the milk.

The portion 10 of the milk bottle cap B provides a convenient place for printing owing to the flat character thereof and the relatively large area offered by said portion.

Changes in details may be made without departing from the spirit or the scope of the invention, but what I claim as new is:

1. A milk bottle closure comprising a body having a depending outwardly flared locking lip, the lower face of the lip being provided with a rounded surface for engaging the lower wall of the closure seat of the milk bottle, the upper edge of the lip ex-

tending beyond the rounded face and constituting a shoulder for engaging the side wall of the bottle closure seat, and a cap connected with the body extending beyond the periphery thereof having a depending annular skirt.

2. A closure for milk bottles comprising a molded body having a flat portion and a depending outwardly flared lip on the margin thereof, the lip and the flat portion defining an expansion chamber on the lower face of the body, the lip having its lower edge provided with a rounded face for engaging the lower wall of the closure seat of the bottle and a shoulder extending beyond the rounded face for engaging the side wall of the closure seat, and a cap connected with the body and extending beyond the periphery thereof and having a depending skirt.

3. In combination with a milk bottle having a neck provided with an annular bead and an internal seat, the bead gradually increasing in diameter toward its upper end, of a closure for the bottle comprising a body having a depending annular outwardly flared lip provided with a rounded face at its lower end engaging the lower face of said seat, the upper edge of said lip engaging the inner face of the bead in spaced relation to the point of engagement of the rounded face with the lower face of said seat defining a chamber therebetween in connection with said bottle, and a cap connected with the body and extending beyond the periphery thereof overhanging said bead and engaging the same in spaced relation to said lip, defining in connection therewith and the bottle, a second chamber.

4. A milk bottle closure comprising a body having a depending outwardly flared locking lip, the lower face of the lip being provided with a rounded surface for engaging the lower wall of the closure seat of the bottle, the upper edge of the lip extending beyond said rounded face constituting a shoulder for engaging the side wall of the bottle closure seat in spaced relation with the point of engagement of the rounded surface with the lower wall of the closure seat defining a chamber therebetween in connection with the bottle.

In testimony whereof I affix my signature.
ROY N. STEWART.