

Oct. 18, 1960

G. S. NAGLE

2,956,719

PACKAGE FOR ARTICLES, SUCH AS CIGARETTES AND THE LIKE

Filed Oct. 14, 1958

2 Sheets-Sheet 1

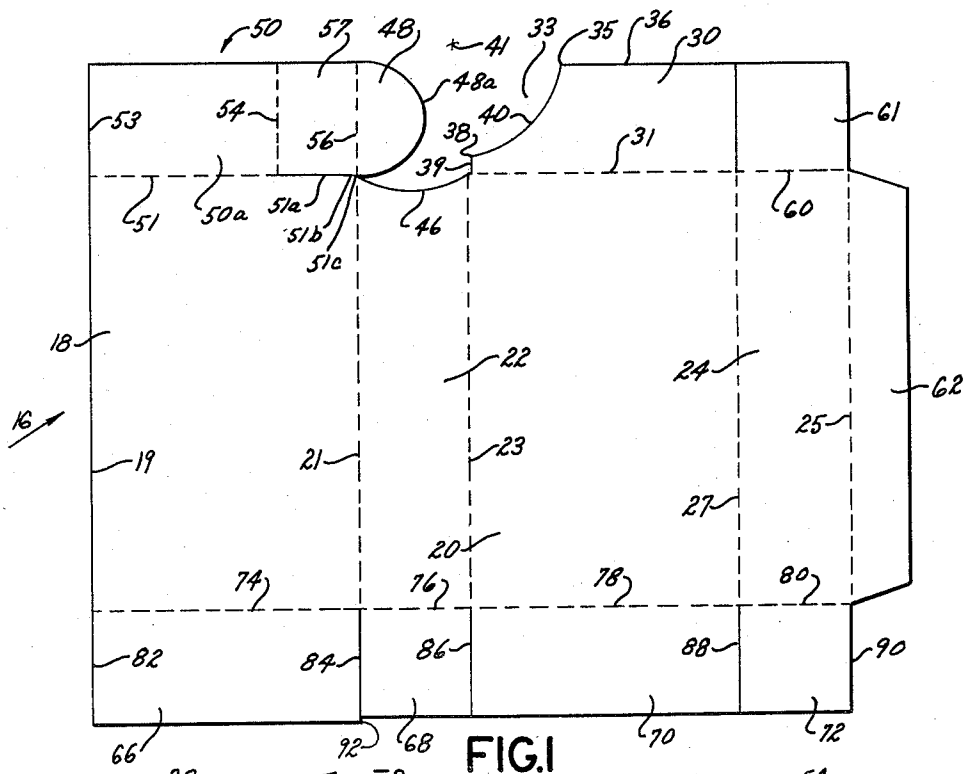


FIG. 1

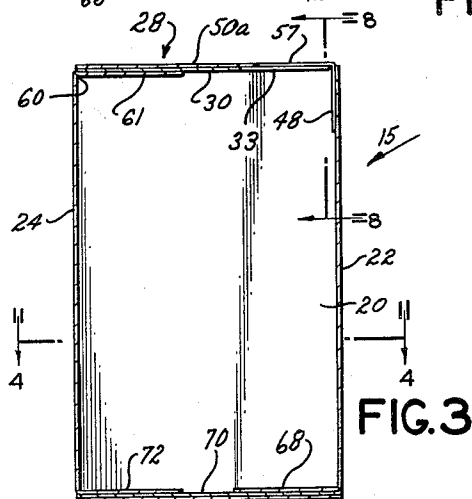


FIG. 3

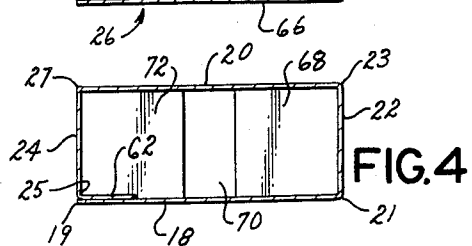


FIG. 4

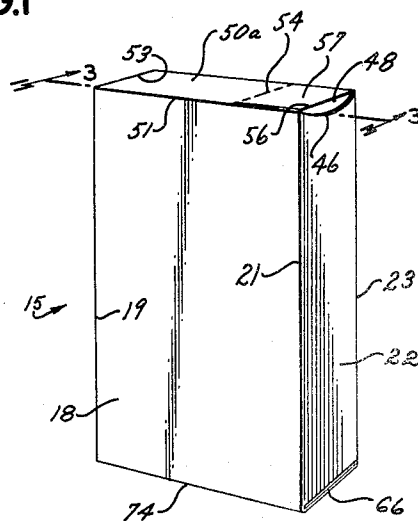


FIG. 2

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2 Sheets-Sheet 2

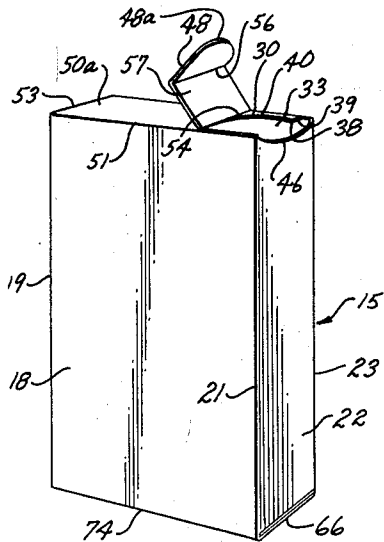


FIG. 5

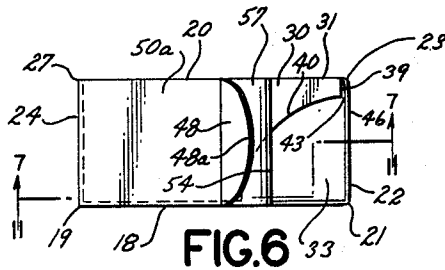


FIG. 6

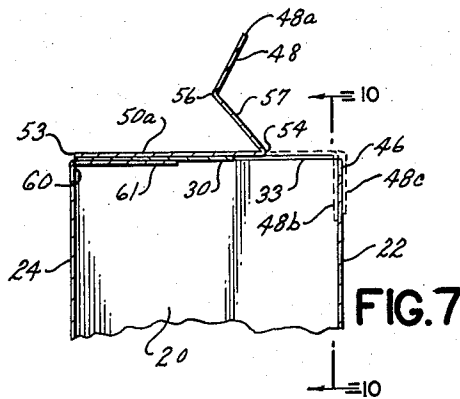


FIG. 7

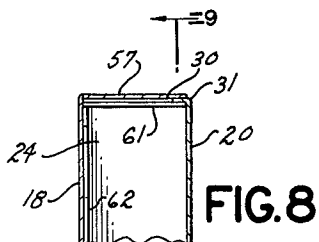


FIG. 8

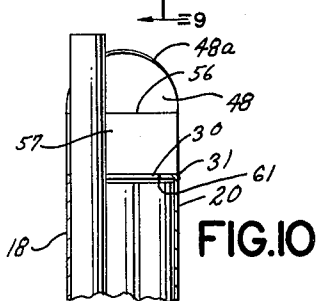


FIG. 10

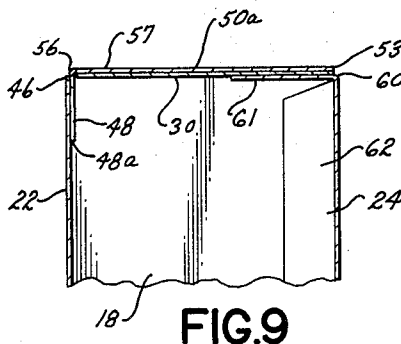


FIG. 9

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PACKAGE FOR ARTICLES, SUCH AS CIGARETTES AND THE LIKE

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6 Claims. (Cl. 229—17)

This invention relates to an improved multi-cornered package or box for articles, such as cigarettes, and the like, which has an article removal opening at a corner of the top of the box, and which also has a hinged and movable member movable up and down above the top of the box to open and close the article removal opening, which movable member cannot be collapsed downwardly into the box, thus preventing damage to any articles remaining in the box.

