Aug. 16, 1966 M. A. ISOLDI 3,266,687

DISPLAY AND CARRIER CARTON

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FIG. 1.

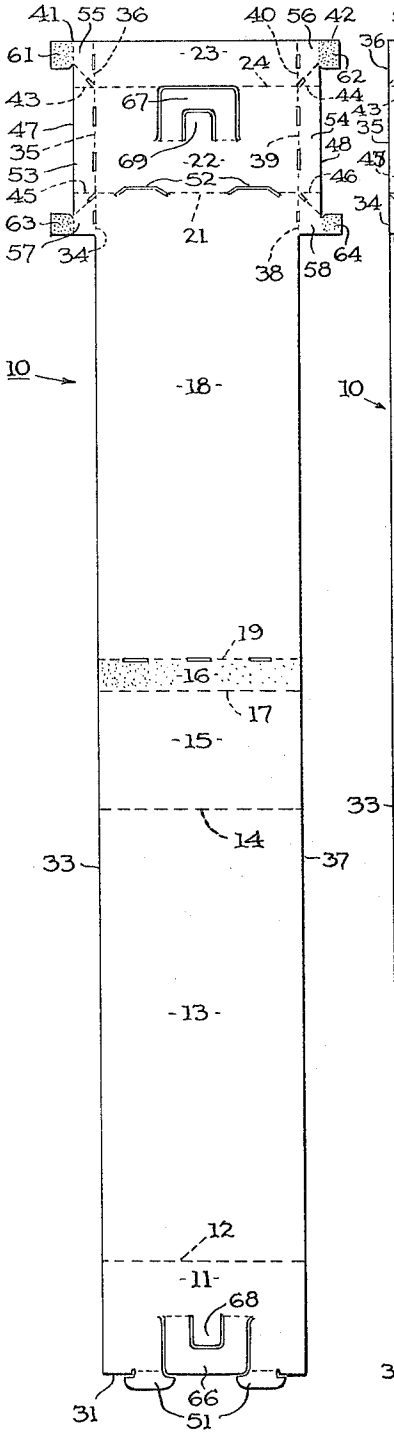


FIG. 2.

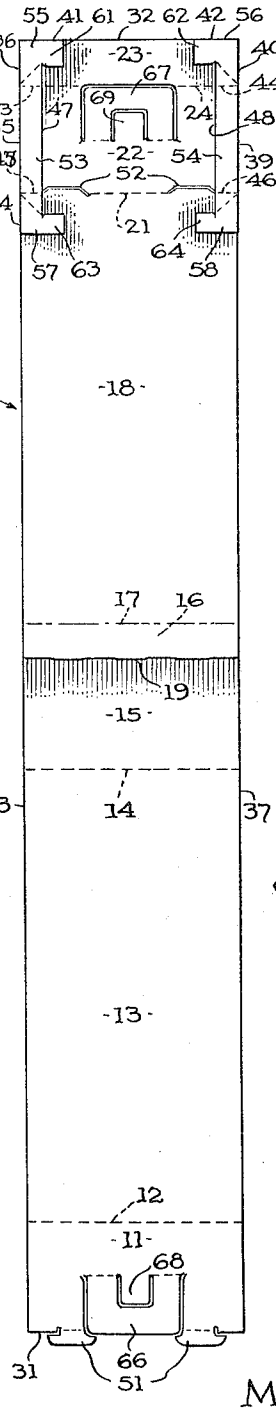
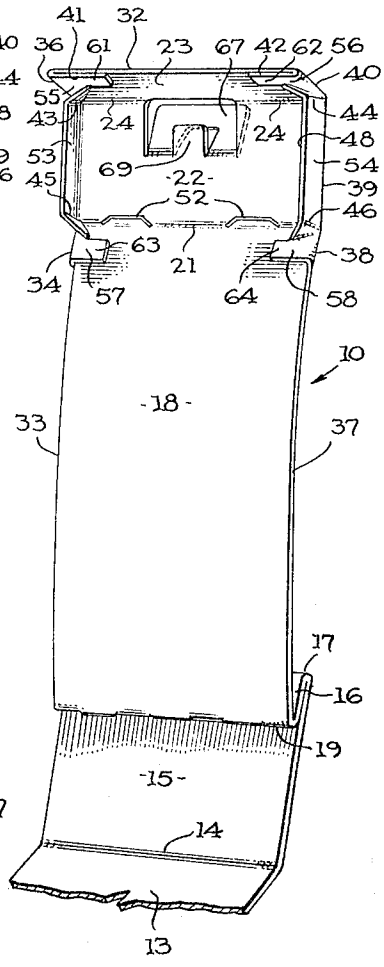


