

[54] GUN BOX

[75] Inventor: Joseph J. Soja, Portland, Conn.

[73] Assignee: Continental Can Company, Inc.,
New York, N.Y.

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[51] Int. Cl. B65d 5/20; B65d 85/00

[58] Field of Search..... 206/16 R, 46 FR, 45.14,
206/317; 229/14 C, 27, 33, 39 B

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Primary Examiner—William I. Price

Assistant Examiner—Steven E. Lipman

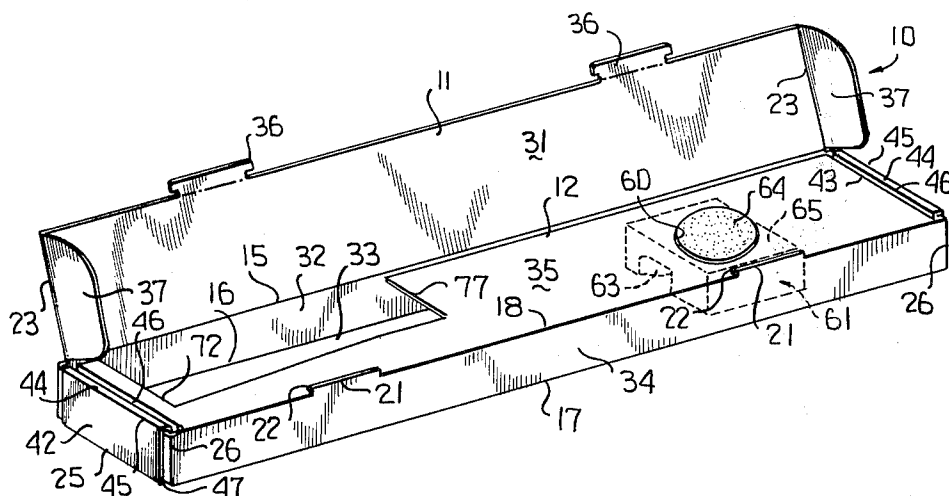
Attorney, Agent, or Firm—Diller, Brown, Ramik & Wight

[57]

ABSTRACT

This disclosure relates to a novel carton blank particularly adapted for packaging elongated articles, such as rifles, shotguns and the like, formed from paperstock material provided with a plurality of fold lines about which the blank is folded into a generally tubular configuration defined by a top panel, a first side panel, a bottom panel, a second side panel, and a locating panel in that order, and an aperture in said locating panel for interlockingly engaging an insert profiled in accordance with the contour of at least a portion of an article adapted to be packaged in the blank whereby undesired relative movement of the blank and packaged article is precluded by the interlocking engagement provided by the aperture. The aperture in said locating panel is for receiving a projecting boss of the insert, and the profiled portion of the insert is at a side thereof opposite the boss.

