

May 5, 1964

H. E. FORBES, JR
REINFORCED CARTON

3,131,852

Filed May 29, 1963

2 Sheets-Sheet 2

FIG. 4

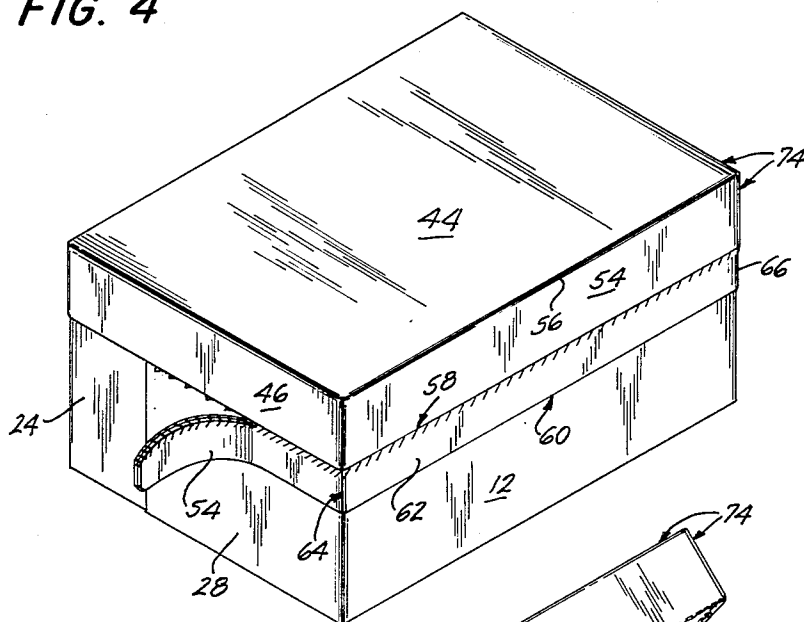
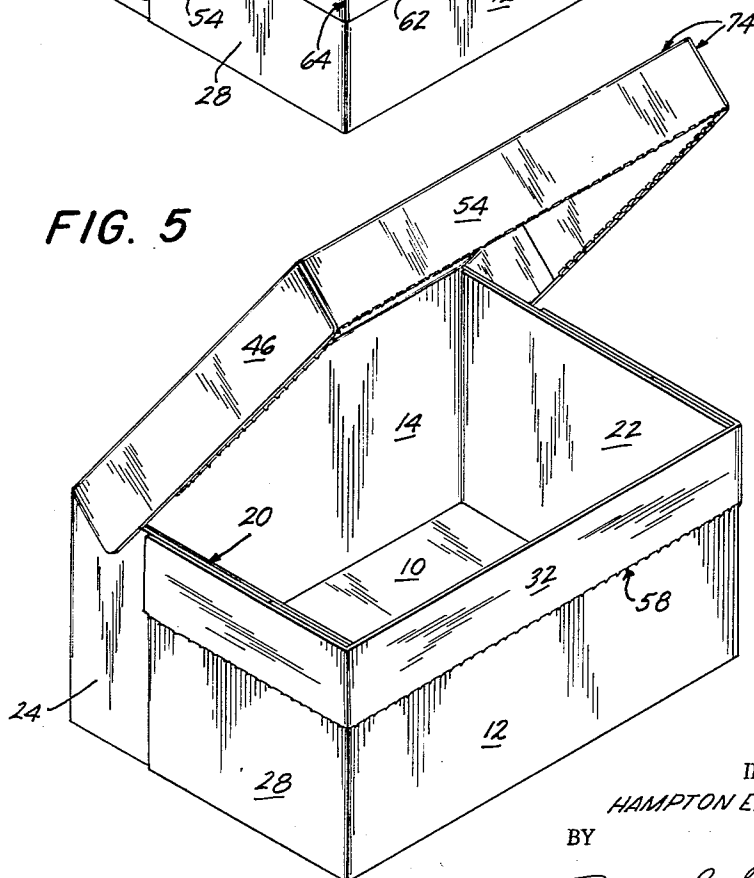


