

[54] **DISPLAY CARTON WITH DUST FLAP
LOCKING CONSTRUCTION**

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- [52] U.S. Cl. 206/45.14, 206/45.31
[51] Int. Cl. B05d 5/50
[58] Field of Search 229/37 E, 16 D; 206/45.14,
206/45.31

[56] **References Cited**

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| 3,360,118 | 12/1967 | Hanson et al. | 206/45.14 |
| 3,578,154 | 5/1971 | Martelli | 206/45.31 X |

FOREIGN PATENTS OR APPLICATIONS

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|-----------|---------|---------------|-----------|
| 731,266 | 6/1955 | Great Britain | 229/37 E |
| 1,091,029 | 10/1959 | France | 206/45.31 |

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[57] **ABSTRACT**

A display carton has article holding panels at each end, and open front panels to allow access to the article. The front panels may extend behind the article, and also maintain certain holding panels in place. The unsupported front edges of the side walls are prevented from bowing outwardly by locking the dust flaps together. The dust flaps overlap. A locking tab on a first dust flap is folded back around the second dust flap, and an outwardly extending detent on the second dust flap prevents the tab from slipping off the second flap.

9 Claims, 7 Drawing Figures

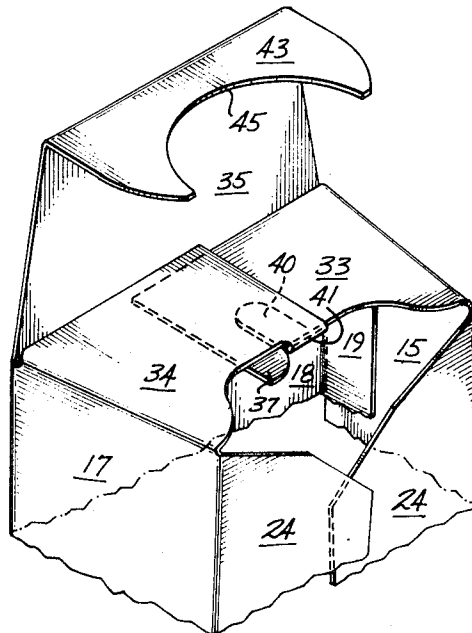


Fig. 1.

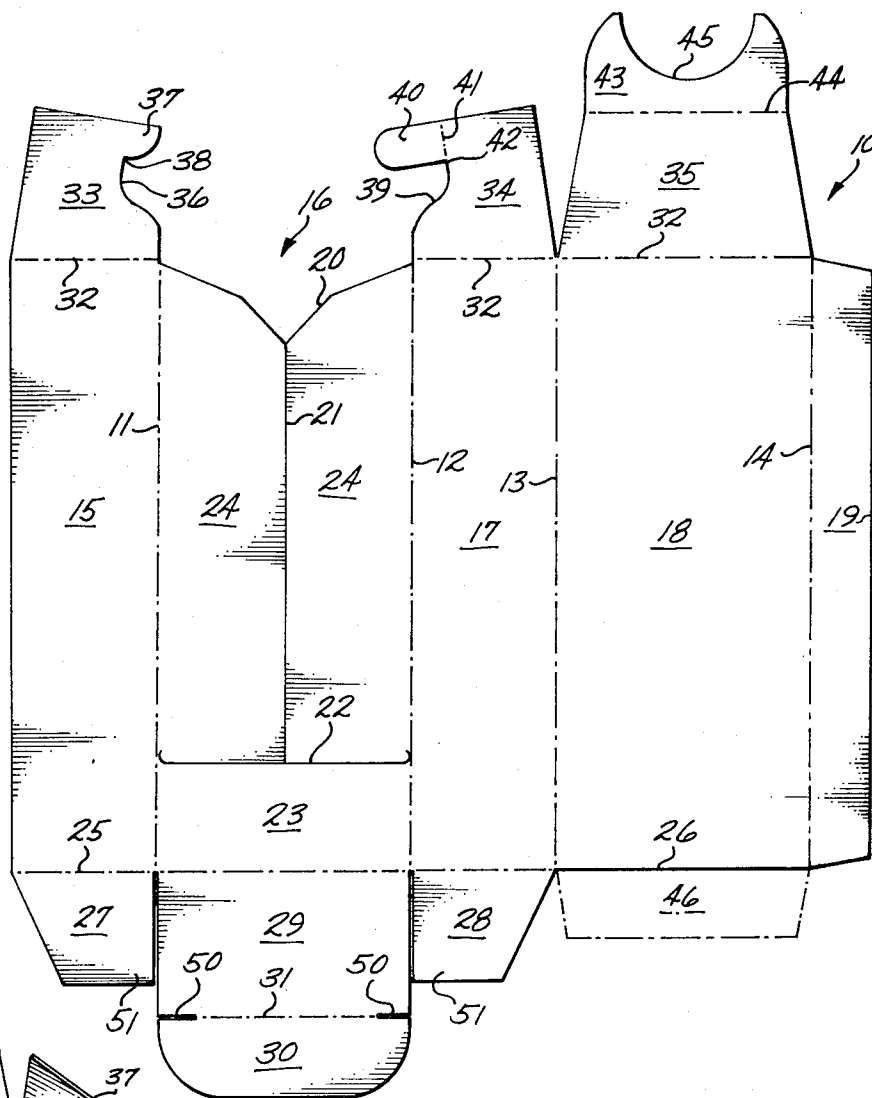
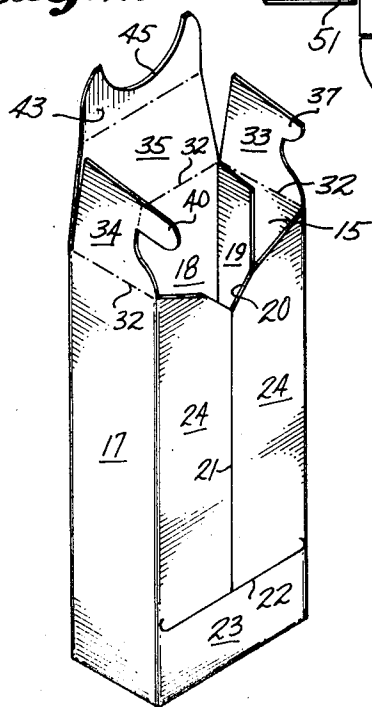