19 Claims, 9 Drawing Figures



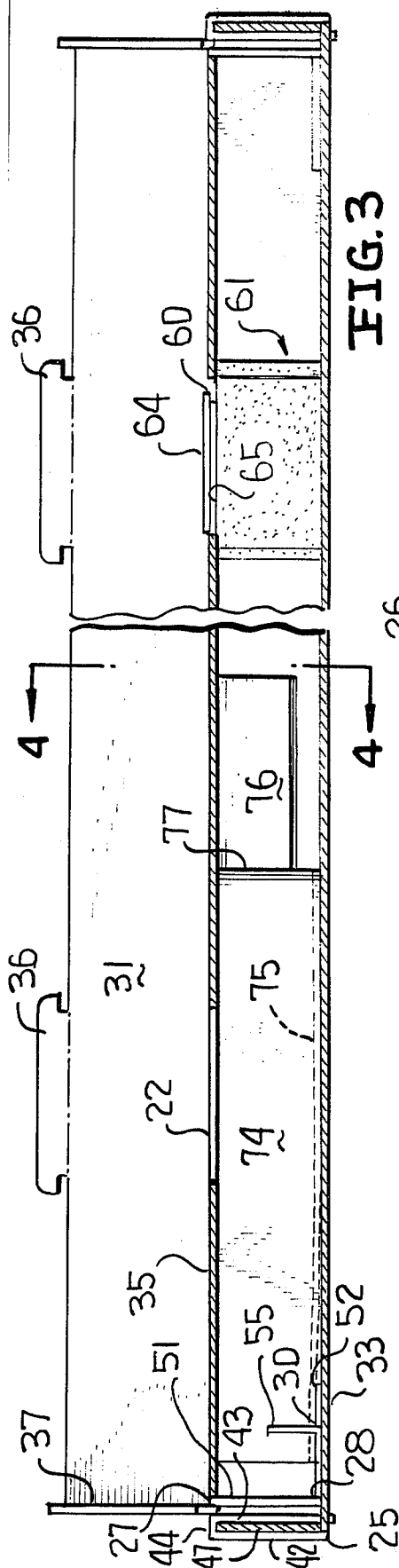


FIG. 3

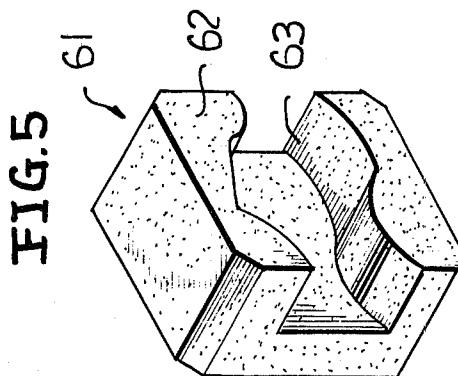
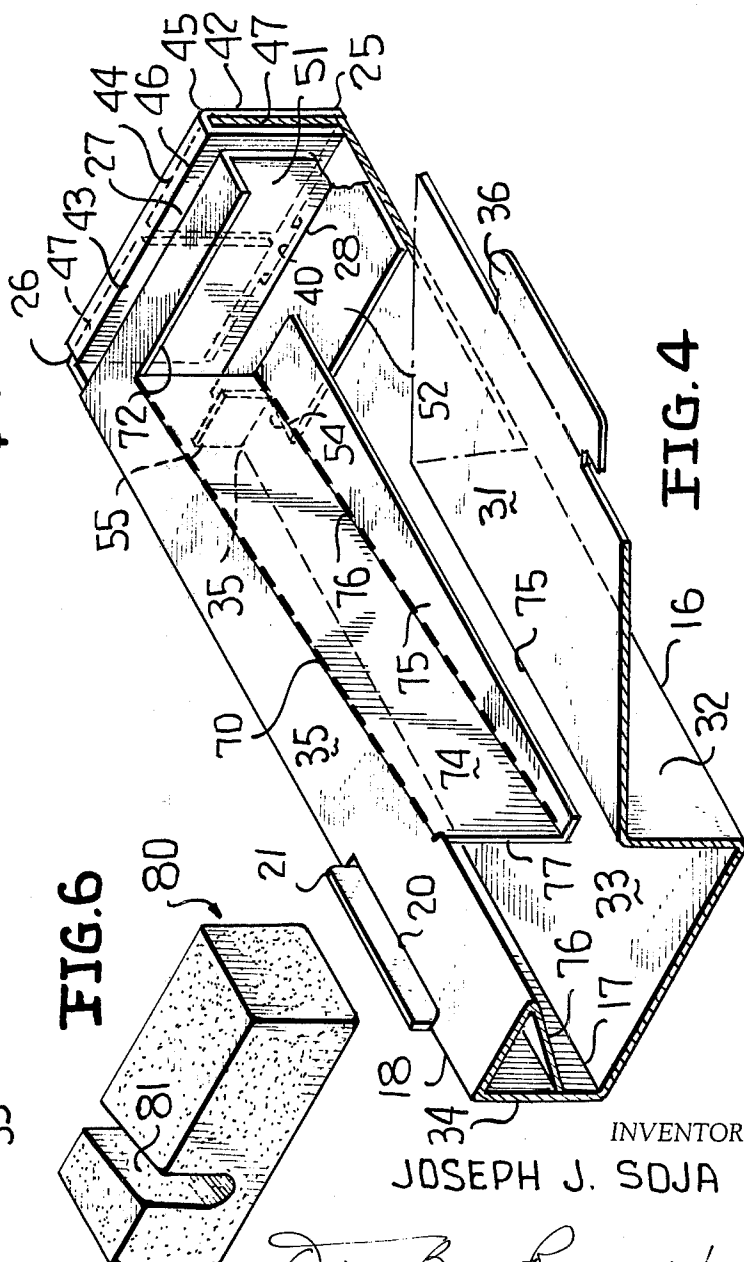


