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G. E. WEST

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CAP FOR CONTAINERS

Filed Jan. 2, 1932

Fig. 1.

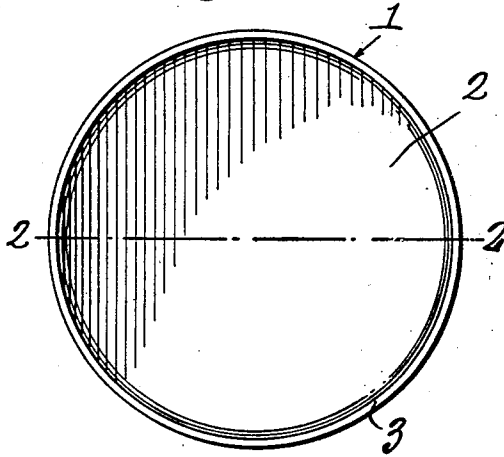


Fig. 2.

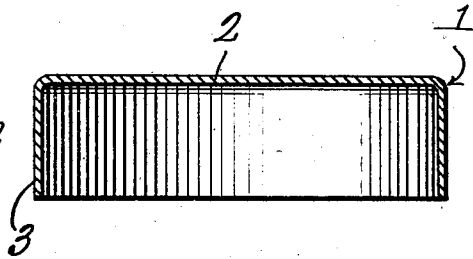


Fig. 3.

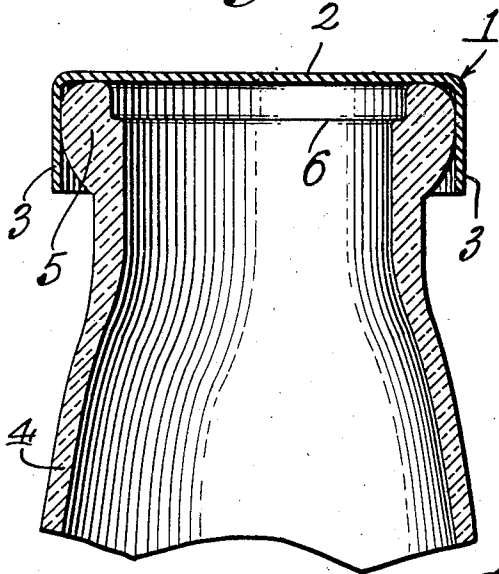
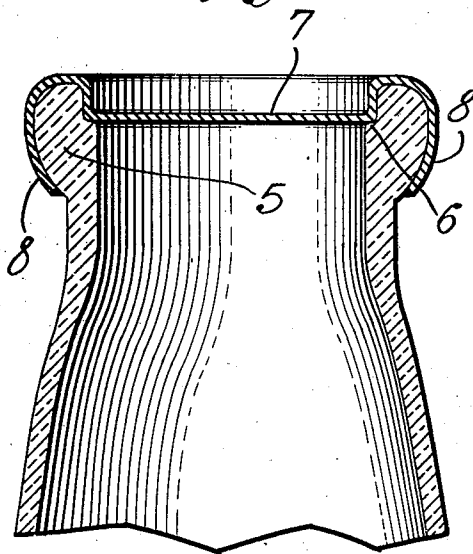


Fig. 4.



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UNITED STATES PATENT OFFICE

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CAP FOR CONTAINERS

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The device forming the subject matter of this application is a cap for containers, such, for example, as milk bottles, although the device may be used on containers of any desired sort.

The invention aims to provide a cap, so constructed that it will resist moisture and hold its place on the bottle without the use of cement, it being possible, nevertheless, to take off the cap by the application of a low degree of heat, the use of tools being unnecessary, and the construction of the cap being such that there is no danger that it will burst into flame, or explode.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawing:—

Fig. 1 shows in bottom plan, a cap constructed in accordance with the invention, and of the shape which it will assume before being applied to the container;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is a vertical section, showing the cap mounted on a part of a container, prior to fastening the cap to the container;

Fig. 4 is a section like Fig. 3, but showing the cap completely mounted on the container.

In carrying out the invention, there is provided a cap 1, made of a cellulose acetate compound, the constituent ingredients of which are such that it will neither burst into flame nor explode when flame or a high degree of heat is applied to it, it being necessary to exercise considerable care in order to get the cap to burn at all. A slight draft of air will extinguish the burning cap, and

it melts, rather than burns. In the respects stated, and in others, the cap differs from one made of celluloid. It can be softened by a low degree of heat, such as the temperature of water at or somewhat under the boiling point. The cap 1 is odorless and tasteless, and it tends to contract as it cools.

The top 2 of the cap 1 preferably is flat, and carries a cylindrical side wall 3.

The numeral 4 marks a container of any desired sort, such as a milk bottle, provided at its upper end with a circumscribing, outstanding bead 5, there being an internal shoulder 6 in the upper end of the container 4.

The cap 1, in the form shown in Figs. 1 and 2, is softened slightly, by the application of heat, and is inverted over the upper end of the container 4, as shown in Fig. 3. By means of a hot plunger (not shown) the top 2 is forced downwardly, to form a depressed, cup-like portion 7, fitting within the upper end of the container 4, and resting on the shoulder 6. The lower portion of the cylindrical wall 3 of the cap 1 is contracted by any suitable means, for instance, through the instrumentality of a heated clamp (not shown) and is formed into an inwardly extended flange 8, embracing the bead 5 closely, and extending underneath the bead, without, however, coming into contact with the straight neck portion of the container 4. While the depressed portion 7 is held in place by the plunger, the contraction of the wall 3, to form the flange 8, takes place, and the entire wall 3 is drawn downwardly, so that it conforms closely to the cross section of the bead 5, as shown in Fig. 3.

The cap 1 tends to contract, as it cools, and the cap acquires a firm grip on the bead 5, the cap retaining its place, securely, without the use of cement or adhesives of any kind, the container 4 being cool enough to cause the cap to contract and grip the bead 5, as aforesaid.

In order to remove the cap 1, no tools are required. It is necessary, merely, to apply a low degree of heat to the cap, whereupon it may be pulled off readily. The cap may

be softened sufficiently to enable it to be taken off, by holding the capped end of the container 4 under a hot water spigot, or in the steam from a tea kettle. Although the cap can be softened as aforesaid, to enable it to be removed from the container 4, the cap does not become sticky and disagreeable to handle, when softened.

Generally stated, the application discloses a method of applying the closure 1, composed solely of a cellulose acetate compound in thin sheet form, to a container, such as the milk bottle 4, the method comprising heating the outer surface of the closure and contracting the same, in a heated state, about the container, to bring the inner surface of the closure into direct contact with the container.

Having thus described the invention, what is claimed is:

A method of applying a closure, composed solely of a cellulose acetate compound in thin sheet form, to a container, which comprises heating the outer surface of the closure and contracting the same, in a heated state, about the container, to bring the inner surface of the closure into direct contact with the container.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

GEORGE E. WEST.

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