

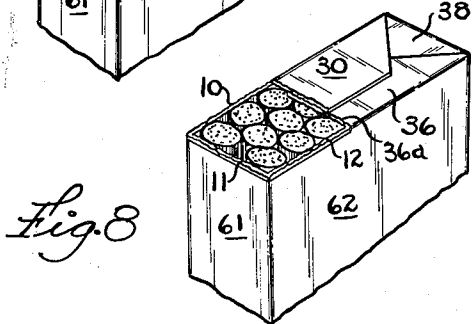
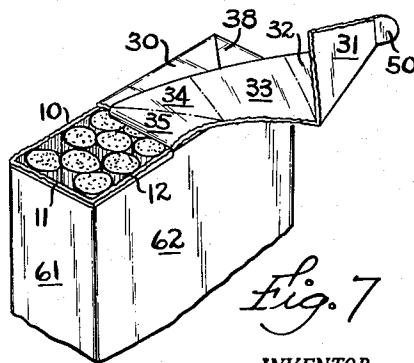
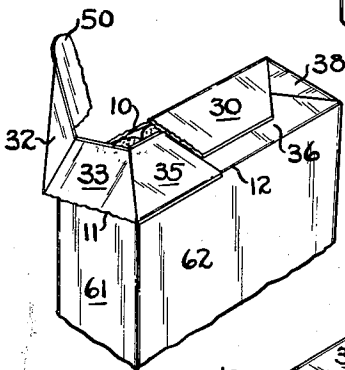
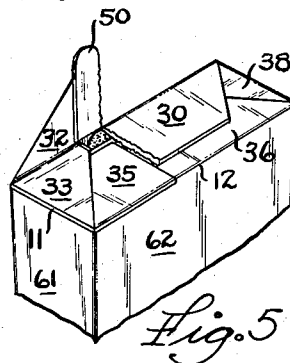
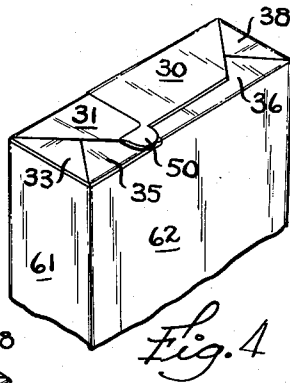
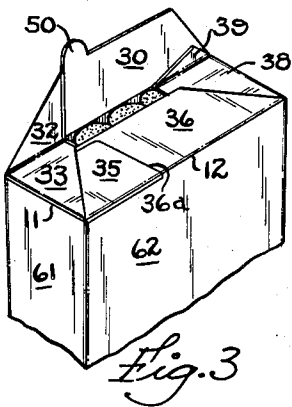
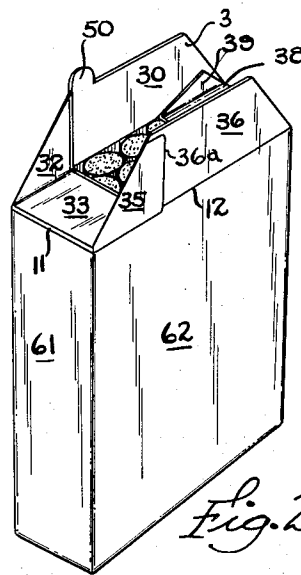
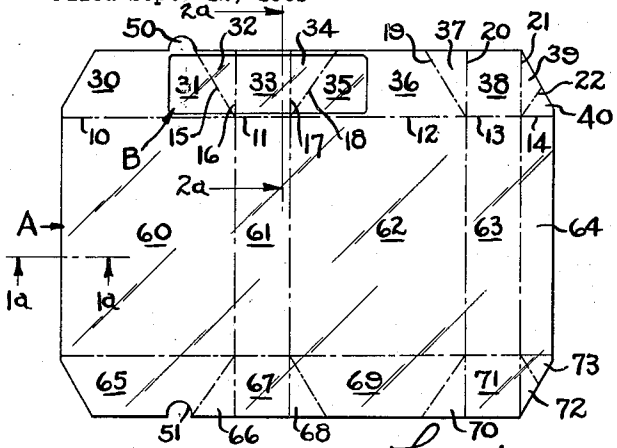
Dec. 24, 1963

H. N. HOVLAND
DISPENSING PACKAGE

3,115,293

Filed Sept. 12, 1961

2 Sheets-Sheet 1



INVENTOR.

