Jan. 17, 1967 P. C. COLLURA 3,298,595

CARTON HAVING ECONOMICAL OPENING CONSTRUCTION

Filed July 23, 1965

Fig. 3

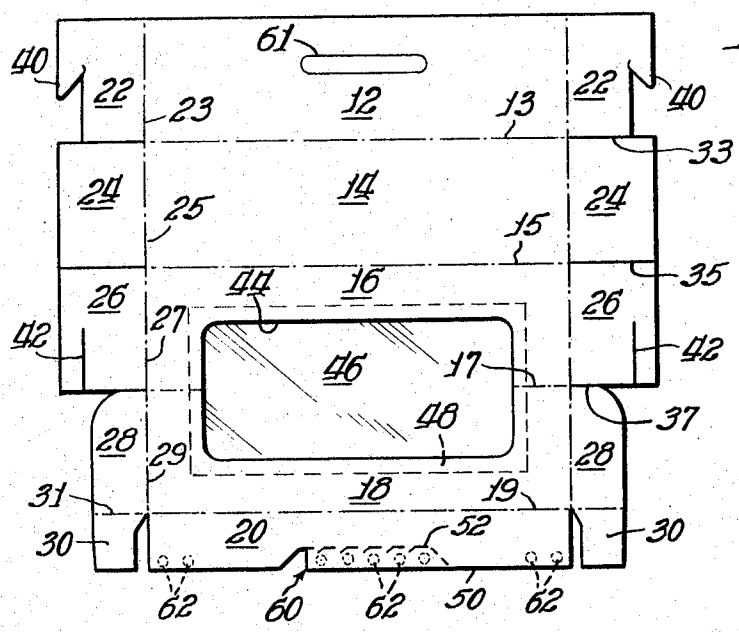


Fig. 2

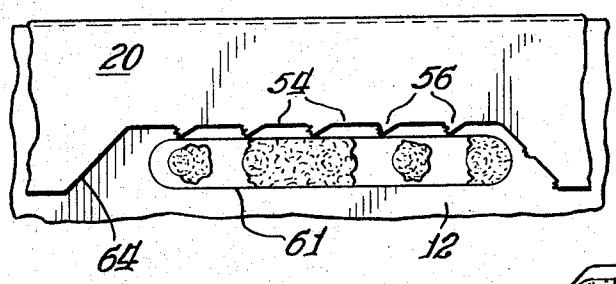


Fig. 2a

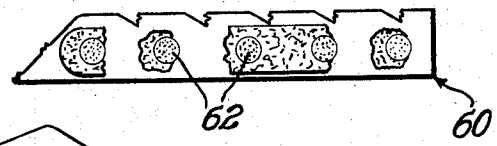
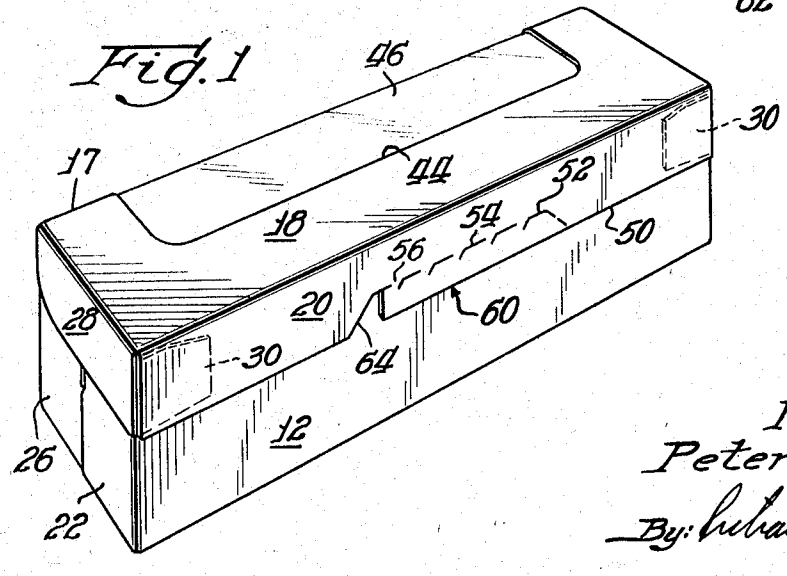


Fig. 1



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3,298,595

CARTON HAVING ECONOMICAL OPENING CONSTRUCTION

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This invention relates to an economical opening construction for a carton formed from a blank of foldable paperboard, and more particularly, to a tear strip formed in the blank within a recess at one end edge thereof immediately adjacent the panel of the carton that is to be opened and bonded locally to the blank at the opposite end edge thereof, and adapted to be removed from the blank upon opening the carton.