FIG. 3.



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FIG. 4.

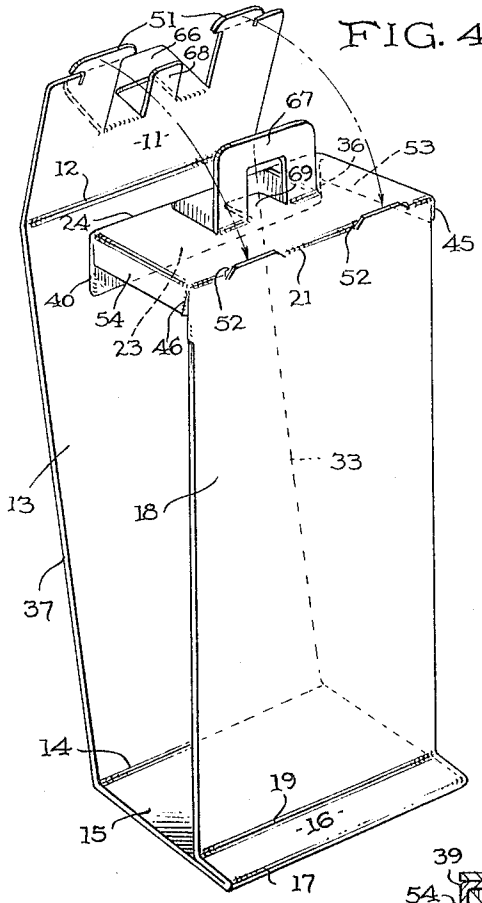


FIG. 6.

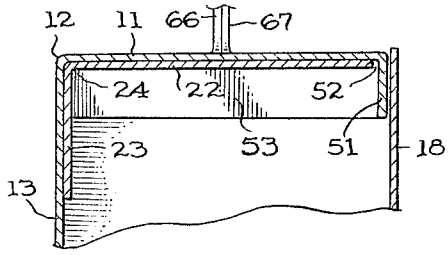


FIG. 7.

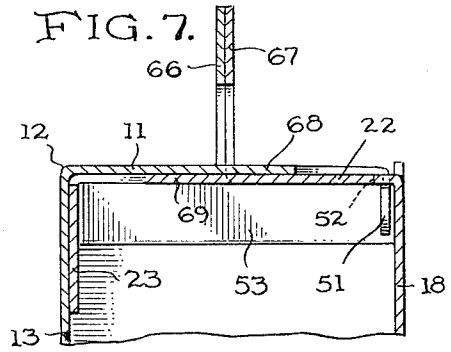
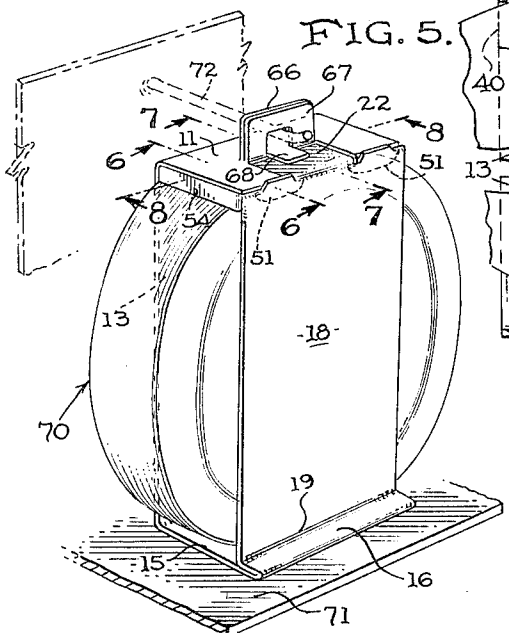


FIG. 5.