HOWARD N. HOVLAND
BY *Florian N. Jabas*
Joseph Korman
ATTORNEYS

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2 Sheets-Sheet 2

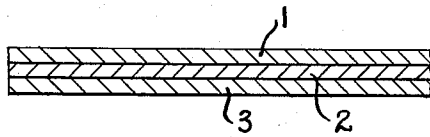


Fig. 1a

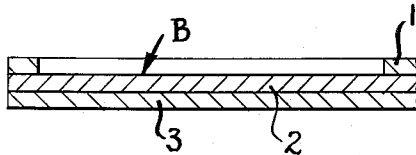


Fig. 2a

INVENTOR.
HOWARD N. HOVLAND
BY *Florin V. Jabas*
Joseph Roman
ATTORNEYS

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DISPENSING PACKAGE

Howard N. Hovland, Appleton, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

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7 Claims. (Cl. 229—51)

This invention relates to a tamperproof dispensing package which may be made from a single multi-ply blank. More specifically, the invention relates to a package having an opening means defined by a cut-out portion in one of the plies of the multi-ply packaging material and which is suitable for use in packaging cigars, cigarettes and the like.

It is important in the packaging of cigarettes to provide a package which in its original unopened condition maintains the freshness of the cigarettes to insure maximum shelf life. Therefore opening means which utilize lines of weakness extending through the packaging materials to the interior of the package are undesirable. Customarily cigarettes are packaged by first enclosing them in contact with the paper portion of a paper-laminated-to-foil wrapper. They are then overwrapped with a printed paper label covering all of the foil except at the top, and subsequently enclosed in a cellophane overwrap. The package is opened by utilizing a tear strip integral with the cellophane to gain access at the end with the foil showing. The opening is completed by removing the foil laminate exposing the cigarettes.

The use of three separate wrapping materials in the conventional cellophane wrapped package entails high material costs. Further, the wrapping machinery is more involved than that required if a single multi-ply material were employed. Also, from the consumer's standpoint, the necessity of making two openings, namely one through the cellophane with the tear strip and then one through the foil is time consuming. From the standpoint of economy in material cost, of operation and time a package involving only a single wrapping operation and a single opening means integral with and consisting of only the wrapping material would be ideal.

It is therefore an object of the present invention to provide a package made of a composite multi-ply blank which utilizes the configuration of the plies to provide means for easy opening of the package.

Another object of the present invention is to provide a package opening means which does not materially weaken the overall strength of the unopened package.

A further object of the present invention is to provide a package opening means which does not involve cutting entirely through the blank material, which would destroy the freshness of articles encompassed within the sealed package.

Still another object of the present invention is to provide a package opening means which involves a minimum of die cutting in forming the package blank.

Another object of the present invention is to provide a package blank which may be folded and closed on machines employing standard folding and gluing elements.

According to the present invention a package blank is formed of a composite multi-ply sheet material. A portion of one of the plies is cut away in a predetermined area, exposing the underlying ply. When the package is folded and closed all of the underlying ply except for the exposed portion is covered. A tearing path for the exposed portion of the underlying ply is defined by the edges of the cut-out portion. The package is opened by grasping an extending portion of the exposed underlying ply and detaching along the defined tear path.

Further details, advantages and objects of the invention

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will be apparent from the following specification and appended drawings wherein:

FIGURE 1 is a plan view of the outside surface of an integral blank suitably cut to form a tamperproof package having a tear-out opening means,

FIGURE 1a is a partial sectional view of the integral blank taken along line 1a—1a of FIGURE 1 showing the ply construction.

FIGURE 2a is a partial sectional view of the integral blank taken along line 2a—2a of FIGURE 1 showing the ply arrangement in the area of the tear-out portion.

FIGURE 2 is a perspective view of the blank of FIGURE 1 set up and partially closed to form a package with the product enclosed,

FIGURE 3 is a perspective view of the same partially closed package at a further stage,

FIGURE 4 is a perspective view of the completed package in closed and sealed condition,

FIGURE 5 is a perspective view of the same completed package showing the tear-out portion partially removed,

FIGURE 6 is a perspective view of the same completed package at a further stage of opening,

FIGURE 7 is a perspective view of the same completed package at still a further stage of opening, and

FIGURE 8 is a perspective view showing the opened package.

Referring first to FIGURE 1, the package is made of a single, foldable, composite blank "A" of flexible materials such as paper, foil, plastic etc. The composite blank consists of at least two, and preferably three, plies laminated together to give the desired moisture or air impervious qualities. In the preferred embodiment (see also FIGURE 1a), a web of paper tissue 3 is suitably laminated to one side of a web of metal foil 2. A web of paper 1 with spaced cut-out portions of predetermined size is then suitably adhered to the other exposed side of the foil ply 2. The foil 2 is exposed through the spaced cut-out portion provided in the paper ply 1.

