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PAPER CARTON WITH HANDLE

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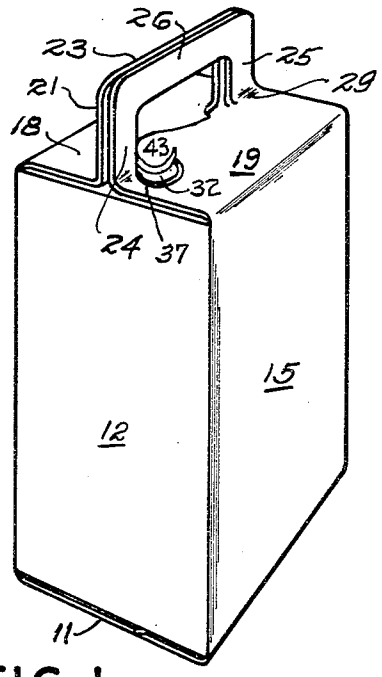
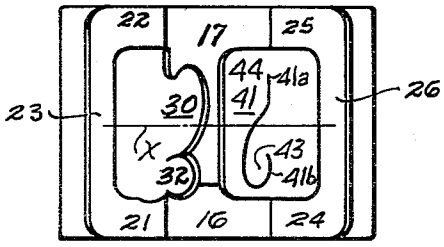


FIG. 1.

FIG. 3.



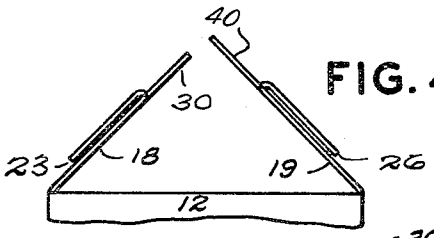


FIG. 4.

FIG. 5.

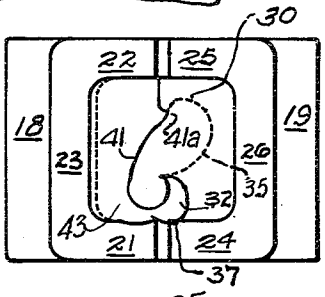


FIG. 2.

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PAPER CARTON WITH HANDLE

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5 Claims. (Cl. 229—52)

The invention relates to cartons of paper cardboard or the like such as are commonly used for packaging ice cream and other merchandise and consist of a flat blank with bottom, side and top portions foldable relative to each other to complete the carton.

One form of such cartons includes extensions on top flaps of the carton extending normally thereto and forming handles by which the carton may be conveniently carried. The present invention relates particularly to such a carton in which the handle-forming portions are juxtaposed and the additional flaps are provided with tabs for engaging each other and at least some of which engage the handle to hold the carton closed. Such cartons as previously used are likely to have the closing flaps separate from each other when the handles are subjected to the weight of the loaded carton thus forming an unsightly and unsecure gap between the carton flaps and possibly exposing or permitting escape of the contents.

In the accompanying drawings illustrating a selected embodiment of the invention:

Figure 1 is a perspective of a set-up carton embodying the invention.

Figure 2 is a top view of an open carton with the top flaps extending outwardly from the merchandise-containing body of the carton.

Figure 3 is a the top view of the carton just prior to its completely closed position shown in Figure 1.

Figure 4 is a side view of the upper portion of the carton as shown in Figure 3.

Figure 5 is a top view of the carton completely closed but with the handles flat against the top flaps of the carton.

The carton includes overlapping bottom forming flaps **11**, front and rear walls **12, 13** and side walls **14, 15**. Flaps **16, 17, 18, 19** project from the upper ends of walls **12, 13, 14** and **15** respectively and are folded over in the usual manner to form the top wall of the carton. Flaps **16** and **17** are as wide as walls **14, 15** and overlap each other between front and rear walls **12, 13**. Each of flaps **18, 19** includes a body portion extending from the corresponding side wall **14, 15** about half of the maximum width of flaps **16, 17** and flap **18** terminates in an extension of U shape having legs **21, 22** and a cross bar **23** at the outer ends of the legs. Flap **19** has a similar extension with legs **24, 25** and a cross bar **26** at their outer ends. The extensions are bendable about fold lines **28, 29** to the positions shown in Figure 1 in which they are normal to the flat body portions and form handles for the closed carton.

