Nov. 2, 1943. L. H. MERRILL 2,333,328

MILK BOTTLE SHIELD

Filed March 26, 1941

FIG_1_

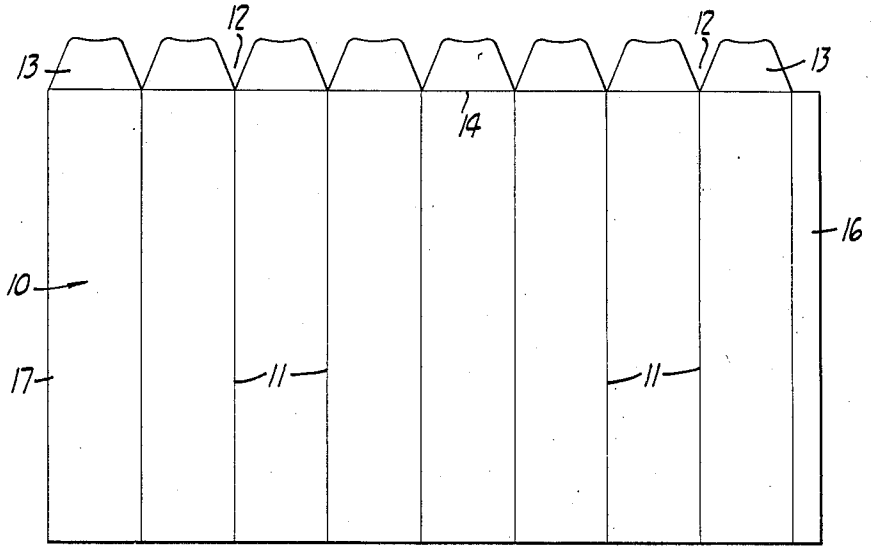


FIG_2_

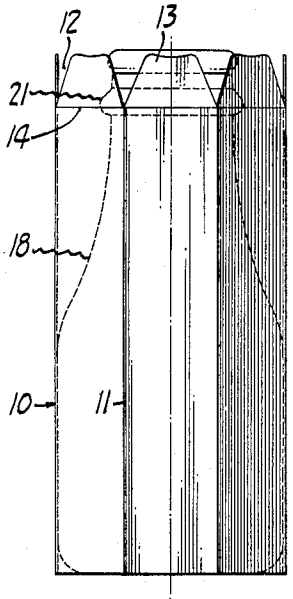
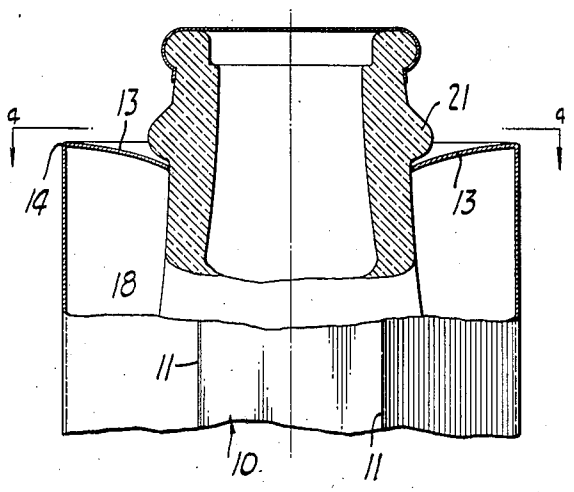


FIG_3_



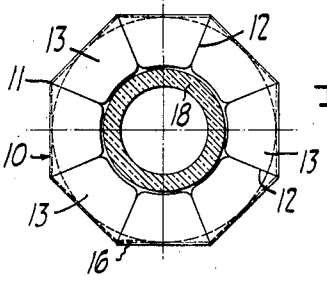


FIG_4_

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MILK BOTTLE SHIELD

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3 Claims. (Cl. 229—89)

This invention relates generally to devices for shielding or generally enclosing milk bottles.

In the sale and distribution of certain food products it has been known that exposure to light will accelerate deterioration of certain vitamins, particularly vitamin C. For this reason, it is common to package many vitamin products in opaque containers or cartons. Recently it has been proposed to market a milk having a fortified vitamin content. It has been found that if this product is distributed to the trade in ordinary milk bottles, the rate of deterioration of certain vitamins is accelerated by direct exposure to light. To endeavor to enclose such a product in conventional cardboard cartons would involve prohibitive expense due to the cost of the cartons, and the added expense of handling.

It is an object of the present invention to provide a relatively inexpensive type of shield or shroud which can be applied to milk bottles, and which will serve to intercept a great majority of the light rays which would otherwise be received by the contents of the bottle.