The blank, shown in FIGURE 1, is adapted to be folded so as to form panels and flaps including main panels 60, 62, side panels 61, 63, glue panel 64, end panels 30, 36, 65, 69, side panel flaps 33, 38, 67, 71, closure flaps 32, 34, 37, 39, 66, 68, 70, 72 and glue panel flaps 40 and 73. A portion in the outer ply 1 is cut out to define a rectangular tear-out portion of the underlying ply designated by letter "B" (see also FIGURE 2a). An extending tab 50 formed as an integral part of plies 2 and 3 serves to initiate the opening of the completed package. When the blanks "A" are cut successively from a continuous web, cut-out portion 51 will result in the edge of the blank opposite from which the tab 50 extends. The function of the enumerated elements at the upper-end of the blank will be more fully described hereinafter.

FIGURE 1a is a partial cross-section of the blank of FIGURE 1 showing the arrangement of the plies. On the bottom of the blank and the inside of the finished package is the paper tissue ply 3 and on the top of the blank and the outside of the finished package is the paper ply 1. Sandwiched between the two aforementioned plies is the foil ply 2. Similarly, FIGURE 2a is a partial cross section of the blank of FIGURE 1 showing the arrangement of the plies. Since FIGURE 2a is taken through the area of the rectangular tear-out portion "B," part of ply 1 is missing. The perimeter of exposed ply 2 defined by the perimeter of the removed portion of ply 1 defines the tear-out portion "B."

The paper ply of blank "A" as shown in FIGURE 1 is positioned on the outside surface of the completed package. The blank is formed into a package by fold-

ing the blank "A" around a mandrel in a conventional manner to form the main panels 60, 62, side panels 61, 63, glue panel 64, and end panels 65, 69. The outer side of glue panel 64 is coated with adhesive and adhered to the inner surface of main panel 60. Side panel flaps 67, 71, glue panel flap 73 and closure flaps 66, 68, 70, 72, are then folded inwardly and adhered in a conventional manner to complete the lower end closure. Next, the articles to be packaged are inserted in the set-up package and the closing of the top end commenced. Alternatively, since the package is symmetrical with regard to the panels and flaps comprising the blank, the top end closure could be made first and the articles to be packaged inserted through the bottom.

The closure is accomplished by first folding in side panel flaps 33 and 38 along fold lines 11 and 13, respectively, to lie superposed on top of the packaged articles parallel to the upper end of main panels 60 and 62. Simultaneously, triangular closure flaps 32, 37, 34 and 39 are infolded about fold lines 15, 18, 19, and 22, respectively, to lie superposed against the inner surfaces of the extending end panels 30, 36, respectively. Fold lines 16, 17, 20 and 21, connecting closure flaps 32, 34, 37 and 39 to side panel flaps 33 and 38, respectively, lie parallel and adjacent to the upper edges of main panels 60 and 62 defined by prospective fold lines 10 and 12. This stage in the closing of the package is shown in FIGURE 2.

Next, adhesive is applied to the exposed inner surfaces of closure flaps 34 and 37, and end panel 36 is then folded inwardly about fold line 12 to lie superposed on the ends of the packaged articles. Simultaneously, the adhesive bearing surfaces of closure flaps 34 and 37 are adhered to side panel flaps 33 and 38, respectively, as shown in FIGURE 3. The closure is completed by applying a thin layer of adhesive to the exposed inner surfaces of closure flaps 32 and 39 and along the outer free edge of end panel 30 except for tab 50. End panel 30 is then infolded to lie superposed on and adhered to end panel 36 at which time closure flaps 32 and 39 become adhered to the adjacent underlying flaps to give the completed sealed package shown in FIGURE 4.

In the closed package, portions 31, 33, and 35 of tear-out portion "B" are visible. Except for the aforementioned portions the entire surface of the underlying ply 2 is covered. The edge of the outer ply 1 intermediate panel 30 and portion 31 defines the initial tear path for opening the package. Similarly the remainder of the tear path is defined by the edges of the outer ply 1 adjacent portions 31, 33 and 35 and denoted by fold lines 10, 11, and 12.

Referring to FIGURE 5, the package is opened by grasping the pull tab 50 and pulling upward and away from main panel 62 toward panel 60, the edge of the outer ply 1 serving as a force directing line. Upon reaching the opposite main panel 60 the direction of pull is changed so that tearing occurs along fold line 10 towards side panel 61. Upon reaching the juncture of fold line 10 with fold line 11, the direction of pull is again changed so that tearing occurs along fold line 11 from fold line 10 to fold line 12 as shown in FIGURE 6. The direction of tearing is again changed upon reaching fold line 12 so that the tear-out portion is freed along fold line 12 up to the juncture of the edge of portion 35 with end panel 36, as shown in FIGURE 7. The removal is completed by tearing portion 35 along the free edge 36a of the outer ply of end panel 36. FIGURE 8 shows the opened package ready for dispensing with the tear-out portion removed. As is readily apparent, the tearing has followed along the edges of the outer ply 1 of the package material. Since the tissue ply 3 on the inner side of the foil ply 2 offers relatively little tear resistance and since it is laminated to the foil 2, it is readily detached along with the foil tear-out portion. In order for ease of open-

ing and successful operation in removal of the tear-out portion it is important that the underlying ply or plies are frangible enough to readily tear along the defined path when opening of the package is initiated.

