PACKAGE FOR CAPPED ARTICLES

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Fig. 10.

Fig. 11.

Fig. 12.

Fig. 13.

Fig. 14.

Fig. 15.

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PACKAGE FOR CAPPED ARTICLES

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My invention relates to cartons or containers in which sales units of groups of articles such as cans or bottles may be packaged for handling, storage, display, and merchandising, and for convenient transportation by the purchaser from the store to his home.

An object of my invention is the provision of a carton or container for a sales unit of cans or bottles which can be furnished to the manufacturer of the product in the form of a completely made article, requiring only a simple erecting operation and top closure operation after filling.

It is an object of my invention to provide a structure for the purpose described which will be complete as manufactured with respect to all body walls and a bottom, so that a top closing operation is all that is required after filling.

It is an object of my invention to provide a structure of the class described in which the contents are securely locked irrespective of the position of the package, which can be turned upside-down without loss of the articles.

It is an object of my invention to provide a structure in which portions of the articles are visible after the closure of the package. This is a particular importance in connection with bottles or cans which are closed by caps, inasmuch as different taxes apply to beverages in different states, and appropriate indicia are ordinarily printed on the caps or closures of the cans or bottles. As a consequence, an object of the invention is the provision of a package in which, despite complete closure and locking, the caps affixed to the cans or bottles will be visible.

It is an object of my invention to provide a structure having the advantages set forth above, which nevertheless will be capable of being stacked either for storage or for display purposes.

It is an object of my invention to provide a package of the class described which provides adequate surfaces for attractive printing. In this connection it is an object of my invention also to provide a package not only of unusual but of neat and attractive appearance.

It is an object of my invention to provide a package in which top closure elements coat in a locking fashion with the individual units of can or bottle form to be placed therein.

These and other objects of my invention which will be described hereafter will be apparent to one skilled in the art upon reading these specifications, I accomplish by that structure and arrangement of parts of which I shall now describe certain exemplary embodiments. Reference is made to the accompanying drawings wherein:

Figure 1 is a plan view of the blank for one form of my package, namely a package for disposable beverage cans.

Figure 2 is a plan view of the package in folded and glued condition.

Figure 3 is a vertical transverse section of the collapsed package taken along the section line 3—3 of Figure 2.

Figure 4 is a similar transverse section taken through the erected package.

Figure 5 is a similar section taken through the package as filled with its contents.

Figure 6 is a top plan view of the filled package showing an initial closure operation.

Figure 7 is a side elevation of the filled package in partially closed condition.

Figure 8 is a top plan view of the fully closed package.

Figure 9 is a partial vertical sectional view of the filled and closed package.

Figure 10 is a plan view of the blank for a modified form of my invention.

Figure 11 is a plan view showing the completely formed, folded and glued blank in collapsed condition.

Figure 12 is a top plan view of the closed package with portions broken away.

Figure 13 is a side elevation of the filled and closed package.

Figure 14 is a transverse vertical sectional view of the package of the second embodiment.

Figure 15 is a partial transverse sectional view of the first form of package, in use for disposable bottles, and showing the employment of partition elements.

In Figure 1, wherein solid lines indicate lines of cut and dot-dash lines, lines of score, I have illustrated the blank for one exemplary form of my invention. The blank may be made of paperboard of suitable weight, which may be printed as desired. The blank forming operations are, as usual, carried on conventional cutting and scoring presses.

The blank is configured to form a side wall 1, a bottom wall 2, and a side wall 4 articulated together in the order named. The bottom wall has a median score line 5. Articulated to the ends of the side wall elements 1 and 4 are partial end wall elements 6, 7, 8 and 9. One pair of these elements, such as the elements 6 and 7, is provided with glue lips 10 and 11 as shown. Partial end wall closure flaps 12, 13, 15 and 16 are articulated to the tops of the partial end wall elements, and a pair of these flaps also, such as the flaps 12 and 13, is provided with glue lips 17 and 18. Top closure elements 19 and 20 are articulated respectively to the outer edges of the side wall elements 1 and 4.