Fig. 2.



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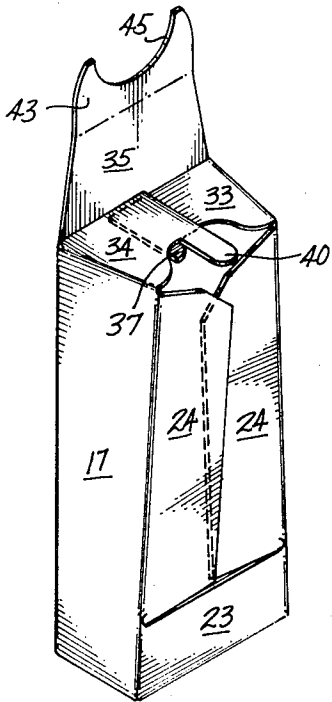


Fig. 3.

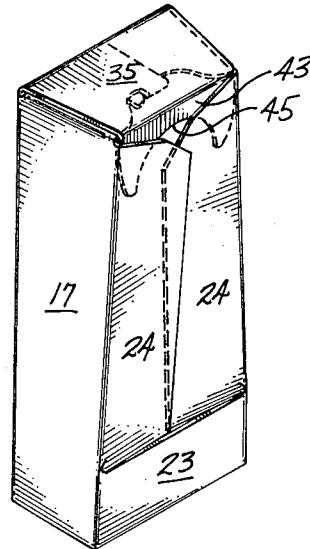


Fig. 4.

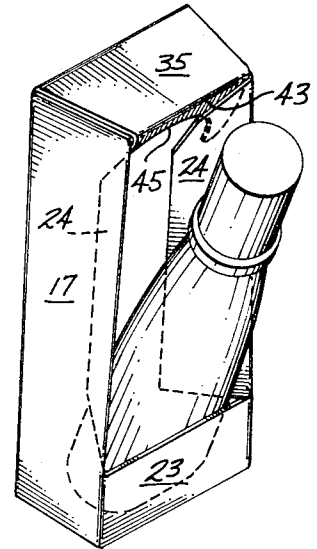


Fig. 5.