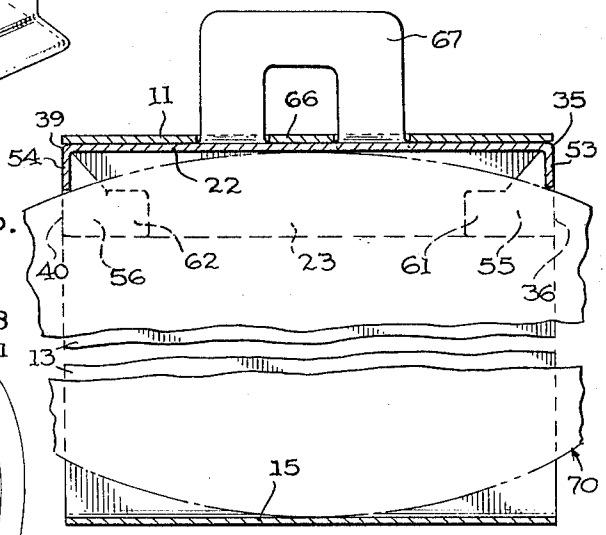


FIG. 8.

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DISPLAY AND CARRIER CARTON

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6 Claims. (Cl. 224—45)

The present invention relates to a carton and more particularly to a carton for display purposes adapted to stand on a shelf or hang on a rack.

Perhaps the outstanding advantage of the new carton resides in the improved carton arrangement, giving the carton a neat appearance and a large billboard display area.

With the new arrangement it is possible to provide a carton that can be displayed by standing it on a shelf or counter or, alternatively, by hanging it on a display rack.

A further advantage is a structure on the carton of the present invention which is provided to function either as a hanging point or as a carrying handle.

A still further advantage is the convenient access to the product with a large opening exposing a good proportion of the product.

Other advantages of the present carton are the features which make it tamper-proof and necessitate the defacement of the carton in order to open it.

An additional advantage is the construction forming a strong end wall and easel which provides for superior stack-up strength and gives additional side display area.

These, as well as further advantages which are inherent in the invention will become apparent from the following description, referenve being had to the accompanying drawings, wherein:

FIG. 1 illustrates a plan view of the blank used to form the carton of the present invention;

FIGS. 2, 3 and 4, illustrate steps in folding the blank of FIG. 1 to form the carton of the present invention;

FIG. 5 is a perspective view of the carton as used for display;

FIG. 6 is a vertical cross section view of the upper part of the carton along line 6—6 of FIG. 5;

FIG. 7 is a vertical cross section view along line 7—7 of the upper part of the carton of FIG. 5; and

FIG. 8 is a vertical cross section view along line 8—8 of FIG. 5.

First referring to FIG. 1, a one-piece blank is produced from a suitable paperboard material or the like as indicated generally at 10 and comprises a first top panel 11 having hingedly connected at a marginal fold line 12 an elongated rectangular side wall panel 13. At the opposite end of the side wall panel 13 there is hingedly connected by marginal fold line 14 a rectangular bottom panel 15. An elongated narrow panel 16 is attached along a long side on marginal fold line 17 to the opposite side of bottom panel 15. A second side wall panel 18 of elongated rectangular shape and having somewheat the same area as first side wall panel 13, has one of its ends hingedly attached at marginal fold line 19 to the opposite long side of elongated narrow panel 16 and the opposite end hingedly attached at marginal fold line 21 to a second top panel 22. An end panel 23 is hingedly attached at the opposite end of second top panel 22 at marginal fold line 24.

