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SHIPPING AND STORAGE CARTON

Filed March 12, 1963

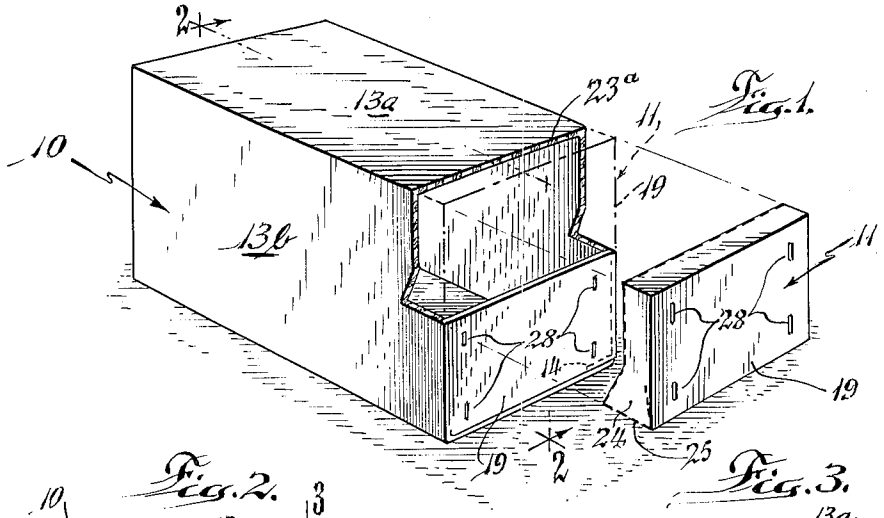


Fig. 1.

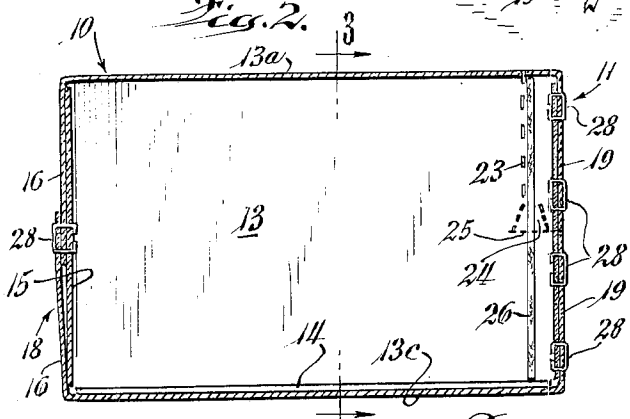


Fig. 2.

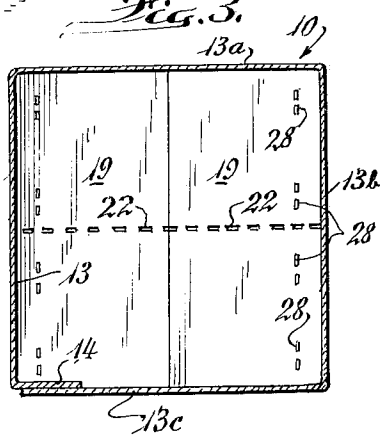


Fig. 3.

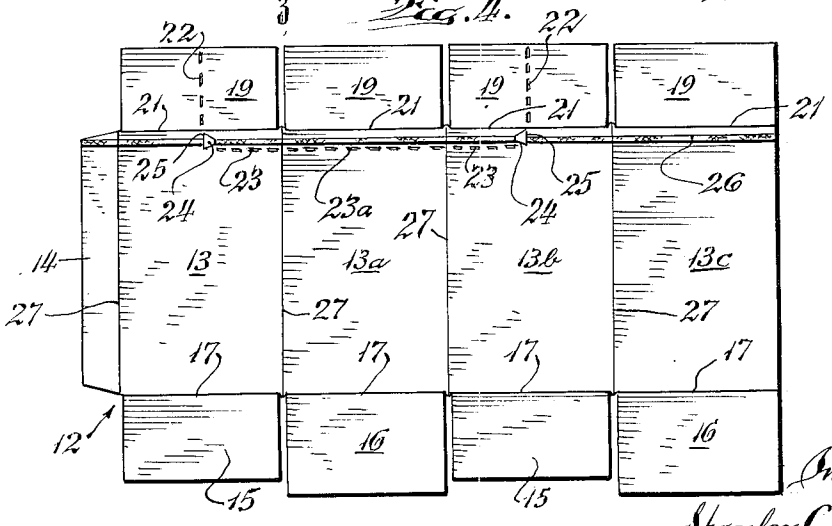


Fig. 4.

