Aug. 9, 1960 M. L. WAGAMAN 2,948,390

WINDOW CARTON

Filed June 23, 1959 2 Sheets-Sheet 1

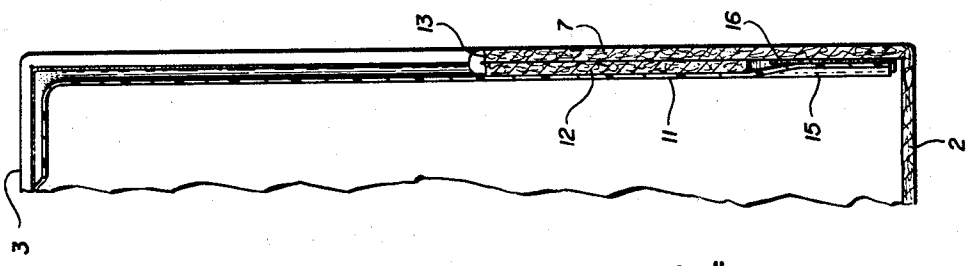


Fig. 2

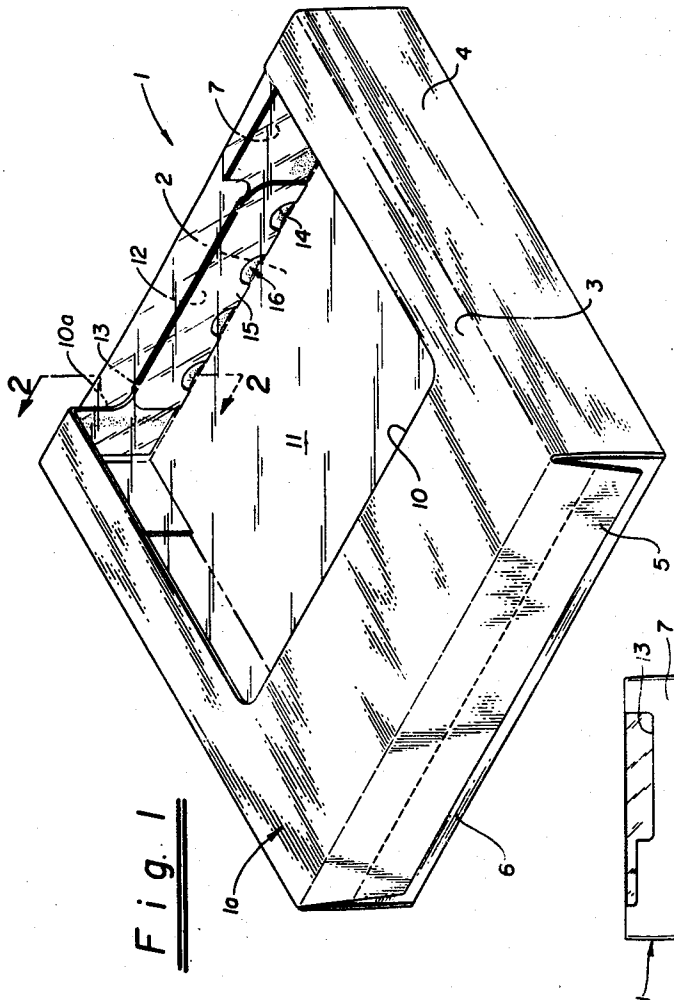
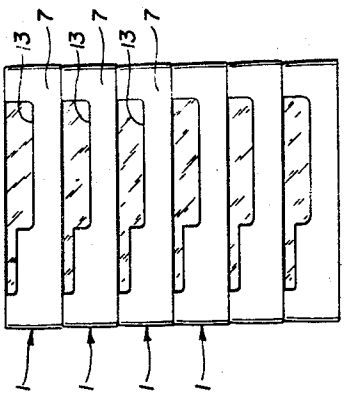


