March 28, 1939. H. A. CARTER 2,151,896

BOTTLE CASE STRUCTURE

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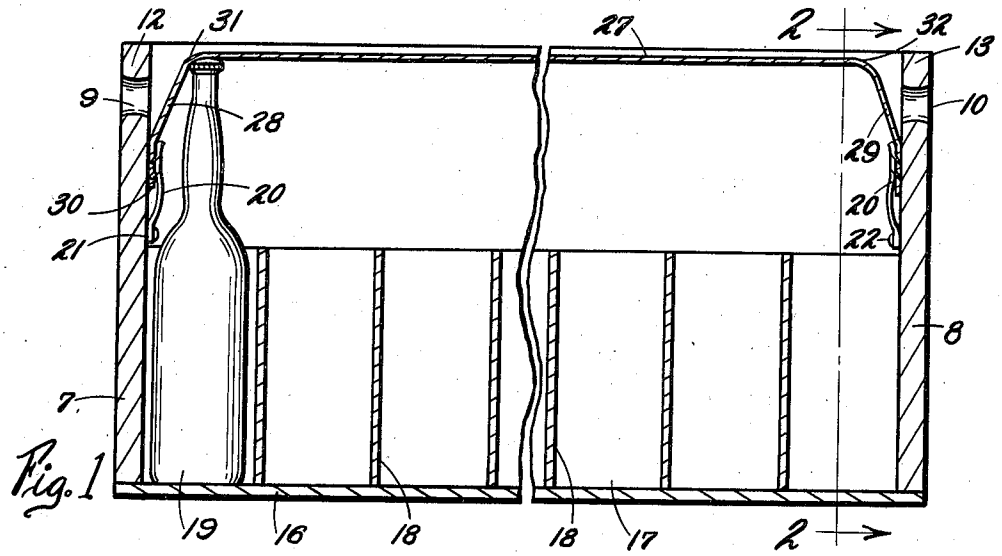


Fig. 1

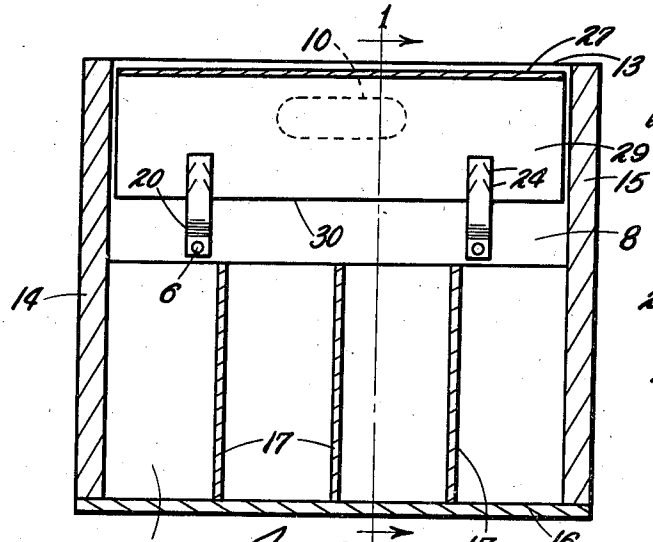


Fig. 2

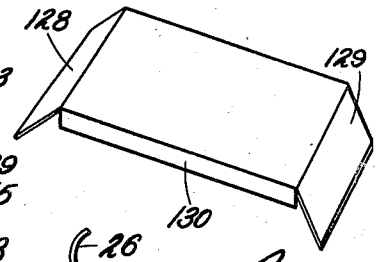


Fig. 6

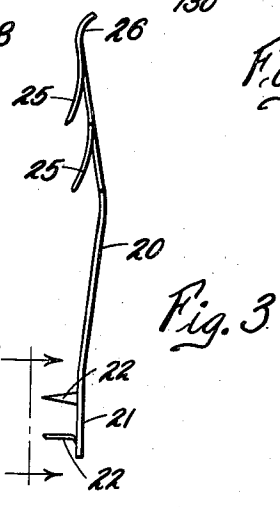


Fig. 3

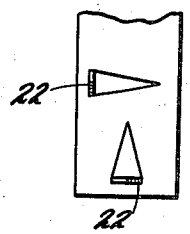


Fig. 4

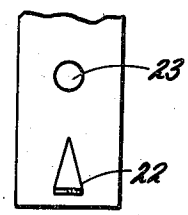


Fig. 5

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BOTTLE CASE STRUCTURE

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7 Claims. (Cl. 217—56)

The present application relates to a bottle case structure such as may be used in the packaging of bottle beer, soft drinks, and the like.

An object of the invention is to provide an improved and simplified cover structure for bottle cases.

Another object of the invention is to provide a cover structure of the character stated, which will preclude entry of light into the case and upon the contents thereof, while at the same time precluding theft or substitution of the bottles of the case, unless the cover is destroyed and the theft or substitution thus made evident.