First top panel 11, first side wall panel 13, bottom panel 15, elongated narrow panel 16, second side wall panel 18, second top panel 22 and end panel 23 which are hingedly connected in that order by mutually parallel marginal fold lines 12, 14, 17, 19, 21, and 24 form an elongated rectangular form bounded on the short ends

by free end margin 31 on the outer edge of first top panel 11 and free end margin 32 on the outer edge of end panel 23. The long sides of the elongated rectangular form are bounded by free side margin 33 in colinear relationship with segmental fold lines 34, 35, and 36 continuing therefrom. Along the opposite edge of the elongated rectangular form in parallel relationship is free side margin 37 and segmental fold lines 38, 39, and 40 colinear to and extending free side margin 37.

Along the free end margin 31 of the first top wall panel 11 are located a pair of locking tabs 51 hingedly attached thereto. When the carton is in erected condition as illustrated in FIGS. 4 and 5, with the top wall panels disposed in overlapping relation, the locking tabs 51 may be inserted within aligned tab receiving slots 52 located on fold line 21 thereby maintaining the carton in assembled condition.

Closing panels 53 and 54 are hingedly attached on opposite sides of second tap panel 22 at marginal fold lines 35 and 39 respectively. A first pair of securing panels 55 and 56 are hingedly attached on opposite sides of end panel 23 at marginal fold lines 36 and 40, respectively, and have their free edges 41 and 42 respectively colinear with free end margin 32. The securing panels 55 and 56 are also hingedly attached on sides opposite and parallel to free edges 41 and 42 respectively to closing panels 53 and 54 by marginal fold lines 43 and 44, respectively, which are colinear with marginal fold line 24. In a like manner securing panels 57 and 58 are hingedly connected to closing panels 53 and 54 at marginal fold lines 45 and 46 which are colinear with marginal fold line 21 and hingedly connected on their adjacent sides to second side walls panel 18 at segmental fold lines 34 and 38, respectively, which are colinear with marginal fold lines 35 and 39.

Each of securing panels 55, 56, 57, and 58, are somewhat L shaped and have a triangular section defined by the fold line 43, 44, 45, or 46 hingedly connecting the triangular section to a closing panel 53 or 54, and by a fold line at an acute angle to that respective fold line 43–46. The third side of the triangular section is a free edge colinear with either of free end margins 47 or 48 of closing panels 53 and 54 respectively. Each of the securing panels 55–58 also includes a remaining portion hingedly connected at marginal fold lines 36, 40, 34, and 38 with an anchor tab portion 61–64, respectively, which extends beyond the confines of parallel free end margins 47 and 48.

Also, looped handles 66 and 67 are cut out of first and second top panels 11 and 22, respectively, with intermediate flaps 68 and 69 respectively remaining even during formation of the carton in the plane of their respective top panel from which they are formed.

When the carton 10 is to be formed in erected state an adhesive is applied on elongated narrow panel 16 as shown in FIG. 1, or in the alternative on a narrow strip on bottom panel 15 on the portion adjacent panel 16. Adhesive is also applied to anchor tabs 61–64 as shown in FIG. 1. It is considerably easier to apply adhesive to these tabs because of the projection of the tabs 61–64 further from the sides of blank 10 than any other portions of the blank. Therefore a machine applying adhesive in a straight line will not overrun other parts of the blank.

After the application of adhesive the first folds are made as shown in FIG. 2. The elongated narrow panel 16 is folded over 180° on fold line 17 so as to overlie bottom panel 15 while the upper portion of blank 10 is folded outward 180° on fold line 19 thereby retaining the substantially flat form shown in FIG. 2. Closing panel 53 with attached securing panels 55 and 57 and

closing panel **54** with attached securing panels **56** and **58** are folded inward 180° along their respective segmental fold lines **34–36** and **38–40**.

Erection of the carton is continued preferably with the product such as paper plates **70** inserted between side wall panels **13**, **18** and bottom panel **15**. The product is not included in the showing of the steps in forming the carton in FIGS. 3 and 4 for the sake of clarity but is shown in the completed assembly in FIG. 5 and in the cross-section view of FIG. 8.