The box is readily made from a cut and scored blank of sheet package material, which is waste saving in character and which may be folded into the desired box shape, and filled with the selected contents by high speed automatic machinery.

Box cartons for articles, such as cigarettes, have been provided heretofore with a hinged top member for covering the removal opening. This opening has been co-extensive with the width of the box, so the hinged top member could easily move down below the level of the top of the box. This has resulted in damage to the articles, particularly cigarettes, remaining in the box.

A top hinged member has also been provided heretofore with side wings, which are insertable and slidable along the side walls of the box. These side wings tend to damage the cigarettes when such side wings move along the inner sides of the walls of the box. Also, these side wings do not provide a firm support for the hinged top sufficient to prevent a downward collapse into the box in the event of careless handling of the package by the user.

According to this invention, on the other hand, a removal opening is provided at a corner of the top of the box which is opened and closed by a hinged top member. This top member may be moved up and down above the box to cover and uncover the opening, but cannot easily collapse inwardly into the box to damage the remaining contents because such movable cover member is very rigidly supported by the edge portion of the top adjacent the corner opening.

This invention also permits the use of a tuck-in tab insertable in and removable from such corner opening. Also, it permits the provision of a narrow tuck-in space extending from the corner opening to another corner of the top of the box in such a manner that the tuck-in tab may also be insertable in and removable from such tuck-in space.

This superior box construction is readily made from a cut and scored blank in which a minimum of waste cuttings are produced, the blank being easily folded, assembled and filled by automatic machinery, at relatively high speed, as will become readily apparent.

Accordingly, it is an object of this invention to provide an improved box for articles, such as cigarettes, which box has a corner opening in the top of the box for removal of such articles, and has a movable top member which is movable up and down above the top of the box to uncover and cover the removal opening, which movable member is rigidly supported against further down-

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ward movement below the level of the top of the box, thus preventing damage to the contents remaining in the box.

Another object of this invention is to provide a box according to the foregoing object in which the movable top member is provided with a tuck-in tab insertable in and removable from said corner opening.

Another object of this invention is to provide a box according to either of the foregoing objects in which the top of the box has a narrow tuck-in space extending from the corner opening to another corner of the top so the tuck-in tab on the movable top member is insertable in and removable from the tuck-in space.

Further objects of this invention will become apparent as the description proceeds with reference to the accompanying drawings in which:

Figure 1 is a plan view of the unfolded cut and scored sheet of package material.

Figure 2 is a perspective view of the box after it has been folded, and while it is in fully closed position.

Figure 3 is a cross-section along the vertical plane of line 3—3 of Figure 2.

Figure 4 is a horizontal cross-section along the line 4—4 of Figure 3.

Figure 5 is a view similar to Figure 2, showing the box in open position.

Figure 6 is a top plan view of the box in the open position shown in Figure 5.

Figure 7 is a vertical cross-section of the upper portion of the box taken along the line 7—7 of Figure 6.

Figure 8 is a vertical cross-section of the upper portion of the box taken along the line 8—8 of Figure 3.

Figure 9 is a cross-section taken along the line 9—9 of Figure 8.

Figure 10 is a cross-section taken along the line 10—10 of Figure 7, and showing the cigarettes within the box, with one of the cigarettes partially removed from the box.

A package for articles, such as cigarettes, pills, tablets, etc., according to this invention, is preferably in the form of a box or parallelepiped 15, made from a cut and scored sheet 16, Figure 1, of suitable sheet material.

For example, such material may be selected from any of the usual folder, card, tag, or red rope folder stocks well known in this art. The material also may be a laminated sheet, such as a 80 pound paper or cardboard layer of about .010 inch thickness secured to an outside layer of foil, such as aluminum foil, of about .00035 inch thickness.

