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N. J. ASMAN  
DISPLAY CARTON

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2 Sheets-Sheet 2

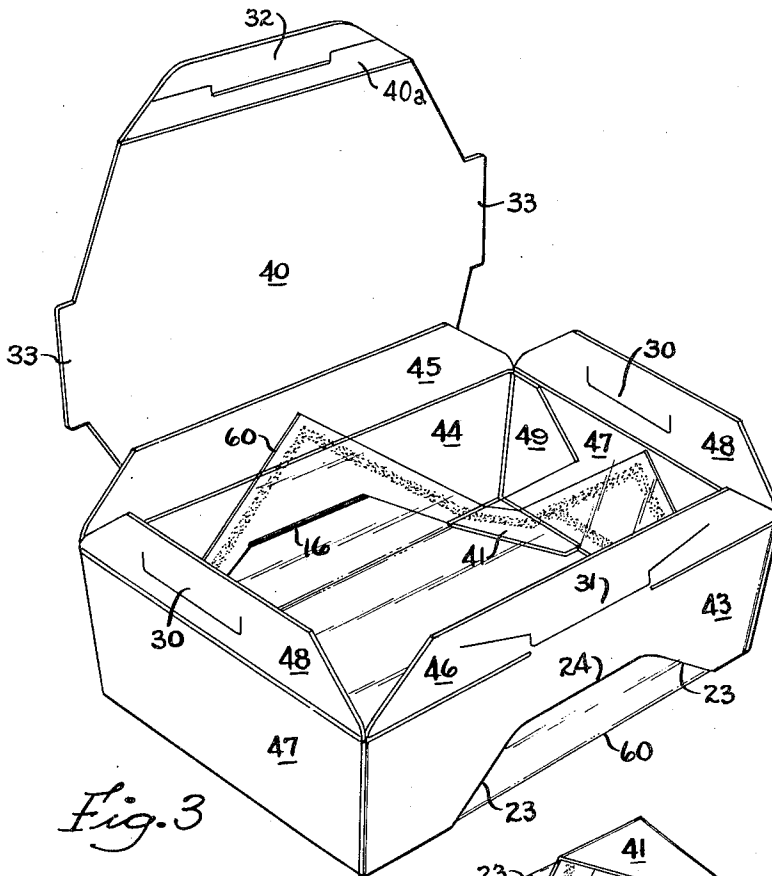


*Fig. 3*

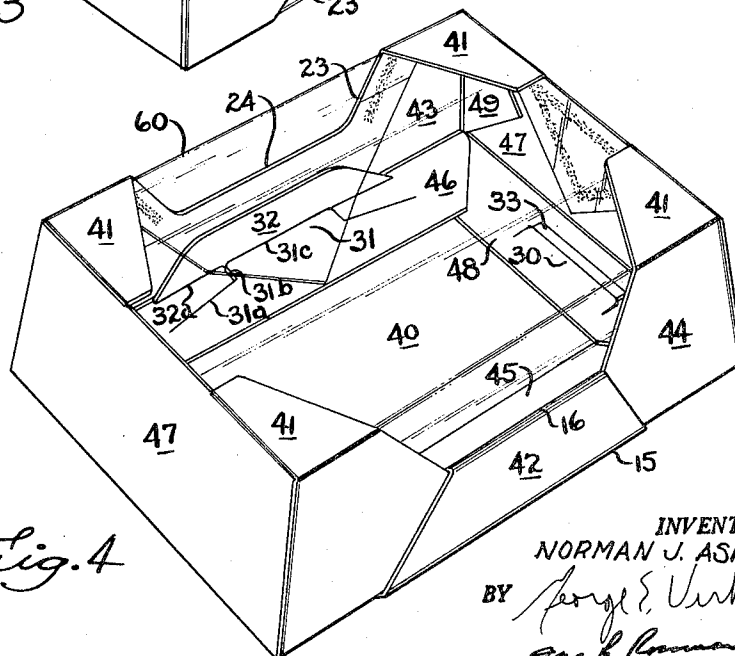


*Fig. 4*

INVENTOR.  
NORMAN J. ASMAN  
BY *George E. Verhage*  
*James R. Roman*  
ATTORNEYS

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## DISPLAY CARTON

Norman J. Asman, Appleton, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

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This invention relates to a readily assembled display carton which may be made from a single blank. More specifically, the invention may with particular advantage be used for the display packaging of food products which must be displayed to enhance their salability.