It is readily apparent that the present invention is applicable to a variety of packages utilizing different sheet materials composed of plies of a large variety of suitable sheet materials to provide opening means as previously described.

The present invention provides a package having a tamperproof opening means which does not destroy the ability of the package to maintain the freshness of the articles enclosed therein. Further the use of the edges of the outer ply directs the tearing force along a particular defined path. The opening means is readily accessible and easily detached, yet does not materially weaken the inner plies of the packaging material. Although exemplified with the opening means on just a portion of the top end of the package, it is understood that the opening means may be employed on either a smaller or larger area of the package.

I claim:

1. In a composite wrapper comprising multiple plies laminated together and adapted to be folded to form a rectangular cigarette package having opposed main panels, and alternating therewith opposed side panels, flaps attached to the end edges of said side panels, and end panels attached to the end edges of said main panels; a cut-out portion in the outer ply extending from one of said flaps into portions of the end panels adjacent thereto defining a tear path in the completed package for the underlying ply at least part of the edges of said cut-out portion being located immediately adjacent prospective fold lines along which fold lines said blank is folded to form a package; said edges of the cut-out portion in conjunction with the adjacent fold lines determining a force directing path for opening the completed package.

2. A composite blank adapted to be formed into a rectangular cigarette package, said blank being divided by fold lines into a pair of opposed rectangular main panels and, alternating therewith, a pair of opposed rectangular side panels; end panels attached to the end edges of said main panels; and flaps attached to the end edges of said side panels; said blank comprising multiple plies laminated together with the outermost ply having a cut-out portion located in one of said flaps and extending into portions of the end panels immediately adjacent thereto; one edge of the cut-out portion essentially coinciding with the fold lines defining the end edges of the adjacent main panels and side panel; the edges of said cut-out portion defining a tear path in the completed package for the underlying ply.

3. A dispensing package formed of a composite multiply blank cut and folded comprising a pair of opposed main panels, a pair of opposed side panels connected to the side edges of said main panels, opposed end panels connected to the end edges of said main panels, flaps attached to the end edges of said side panels and to the side edges of said end panels; portions of the end panels adjacent the outer corners thereof being folded inwardly on diagonals running from the inner corners of said end panels so as to lie between and against the inner surface of adjacent portions of the end panels, said flaps lying in subposed relationship with respect to the infolded portions of the end panels in the completed package; the outer ply of said package having a cut out portion located in one of the flaps and extending into portions of the adjacent end panels defining a tear path for the underlying ply for opening package, with the edges of the cut-out portion lying in close proximity to the adjacent side and main panels so that the edges of the cut portion and the adjacent fold lines direct the tearing force along a specific path to facilitate easy opening of the package.

4. The package of claim 3 wherein the cut-out portion

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extends an appreciable distance beyond the juncture of the diagonals with the outer edges of the end panels.

5. The package of claim 4 wherein a pull tab extends outward from one of the end panels opposite the adjoining main panel between the end of the diagonal and the edge of the cut-out portion to facilitate initiating the opening of the package.

6. A composite blank adapted to be formed into a rectangular package, said blank being divided by fold lines into alternating pairs of opposed main panels, and side panels, end panels and flaps attached to the end edges of said main panels and attached to said side panels, respectively; said blank comprising multiple plies with the outermost ply having a cut-out portion located in one of said flaps and extending into portions of the end panels immediately adjacent thereto; the underlying ply being frangible in the area underlying the cut-out portion so as to readily tear along a tear path defined by the edges of the cut-out portion, the remainder of the blank being intact, integral and imperforate.

7. A composite blank adapted to be formed into a rectangular package, said blank being divided by fold lines into a pair of opposed rectangular main panels; a pair of

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opposed rectangular side panels; end panels attached to the end edges of said main panels; and flaps attached to the end edges of said side panels; said blank comprising multiple plies, the outermost ply having a cut-out portion located in one of said flaps and extending into portions of the end panels immediately adjacent thereto, one edge of the cut-out portion essentially coinciding with the fold lines defining the end edges of the adjacent main panels and side panel; the underlying ply being frangible, in the area defined by the cut-out portion so as to readily tear along a tear path formed by the edges of the cut-out portion in the outermost ply, the remainder of the blank being intact, integral and imperforate.

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