Another object of the invention is to provide a shield of the above character which can be readily applied and removed from the bottles.

Additional objects and features of the invention will appear from the following description in which the preferred embodiment has been set forth in detail in conjunction with the accompanying drawing.

Referring to the drawing:

Figure 1 is a plan view of a cardboard blank such as is employed for forming my shield;

Figure 2 is a side elevational view of the shield as applied to a milk bottle;

Figure 3 is an enlarged detail illustrating the manner in which the shield is retained upon the bottle;

Figure 4 is a plan view of the shield as applied to a bottle.

In forming my shield, I utilize a sheet of cardboard having sufficient inherent stiffness to be self supporting. It is desirable that this cardboard be waterproof, so that it will not soften to any serious extent upon wetting or exposure to various climatic conditions. A suitable material is a cardboard which has been impregnated with paraffine, and similar to the cardboard used for making butter cartons. A sheet 10 of this cardboard is formed into a blank, as shown in Figure 1. It is creased along a plurality of parallel lines 11, for subsequent bending, and its upper edge is notched as at 12, to provide the integral tabs 13. Another crease line 14 is provided along the base of the tabs for their subsequent bending.

The blank of Figure 1 is then bent about itself and the marginal edge 16 glued or otherwise attached to the other end edge 17. With the number of creased lines 11 provided in the blank as illustrated, in octagonal shield is formed as shown in Figure 2. The shield is loosely slipped over a milk bottle 18, and then the tabs 13 are bent inwardly and downwardly to the position substantially as shown in Figure 3. It will be noted in this figure that the inner ends of the tabs 13 terminate about the neck of the bottle immediately below the annular bead 21. Therefore, the shroud is now loosely retained upon the bottle, and the bottle can be lifted and handled in the customary fashion by grasping its upper end, without disturbing or displacing the shield. One may pour the contents from the bottle without taking the trouble to remove the shield, or the shield can be readily removed simply by forcing it either upwardly or downwardly from the bottle.

The shield described above does not form an absolute seal in protecting the contents of the bottle from light, but it does protect the bottle against a great majority of light rays to which the sides of the bottle would ordinarily be subjected. Note in this connection that the tabs 13 not only provide attachment to the bottle, but in addition they intercept light, and in effect form an opaque wall extending inwardly from the top of the shield.

Devices of this character can be manufactured and applied to bottles relatively inexpensively. Blanks as shown in Figure 1 can be formed as a part of a continuous strip of cardboard, which is cut automatically by a suitable machine into blanks of the desired length, and then formed into the octagonal shape shown in Figure 2.

I claim:

1. A device for generally enclosing a bottle having a neck of smaller diameter than the major portion of the bottle and having a bead about said neck, said device comprising a shield formed of a circumferentially continuous relatively stiff cardboard body portion for loosely fitting about and covering the major portion of said bottle, the upper end of said shield having a plurality of integral tabs bendable about the upper edge of said body portion to extend from said upper edge substantially directly inwardly and downwardly at a small angle to the plane of said edge to engage the inner ends of each of said tabs against said neck beneath said bead, whereby said tabs

retain said shield on said bottle and a portion of the neck of said bottle extends above the upper edge of the body portion of said shield.

2. A device for generally enclosing a bottle having a neck of smaller diameter than the major portion of the bottle and having a bead about said neck, said device comprising a shield formed of a circumferentially continuous cardboard body portion for loosely fitting about and covering the major portion of the bottle, said body portion having a plurality of score lines extending longitudinally thereof to provide a plurality of flat side panels, the upper end of said shield being notched at said score lines to provide a plurality of tapered integral tabs bendable about the upper edge of said body portion to extend from said upper edge substantially directly inwardly and downwardly at a small angle to the plane of said edge to engage the inner ends of each of said tabs against said neck beneath said bead, whereby said tabs retain said shield on said bottle and a portion of said neck of said bottle extends above the upper edge of said body portion of said shield.

3. The combination with a bottle having a neck of smaller diameter than the major portion of said body and having a bead about said neck, of a shield formed of a circumferentially continuous relatively stiff cardboard body portion for loosely fitting about and covering the major portion of the bottle, the upper end of said shield having a plurality of integral tabs bent about the upper edge of said body portion and extending from said upper edge substantially directly inwardly and downwardly at a small angle to the plane of said edge, the inner ends of each of said tabs engaging said neck beneath said bead, whereby said tabs retain said shield on said bottle when said bottle is lifted by said neck.

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