If desired, the box, when folded and filled, may be wrapped in a wrapper, not shown, made of foil, such as aluminum foil, cellophane, or similar materials. Also, if desired, contents, such as pills, tablets, etc., may be enclosed in a sealed liner, not shown, of any desired material, inside the box, and this liner may be opened or torn by the user adjacent the box removal opening later to be described.

The scored portions of the sheet 16, Figure 1, are shown in dotted lines and the cut portions are shown in full lines.

The sheet 16 is folded into the shape of the box 15, Figures 2 and 5. In the preferred form, the box is a parallelepiped, and has two vertical relatively large, elongated, rectangular, side walls 18 and 20, two vertical, intermediate size, elongated, substantially rectangular, end walls 22 and 24, and two horizontal, smaller size, elongated, rectangular, bottom and top walls 26 and 28. The walls 18, 20, 22 and 24 are referred to as "vertical" for convenience. These walls have "vertical" edges or seams 19, 21, 23, 25 and 27. The top and bottom walls are referred to as "horizontal" also for convenience. Such terms and other terms, such as "side," "top," "bottom," etc., are used for convenience for identification in

the drawings, it being understood that they apply to the box only when it is in the position shown in the drawings.

The top wall 28 includes a mainly rectangular lower flap 30, substantially of the size of the top wall 28, and which is secured to and integral with the seam or top edge 31 of the side wall 20. The flap 30 has a free corner which is cut at 40 to form an article removing opening 33. The cut 40 starts diagonally from an "intermediate" point 35, Figure 1, on the free and opposite edge 36 of the flap 30 and extends to an "intermediate" point 38 on the end edge 39 of the flap 30. The cut 40 preferably is in the form of an arc having a center at any convenient point, such as 41. The cut may be of any other suitable shape to form a corner opening (preferably somewhat triangular in shape) in the top of the box, if desired. The remaining portion 39 of the end edge of the flap 30 is spaced slightly from the edge of the top of the box to form the narrow tuck-in space 43, as shown in Figure 6. This tuck-in space receives the tuck-in tab 48, more fully to be described.

A mainly rectangular, upper flap 50 is substantially of the size of the top wall 28 and has an end portion 50a secured to and integral with the top edge 51 of the side wall 18. The end portion 50a of the flap 50, which extends from the edge 53 to the transverse seam or crease 54, is adhesively secured to the lower flap 30. The other or movable end 57 of the flap 50, extends from the seam 54 to the seam 56, and has a tuck-in tab 48 integral therewith and insertable into the space or slot 43 and along the inside of the top edge 46 of the end wall 22. The seam, or bend crease 54 on the flap 50 permits the end portion 57 to be moved up, as shown in Figure 5, to open the cigarette removal opening 33, and to move down, as shown in Figure 2, to close the opening 33. The tuck-in tab 48 may have a substantially arc-shaped edge 48a, if desired.

An important feature of this invention is that the lower flap 30 forms a firm, rigid support for the movable end 57 of the upper flap 50. This support prevents the movable end 57 from being moved below the level of the top 28, or of lower flap 30, and thereby prevents damage to the cigarettes remaining in the box. The flap 30 is firmly supported by the integral connection with side 20 at edge 31. It is also firmly supported by the adhesive connection to end portion 50a of flap 50, which has the edge 51 integrally connected with side 18.

The end wall 24 has a top edge formed by the crease 60 where a flap 61 is secured to and integral with the top edge 60 of the end wall 24. When the box is formed, the flap 61 is placed below the flap 30, and, if desired, may be adhesively secured thereto. The flap 61 aids in supporting the flaps 30 and 50 and aids in making the top of the box more rigid.

The end wall 24 also has a side flap 62 secured to an integral with the scored seam or edge 25 of the end wall 24. The flap 62, in the completed box, is placed inside of the side wall 18, as indicated in Figures 4 and 9, and may be adhesively secured thereto.