In the production of cartons for display purposes the appearance of the completed carton as well as the price is of paramount importance. Ideally, the display carton should be made from a single blank of a minimum amount of board such that it can be readily set up by hand or machinery to form a carton having a window made of transparent sheet material attached on the inside. The carton constituting the instant invention meets all of these requirements.

Further details and advantages of the invention will be apparent from the following specification and appended drawings wherein:

FIGURE 1 is a plan view of a single blank suitably cut and scored to form a windowed display carton with the window inserted,

FIGURE 2 is a perspective view of the blank of FIGURE 1 glued and partially set up in the form it is ordinarily shipped,

FIGURE 3 is a perspective view similar to FIGURE 2, showing a further stage in forming the completed carton, and

FIGURE 4 is a perspective view of the closed carton. Referring to FIGURE 1, the carton is made of a single foldable blank A of flexible material, such as paperboard. The blank A is divided by score lines 10—18 and cut lines 22—24 and 33a—33b into hingedly connected panels and flaps, including bottom panel 40, top panels 41, outer side panel 42, side panels 43, 44, bottom closure flaps 45, 46, end panels 47, end closure flaps 48, and glue flaps 49. Panels 40 and 41 together comprise a central panel.

Cut lines 30a and 30b comprising locking slits 30 are located in end closure flaps 48. Cut lines 31a—31c comprising female locking slit 31 are located in bottom closure flap 46. Cut lines 32a and 32b and perforated line 32c define a male locking tab 32 which when the carton is closed is inserted in locking relationship in female locking slit 31 as described hereinafter. Locking tabs 33 defined by cut lines 33a and 33b are inserted in locking relationship in locking slits 30 when the carton is closed, as will be described more fully hereafter.

In the formed blank, the cut out portion which includes the male locking tab 32, the bottom panel comprising 40 and 40a and outer side panel 42 defines a window opening. Adhesive is applied to the carton blank in close proximity to the edge of the window opening in the stippled area indicated in FIGURE 1. A sheet of transparent material 60, such as cellophane, is then adhered along the edge thereof to the edge of the opening formed by the cut out portion and defined by score line 16 and cut lines 22—24, 33a and 33b. The formed blank with the window inserted is shown in FIGURE 1.

Next, adhesive is applied to the outer side of the glue flaps 49 which is opposite the side of the blank to which the window is adhered. The glue flaps are then infolded at right angles to side panels 43, 44. The side panels 43, 44 and end panels 47 are then folded inwardly so that the edges of side panels 43, 44 bearing the glue flaps and the free edges of the end panels abut each other. At the completion of the folding, flaps 49 are adhered

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on the outer side to the inner side of end panels 47 as shown in FIGURE 2. The tapered carton in this stage of construction may be shipped to the user in a stack of the nested cartons.

The cut out portion of the carton is shown in FIGURE 2 still in its original position. To complete the carton, portions 32, 40 and 40a are dropped down and folded along score line 15 to lie in a common plane with outer side panel 42 and side panel 44. The whole cutaway portion including 32, 40, 40a and also 42, which is hingedly connected to side panel 44 along score line 16 is then folded to lie in a plane with side panel 42 against side panel 44, as shown in FIGURE 3.

The closure flaps, 45, 46 and 48 are then folded inwardly into abutting relationship. The upstanding cut out portion, namely 32, 40 and 40a, shown in FIGURE 3, is then folded inwardly about score line 15 to lie against the closure flaps. At this point male locking tab 32 overlies female locking slit 31. Male locking tab 32 is then inserted in female locking slits 31. Although the side edges 33a of locking tabs 33 are offset from and do not form a common line with the side edges 30b of locking slits 30 in the original blank, tabs 33 overlie the confines of slits 30 when the carton is set up. The changing relationship is caused by the folding about of the cutaway portion 32, 40, 40a and 42 around the side panel 44 thus shifting panel 40 and closure flaps 48 with respect to their original position. Overlying locking tabs 33 are inserted in locking slits 30. The carton which is closed from the bottom, is shown closed and reversed in FIGURE 4.

