United States Patent [19]

Skillen

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[54] TEAR TOP OPENING CARTON

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[30] **Foreign Application Priority Data**

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[52] **U.S. Cl.** .....**229/51 TC,** 220/115, 229/52

[51] **Int. Cl.** **B65d 5/54**

[58] **Field of Search** .....229/51 TS, 51 TC, 52 BC; 220/115

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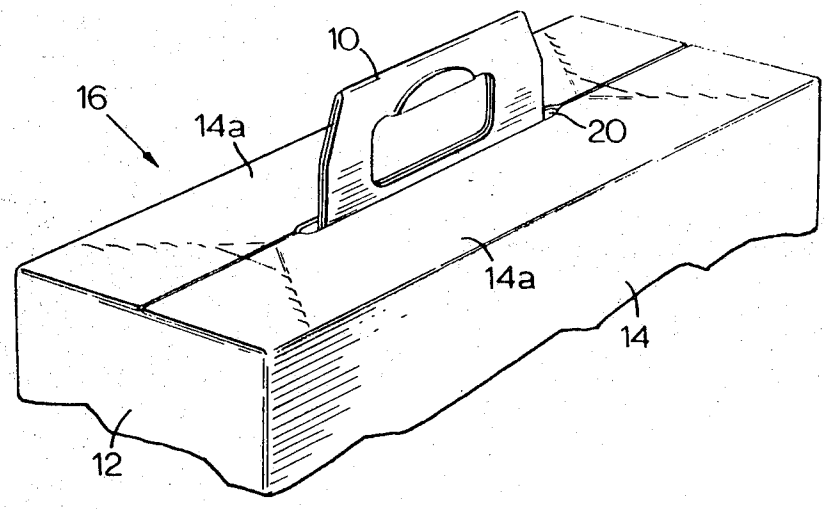
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[57] **ABSTRACT**

A top-opening paperboard carton having a top wall formed of overlapped end wall and side wall flaps, the latter overlying the former and having oblique lines of weakness arranged parallel to and above angled side edge portions on the end wall flaps, and finger entry points in the top wall whereby the end wall flaps may be engaged by the fingers and pulled upwardly to tear the side wall flaps along the lines of weakness.

4 Claims, 3 Drawing Figures



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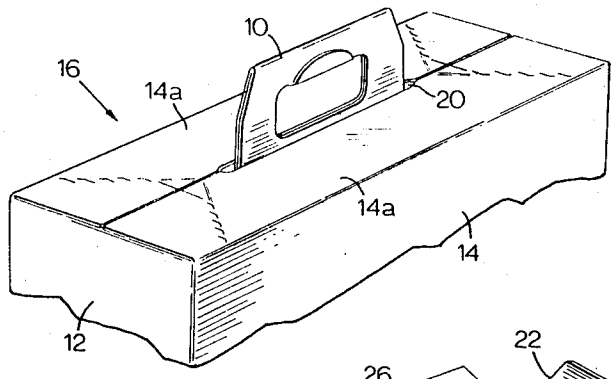


FIG. 1

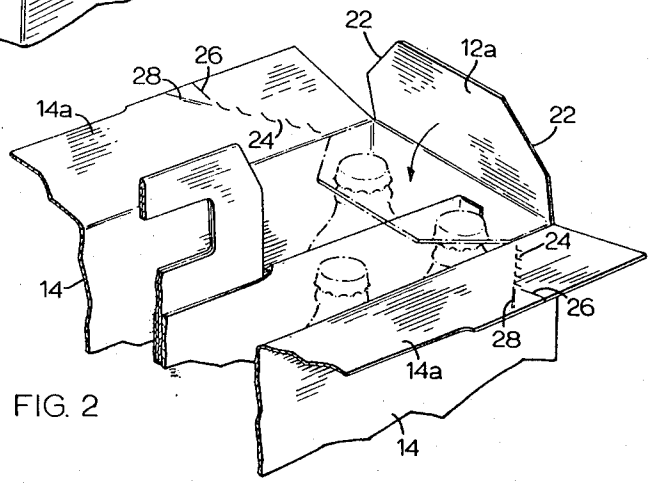


FIG. 2

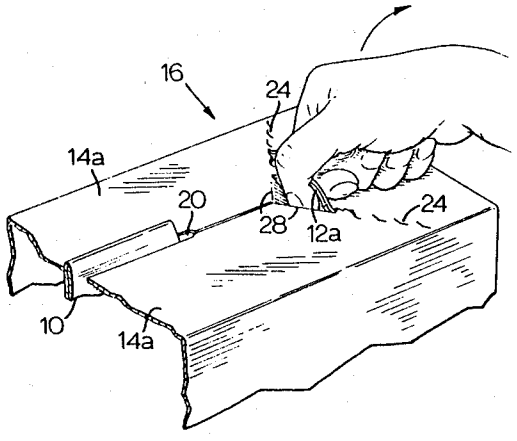


FIG. 3

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TEAR TOP OPENING CARTON

FIELD OF INVENTION

This invention relates to paperboard cartons and is particularly concerned with top opening cartons of the type that are commonly used in the distribution of bottled beverages, such as beer.

While the carton of the present invention could be used for storing and shipping any product that requires a top opening carton, it is particularly suited for use as a "beer carton," particularly that type of beer carton which includes a pop-up center line handle. The latter type of carton is characterized by a top wall which includes a center line slot and associated finger openings so that the purchaser can pull up the recessed handle until its' hand hole is exposed.

PRIOR ART

Heretofore, the opening of the above type of "beer carton" has been largely a matter of manipulating the fingers through the handle slot and pulling upwardly on the side wall flaps forming the greater part of the top wall. More often than not, this action, apart from requiring considerably exertion, will also tear the side walls themselves. Thus, the opening of the carton often results in its partial destruction and it is less effective as a receptacle for empty bottles and as a carton for returning the bottles to the sales outlet.