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SHIPPING AND STORAGE CARTON

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1 Claim. (Cl. 229—51)

The present invention relates to a novel shipping and storage carton and more particularly to a novel carton utilizing a tear strip adjacent one end to facilitate removal of approximately one-half of that end of the carton to provide a self-contained storage bin.

An important object of the present invention is the provision of a novel one-piece carton construction which is easily assembled and includes weakened or scored areas to provide an easily removable portion of an end of the assembled box to convert the shipping container to a self-contained storage bin.

Another important object of the present invention is the provision of an assembled carton of cardboard or corrugated board having a tear strip which encompasses one-half of the periphery of the carton adjacent one end to aid in the removal of one-half of the carton end to provide the opening for the storage bin. As the tear strip along with connected perforated portions encompasses the area to be removed from the closed container, no tools are required or needed to open the container.

Another object of the present invention is the provision of a carton or container which is quickly and easily assembled, filled and sealed at the plant of the manufacturer or supplier and, when received by a second party, is easily opened utilizing the tear strip and stored as a storage bin for the goods as received or for the other goods which may be placed in the container. The tear strip has an enlarged wedge-shaped, die cut thumb grip at each end.

The present invention also comprehends the provision of a container formed from a single piece or sheet of cardboard or corrugated board which has been printed and cut to provide end flaps at the opposite ends, two opposed inturned end flaps at one end of the container having substantially centrally located perforated lines joining a perforated line lying parallel to but spaced from the end of the assembled container and extending across a side panel and a portion of two adjoining panels. A strip of tear tape extends along the interior of the panels closely adjacent and parallel to the tear or perforated lines to facilitate or aid in removal of the end portion of the container.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.

In the drawing:

FIGURE 1 is an exploded perspective view of the assembled container with the removable portion of the end of the carton shown removed or displaced to provide the storage bin.

FIG. 2 is a vertical cross-sectional view of the assembled container including the removable end piece in its normal assembled relation taken on the line 2—2 of FIG. 1.

FIG. 3 is a vertical cross-sectional view taken on the line 3—3 of FIG. 2 and showing the end of the box with the removable end portion in its normal assembled relation.

FIG. 4 is an open plan interior view of a sheet of cardboard or corrugated board cut to the proper dimensions provided with fold and score or tear lines for forming the disclosed container by subsequent folding and assembly into a carton.

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Referring more particularly to the disclosure in the drawing and to the novel illustrative embodiment therein shown, FIG. 1 discloses an assembled carton or container 10 with a removable end portion 11 disconnected and withdrawn to provide an open storage bin with ready access to the contents. This carton, with the end portion 11 integral therewith, is formed of relatively heavy cardboard or corrugated board from the single sheet 12 shown in FIG. 4. This sheet is scored to provide four side or wall panels 13, 13^a, 13^b and 13^c, the panel 13 provided with an end or overlapping flap 14. Alternate short and long flaps 15 and 16 at one end of the carton are longitudinally slit apart and provided with fold lines 17 so they can be folded inwardly along the lines 17 and joined by any suitable securing means such as staples, tape or adhesive to securely close one end of the carton. The shorter flaps 15 are folded inward first with their edges in substantially abutting relation while the adjoining edges of the longer flaps 16 overlap when folded inwardly and are then joined to provide a sealed end 18.