FIG. 5



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INVENTOR

JOSEPH J. SOJA

BY Tiller, Brown, Rannik & Ault

ATTORNEYS

FIG. 9

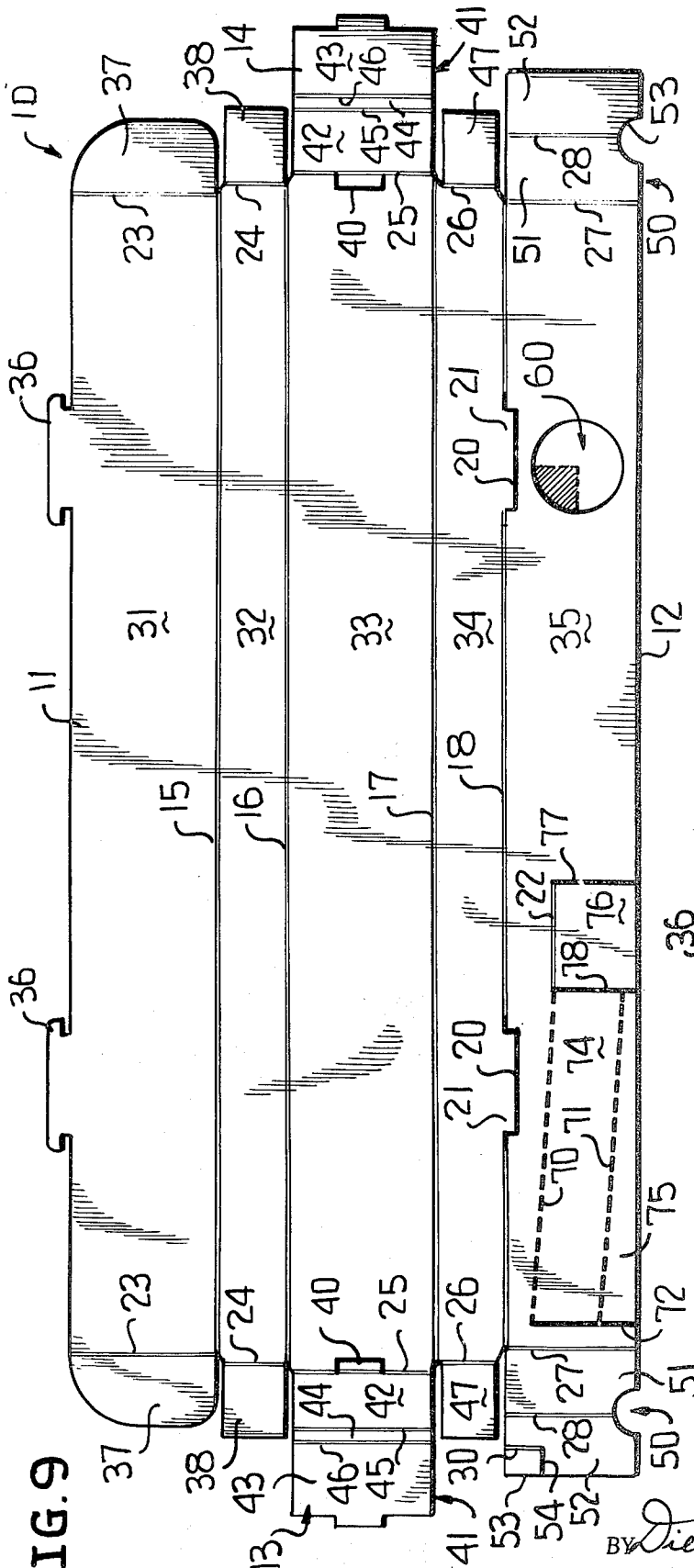


FIG. 8

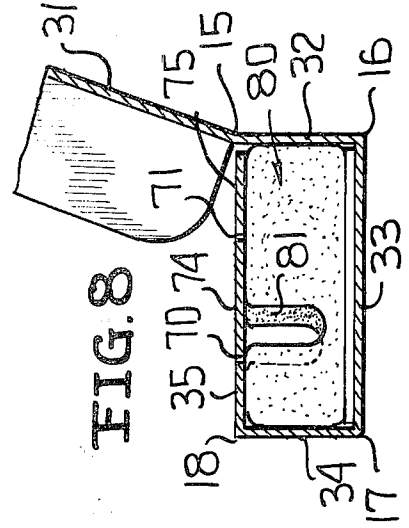
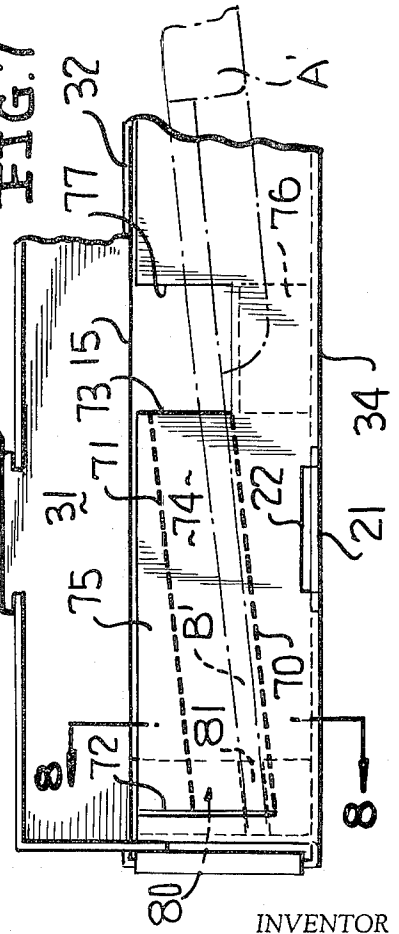


FIG. 7



INVENTOR

JOSEPH J. SDJA

BY *Dieter Braun, Rasmik, Att*

ATTORNEYS

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GUN BOX

At present such articles as rifles, shotguns, or similar elongated articles having varying profiles at different portions are normally packaged in paperstock blanks folded to form cartons or boxes normally defined by opposite end walls, opposite side walls, a bottom wall and a top wall. Barring the provision of some type of means for positively locating the packaged articles within the boxes, the normal tendency is for any particular article to shift with respect to its box during storage and/or shipment. Obviously, this is highly undesirable since damage to the packaged article will more than likely result and to preclude such damage through the use of a properly designed carton is a small price to pay to avoid such damage and attendant consumer and/or retailer complaints.

Moreover, it is readily apparent that such articles as rifles and shotguns are made in various gauges, styles, lengths, etc., and heretofore only a few particular makes and/or styles of rifles and/or shotguns could be packaged in a carton of a particular design. As an example, the side profile and length of a double-barrel shotgun might be sufficiently dissimilar to the length and side profile of a single, bolt-action, 22-caliber rifle as to require a differently designed carton for packaging each of these articles. Obviously, since manufacturers of rifles, shotguns, hand guns and the like normally produce innumerable styles, sizes, gauges, etc., any carton which could accommodate different ones of such arms would be highly desirable simply from the standpoint of less critical inventory control and less cost by greater bulk purchasing of fewer designs.

In keeping with the foregoing, it is a primary object of the present invention to provide a novel box or carton blank which when formed into a carton is of a "universal" construction from the standpoint of accommodating different articles of varying lengths, styles and profiles, and particularly such articles as rifles and shotguns. More particularly, the carton constructed in accordance with this invention includes in addition to the usual side, end, bottom and top panels, a "locating" panel having aperture means for interlockingly engaging a projection or boss of an insert which at a side opposite the boss is profiled in accordance with the contour of a portion of the particular article packaged in the carton whereby undesired relative movement between the carton and the packaged article is precluded. More particularly, the profile portion of the insert is in the form of an undulating channel which snugly receives and interlocks with a portion of the packaged article, preferably the area of the "cheek-rest" in the case of articles such as rifles and shotguns. However, irrespective of the particular area of the packaged article with which the insert channel is in conformity with, the interlocking relationship therebetween, as well as between the boss and the aperture of the locating panel, assures limited if any movement between the packaged article and the novel carton of this invention.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claimed subject matter, and the several views illustrated in the accompanying drawings.