The bottom panel 2 will be so dimensioned as to underlie a group of bottles or sales unit of the articles to be placed in the package, such as, for example, a group of six beverage cans 21. The depth of the side and end walls of my structure may be made to be the same as the height of the articles 21, but preferably as shown in several figures hereof, the depth of the side and end walls is made less than the total height of the containers. In the case of cans having upwardly tapering top portions, it is my preferred practice to terminate the sides and end walls at the height of the shoulders of the containers, and in the case of bottles, as shown in Figure 15, at a height roughly approximating the midsection of the shoulder portion.

As a consequence, portions of the side and end wall closure flaps will roughly follow the contour of the tapered upper portions of the containers or the shoulders of the bottles. It is my purpose to interlock the closure flaps with the containers in order to supply a package in which the container caps are visible even though the package is closed, and in order to obtain a package in which the closure elements are locked with the articles themselves so that the package may be handled in any position without loss of its contents.

To this end I provide the partial end wall flap elements 12, 13, 15 and 16 with cut-outs 22, 23, 24 and 25 to engage the necks of bottles or cans; and I provide the side wall flaps 19 and 20 with perforations 26 and 27 of a size to go over the necks of the cans or bottles, but of a diameter somewhat smaller than the diameter of the caps thereof. In order to permit the caps to be forced through these perforations, I provide them with slits indicated at 28 and 29.

The blank of Figure 1 is simply and rapidly formed up and glued on standard carton folding and gluing machines, which either may be of the right-angle type, or of that type having sections in which elements are provided for making folds transverse the movement of the blanks. In forming up the collapsed structure, the blank is folded along median score line 5 of the bottom panel 2. Glue is applied as indicated in the areas 30 and 31 to the glue flap portions 10, 17 and 11, 18. Whereupon these portions are folded over onto the opposite partial side wall members 8 and 9 and their partial end wall flap elements 15 and 16. This provides the
This structure is erected as before described; but when it is filled with the cans 21, by reason of the foreshortened length of the side and end wall members, and the provision of the connecting elements 34, 35, 42 and 43, the package in horizontal cross-section assumes an octagonal configuration best illustrated in Figure 12. The wall portions of said band, an assembly of articles supported on said bottom element in parallel rows and surrounded by said closed band, the end portions of said said bottom element being collapsible along median score lines, flaps elements articulated to the upper edges of the end wall portions of said band, said flaps elements being medially scored along score lines constituting prolongations of the score lines in the end wall portions of said band and provided with recesses engaging beneath the caps of said endmost articles, said assembly, and top closure flaps articulated to the upper edges of the side wall portions of said band, said top closure flaps being folded inwardly over said first named closure flaps, annular perforations in said top closure flaps engaging over the caps of the articles in an adjacent row, the free edges of said last-named closure flaps engaging beneath the caps of articles in a non-adjacent row.

2. In a package for an assembly of capped articles, a collapsible carrier structure formed from a paperboard blank cut, scored and adhesively joined to form a band portion defining the side and end walls of the carrier structure, a bottom element contiguous to the lower edges of the side wall portions of said band, an assembly of articles supported on said bottom element in parallel rows and surrounded by said closed band, the end portions of said said bottom element being collapsible along median score lines, flaps elements articulated to the upper edges of the end wall portions of said band, said flaps elements being medially scored along score lines constituting prolongations of the score lines in the end wall portions of said band and provided with recesses engaging beneath the caps of said endmost articles, said assembly, and top closure flaps articulated to the upper edges of the side wall portions of said band, said top closure flaps being folded inwardly over said first named closure flaps, annular perforations in said top closure flaps engaging over the caps of the articles in an adjacent row, the free edges of said last-named closure flaps engaging beneath the caps of articles in a non-adjacent row.

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