Although the embodiment as described employs glue flaps for securing the end panels, other means such as locks or staples may be employed. For instance, in place of glue flaps, male locking tabs may extend from the lateral edges of the side panels to engage female locking slits located in the end panels. The use of locks would be particularly advantageous when using a rectangularly shaped carton is desired, the carton blanks rather than partially completed, nested cartons are shipped to the user. Since a rectangular carton shell cannot be nested, it is not economical to ship it partially set up. The ultimate user may set up the flat carton blank either by hand or by machinery. Any conventional locking arrangement may be employed since the end closure means does not form an essential part of the invention. Furthermore, other conventional means could be employed to secure the bottom panel, rather than the locking arrangement shown in the drawings.

The particular configuration of the bottom panel 40, 40a of necessity depends upon the portions cut out from the side and top panels of the carton. Rather than having the cut out portion hinged only to one side panel, other modifications are obvious. For instance, bottom panel 40 may be cut in half lengthwise of the carton. Then with each cut out portion hinged to a side panel at a distance substantially less than one half the height of the side panels, the portions when folded around to form the bottom will overlap. These overlapping portions could then be secured by conventional means.

The present invention provides a display carton construction which requires a minimum of paperboard stock. The window may be inserted, the carton blank shipped flat if a rectangular carton is to be formed or if a nested carton is desired the carton blank may be glued and partially set up to a tapered shell as shown in FIGURE 2. Either the blank or the tapered shell, which may be shipped in nested form to the user, are readily set up by hand or machinery, filled and closed. The appearance of the closed carton is considerably enhanced with a transparent window adhered on the side of the carton.

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The carton is particularly suitable for the packaging of fresh fruit such as pears and peaches. If an overlap rather than an inside window is employed, food products such as cakes and doughnuts which must be sealed in to maintain freshness may with advantage be packaged in the carton comprising this invention. It is also suitable for non-perishable items such as Christmas decorations. It is to be understood that the size and shape of the carton and the material from which it is formed may be varied in numerous ways by those skilled in the art without departing from the spirit of the invention.

I claim:

1. A tapered display carton, capable of being stacked in the form of a nested tray when partially set up formed of a single blank suitably cut and scored comprising a pair of opposed first side panels being cut away at their upper central portions; a pair of opposed end panels; polygonal top panels hingedly connected to the lateral portions of the upper edges of said side panels and to the upper edges of said end panels and of size to close only a portion of the top of the carton; an outer side panel coextensive with the cut away portion of one of the first side panels and hingedly connected to said one of the first side panels at a score line which forms the upper edge of said outer side panel and is intermediate the top and bottom edges of said one of the first side panels; a bottom panel hingedly connected along one edge to the lower edge of said outer side panel; means hingedly connected to the edge of the bottom panel opposite said one edge for securing said bottom panel to the other of said first side panels; and closure means comprising closure flaps hingedly connected to the bottom edges of said side and end panels, said end closure flaps having therein locking slits engaged in locked relationship with locking tabs formed in said bottom panel of said carton for maintaining the carton in permanent set up form; said carton having therein a continuous window opening comprising

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the cut away portions in said first side panels and the unclosed portion of the top of the carton, and having a transparent window of sheet material attached inside the carton at the periphery of said sheet to the edge of the window opening.

2. A nested tapered tray capable of being converted into a closed windowed display carton comprising a central panel defined by a spaced pair of longitudinal parallel score lines and a spaced pair of transverse parallel score lines, a pair of opposed side panels hingedly connected to said central panel along said longitudinal score lines, a pair of opposed end panels hingedly connected to said central panel along said transverse score lines, said end and side panels being connected to each other by hingedly attached tabs, said central panel being divided by cut lines into polygonal panels located at the corners of the central panel and encompassing only a portion of the central panel and a bottom panel having locking projections thereon with a transparent sheet material covering said bottom panel and attached outside the periphery of said bottom panel; cut lines in the side panels extending upwardly and tapering towards each other from the cut lines in the central panel; the cut lines in one of said side panels being connected by a cut line parallel to the bottom edge of said side panel and the cut lines in the other of said side panels being connected by a hinge line parallel to the bottom edge of the side panel; the cut lines in their entirety defining a portion foldable back about said parallel hinge line to enclose the open portion of said tray with said locking projections engaging immediately adjacent portions of the end and side panels in locked relationship.

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