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IN THE DRAWINGS

FIG. 1 is a perspective view of a novel carton constructed in accordance with this invention, and illustrates a locating panel provided with an aperture interlockingly receiving a boss of an insert having a lower surface contoured to the profile of an article adapted to be positioned therein.

FIG. 2 is a top plan view of the carton of FIG. 1, and illustrates in phantom outline a shotgun with its cheek-rest positioned in the profile portion of the insert.

FIG. 3 is a longitudinal sectional view taken generally along line 3—3 of FIG. 2, and more clearly illustrates the manner in which the insert is interlocked with the aperture of the locating panel, and another portion folded downwardly from the plane of the locating panel to form a rest for the gun barrel.

FIG. 4 is an enlarged sectional view taken generally along line 4—4 of FIG. 3, with a portion thereof removed for clarity, and illustrates the gun barrel rest portion more clearly, as well as a stop to limit the folding of the latter portion toward its most adjacent side wall.

FIG. 5 is a perspective view of the insert of FIGS. 1 through 3, and illustrates the manner in which the insert is provided with a channel in a surface opposite the boss or projection for conforming to and interlocking with the cheek portion of the packaged article.

FIG. 6 is a perspective view of another insert, and illustrates a slot formed therein for receiving the gun barrel of the packaged article.

FIG. 7 is a fragmentary top plan view of the carton of FIGS. 1 through 4, and illustrates the insert of FIG. 6 positioned to receive the barrel of a differently designed and/or styled article in the absence of the downward folding of the gun barrel rest portion of the locating panel.

FIG. 8 is a sectional view taken generally along line 8—8 of FIG. 7, and illustrates the position of the insert within the carton.

FIG. 9 is a top plan view of a blank from which the carton of this invention is constructed, and illustrates the generally rectangular configuration thereof, as well as the specific details of the locating panel.

Reference is first made to FIG. 9 of the drawings in which a novel carton blank of this invention which is particularly adapted for packaging elongated articles, such as rifles, shotguns, and the like, is generally designated by the reference numeral 10, and is preferably constructed from foldable paperstock, corrugated board, or similar material. The blank 10 is of a generally rectangular configuration, and is defined by longitudinal edge portions 11, 12, and transverse edge portions 13, 14. The blank 10 further includes a plurality of longitudinal fold lines 15 through 18, the latter of which is interrupted by generally shallow U-shaped notches or slits 20, defining tabs 21, and a relatively short longitudinal fold line 22. In view of the relatively identical construction of the transverse edge portions 13, 14, fold lines 23 through 28 disposed generally normal to the fold lines 15 through 18 have been identically numbered at opposite transverse edge portions 13, 14. However, as viewed in FIG. 9, an additional fold line 30 is provided at the lower left-hand corner of the blank 10.

The various fold lines and edge portions heretofore described define a plurality of body-forming panels 31 through 35.

The body-forming panel 31 is a top panel of the blank 10 and is defined by the transverse fold lines 23, 23, the longitudinal fold line 15, and the longitudinal edge 11 which is contoured to define a pair of generally T-shaped latching tabs 36, 36. An identical end closure flap 37 is joined to the top panel 31 along the fold lines 23, 23.

The body-forming panel 32 defines a side panel of the blank 10 and is defined by an area between the fold lines 15, 16 and 24, 24. Likewise, end flaps or closure flaps 38, 38 are each joined to opposite longitudinal ends of the side panel 32 by the fold lines 24, 24.

The body-forming panel 33 defines a bottom panel of the blank 10 and is set off by the longitudinal fold lines 16, 17 and the transverse fold lines 25, 25 which are interrupted by generally rectangular cut-outs or openings 40, 40.

A closure flap 41 is joined to opposite longitudinal edges of the bottom panel 33 by the fold lines 25, 25, and each closure flap 41 includes three panel portions 42 through 44, the latter of which is set off between a pair of spaced parallel fold lines 45, 46.