Continuing the forming of the carton, the end panel **23** is rotated 90° inward on fold line **24** thereby causing closing panels **53** and **54** to rotate 90° outward on fold lines **35** and **39**, respectively. At the same time the side wall panels **13** and **18** are raised perpendicular to bottom panel **15**. As shown in FIG. 4, but with product **70** already inserted, the side wall panels are rotated toward each other and with handles **66** and **67** raised from their respective top panels **11** and **22**. With the top panel **11** overlying top panel **22**, the locking tabs **51** are inserted within tab receiving slots **52** while intermediate flaps **68** slides above intermediate flap **69** into the opening in the handle **67**. Intermediate flap **69** is now positioned to press against the under surface of top panel **11** while the handles extend upwardly from the top in adjacent relation to assume the position shown in FIG. 5 and in the vertical cross-section views of FIGS. 6, 7 and 8.

The carton is shown in finished form in FIG. 5 holding the product **70** while standing on a counter or shelf **71** in a position for best display of the product and advertising on the carton. Shown in dashed lines is a wall attached hook **72** which is inserted through handles **66** and **67** to support the carton and product in a suspended position as an alternative to standing on shelf **71**.

FIGS. 6 and 7 illustrate in detail in vertical cross section views the interlocking of top panels **11** and **22** to form and hold the carton during its use. The interlocking of handles **66** and **67** and the intermediate flaps **68** and **69** is shown in greater detail in FIG. 7.

FIG. 8, which is a vertical cross-section view along lines **8—8** of FIG. 5, shows how the carton of the present form prevents the articles held therein from being removed. In order to remove said articles the carton must be defaced and so there is a positive indication of any tampering therewith. The product **70** being of a circular shape is confined by bottom panel **15** and top panels **11** and **22** with closing panels **47** and **48** extending downward just far enough to hold product **70** in place.

It should be noted that by this form of the carton the extended edge formed by the overlap of narrow panel **16** with bottom panel **15** greatly increases the stability of the carton when used in an upright position while standing on a shelf or counter.

A number of the fold lines are indicated in FIG. 1 as containing perforated slots therein in order to increase the ease of folding along these lines. Such ease of folding may be increased also by scoring along fold lines and the type of fold line used is dependent on the thickness of paperboard or similar material used and the preference of the manufacturer.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. A blank for forming a carton for display purposes comprising

a one-piece elongated planar element including, in order,

a top panel, a side wall panel, a bottom panel, an elongated narrow panel, a second side wall panel, a second top panel, and an end panel connected on mutually parallel fold lines,

said end panel including opposite side margins having a securing panel hingedly connected at each of said side margins of said end panel,

said second top panel including opposite side margins having a closing panel hingedly connected to each of said side margins of said second top panel,

said second side wall panel at the end closest to said second top panel including opposite segmental side margins having hingedly connected thereto an additional securing panel at each said segmental side margins of said second top panel,

and locking elements hingedly connected to the free end of said top panel.

2. The blank as claimed in claim **1**, further characterized by

means for receiving said locking elements located on the fold line connecting said second side wall panel and said second top panel.

3. The blank as claimed in claim **2**, further characterized by

a looped handle structure cut in said top panel and said second top panel having the handle structure within the area of said top panels.

4. The blank as claimed in claim **2**, further characterized by

each of said securing panels hingedly connected to an adjacent closing panel.

5. The blank as claimed in claim **2**, further characterized by

each of said securing panels including

an anchor tab projecting beyond the free margin of said closing panel,

a triangular section formed by its having a hinged connection with a side of said closing panel and by a hinged connection with the remainder of said securing panel at an acute angle with the hinged connection with said closing panel.

6. A display carton supporting an article comprising

a pair of side wall panels,

a bottom panel connecting said side wall panels and extending beneath at least one of said pair of side wall panels in the plane of said bottom panel,

a top panel hingedly connected to one of said pair of side wall panels,

closing panels extending across the sides of said top panel with the bottom edge of said closing panels spaced above said bottom panel whereby the display carton has open sides below said closing panels,

and an elongated narrow panel overlying said bottom panel and connected at a fold defining the bottom of one of said side wall panels and at a fold defining an edge of said bottom panel, and adhesively attached on its undersurface to said bottom panel.

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