Fig. 1

Fig. 4



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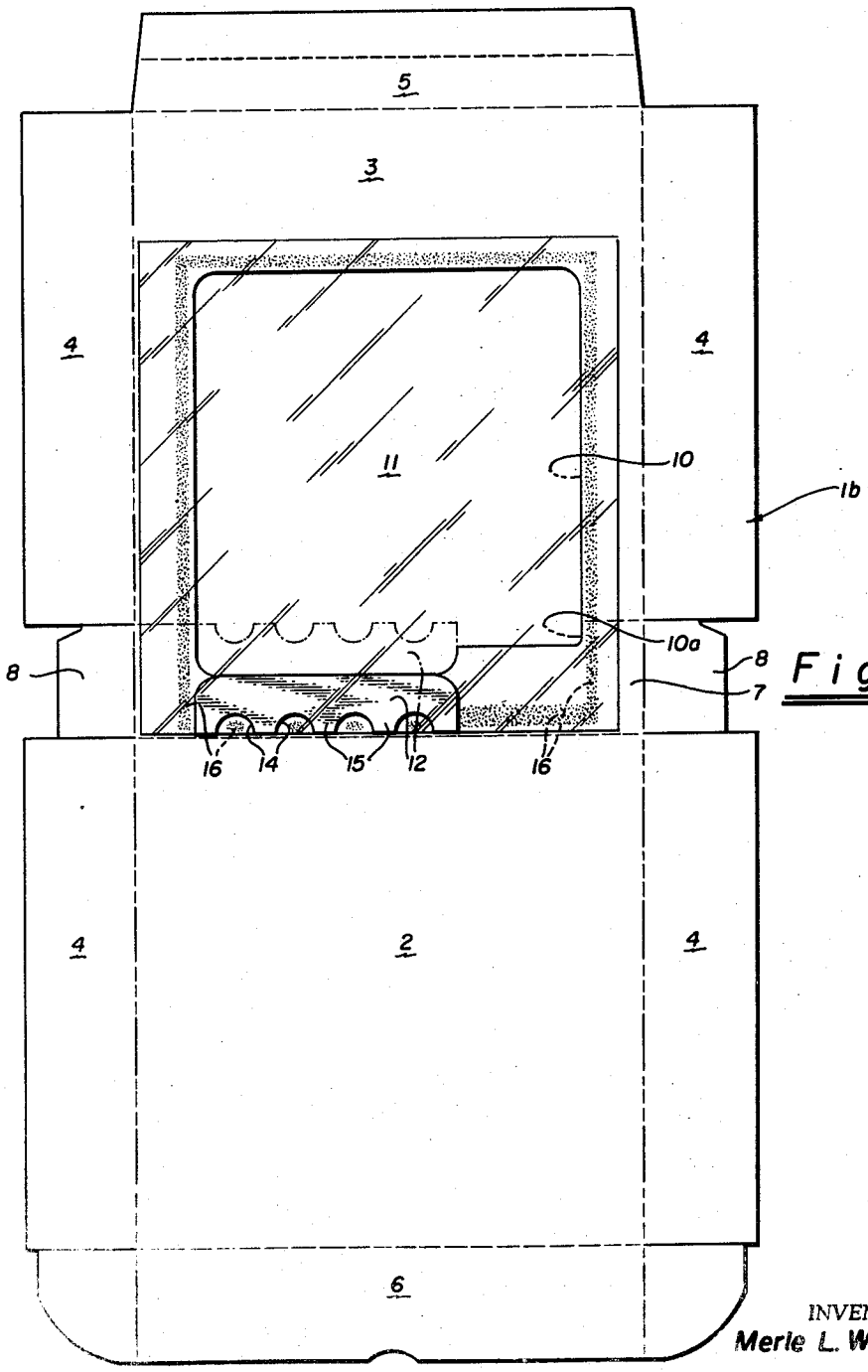


Fig. 3

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WINDOW CARTON

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8 Claims. (Cl. 206—45.31)

This application relates to window cartons and, more particularly, to cartons having window openings therein extending into a vertical wall so that the contents of the cartons can be inspected through the window while the cartons are stacked with only the vertical wall exposed.

Previous efforts have been made to display baked goods and other eye-appealing products by use of paperboard cartons having window openings therein, but where it is desired to stack the cartons for conservation of display or storage space, it becomes necessary to provide a window opening in at least one of the exposed vertical panels. Since, when the cartons are stacked, the vertical panels support the weight of cartons stacked above, the provision of a window opening in a vertical panel ordinarily entails the sacrifice of the carton's load-carrying ability.

It is, therefore, an object of this invention to provide a display or window carton with a vertical window panel, but having sufficient strength to support cartons stacked thereon.

It is a further object of this invention to provide a carton having a vertical window opening which is reinforced for additional strength without requiring any appreciable increase in time and expense of manufacture.

It is a further object of this invention to provide a reinforcement for a load-carrying carton panel which may be applied concurrently with the application of a transparent window panel.