The body-forming panel 34 is a side panel and is set off by the longitudinal fold lines 17, 18, the transverse fold lines 26, 26, and the slits 20, 20.

Closure flaps 47, 47 are joined to the side panel 34 at the fold lines 26, 26.

The body-forming panel 35 defines a "locating" panel which is defined by the fold line 18, the longitudinal edge portion 12, and the transverse fold lines 27, 27. Joined to the locating panel 35 at each of its transverse edges by the transverse fold lines 27, 27 is another closure flap 50 defined by flap portions 51, 52 set off from each other by the transverse fold line 28 which terminates at a generally semi-circular notch 53 of the longitudinal edge portion 12. The left-handmost closure flap portion 52, as viewed in FIG. 9, additionally includes a longitudinal slit 54 which defines with the fold line 30 a locating or abutment flap 55 which will be described more fully hereinafter.

The locating panel includes means, generally designated by the reference numeral 60, for interlockingly engaging an insert 61 (FIGS. 3 and 5) having a lower surface 62 provided with a channel 63 profiled in accordance with the contour of a cheek-rest portion C (FIG. 2) of an article A (FIG. 2), such as a rifle or shotgun positioned within the carton 10 (FIG. 2). The interlocking means is preferably a circular aperture 60 which receives a circular boss or projection 64 of the insert 61 projecting above an upper surface 65 of the insert, in the manner best illustrated in FIGS. 1 and 3 of the drawings. The insert 61 is of a generally rectangular outline having a height corresponding to the distance between the inner surface (unnumbered) of the panels 33, 35, and of a width corresponding to the distance between the inner surfaces (also unnumbered) of the side panels 32, 34. With the article A resting upon the bottom panel 33, as shown in FIG. 2, the profile channel 63 opens downwardly toward the bottom panel 33 and snugly embraces and interlocks with the cheek portion C. As is readily apparent from FIG. 2, the similar profile between the cheek portion C and the channel 63 prevents relative movement between the article A and the insert 61, while the interlocked relationship

between the aperture 60 of the locating panel 35 and the boss or projection 64 prevents relative movement between the locating panel 35 and the insert 61. Thus, this dual interlocking between the article A, the insert 61, and the locating panel 35 prevents relative movement between the article A and the carton 10.

It is to be noted that though the projection 64 is preferably circular, as is the aperture 60, this construction could result in the insert 61 being positioned in the carton 10 incorrectly if, for example, it were first inserted and rotated 180 degrees either clockwise or counterclockwise from the position shown in FIGS. 1 and 2. In order to prevent such inadvertent placement of the insert 61 within the carton, the aperture 60 as well as the boss 64 could be contoured other than circular, as indicated by the dotted and shaded portion of the aperture 60 in FIG. 9. If the material of the shaded portion of the locating panel 35 were not removed and if a like portion of the boss 64 of the insert 61 were removed, the boss and aperture would no longer be circular and when interlocked the channel 63 would at all times be properly oriented as necessary. Thus, the latter and equivalent arrangements for assuring proper orientation of the channel 63 with respect to the packaged article A is considered to be a further embodiment of the present invention.

Reference is again made to FIG. 9 of the drawings wherein the locating panel 35 is additionally provided with a pair of generally parallel spaced interrupted cut lines 70, 71 defining therebetween with portions of slits 72, 73 a locating panel 74. An additional panel 75 is defined between portions of the slits 72, 73, and a portion of the longitudinal edge 12. Likewise, a further panel 76 is defined by the fold line 22, the slit 73, a portion of the longitudinal edge 12, and another slit 77 parallel to the slit 73. The function of the panels 74 through 76, and the abutment flap 55 will now be described particularly in regard to FIGS. 1 through 4 of the drawings.