A further object of the invention is to provide a cover structure which may be manufactured at a minimum cost of production, and which permits free access to the handholes of the case, while the cover is stretched taut across the tops of the bottles.

Another object is to provide a simple and inexpensive gripping or securing means adapted to freely receive portions of the cover to be gripped, while at the same time resisting removal of the cover to the extent of tearing it in the event of an attempt to remove the cover.

The foregoing and other objects are attained by the means described herein and disclosed in the accompanying drawing, in which:

Fig. 1 is a longitudinal cross section of a bottle case taken on line 1—1 of Fig. 2.

Fig. 2 is a cross sectional view taken on line 2—2 of Fig. 1.

Fig. 3 is a side view of a gripper or holding member for the cover sheet.

Fig. 4 is a fragmental plan view taken on line 4—4 of Fig. 3.

Fig. 5 is a view similar to Fig. 4, showing a modified form of gripper or holding means.

Fig. 6 is a perspective view of a modified form of cover sheet.

The present invention is directed to improvements upon existing bottle case structures embodying flexible covers adapted to be torn in the attempt to remove them from the case during transit or storage thereof. The primary objects of the present invention and improvements have been set forth, so that the following description may be clearly understood.

Referring to Figs. 1 and 2 which show a bottle case, the characters 7 and 8 indicate opposed end walls of the case having handholes 9 and 10 formed therein near the top edges 12 and 13 of the end walls. The side walls of the case are indicated by the characters 14 and 15, and the wall 16 provides a bottom for the case. The case preferably is divided into compartments by means of longitudinal interior walls 17 and transverse interior walls 18, the compartments being intended to receive individual bottles 19.

Interiorly of the case, and attached to the opposite end walls thereof, are located one or more grippers or holding elements 20, each of said elements being constituted of a base portion 21 adapted to abut an end wall and to be secured thereto. As disclosed in Figs. 1 and 2, the grippers or holding elements are nailed or screwed to the end walls as indicated at 6. In the modified form disclosed in Figs. 3 and 4, the base portion 21 has a series of extending prongs 22 punched from the material of the base portion 21 and adapted to be driven into the material of the case ends. In the second modification of Fig. 5, there is provided a punched-out prong 22 and an aperture 23, the prong to be driven into the end wall, and the aperture being adapted to receive a screw, nail, or other securing means. It is to be understood that various other modes of attaching the base portion 21 to the case wall may be employed if desired.

Each gripper or holding element preferably is constructed of spring metal, with slits 24 formed in one or both sides thereof to provide the extending sharpened prongs 25 which are adapted to permit ready insertion of a cover sheet between the holding element and the inner face of the end wall, but to penetrate the material of the cover sheet upon an attempt to withdraw the sheet from the space between the holding element and the wall. By preference, the upper end of each gripper or holding element is turned away from the end wall, as indicated at 26, to guide the ends of the cover sheet into holding relationship with the grippers.

The cover itself is preferably a rectangular sheet of flexible material such as cardboard, paper, fiber, or the like, and it comprises a rectangular top or horizontal portion 27 and opposed rectangular end flaps 28 and 29 adapted to depend from the top or horizontal portion so as to be subjected to the action of the grippers 20. It should be noted that the top or horizontal portion of the cover is considerably shorter than the distance between the end walls 7 and 8 of the case. More specifically, the length of said top or horizontal portion approximates the distance across the tops of the bottles, which distance includes the caps of those bottles which are adjacent to the opposite end walls. By thus reducing the length of the top or horizontal portion of the cover, there results an initial taut con-

dition of the top portion when the depending end flaps thereof are inserted behind the grippers or holding means 20, so that the cover may not be lifted or arched at its middle portion sufficiently to permit removal or substitution of bottles of the case without tearing the cover.

Attention is directed to the fact that each of the depending end flaps 28 and 29 of the cover is substantially rectangular, and has a straight terminal edge 30 adapted to contact the case ends along a straight line below the handholes, from one side wall of the case to the other. The effect of this construction is to exclude the entry of light into the case and upon the contents thereof, it being well known that light is injurious to the various types of beverages. It is important to note that the shortened top or horizontal portion 27 enables the depending flaps 28 and 29 to reach the grippers without covering the handholes 9 and 10, so that free access of the handholes is provided for. This construction also effects a saving of cover material, and as the entire cover sheet may be made rectangular, the cover sheet may be manufactured without waste and at a minimum cost of production. Although the handholes are not closed or covered by the depending flaps, a light seal is effected by means of a substantially straight line contact of the terminal ends 30 of the flaps against the inner faces of their respective case ends, at a location below the handholes. The depending flaps 28 and 29 may be definitely distinguished from the top or horizontal portion of the cover sheet by means of transverse score lines 31 and 32, if desired.