In carrying out this invention, the lower edge of the window opening which extends into the vertical panel is formed as a flap to be folded downwardly and affixed to the inner surface of the panel. The flap, before being so affixed, is cut with a series of notches or perforations. Then, when a peripheral strip of adhesive is applied around the window opening to secure the transparent panel, it will function to secure the flap in place with a portion thereof being exposed through the perforations in the panel to receive and affix the transparent window panel.

Other objects and advantages of this invention will become apparent from the specification following when read in connection with the drawings affixed hereto wherein:

Fig. 1 is an isometric view of a carton embodying features of the invention;

Fig. 2 is a partial section view taken along line 2—2 of Fig. 1;

Fig. 3 is a plan view of a carton blank embodying features of the invention; and

Fig. 4 is an elevation view of a stack of the cartons.

Referring now to the drawings, I show a carton 1, the general construction of which is more or less conventional, being formed from paperboard or the like and having bottom and top panels 2 and 3, side panels 4 and closure flaps 5 and 6. Interconnecting the bottom and top panels 2 and 3 is a front panel 7 having corner flaps 8 thereon which, in assembly, are secured to the

side panels 4 by adhesive or any other suitable means.

A window opening 10 having a transparent panel 11 thereacross is formed in the top panel and extends at 10*a* down into the front panel 7 to permit inspection of the carton's contents whether it be disposed flat or stacked with other like cartons, as shown in Fig. 4. It is the structure of this window opening to which my invention is particularly directed.

When the window opening 10 is die cut, an extension 10*a* in the vertical panel portion thereof is provided to increase visibility of the carton's contents without unnecessarily sacrificing strength as by making the entire width of the window opening full depth. Because the window extension would normally impair the strength of the vertical panel 7, I form the window extension during die-cutting by cutting a reinforcing flap 12 which is simultaneously scored at 13 so that it may be folded downwardly over the inside of the vertical panel 7 to provide a double thickness therein below the window opening extension. When the reinforcing flap is formed, i.e. in a single die cut operation, a series of notches or holes 14 are cut in the edge thereof for a purpose to be hereinafter described.

Conventionally, the outer surface 1*a* of the carton blank is coated or glazed with a plastic or other moisture resistant substance.

Since the glazed side of the carton blank 1*a* also resists the usual adhesives applied in liquid state, adhering is done where possible on the uncoated side 1*b* of the carton blank. Consequently, the transparent film 11 of "cellophane" or the like conventionally applied to window cartons of this type, is applied by adhesives to the inner surface 1*b* of the carton blank. However, with the reinforcing flap 12 folded down, its adhesive-resistant surface 1*a* is exposed upwardly on the inner surface of the carton blank presenting an obstacle to adhesion of the transparent film. An important feature of this invention resides in the attachment of the reinforcing flap 12 and transparent film 11.

The notches or perforations 14 with intervening tabs 15, in the reinforcing flap 12 and a peripheral line of adhesive 16 applied to the inner surface 1*b* of the carton are so situated relative to the score line 13 of the flap that when the flap is folded downwardly the line of adhesive 16 applied to the carton blank and the reinforcement flap 12 folded downward, the adhesive will underlie alternately a tab 15 and a perforation 14. Then, the transparent film 11 is placed across the window opening 10 and over the flap and secured directly to the uncoated inside surface 1*b* of the vertical panel 7 by means of the adhesive 16 exposed through the notches of perforations 14. Thus, in a single operation the flap 12 is secured to the panel 7 by attachment of the adhesive to its under surface, including the tabs 15, and the transparent film 11 is secured by the same strip of adhesive exposed through the notches 14.

With the flap so secured, the strength of the vertical panel is enhanced appreciably so that cartons may be stacked to a considerable height without fear of collapse and resultant damage of the contents. This, of course, is particularly significant where the cartons are employed to display articles susceptible to damage by contact, such as baked goods.

While notches 14 cut in the flap 12 are preferred for simplicity in manufacture, other openings such as holes may be formed for the same purpose.

It is apparent that other modifications and changes in detail may be made to this invention without departing from the spirit and scope thereof which is intended to be limited only by the claims appended hereto.

What is claimed as new is:

1. A carton blank formed from sheet material and including a pair of adjacent hingedly connected wall panels, a window opening extending into both of said panels across the hinged connection therebetween, a coating of adhesive applied to one side of said sheet material in a peripheral line around said window opening, a reinforcing strip on said one side adjacent to said window opening, said reinforcing strip having at least one perforation therethrough overlying said adhesive to expose said adhesive therethrough, a film of transparent sheet material covering said window opening and secured to said panels by said peripheral strip of adhesive, said window being secured over said reinforcement strip by the adhesive exposed through said perforation.