Referring particularly to FIG. 4, the flaps 38, 41, 47 and 50 are illustrated in their normal positions in which the flaps 38, 47 are sandwiched between the flaps 42, 43 with a tab (unnumbered) of the latter being received in the rectangular opening 40 to maintain these flaps in assembled relationship. Prior to the folding of the panels 74, 75, 76 out of the plane of the locating panel 35, the flap portions 51, 52 are folded to the position illustrated in FIG. 4 with the flap portion 52 seated upon the bottom panel 33. The abutment flap 55 is folded upwardly along the fold line 30. Thereafter the flaps 74, 75 are folded from the position shown in FIG. 9 to that shown in FIG. 4, as is the flap 76. As is best illustrated in this figure, the abutment flap 55 is sandwiched between the side panel 32 and the panel 74 to prevent the latter from moving toward the panel 32 when the weight of the gun barrel B (FIG. 2) rests thereupon in the manner best shown in FIG. 2. Thus, the panel or flap 74 additionally serves as another guiding or locating surface for other portion B of the article A.

Though the carton 10, as thus far described, will accommodate articles A of varying side profiles, lengths, etc., in keeping with a further embodiment of this invention, there is additionally provided another insert 80 (FIGS. 6 and 8) of a generally rectangular configuration, again having a length corresponding to the distance between the side panels 32, 34, and a height corresponding to the distance between the bottom panel

33 and the locating panel 35. As in the case of the insert 61, the insert 80 additionally includes a channel 81 profiled to the configuration of another portion of an article A' (FIG. 7), which in this case is the gun barrel B' thereof. In this case it is desirable to more positively locate the gun barrel B' and thus the latter is positioned within the channel 81 of the insert 80 without the flaps or panels 74, 75 being folded in any manner, and merely being in overlying relationship to the upper surface (unnumbered) of the insert 80. Due to the inclined nature of the channel 61 with respect to the longitudinal axis of the carton 10, it will be readily apparent from FIG. 7 that the insert 80 cannot move to the right, and is precluded from moving to the left thereby additionally serving to accurately locate the barrel portion B' of the article A'. However, in further keeping with this invention, the insert 80 could likewise be provided with a boss, corresponding to the boss 64, while a portion of the locating panel 35 between the slit 73 and the fold line 27 can be provided with an aperture corresponding to the aperture 60 to achieve the interlocking heretofore described relative to the insert 61 and the aperture 60.

While preferred forms and arrangements of parts have been shown in illustrating the invention, it is to be clearly understood that various changes in details and arrangement of parts may be made without departing from the spirit and scope of this disclosure.

I claim:

1. A carton blank particularly adapted for packaging articles such as rifles, shotguns, hand guns and the like, comprising a sheet material blank provided with a plurality of fold lines about which said blank is adapted to be folded into a generally tubular configuration, at least one of said plurality of fold lines in part sets off a locating panel, means defined by said locating panel for interlockingly engaging an insert profiled in accordance with the contour of at least a portion of an article adapted to be packaged in said blank whereby undesired relative movement of the blank and packaged article is precluded by the interlocking engagement provided by said interlocking means, and an insert having means for interlockingly engaging the interlocking means of said locating panel.

2. The carton blank as defined in claim 1 wherein said insert is constructed from synthetic polymeric plastic material.

3. The carton blank as defined in claim 1 wherein said insert interlocking means is a boss projecting into the interlocking means of said locating panel.

4. The carton blank as defined in claim 1 wherein said insert includes cavity means profiled in accordance with the contour of at least a portion of an article adapted to be packaged in said blank.

5. The carton blank as defined in claim 4 wherein said insert interlocking means and cavity means are positioned at opposite sides of said insert.

6. A carton blank particularly adapted for packaging articles such as rifles, shotguns, hand guns and the like, comprising a sheet material blank provided with a plurality of fold lines about which said blank is adapted to be folded into a generally tubular configuration, at least one of said plurality of fold lines in part sets off a locating panel, means defined by said locating panel for interlockingly engaging an insert profiled in accordance with the contour of at least a portion of an article adapted to be packaged in said blank whereby unde-

sired relative movement of the blank and packaged article is precluded by the interlocking engagement provided by said interlocking means, said interlocking means is an aperture in said locating panel, and an insert having means for interlockingly engaging the aperture of said locating panel.