An object of this invention is to provide in a carton formed from a blank of foldable paperboard an improved economical opening construction that includes a tear strip and that can be utilized with no required additional blank area or gluing step as compared to the same carton without the tear strip.

A more detailed object of this invention is to provide an improved tear strip construction formed by weakened lines immediately adjacent one end edge of the blank and bonded generally only at local areas to the blank adjacent the opposite end edge thereof, operable to be easily separated across the locally bonded areas from the blank for opening the carton which thereupon leaves a gap or recess in the one end edge of the blank.

Other objects will become more apparent after reviewing the following specifications including the accompanying drawing, wherein:

FIG. 1 is a perspective view of a carton having an embodiment of the improved tear strip forming the subject invention;

FIG. 2 is a front elevational view of the tear strip shown in the carton on FIG. 1, with the tear strip being removed and having the partially torn section of the under-panel exposed;

FIG. 2*a* is a front elevational view of the under side of the tear strip itself as viewed after it would be removed from the carton by ripping in a general left to right direction relative to FIG. 2;

FIG. 3 is the top plan view of the blank used to form the carton shown in FIG. 1.

Referring now to FIGS. 1 and 3 of the drawing, the blank **10** is shown to include successively connected main panels **12**, **14**, **16**, **18** and **20** hinged together on respective parallel longitudinal hinge lines **13**, **15**, **17** and **19**, which panels form upon being folded at right angles respectively, the front, bottom, rear, top and over-lapping front hood walls of the carton. Closure flaps are connected to the end edges of the panels along parallel transverse hinge lines and operate upon being folded at right angles to the respective panel to close the ends of the carton. The flaps are identified as inner closure flap **24** connected on hinge line **25** to bottom wall **14**; outer closure flaps **22** and **26** connected respectively on hinge lines **23** and **27** to front panel **12** and rear panel **16**; side hood panel **28** connected on hinge line **29** to top panel **18**; and glue flap **30** connected to side hood panel **28** on hinge line **31**. Cut lines **33**, **35** and **37** separate the respective end closure flaps from one another and generally are aligned with the respective longitudinal hinge lines of the carton.

In the set up condition of the carton, the front, bottom, and rear panels are folded normal to their respective hinged panels to define a tray closed at its top by top wall **18**. End flaps **22** and **26** are provided with locking means, in the form of locking tab **40** and tab receiving slit **42**, which cooperate with one another in a well known manner to hold the flaps together. Flap **30** is folded in face-to-face relation under the front hood panel **20** and is secured thereto. As such, the top panel **18**, front panel **20**, side panels **28** and flaps **30** all move as an integral hood about hinge line **17** relative to the rear panel **16** to open or close the tray. When the carton is in the closed position, the front and side panels of the hood overlap the front and end closures of the tray. In the carton disclosed, a window is formed by opening **44** in adjacent portions of the rear and top panels covered with a transparent sheet **46** glued at its extremities **48** to the panels in the well-known manner.

As can be readily seen from FIG. 1, the front panel **20** of the hood overlaps a portion of the front panel **12** of the carton. The outer edge **50** of the front hood panel **20** is generally straight and extends parallel to the longitudinal hinge lines of the carton body. Extending inwardly from the outer edge **50** of the front panel **20**, a weakened line of tear **52** is formed approximately centrally of the front panel **20** spaced from and between end panels **28**. The weakened line of tear **52** is formed in a well-known manner wherein spaced cut lines **54** are formed completely through the panel to leave between them connected portions of board **56**. A tear strip **60** is thus defined within the front panel **20** between the outer edge **50** of the panel and the weakened line **52**.

The tear strip **60** is secured by adhesive to the front panel **12** to join the front panel of the hood to the body of the tray. Preferably, the front panel **12** is cut scored, as at **61**, partially through the panel from the side that is to be glued, and only the area within the cut score pattern is treated with an adhesive to provide adhesion of the overlapped panels only in this area of the cut scores. Thus, the secured tear strip, upon being torn from the front hood panel rips a portion of the front tray panel within the cut scores from the front panel itself to provide for easy and neat separation of the tear strip from the front panel. The pattern of gluing is not material to this invention, but it has been found that a series of glued circles **62** spaced along the length of the glue strip and generally in line with the remaining fabric portion **56** across the weakened line of tear works quite well. Also, the edge of the hood front panel **20** adjacent one end of the tear strip can be cut away as at **64** to expose the end of the strip for facilitating initial gripping thereof for opening of the carton.