FIG. 5



INVENTOR
HAMPTON E. FORBES, JR.
BY
Robert S. Grimshaw
ATTORNEY

1

2

3,131,852

REINFORCED CARTON

Hampton E. Forbes, Jr., Wilmington, Del., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Filed May 29, 1963, Ser. No. 284,239

1 Claim. (Cl. 229—51)

This invention relates to an improved carton construction. More particularly it relates to an easy opening, reclosable, one-piece carton suitable for the automatic packaging of such products as ice cream. This invention also provides a carton that gives access to the contents from the top of the carton but may be filled from the side of the carton during the packaging.

The carton of this invention may be partially assembled and shipped flat to the packager. The flat carton is easily erected for filling and closing.

In the past many cartons have been proposed for packaging ice cream and like materials, but none have shown a top opening carton with a reinforced top edge wherein the reinforcing member provides the opening means for the carton.

The advantages and features of this invention will be apparent to those skilled in the carton art from the following detailed description and drawings.

FIGURE 1 is a plan view of a blank from which a carton may be constructed in accordance with this invention.

FIGURE 2 is a plan view of the blank of FIGURE 1 partially assembled as shipped to a packager.

FIGURE 3 is an enlarged cross-sectional view taken at line 3—3 in FIGURE 2 showing the construction overlying panels of the front wall of the container.

FIGURE 4 is a perspective view showing the formed container in the process of being opened.

FIGURE 5 is a perspective view showing the opened container after the tear strip has been removed and with the top in open position.

In the following detailed description, and in the drawings, similar reference characters indicate similar parts.

In FIGURE 1 the one-piece blank from which the carton of this invention is constructed includes a bottom panel 10, a front panel 12 and a back panel 14 foldably attached to the bottom panel 10 along score lines 16 and 18, respectively, with the first pair of end flaps 20 and 22 attached to opposite ends of bottom panel 12, a second pair of end flaps 24 and 26 foldably attached to back panel 14 with a third pair of end flaps 28 and 30 attached to front panel 12 along score lines 29 and 31. A reverse fold glue flap 32 is foldably attached to front panel 12 along score line 33 and also to the third pair of end flaps 28 and 30 along score lines 35 and 37 with the first pull tab portion 34 being that portion of the reverse fold glue flap 32 between perforated lines 36 and outside edge 38, the reverse fold glue flap 32 having score lines 40 and 42 in line and coincident with score lines 29 and 31 respectively.

Top panel 44 is foldably attached to back panel 14 with top end flaps 46 and 48 foldably attached at opposite ends of top panel 44 at score lines 50 and 52, respectively, and top rimming panel 54 is foldably attached to top panel 44 along score line 56. Top rimming panel 54 has a line of perforations 58, the portion of the top rimming panel 54 between the line of perforations 58 and edge 60 define the second pull tab portion 62. The top rimming panel 54 has score lines 64 and 65 in line with and coincident with score lines 50 and 52, respectively.

The carton is partially assembled as shown in FIGURE 2 by folding front panel 12 along fold line 16 onto bottom panel 10, reverse glue flap 32 is folded over as

shown in FIGURE 3 and adhesively connected to a portion of front panel 12 with adhesive 63. Adhesive 63 does not extend all the way between the first pull tab portion 34 but only extends up to that portion between edge 34 and perforated line 36. In some cases for adhesive economy it may be desirable to utilize only a small amount of adhesive on the reverse glue flap 32 between score line 33 and perforated line 36. However, the amount of adhesive used should be sufficient to hold the reverse glue flap 34 to the front panel 12 when the carton is formed and when the carton is opened by pulling first pull tab portion 34. Top running panel 54 is adhesively connected to the first pull tab portion 34 along the second pull tab portion 62 with the second pull tab portion 62 overlying the first pull tab portion 34 and perforated line 36 approximately coincident with perforated line 58. The carton may be partially assembled as shown in FIGURE 2 and shipped flat to the packager in this manner.