7. A carton blank particularly adapted for packaging articles, such as rifles, shotguns, hand guns and the like, comprising a generally polygonal sheet material member defined by opposite pairs of longitudinal and transverse edge portions, a plurality of spaced fold lines in part defining a top panel, a first side panel, a bottom panel, a second side panel, and a locating panel in that order, means defined by said locating panel for interlockingly engaging an insert profiled in accordance with the contour of at least a portion of an article adapted to be packaged in said blank whereby undesired relative movement of the blank and packaged article is precluded by the interlocking engagement provided by said interlocking means, said locating panel is defined by one of said longitudinal edge portions and an adjacent fold line, said interlocking means is disposed to one side of the longitudinal midpoint of said locating panel, locating means at the other side of said midpoint for locating another portion of the packaged article, said locating means is another insert profiled in accordance with the contour of another portion of the article.

8. A carton blank particularly adapted for packaging articles, such as rifles, shotguns, hand guns and the like, comprising a generally polygonal sheet material member defined by opposite pairs of longitudinal and transverse edge portions, a plurality of spaced fold lines in part defining a top panel, a first side panel, a bottom panel, a second side panel, and a locating panel in that order, means defined by said locating panel for interlockingly engaging an insert profiled in accordance with the contour of at least a portion of an article adapted to be packaged in said blank whereby undesired relative movement of the blank and packaged article is precluded by the interlocking engagement provided by said interlocking means, said locating panel is defined by one of said longitudinal edge portions and an adjacent fold line, said interlocking means is disposed to one side of the longitudinal midpoint of said locating panel, locating means at the other side of said midpoint for locating another portion of the packaged article, said locating means is a locating panel portion of said locating panel defined in part by a pair of spaced longitudinally extending fold lines, and said last-mentioned pair of fold lines converge toward the adjacent transverse edge portion in a direction toward said midpoint of said locating panel.

9. The carton blank as defined in claim 8 including an insert having means for interlockingly engaging the interlocking means of said locating panel.

10. The carton blank as defined in claim 8 including another locating panel portion between said first-mentioned panel portion and said interlocking means defined by a pair of transverse cut lines and a longitudinal fold line more closely adjacent a fold line joining said locating panel to said second side panel than to an adjacent transverse edge of said locating panel.

11. A carton blank particularly adapted for packaging articles, such as rifles, shotguns, hand guns and the like, comprising a generally polygonal sheet material member defined by opposite pairs of longitudinal and

transverse edge portions, a plurality of spaced fold lines in part defining a top panel, a first side panel, a bottom panel, a second side panel, and a locating panel in that order, means defined by said locating panel for interlockingly engaging an insert profiled in accordance with the contour of at least a portion of an article adapted to be packaged in said blank whereby undesired relative movement of the blank and packaged article is precluded by the interlocking engagement provided by said interlocking means, and an insert having means for interlockingly engaging the interlocking means of said locating panel.

12. A carton particularly adapted for packaging articles such as rifles, shotguns, hand guns and the like comprising a sheet material blank provided with a plurality of fold lines about which said blank is folded into a generally tubular configuration, at least one of said plurality of fold lines in part sets off a locating panel, means defined by said locating panel for interlockingly engaging an insert in said carton profiled in accordance with the contour of at least a portion of an article adapted to be packaged therein whereby undesired relative movement of the carton and article is precluded by the interlocking engagement provided by said interlocking means, another panel in spaced relationship to said locating panel, and said insert is disposed between said locating and another panel.

13. The carton as defined in claim 12 wherein said locating panel includes means for orienting the insert

for interlocking engagement with said interlocking means in but a single relative position of the insert and interlocking means.

14. The carton as defined in claim 12 wherein said interlocking means is contoured for interlocking engagement with said insert in but a single relative position therebetween.

15. The carton as defined in claim 12 including means spaced from said interlocking means for locating another insert in said carton profiled in accordance with the contour of another portion of the article adapted to be packaged in said carton thereby additionally stabilizing a packaged article.

16. The carton as defined in claim 12 wherein said insert is constructed from synthetic polymeric plastic material.

17. The carton as defined in claim 12 wherein the article profile of said insert is a cavity opening in a direction toward said another panel.

18. The carton as defined in claim 17 wherein said insert interlocking means and cavity means are positioned at opposite sides of said insert.

19. The carton as defined in claim 18 wherein said insert interlocking means is a boss projecting into the interlocking means of said locating panel, and said last-mentioned locating means is an aperture in said locating panel.

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