It will be understood that generally the subject carton is initially formed as a tray, the product is then loaded into the tray, and the top panel **18** including the hood side panels **28** plowed around the tray. Thereafter, glue is applied to the underside of front hood panel **20**, both in the area of the tear strip and at the ends by the flaps **30**, and the panel is plowed over to bond to the tray front wall **12** and flaps therebeneath. This forms the hood and further secures the hood in the closed condition of the carton to the tray.

While only a single embodiment of the subject invention has been disclosed it will be obvious to persons skilled in the art that other modifications can be made. For example, it is to be noted that this invention can be used also on tubular cartons wherein the tear strip on one panel of the blank initially acts, when bonded to the opposite end panel of the blank, as the manufacturer's joint of the carton. In such cases, the product carried by the article is loaded into the open end of the tube, which tube end is thereafter closed as required. Accordingly, it is desired that the invention be limited only by the scope of the claims hereinafter following.

What is claimed is:

1. A carton formed from a cut and scored blank of foldable paperboard, comprising:

(a) hingedly interconnected front, bottom and rear walls, and end closures hinged to the opposite ends of the walls forming a tray open at the top;

(b) a closure for the open top of the tray including a top wall hinged at its rear edge to the tray, and front and end panels hinged to the front and opposite end edges of the top wall and folded substantially normal thereto and held together forming a hood that overlaps the upper portion of the tray;

(c) separable locking means formed between overlapping portions of the tray and hood including a tear strip defined in the hood front panel by a weakened line of tear and bonded to the tray front wall;

(d) said bond between the tear strip and tray front wall being confined to an elongated pattern along the strip, wherein the tear strip can be readily separated from both the tray and the hood for opening the carton;

(e) the tear strip being spaced substantially equidistantly from the opposite ends of the hood front panel and being disposed immediately adjacent the free lower edge of the hood front panel to leave a gap in said panel at said free edge after removal of the tear strip;

(f) the hood front panel adjacent one end extremity of the tear strip being cut away to expose said end extremity of the tear strip for easy initial gripping thereof for opening the carton;

(g) the hood having no bonded connection to the tray other than at the tear strip.

2. A carton according to claim 1, wherein the tear strip is of a width less than one half the full width of the hood front panel, and is of a length to occupy approximately the middle third of the hood front panel.

3. A carton formed from a cut and scored blank of foldable paperboard, comprising:

(a) a tray having a bottom wall and front, rear and end walls upstanding therefrom;

(b) a closure having a top wall hinged to the tray and having a front panel and end panels hinged to the front and end edges thereof and to each other to form a hood overlying portions of said tray front and end walls;

(c) a detachable tear strip formed in the front panel of said hood immediately adjacent the lower edge thereof and being removably bonded to the tray front wall;

(d) said tear strip having its ends spaced inwardly from the ends of said hood front panel and having its lower edge defined by the free lower edge of said hood front panel and having an upper edge defined by a weakened line of tear which has a major portion spaced above and parallel to said lower free edge and which has an end portion sloping downwardly from one end of said major portion to said lower free edge of said cover front panel;

(e) said hood front panel adjacent the other end of the major portion of the weakened line of tear having therein a recess to expose the end of the tear strip adjacent thereto, to provide for initial gripping of the tear strip to open the carton.

4. A carton according to claim 3, wherein the bond between the tear strip and tray front wall is confined within a cut scored area in the tray front wall beneath the tear strip and includes an elongated pattern of separated spots of adhesive.

5. A carton formed from a cut and scored blank of foldable paperboard, comprising:

(a) hingedly interconnected front, bottom, rear and top walls, and end closures hinged to the opposite ends of the walls;

(b) the top wall being separable from the front wall and end closures to hinge about its rear edge to open the carton, and a front panel hinged to the front of the top wall folded to overlap the upper portion of the front wall;

(c) separable locking means formed between the overlapping portions of the front wall and front panel including a tear strip defined in the front panel by a weakened line of tear and bonded to the front wall;

(d) said bond between the tear strip and front wall being confined to an elongated pattern along the strip, wherein the tear strip can be readily separated from both the front wall and front panel for opening the carton;

(e) the tear strip being spaced substantially equidistantly from the opposite ends of the front panel and being disposed immediately adjacent the free lower edge of the front panel to leave a gap in said panel at said free edge after removal of the tear strip;

(f) the front panel adjacent one end extremity of the tear strip being cut away to expose said end extremity of the tear strip for easy initial gripping thereof for opening the carton;

(g) the top wall and front panel having no bonded connection to the front wall other than at the tear strip.

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