SUMMARY

In accordance with the present invention, there is provided a paperboard carton of the aforementioned type which includes a top wall construction which is both easier to open than cartons known before and which avoids tearing of the carton side walls during the opening operation. This is accomplished by a top wall construction consisting of overlapped side and end wall flaps, the side wall flaps overlying and being glued to said end wall flaps, the side edges of said end wall flaps being inclined from the free end of the flap towards a side wall so that the side edges of the end wall flaps include portions which are angled with respect to the side walls, said side wall flaps including lines of weakness positioned over and being substantially parallel to the angled portions of the end wall side edges, said side wall flaps also including finger entry points adjacent the free ends of the end wall flaps, whereby said carton can be opened by employing said finger entry points to grip the undersides of the end wall flaps and to lift the end wall flaps while simultaneously tearing said side wall flaps along said lines of weakness.

PREFERRED EMBODIMENT

The invention will be more thoroughly understood from the following description of the preferred embodiment thereof as read in conjunction with the accompanying drawings.

In the drawings:

FIG. 1 is a perspective view of the upper end of a paperboard carton in accordance with this preferred embodiment of the invention;

FIG. 2 is a perspective view partially broken away of the upper end of the carton of FIG. 1 and shows the carton in its condition prior to its closure at the packing plant; and

FIG. 3 is a perspective view partially broken away of the carton as it is being opened.

Referring to FIG. 1, the carton illustrated is an elongated "beer carton" of the type that is commonly used to package 12 bottles. It should be understood however, that while the top opening carton of the invention is particularly suited as a "beer carton," its use need not be limited thereto.

Needless to say the illustrated carton is formed of paperboard of sufficient strength to support the enclosed contents. When used as a "beer carton," the illustrated carton is provided with a longitudinally extending center partition and a plurality of transverse partitions which divide the interior of the carton into a number of cells for receiving and separating the bottles. This central partition carries a handle which is normally recessed within the carton but can be pulled upwardly through a central slot. The upper end of this handle **10** can be seen in FIG. 1.

The carton is comprised of a bottom wall, not shown, a pair of end walls **12**, a pair of side walls **14** and a top wall **16**. The top wall is actually formed of flaps **12***a* and **14***a* hinged to the end and side walls respectively. From FIG. 1, it can be seen that the side wall flaps **14***a* overlie the end wall flaps **12***a* and further that the side wall flaps meet along the center line of the carton and do not overlap each other. Elongated shallow recesses on the free edges of the side wall flaps provide the longitudinally extending slot **20** through which the handle can protrude. When the carton has been filled, it is closed and sealed by the inward folding of the end and side wall flaps to form up the top, with the side wall flaps being glued to the top surface of the end wall flaps.

FIG. 2 shows the carton of FIG. 1 prior to closure and sealing. As mentioned above, closure is effected by first folding down the end wall flaps **12***a* and then the side wall flaps **14***a* with the latter being glued to the end wall flaps. In FIG. 2, it can be seen that the free ends of the end wall flaps have plan forms which consist of truncated triangles so that the side edges of the end wall flaps include portions **22** which extend at an angle to the side walls. It can also be seen that the side wall flaps **14***a* are provided with lines of weakness which are so located that when the carton has been closed, these lines of weakness lie substantially over and parallel to the angled partitions **22** of the end wall flap side edges. The effect of this arrangement is that when the end wall flaps are lifted upwardly as shown in FIG. 3, the side walls tear along these lines of weaknesses leaving the greater part of the side wall flaps completely free to be upwardly folded to provide access to the contents of the carton. In effect, the arrangement means that the end wall flaps are used as levers to tear the side wall flaps and as this tearing is carried out along predetermined lines, there is no danger that the side walls themselves will also be torn.

At each end of the carton, there is provided finger access points which permits the operator to work his fingers or his thumb underneath the end wall flaps to carry out the upward tearing operation shown in FIG. 3. These finger access points consist of small transverse slits **26** and angled crease lines **28**. These finger access points are, of course, located at the center line of the carton immediately adjacent the edges of the end wall flaps.

Minor modifications to the illustrated embodiment of the invention are possible without departing from the scope of the invention. For example, while it might detract someone from the appearance of the carton, it would be possible to provide finger holes in lieu of the "press-in" type of finger access points illustrated. Further variations in the nature of the inclined portions 22 of the end wall flaps would not seriously reduce the effectiveness of the opening action. Further slight misalignments between the angled lines of weakness in the side wall flaps and the angled portions of the end wall flaps would not seriously interfere with fast and effective opening of the carton.

I claim:

1. A paperboard carton having bottom, top, side and end walls, said top wall consisting of overlapped side and end wall flaps, the side wall flaps overlying and being glued to said end wall flaps, at least a portion of the side edges of said end wall flaps being inclined from the free end of the flap towards a side wall, said side wall flaps including lines of weakness positioned over and being substantially parallel to the inclined portions of the end wall side edges, said side wall flaps also including finger entry points adjacent the free ends of the end wall flaps, whereby said carton can be opened by employing said finger entry points to grip the undersides of the end wall flaps and to lift the end wall flaps while simultaneously tearing said side wall flaps along said lines of weakness.

2. A paperboard carton as claimed in claim 1 in which the free end of said end flaps is the small dimensions of a truncated portion of a triangle.

3. A paperboard carton as claimed in claim 1 in which said finger entry points consist of transverse cuts and angled crease lines in the free edges of said side wall flaps.

4. A paperboard carton as claimed in claim 2 in which said finger entry points consist of transverse cuts and angled crease lines in the free edges of said side wall flaps.

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