July 2, 1929. F. W. CHAUSSE 1,719,212

CLOSURE FOR MILK BOTTLES

Filed Dec. 28, 1926

FIG. 2

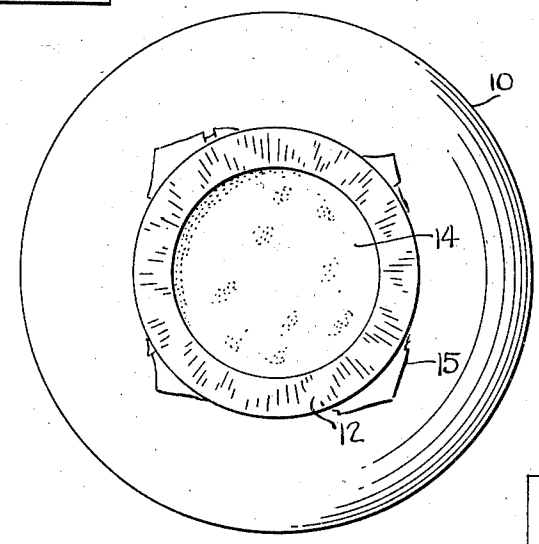


FIG. 3

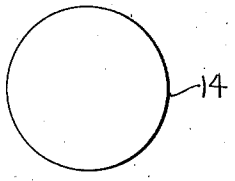


FIG. 4

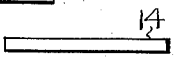


FIG. 5

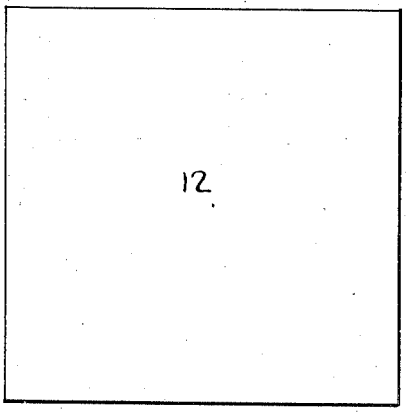


FIG. 6

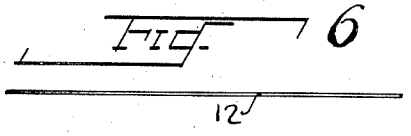
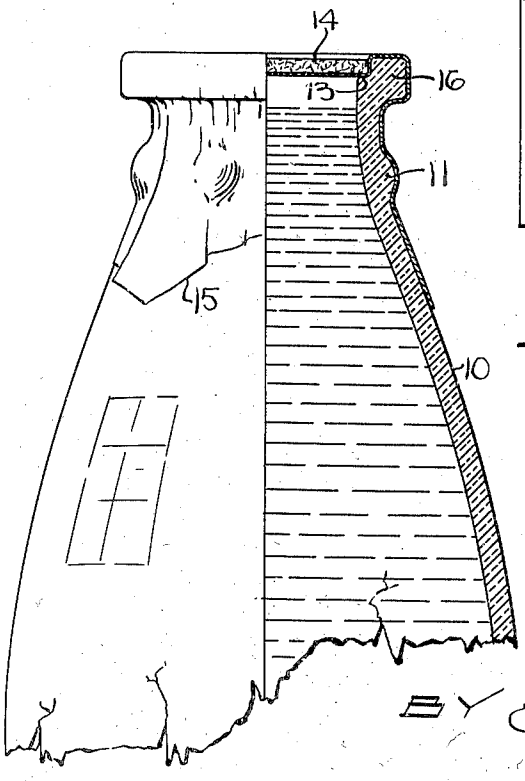


FIG. 1



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UNITED STATES PATENT OFFICE.

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CLOSURE FOR MILK BOTTLES.

Application filed December 28, 1926. Serial No. 157,441.

This invention relates generally to closures for bottles, and particularly to a special form of closure for bottles containing milk and cream.

The first object of this invention is to provide an exceedingly simple and efficient bottle closure which will effectively protect the entire mouth and neck of a bottle so that no portion of the bottle which can possibly come in contact with the liquid while being poured can touch the hands or any foreign substance before the bottle is opened.

The second object is the employment of aluminum foil or similar material for an outer casing for the bottle neck and for immediate contact with the milk or cream and to reinforce such material by means of the ordinary stiff paper disk.

The third object is to provide a cap which can be made to so closely adhere to the contour of the bottle that it will be impossible for insects or foreign matter of any kind to find their way up under the closure, and at the same time to form such a rigid union with the bottle that it can be picked up by its cap without any danger of becoming separated therefrom.

The fourth object is the employment of unmanufactured foil, or foil in roll form, which needs only be shortened to the approximate width of the roll in order to make it usable as a closure.

The fifth object is to provide a form of cap which can be removed without the aid of tools for the purpose of pouring off all or a portion of the contents of the bottle and that it can again be replaced as often as desired for the further protection of any contents which might remain in the bottle.