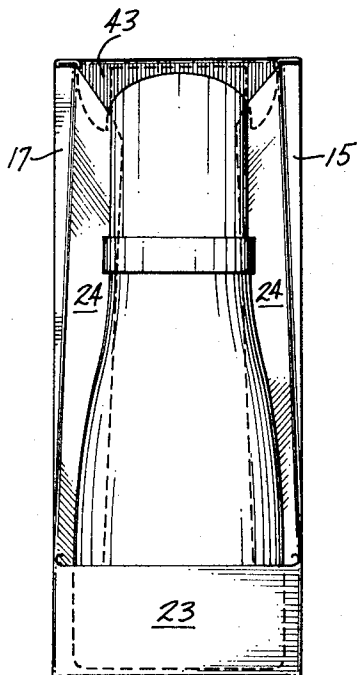


Fig. 6.

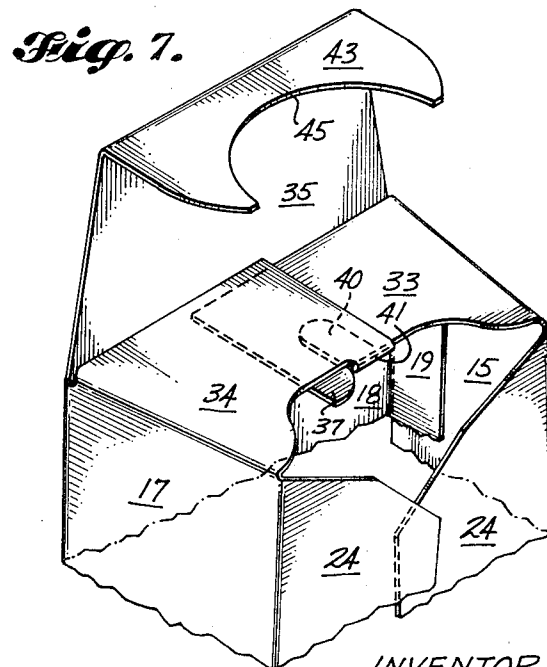


Fig. 7.

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DISPLAY CARTON WITH DUST FLAP LOCKING CONSTRUCTION

BACKGROUND OF THE INVENTION

1. Field of the Invention

A display carton having means for positioning the displayed article within the carton.

2. Description of the Prior Art

Display cartons have been known for many years. However, none have used a relatively simple means of locking the dust flaps together to hold the free edge of the sidewalls in place. The sidewalls are held normally by relatively complex construction using the upper and lower holding panels. Illustrative of this approach are Hennessey et al., U.S. Pat. No. 3,270,867, which issued Sept. 6, 1966, Wolowicz et al., U.S. Pat. No. 3,344,911, which issued Oct. 3, 1967 and Hanson et al., U.S. Pat. No. 3,360,118, which issued Dec. 26, 1967. Each of these patents discloses sidewalls having free front edges which are held in place by the top and bottom article holding panels, requiring complex cutting and scoring of both the sidewalls and the top and bottom article holding panels.

BRIEF SUMMARY OF THE INVENTION

The free edges of the sidewalls of a display carton are prevented from bowing outwardly by construction which locks the dust flaps together.

The dust flaps overlap centrally of the carton. A tab on a first dust flap is folded back around the second dust flap, and a detent on the second flap prevents the tab from slipping from the second flap. The product holds the tab against the second flap.

BRIEF DESCRIPTION OF THE DRAWINGS.

FIG. 1 is a top plan view of the blank.

FIG. 2 is an isometric view of the standing carton. The bottom flaps are closed and the top flaps are open.

FIGS. 3-5 are isometric views of the carton showing its formation and the placing of the article within it.

FIG. 6 is a front elevational view of the display package containing the article.

FIG. 7 is an isometric view of the top of the carton showing the dust flap locking structure.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 shows the blank 10 of the carton. The blank is divided by score lines 11, 12, 13 and 14 into a first side panel 15, a front panel 16, a second side panel 17, a back panel 18, and a glue flap 19.

The front panel 16 has a V-cut 20 at its upper edge and a longitudinal slit 21 and a transverse slit 22 which divide the panel into a lower article holding panel 23 and two beveled panels 24 which normally fit behind the enclosed article. The panels 24 are hinged to the side walls 15 and 17 by the score lines 11 and 12 respectively.

Lower transverse score line 25 on side panels 15 and 17 and front panel 16 is aligned with the lower edge 26 of back panel 18 and glue flap 19. The score line 25 hinges the glue flaps 27 and 28 to side panels 15 and 17, respectively, and the closure panel 29 to the article holding panel 23. The tuck panel 30 is hinged to the closure panel 29 by score line 31. Slits 50 extend outwardly from the ends of score line 31. The front cor-

ners 51 of the dust flaps 27 and 28 extend into the slits to lock the closure panels of the closed container.