The bottom of the box 26 may be formed in any desired manner. The bottom flaps 66, 68, 70 and 72, Figure 1, are integrally secured by the scored seams 74, 76, 78 and 80, respectively to walls 18, 22, 20 and 24. These flaps are separated by the cut edges 82, 84, 86, 88 and 90. If desired, the flaps 68, 70 and 72 have a slightly smaller width than the flap 66, as indicated by the offset 92, which, in one size of cigarette box, may be $\frac{1}{32}$ of an inch, more or less, for the purpose of permitting an easy folding assembly of the box as hereafter described. Likewise, the flaps 30 and 61 may be similarly narrower than the flap 50 also by an offset of $\frac{1}{32}$ of an inch, more or less.

The bottom 26 of the box may be assembled by placing the flap 66 in the lowermost position, the flap 70 in the intermediate position, and the flaps 68 and 72 in the top position, as shown in Figure 3. Any of these flaps, if desired, may be adhesively secured to adjacent flaps.

The tuck-in tab 48 may be lifted by a finger nail inserted above the slightly arc-shaped top edge 46 of the end wall 22.

The line of severance between the movable end portion of the flap 50 and the side wall 18 initially may not be a complete cut, and may be a heavier scoring than performed at 51, so that the package is initially closed at this point, but may be easily severed when initially swinging the portion 57 up by use of a finger nail or the like. To aid in this severance, a cut or nick about $\frac{1}{8}$ inch long between the points 51b and 51c, Figure 1, may be made in the blank to initiate the severance along the line 51a.

The tuck-in tab 48 initially may be inside of the box as shown in Figures 2, 3 and 7, or it may be initially on the outside of the box and may be sealed by a paper seal, not shown. The scoring at 56 is sufficiently adjustable or yieldable so that the tab 48 may be selectively placed on the outside of the box, along the outer face of the end wall 22, as indicated at 48c, Figure 7, or inside the box, along the inside face of the end wall 22, as indicated at 48b, Figure 7.

In assembling and loading the box, the cut and scored blank shown in Figure 1 may be folded by automatic machinery, now well known. The walls 18, 22, 20 and 24, with the tab 62 are folded into a rectangularly cross-sectioned tube. Either the bottom 26, or the top 28, as desired, is also folded, and adjacent overlapping flaps may be adhesively secured to each other wherever desired. The cigarettes or other articles (with or without a liner) are inserted into the top 28, or bottom 26, whichever has been left open, and thereafter that top or bottom is folded, closed and adhesively secured, as shown in the various figures of the drawings.

In use, the user lifts the movable end 57 of the flap 50 by inserting a finger nail above the top edge 46 of the wall 22 and lifts or swings the movable end 57 about the bending seam or crease 54. If the seam 51a has not been initially completely cut, the nick between 51b and 51c initiates the severance of partition 51a. One or more cigarettes or other articles may be removed through the opening 33, as indicated in Figure 10, and thereafter the movable end 57 may be moved down while inserting the tab 48 within the slot 43, and along the inside face of the end wall 22, as indicated at 48b in Figure 7.

A relatively rigid box is thus provided which is made from a blank having a minimum of waste cuttings. Also, the movable end 57 is provided with a firm support by the flap 30 without any unnecessary additional sliding sides. The end 57 is prevented from moving down below the level of the top 28, and thus damage to the cigarettes or other articles remaining in the box is prevented.

While the preferred embodiment has been disclosed, as required by statute, other forms and embodiments may be used, all coming within the scope of the claims which follow.

What is claimed is:

1. A carton for articles, such as cigarettes, comprising a box having a multi-cornered top including a lower flap with an article removal opening at one corner and having an upwardly and downwardly movable cover portion hingedly secured across an intermediate portion of said lower flap to uncover and cover said opening, an edge portion of said lower flap adjacent said opening preventing said upwardly and downwardly movable cover portion from moving below the level of said lower flap, said lower flap having a narrow tuck-in space extending from said removal opening to another corner of said lower flap, and said movable cover portion having a tuck-in tab insertable in and removable from said tuck-in space.