The above description is of conventional carton structure. The present carton includes novel securing means for holding the top flaps **18, 19** interengaged. For this purpose flap **18** has a part P cut away leaving a major tab **30** and a smaller tab **32** projecting from the body of the flap transversely of a straight line between the inner ends of legs **21, 22**. The adjacent portions of tabs **30, 32** are defined by a common short curved slit **33** extending inwardly from the outer end of the tab. The opposite sides of tabs **30, 32** bulge transversely of the flap at **35, 37** respectively. The projecting portion **40** of flap **19** has a closed end slit **41**, in addition to the handle-forming slit **42**, extending between but spaced from legs **24, 25**. One end of the slit is reentrant and forms a short lateral tab **43**.

When the carton is to be closed, flaps **16** and **17** are first folded over the open top of the carton and then flaps **18, 19** are brought to the position shown in Figure 4 with their handles folded back over the top faces of the flaps. Tab **30** is then lapped over the outer portion **40** of flap **19** and inserted into the portion **41*a*** of slit **41** and beneath the inner part of flap **19**. Simultaneously tab **32** is passed beneath tab **43** and upwardly through portion **41*b*** of slit **41**, and over the top of flap **19**. The bulge **37** of tab **32** moves past the opposing inner edge of the handle leg **24** at its fold and when the handle is upright projects outwardly beyond said edge to resist withdrawal of the tab. Similarly the edge of bulge **35** on tab **30** engages the portion **41*a*** of slit **41** to prevent withdrawal movement of the tabs.

The carton material is flexible enough to accommodate shifting, under pressure at points spaced from the tabs, of the edges of the tabs transversely of the line X so that the tabs may move to the assembled positions described, but the carton material is stiff enough, under tension applied through the handle legs when the carton is lifted by the handles, to resist similar distortion of the tab edges which would be necessary to unlatch or free the flaps from each other.

The desired result is due largely to the direct engagement of bulge **37** with the inner edge of handle leg **24** and the folding of the flaps against shifting transversely of line X by the interengagement of the outer edge of bulge **35** of tab **30** with the end portion **41*a*** of slit **41** in flap **19**. The structure is particularly advantageous when the cartons are filled and closed with their handles interlocked in a packaging machine, as is used for merchandising ice cream. In such machines it has been difficult to readily effect adequate closure of the top flaps when provided with handles, and the provision of a carton for effectively carrying out such operation is an additional object of the invention.

Accordingly the objectives stated in the introductory portion of the specification are attained.

The details of the contours of the tabs and slits and handle edges, and their relations to each other, may be varied without departing from the spirit of the invention and the exclusive use of such modifications as come within the scope of the claims is contemplated.

I claim:

1. A foldable carton of paper or the like with overlapping flaps forming the top wall of the set-up carton, at least one of which flaps includes a handle extension of U shape with spaced legs bendable about fold lines on the flap, at the ends of the U legs remote from the U cross bar, to an upright position normal to the face of the remainder of the flap, there being a slit with closed ends in one flap extending a major portion of the distance between the legs of the handle-forming extension of that flap but the ends of the flap slit being spaced from he flap handle legs, there being a tab on the other flap readily inserted in said slit and having a lateral projection at one end engageable with the edge of an upstanding leg of the first flap to hold the flaps interlocked.

2. A foldable paper carton according to claim 1 in which each of the overlapping flaps includes an individual handle-like extension, said handle-like extensions being contiguous to each other when upright to provide a double thickness handle extending from the flaps.

3. A foldable carton of paper or like material having overlapping top closure flaps, each flap including a U-shaped extension with fold lines transversely of the U legs at the ends thereof remote from the U cross bar about which the extension may be bent to form upstanding juxtaposed handles, characterized by the presence of a closed end slit in one flap extending between but terminating short of the legs of the handle extension on that flap, and a tab projecting from the other flap transversely of and beyond said slit and bulging outwardly beyond the end of the slit and having a lateral recess spaced from its outer end receiving the corresponding upstanding handle leg on the first flap and holding the juxtaposed handle legs together.

4. A carton according to claim 3 in which the flaps have a second pair of tabs adjacent to the other legs of the handle extensions each overlapping the other flap, and said latter-mentioned tabs interengaging each other edgewise to hold the overlapped flaps together, and all of

the tabs holding the two flaps against shifting along the handle fold lines.

5. A carton according to claim 3 in which each flap has a tab with a convex arcuate edge facing away from the handle extension and toward the middle of the flap, the arcuate edges of said tabs being disposed to interengage and interlock the flaps irrespective of the first-mentioned engagement of a tab and the upstanding handle leg.

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