2. A carton blank formed from sheet material and including a pair of hingedly connected wall panels, a window opening extending into both of said panels across the hinged connection therebetween, an adhesive applied to one side of said sheet material in a peripheral line around said window opening, a reinforcing flap on one of said panels adjacent said window opening adapted to be folded back on said one side thereof and secured thereto by said adhesive, said reinforcing flap having perforations therethrough overlying said adhesive to expose portions of said adhesive therethrough, and a transparent film covering said window opening and secured to said sheet material by said adhesive, said film being secured over said reinforcing flap by the portions of said adhesive exposed through said perforations.

3. A carton blank formed from sheet material having an uncoated surface and an adhesive resistant coated surface, said carton blank including a pair of hingedly connected wall panels, a window opening extending into both of said panels across the hinged connection therebetween, an adhesive applied in a peripheral line on the uncoated side of said sheet material around said window opening, a reinforcing flap on one of said panels adjacent said window opening folded back onto the uncoated side of said one panel and secured thereto by said adhesive, said reinforcing flap having perforations therethrough overlying said adhesive to expose portions of said adhesive therethrough, and a transparent film covering said window opening and secured to the uncoated side of said sheet material by said adhesive, said film being secured over said reinforcing flap by said exposed portions of the adhesive.

4. A carton formed from sheet material and including a generally upright panel and an adjacent generally horizontal panel, a window opening extending from said generally horizontal panel down into said upright panel with the lower edge thereof spaced above the lower edge of said upright panel, a reinforcing flap carried on said upright panel by a hinged connection forming at least a portion of the lower edge of said window opening, a coating of adhesive applied around said window opening, said reinforcing flap being folded down against said upright panel and secured to the inner surface thereof by said adhesive, said reinforcing flap having perforations therethrough exposing portions of said adhesive, and a transparent film secured to said panels around said window opening by said adhesive, said film being secured

over said reinforcing flap by said exposed portions of the adhesive.

5. A carton formed from sheet material having an inner uncoated surface and an outer adhesive resistant coated surface, said carton including a generally upright panel and an adjacent generally horizontal panel with a hinged connection therebetween, a window opening extending from said generally horizontal panel across said hinged connection and down into said upright panel with the lower edge thereof spaced above the lower edge of said upright panel, a reinforcing flap carried on said upright panel by a generally horizontal hinged connection forming at least a portion of the lower edge of said window opening, a coating of adhesive around said window opening on the uncoated inner surface of said sheet material, said reinforcing flap being folded back down against the inner surface of said upright panel and secured thereto by said adhesive, said reinforcing flap having perforations therethrough exposing portions of said adhesive, and a transparent film covering said window and secured around the edge thereof to said panels by said adhesive, said film being secured over said reinforcing flap by said exposed portions of the adhesive.

6. A carton defined in claim 5 wherein, the outer surface only of said sheet material has an adhesive-resistant coating thereon whereby said film is secured over the coated surface of said reinforcing flap.

7. In a carton formed of sheet material and including a generally upright panel having a window therethrough for display of the contents of said carton while said carton is arranged in a stack of like cartons with said upright panel under vertical load, the lower edge of said window being spaced from the lower edge of said upright panel, means increasing the load carrying capacity of said panel comprising a reinforcing flap adjacent said window opening hingedly connected to said panel with the hinge connection forming at least a portion of the lower edge of said window, said flap being folded down against the inner surface of said panel, a coating of adhesive below the lower edge of said window opening securing said flap against said inner surface, said reinforcing flap having perforations therein overlying said adhesive to expose portions of said adhesive therethrough, and a transparent film affixed to said inner surface by said adhesive.

8. A carton blank formed from sheet material and including a wall panel adapted to support an external load generally parallel thereto, a window opening in said panel terminating in a window edge spaced from one edge of said panel, a coating of adhesive applied to said panel along said window edge, a reinforcing flap connected to said panel by a hinge fold forming at least a portion of said window edge, said reinforcing flap having at least one perforation therethrough overlying said adhesive to expose portions of said adhesive therethrough, a transparent film covering said window opening and secured to said panel by said adhesive, said film being secured over said reinforcement flap by said exposed portions of the adhesive.

No references cited.