2. A carton for articles such as cigarettes comprising a box having a rectangular top including a lower flap mainly of the size of said top with an article removal opening at one corner of said top, said top including an upper flap above said lower flap mainly of the size of

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said top and having an upwardly and downwardly movable end portion hingedly secured across an intermediate portion of said lower flap to uncover and cover said opening, an edge portion of said lower flap adjacent said opening preventing said movable end portion from moving below the level of said lower flap, said lower flap having an end edge spaced slightly from the adjacent edge of said top to form a narrow tuck-in space, and said movable end portion of said upper flap having a tuck-in tab insertable in and removable from said tuck-in space.

3. A carton for articles such as cigarettes comprising a parallelepiped having a rectangular top including a lower flap mainly of the size of said top with an article removable opening at one corner of said top, said top including an upper flap above said lower flap mainly of the size of said top and having an upwardly and downwardly movable end portion hingedly secured across an intermediate portion of said lower flap to uncover and cover said opening, an edge portion of said lower flap adjacent said opening preventing said movable end portion from moving below the level of said lower flap, said lower flap being hinged to a vertical wall of said parallelepiped substantially throughout one edge of said top and having a free edge adjacent the opposite edge of said top, said removal opening being formed by a diagonal cut in said lower flap at a corner adjacent said free edge, said lower flap having an end edge spaced slightly from the adjacent edge of said top to form a narrow tuck-in space, and said movable end portion of said upper flap having a tuck-in tab insertable in and removable from said tuck-in space.

4. A carton for articles such as cigarettes comprising a parallelepiped having a rectangular top including a lower flap mainly of the size of said top with an article removal opening at one corner of said top, said top including an upper flap above said lower flap mainly of the size of said top and having an upwardly and downwardly movable end portion to uncover and cover said opening, and edge portion of said lower flap adjacent said opening preventing said movable end portion from moving below the level of said lower flap, said lower flap being hinged to a vertical wall of said parallelepiped substantially throughout one edge of said top and having a free edge adjacent the opposite edge of said top, said removal opening being formed by a diagonal cut in said lower flap at a corner adjacent said free edge, said upper flap being hinged to the opposite vertical wall of said parallelepiped along a portion of said opposite edge of said top removed from said removal opening, said movable end portion being

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hinged by a score in said upper flap transverse to said opposite edge of said top, said lower flap having an end edge spaced slightly from the adjacent edge of said top to form a narrow tuck-in space, and said movable end portion of said upper flap having a tuck-in tab insertable in and removable from said tuck-in space.

5. A carton for articles such as cigarettes comprising a parallelepiped having opposed vertical end walls and opposed vertical side walls and a horizontal top wall with top edges, end and side walls adjacent the top wall; upper and lower vertically overlapping mainly rectangular flaps respectively secured to and integral with the top edges of said side walls, the lower flap being secured substantially throughout the respective side wall top edge, having an end edge spaced slightly from an edge of the top of the parallelepiped forming a tuck-in receiving slot, said lower flap having its adjacent free corner cut away at said end edge diagonally forming an article removing opening with said tuck-in receiving slot adjacent thereto, the upper flap being secured along a portion of the respective side wall top edge, being adhesively secured at one end to the lower flap adjacent said portion, having an intermediate transverse crease and a movable end beyond said crease with a tuck-in tab attached thereto, said movable end being bendable up and down about said crease to open and close said article removing opening, said tuck-in tab being insertable in and removable from said tuck-in space, and said movable end being limited in its downward movement by said lower flap.

6. A carton for articles, such as cigarettes, comprising a box having a multi-cornered top including a lower flap with an article removal opening and having an upwardly and downwardly movable cover portion hingedly secured across an intermediate portion of said lower flap to uncover and cover said opening, a portion of said lower flap adjacent said opening preventing said cover portion from moving below the level of said lower flap, said lower flap having a tuck-in space and said cover portion having a tuck-in tab insertable in and removable from said tuck-in space.

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