At the opposite end of the carton the side panels 13, 13^a, 13^b and 13^c have four flaps 19 which are longitudinally slit apart and of substantially equal length such that opposite flaps will substantially abut when folded inward about the fold lines 21. The flap 19 on the panel 13 adjacent the overlapping flap 14 and its opposite flap 19 on panel 13^b (alternate flaps in FIG. 4) have a substantially centrally located and longitudinally extending perforated score line 22 extending from the end of each flap to the fold line 21. The side panels 13 and 13^b contain a perforated score line 23 extending from the score lines 22 and merge with a continuous perforated score line 23^a extending completely across the panel 13^a, the score lines 23 and 23a being spaced from but disposed parallel to the fold lines 21. The perforated score lines 23 terminate at one end in an enlarged die cut thumb grip or lift tab 24 which may be generally wedge-shaped, and the base 25 of each grip connects one of the perforated score lines 22 on the end flaps 19 of the panels 13 and 13^b.

Extending across and joined to the interior of the four side panels 13, 13^a, 13^b and 13^c and the overlapping flap 14 is a tear tape 26 utilized to enhance the accuracy and facilitate tearing along the perforated score lines 23 and 23^a. This tear tape is located closely adjacent to the perforated score lines 23 and 23^a and between the latter and the fold lines 21 and parallel thereto. The die cut thumb grip 24 at each end of the score lines 23 severs the tape 26 at the base 25.

To assemble the carton 10, the side panels 13 are folded along the longitudinally extending fold lines 27 with the overlapping flap 14 received and suitably secured or gummed to the interior of the side panel 13^c at the opposite end of the corrugated sheet 12. The open-ended box thus formed next has one end closed so that the carton can be filled. In the present assembly, either end can be initially closed for filling of the carton. If the flaps 19 are initially closed, the flaps 19 on the panels 13 and 13^b containing the perforated score lines 22 are first folded inward and then the other two opposite flaps 19 are folded inward and the flaps secured by any suitable securing means such as the staples 28 shown in FIGS. 1, 2 and 3. The line of abutment of the last folded end flaps 19 substantially coincides with the perforated score lines 22 on the first folded flaps 19 to aid in ease of removal of the end portion 11 to convert the carton into a storage bin.

The carton can then be filled and the opposite end closed by first folding the shorter flaps 15 inward followed by the longer flaps 16 which will overlap. This end is secured closed by the staple 28 shown in FIG. 2, or other equivalent means.

When the container has been shipped to a retailer or other user of the goods therein, the carton is easily opened

without the use of any tools by gripping one of the thumb grips or lift tabs **24** and zipping up the side across the top panel **13a** and down the other side along the perforated score lines **23** and **23a**. The removable end portion **11** is then separated from the box along the perforated score lines **22** to completely separate and remove the end portion and leave the other half of the carton end intact after opening to present a storage bin.

As the perforated score lines **23** and **23a** are spaced inwardly from the fold lines of the panels **13**, **13a** and **13b**, when the end section **11** is removed, the access opening into the container, which then functions as a storage bin, is spaced inwardly or rearwardly of the remaining closed end portion. This facilitates access to the contents of the bin.

Having disclosed the invention, I claim:

A carton construction comprising four connected side panels forming a hollow tube with each of said side panels having a foldable flap at the opposite ends thereof with the flaps at one end being folded inwardly in overlapping relation to form a closed end, one pair of opposed flaps at the opposite end of the carton each having a perforated score line positioned centrally on the flap and extending normally to the fold line of the flap between its outer edge and the juncture with its side panel, a perforated score line extending transversely of the last mentioned opposed side panels from adjacent the score lines of said flaps and across the panel intermediate said opposed panels, said perforated score line being spaced inwardly from the ends of said panels, a perforated enlarged thumb grip on each of two opposite sides of the hollow tube providing a lift

tab at the junction of the perforated score lines on the end flaps and the perforated score lines in the adjoining panels, and a tear tape extending across the interior surface of the adjoining panels with the tape positioned closely adjacent the perforated score lines in the adjoining panels and between the score lines and the end flaps, said opposed perforated flaps being folded inwardly first forming a perforated line across the end of the carton and said other pair of opposed flaps then folded inwardly with their line of abutment substantially coinciding with the perforated lines on the first pair of flaps and secured to form a closed end for shipping, said perforated score lines defining an end portion which is readily removed by pulling on said lift tabs at the opposite sides of the hollow tube and, when removed, transforming the carton into a storage bin with an access opening at the upper end portion spaced inwardly and rearwardly from the closed end portion.

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