Upper transverse score line 32 forms the hinge between dust flap 33 and side panel 15, dust flap 34 and side panel 17, and closure panel 35 and back panel 18.

The front edge of dust panel 33 is undercut at 36 and has a forwardly extending detent 37 at its free outer end. The inner edge of detent 37 meets the undercut edge 36 at point 38.

The front edge of dust flap 34 is also undercut at 39 and has a forwardly extending tab 40 at its free end. The tab 40 is hinged to dust flap 33 by score line 41. The inner edge of tab 40 meets the undercut edge 39 at 42. This detent normally is longer than the detent 37 on dust flap 33.

An article holding panel 43 is hinged to closure panel 35 by score line 44. The holding panel 43 has an outer edge 45 which is contoured to fit the shape of the contained article.

In the formation of the package, the glue flap 19 is adhered to the inner face of side panel 15. The bottom flaps are closed in the usual manner with the closure panel 29 underlying the dust flaps 27 and 28 and the tuck of flap 30 inserted into the carton.

As shown in FIGS. 3-5 and 7, the upper flaps are closed. Dust flap 34 is folded downwardly over dust flap 33. As may be seen, the dust flaps overlap and the tab 40 is in the center of the carton. The combined lengths of dust flaps 33 and 34 between the score lines 32 and points 38 and 42 is equal to the width of front panel 16. Therefore, the detent 37 is between the tab 40 and the score line 32 of flap 34.

Closure panel 35 is folded downwardly overlying the two dust flaps 33 and 34, and locking panel 43 is folded downwardly in the front of the carton. During this operation, the tab 40 may be bent downwardly in front of the carton.

The product is now inserted into the lower part of the carton behind holding panel 23. The article is tilted rearwardly into the carton, pivoting the panels 24 rearwardly, the holding panel 43 backwardly and upwardly, and the tab 40 rearwardly. When the product is pushed completely into the carton, the holding panel 43 snaps downwardly and the article is held in place by the edge 45 of the panel. The side panels 24 prevent the holding panel 43 from bending outwardly to release the product. The tab 40 is folded back around flap 33 and is prevented from sliding from the dust flap 33 by the detent 37. The top of the article holds the tab 40 against the flap 33. This construction prevents the front edges of side panels 15 and 17 from bowing outwardly. It is also possible to bend the tab 40 around the dust flap 33 before closing the closure panels 35 and 43 as shown in FIG. 7.

The lower closure panels may be sealed instead of tucked. In this construction an inner closure panel 46, shown in skeletal outline in FIG. 1, is hinged from the lower edge 26 of panel 18 and the tuck flap 30 on closure flap 29 is eliminated.

What is claimed is:

1. In a display carton having a front wall which is open for the display of an article and adjacent side walls having front corners which may bow outwardly, means for preventing such bowing comprising

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dust flaps hingedly attached to each of said side panels and overlapping centrally of the carton, the front edge of each of said dust flaps being undercut,

one of said dust flaps having a tab extending toward said front wall on its outer free end, said tab being folded back around the other of said dust flaps, said other dust flap having a detent extending toward said front wall on its outer free end preventing said tab from sliding from said other flap.

2. The carton of claim 1 in which said detent does not extend forwardly of said front panel.

3. A carton of claim 2 having a closure panel overlying said dust flaps and an article holding panel folded into said carton from the front edge of said closure panel, said article holding panel having a free edge contoured to hold an article.

4. A carton of claim 3 in which said front panel is a pair of inwardly extending bevel panels.

5. A carton of claim 3 in which the other end of said carton has article holding means.

6. A blank for a display carton having a front wall which is open for the display of an article, and adjacent sidewalls having front corners which may bow out-

wardly, means for preventing such bowing comprising dust flaps attached to said side panels by score lines, the edge of each of said flaps facing said front panel being undercut,

one of said dust flaps having a tab extending from said edge,

the other of said dust flaps having a detent extending from said edge,

said tab and said detent each having an inner edge on the side toward the score line attaching its dust flap to said side panel, said inner edge intersecting said undercut edge at a point,

the combined length of said dust flaps between said score lines and said intersection points being at least equal to the width of said front panel.

7. The blank of claim 6 in which there is a score line between said tab and its dust flap.

8. The blank of claim 6 in which there is a back panel and a closure panel joined to said back panel by a score line.

9. The blank of claim 8 in which there is an article holding panel joined to the outer edge of said closure panel by a score line.

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