In the final assembly of the carton the partially assembled carton shown in FIGURE 2 is opened to form a tube with the first end wall being formed by folding first end flap 20 perpendicular to bottom panel 10, closing the tube with end flap 24 being folded over first end flap 20 with third end flap 28 folded upon and adhesively connected to second end flap 24, and top end flap 46 being sealed to a portion of top rimming panel 54 to seal the end of the carton. The carton may be then filled with the desired contents and the other end sealed in the same manner as the first end wall to completely seal the carton.

FIGURE 5 illustrates the arrangement of panels when the carton is closed. Panel 12 is adhesively secured to reverse glue fold 32 along a portion of its surface between fold line 33 and perforated line 36. The portion of panel 34 between perforated line 36 and edge 70 is not glued to panel 12, but is glued to panel 62. Panel 54 overlies panel 32 and panel 62 overlies panel 34 and is glued to it in the area between perforated line 58 and edge 60. When the carton is opened the panels 34 and 62 are removed by tearing along coincident perforated lines 36 and 58. Panel 54 overlies panel 32 when the carton is reclosed. The arrangement of flaps is shown in FIGURE 5 when the carton is assembled in closed condition.

To open the carton the first and second pull tab portions 34 and 62, respectively, are torn along perforated lines 36 and 58 as shown in FIGURE 4 until the first and second pull tab portions 34 and 62, respectively are completely removed from the carton. The top 74 thus formed is hingedly lifted along score line 76 from top rimming panel 32 to open the carton as shown in FIGURE 5. When the desired amount of ice cream or other material is removed, then top 74 can be returned to a reclose position by placing it overlying top rimming panel 32, thus protecting the carton contents for further use.

The invention claimed is:

A carton adapted for end loading or filling with an easy opening and reclosable hinged top and formed from a scored and folded one-piece blank of paperboard or other sheet material comprising:

- (a) a bottom panel,
- (b) front and back panels extending upwardly from the bottom panel,
- (c) end walls comprising a first pair of end flaps extending upwardly from opposite ends of the bottom panel to form inner end walls of the carton, a second pair of end flaps extending from opposite ends of the back panel and overlying and being secured to said first pair of end flaps, and a third pair of end flaps extending from score lines defining opposite ends of the front panel and overlying and being secured to said second pair of end flaps,
- (d) a reverse fold glue flap foldably attached to the

3

said front panel and said third pair of end flaps and having score lines therein coincident with the said score line defining opposite ends of the front panel, said reverse fold glue flap providing a reinforcing band of material around the top of the front panel and a portion of the tops of the two ends of the carton,

(e) a relatively narrow first pull tab portion detachably fastened along a side of said reverse fold glue flap below the adhesive bonding the reverse fold glue flap to the out side of the tops of said front panel and said third pair of end flaps, said first pull tab portion being separable from the reverse fold glue flap by a line of perforations and having score lines therein coincident with the said score lines defining two opposite ends of the front panel,

(f) a top panel hingedly attached to the top of the back panel,

(g) a top rimming panel of substantially the same dimensions as said reverse fold glue flap comprising a portion foldably attached to and extending from the top panel and overlying the said reverse fold glue flap, and two end portions thereof overlying the said reverse fold glue flap of the said third pair of

4

end flaps, said two end portions of the trimming panel being separated defined by score lines coincident with the said score lines in the reverse fold glue flap,

(h) a second pull tab portion of substantially the same dimensions as said first pull tab portion extending along the edge of said top rimming panel and separated therefrom by a line of perforations, the said first and second pull tab portions being adhesively bonded to each other with their lines of perforations in mutual alignment to form an integral pull tab of double thickness for opening the carton, and
(i) a pair of top end flaps extending downwardly from opposite ends of the top panel and overlying and being secured to the outside of said end portions of said top rimming panel.

References Cited in the file of this patent

UNITED STATES PATENTS

1,961,375	McAleer	Jan. 5, 1934
3,085,736	Meyers	Apr. 16, 1963
3,111,255	Skowronski	Nov. 19, 1963