The construction herein disclosed provides for a decided inclination of the end flaps 28 and 29 from the tops of the endmost bottles down to the location of the grippers, so that the handholes are readily accessible and with the further advantage that, in such positions, the flaps will not yield inwardly toward the bottles when the top portion 27 of the cover is arched in the attempt to remove or replace bottles of the case.

Fig. 6 discloses a modified form of cover having end flaps 128 and 129 corresponding to the flaps 28 and 29, respectively, of Fig. 1, and in addition, side flaps 130 adapted to abut the side walls of the case interiorly thereof. As the cover of Fig. 6 is not substantially rectangular, it is somewhat more expensive to manufacture than is the cover disclosed in Figs. 1 and 2. The cover of Fig. 6, however, may readily be substituted for the cover of Figs. 1 and 2, if desired.

What is claimed is:

1. The combination of a bottle case comprising end walls having handholes therein located below the level of the tops of bottles placed upright within the case, a sheet-like cover comprising a horizontal top portion of a length considerably less than the distance between the end walls of the case and adapted to overlie the tops of bottles therein, and flaps depending from opposite ends of said horizontal top portion to substantially a line-contact relationship with the end walls of the case at a location below the handholes, and means for securing the flaps within the case.

2. The combination of a bottle case comprising end walls having handholes therein located below the level of the tops of bottles placed upright within the case, a sheet-like cover comprising a horizontal top portion of length considerably less than the length of the case but approximating the length of an imaginary straight line drawn longitudinally of the case and limited to include the tops of the endmost bottles of a row of bottles extending lengthwise of the case, flaps at opposite ends of the horizontal top portion of the cover, and depending therefrom at a location close to said endmost bottle tops, to meet the case ends at an angle and along a line of contact below the handholes, whereby the handholes are left uncovered by the flaps, and means for securing the flaps within the case

3. The combination of a bottle case comprising end walls having handholes therein located below the level of the tops of bottles placed upright within the case, a flexible sheet-like cover comprising a pair of end flaps, and an intermediate horizontal top portion of a length considerably shorter than the space between the case ends, but approximating the length of an imaginary straight line just sufficient to span the tops of all bottles in a row extending lengthwise of the case, said flaps at the opposite ends of the foreshortened top portion having terminal edges, and means for fixing said edges relative to the adjacent end walls of the case at a location below the handholes thereof, whereby the flaps are maintained inclined toward the tops of the aforesaid endmost bottles so as to eliminate such slack in the cover as would enable arching the top portion sufficiently to permit removal or substitution of bottles in the case.

4. The combination of a bottle case comprising end walls extending above the tops of bottles placed upright within the case, a flexible sheet-like cover comprising a horizontal top portion of a length considerably less than the distance between the end walls of the case, but approximating in length the length of an imaginary straight line drawn through the tops of all bottles in a row extending lengthwise of the case and limited in length to the distance across the tops of all the bottles in said row, and flaps at opposite ends of the foreshortened top portion and including terminal edges fixed relative to the adjacent end walls at a location considerably below the level of the bottle tops, whereby the flaps are maintained inclined toward the tops of the aforesaid endmost bottles so as to eliminate such slack in the cover as would enable arching the top portion sufficiently to permit removal or substitution of bottles in the case while the cover is in position thereover.

5. The combination of a bottle case comprising end walls having handholes therein located below the level of the tops of bottles placed upright within the case, a destructible sheet-like cover comprising a horizontal top portion of a length considerably less than the distance between the end walls of the case and adapted to overlie the tops of bottles therein, substantially rectangular flaps on the foreshortened top portion of the cover, said flaps being extended downwardly and inclined toward the adjacent end walls of the case so that the flaps as well as the top portion embrace the tops of the endmost bottles of the case, thereby to obviate slack in the length of the cover, and means within the case for maintaining the terminal ends of the flaps in contacting relationship with the end walls at a location below the handholes.

6. The combination of a case comprising end walls and containing rows of small-mouthed bottles placed upright within the case, a sheet-like cover comprising a horizontal top portion of length considerably less than the distance between the end walls, said length approximating

the length of an imaginary straight line drawn longitudinally of the case and limited to spanning of the tops of the endmost bottles of a row of bottles extending from one end wall to the other, flaps at opposite ends of the foreshortened horizontal top portion of the cover and depending from said endmost bottle tops to meet the case ends at an angle below the level of the bottle tops, and means for securing the flaps within the case.

7. The combination of a case comprising end walls and containing rows of small-mouthed containers placed upright within the case, a sheet-like cover comprising a horizontal top portion of length considerably less than the distance between the end walls, said length approximating the length of an imaginary straight line drawn longitudinally of the case and limited to spanning of the tops of the endmost containers of a row of containers extending from one end wall to the other, flaps at opposite ends of the foreshortened horizontal top portion of the cover and depending from said endmost container tops to meet the case ends at an angle below the level of the container tops, and means for securing the flaps within the case.

HERBERT A. CARTER.