The sixth object is to render the production of such a cap a commercial possibility by making it extremely desirable from the consumer's standpoint, owing to its sanitary and convenient features, and from the dairyman's standpoint by increasing the popularity of his brand of milk without objectionably increasing the cost of vending same, and from the manufacturer's standpoint by allowing him to sell his capping material in a partially unmanufactured form, which manufacturing is completed by the dairyman himself.

These, and other objects, will become more apparent from the specification following as illustrated in the accompanying drawing, in which:

Figure 1 is a side elevation of the upper portion of a bottle showing the cap applied thereto and showing a portion thereof broken away in section to illustrate how closely the foil adheres to the glass and how it conforms to any irregularities in its contour. Figure 2 is a plan of Figure 1. Figure 3 is a plan of the paper disk employed as a cap. Figure 4 is a side elevation of Figure 3. Figure 5 is a plan of the sheet of foil required for one cap. Figure 6 is a side elevation of Figure 5.

Similar numbers of reference refer to similar parts throughout the several views.

Referring in detail to the drawing, in order to illustrate the application of this device and its advantages over existing devices intended for a similar purpose there is shown the upper portion of a milk bottle 10 which, in this instance, is provided with a number of outwardly projecting surfaces 11 which may vary in form from the dairyman's private brand to corrugations or other irregularities employed by the dairyman to distinguish his own bottles from those of competitors.

This cap consists of two elements, the first a sheet of foil 12 (preferably aluminum) which is placed over the top of a bottle and drawn into the recess 13 of the bottle neck by means of a paper disk 14. The portion of the foil which projects outside of the disk 14 is then bent outwardly and contracted gradually from the top down until all of the air is removed from between the foil and the glass.

Since the original piece of foil 12 is bounded by straight lines it follows that the edge 15 of the applied cap will be somewhat irregular. While this may add somewhat to the artistic appearance of the cap its primary function is to facilitate the removal of the cap from the bottle, and to avoid the waste of time and material which would be caused by the forming of a circular cap, which would provide a more uniform margin than above illustrated.

The greatest difficulty, however, would arise in the handling of the blanked circular sheets of foil since, in order for these to be used commercially and to insure sanitation, they should not be touched by hand.

It is a well known fact that various kinds of milk bottle caps have been employed in the past, all aiming, with varying degrees of success, to protect the contents of the bottle from contamination, which occurs principally during the pouring out of the contents. The most satisfactory type thus far evolved has been of paper previously manufac-

tured and applied to the milk bottles after filling, either by hand or machine, some of which require fastening means such as wire rings, cord, etc., to hold them in place.

Owing to the fact that paper will not retain the exact shape imparted to it by forming devices it is evident that the manufacture of paper covers must be prior to the application to the bottle. This carries with it the necessity of expanding such cover sufficiently to pass over the enlarged neck 16 of the milk bottle, and a consequent air space between the paper cap and the bottle when the cap is fully in place.

With the use of foil, however, a new condition arises, namely that the foil can be formed around the neck of the bottle itself, thereby securing not only the best appearance but also the ideal relation between the cap and its closure.

In order to appreciate the many advatages which naturally follow the employment of this cap, attention is drawn to a copending application, Serial Number 157,451, describing a machine adapted to apply same to milk bottles.

Another feature which this closure possesses which is not findable in ordinary paper closures is the fact that the edge 15 is below the point the fingers would touch when grasping the bottle by the neck 16.

In the case of the paper cap, for instance, which extends partly or even fully below the neck 16, it is necessary to keep this lower edge as high as possible which increases the liability of the fingers to come in contact with such lower edge and deposit any contaminating substance on this edge which would later be dragged over the outer side of the neck 16, producing the very effect it is aimed to avoid.

I claim:

1. A closure for milk bottles consisting of a sheet of metal foil, in combination with a relatively rigid disk cap outside of said foil adapted to draw a portion of said foil into the recess of the bottle neck.

2. A closure for milk bottles consisting of a paper disk forced into the recess of the mouth of a milk bottle; and a sheet of foil under said cap whose sides project beyond said cap and its projecting portion bends downwardly in close contact with the outer side of the bottle neck.

3. A closure for milk bottles consisting of a foil cap for the top and sides of a milk bottle neck the top of which cap extends downwardly into the bottle mouth recess and the surrounding portion of said foil cap forms a close contact with the exterior of the bottle in a manner to exclude all air from between the foil and glass; and a rigid disk member forced into the bottle neck recess above said foil.

4. A method of sealing milk bottles consisting of placing a sheet of ductile metal foil across the opening of the bottle, then placing a relatively stiff cap on top of said foil and forcing same into the aperture of the bottle mouth and then folding the extending edges of said foil downwardly around the sides of the bottle mouth, then bringing said extending edges into close contact with said bottle in a manner to exclude the air from between said bottle and foil by hydraulically compressing said foil toward said bottle beginning at the mouth thereof and gradually compressing said foil toward the bottom of the bottle.

5. A method of applying foil caps to milk bottles consisting of placing a sheet of foil over a filled bottle; then placing a stiff paper disk upon said foil directly over said bottle; then forcing said disk and the foil under same down into the recess of the bottle neck; and then bringing the projecting foil into close contact with the surface of the bottle top and neck.

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