

- [54] **REDUCIBLE FLIP TOP BOX**
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- [52] U.S. Cl.**229/51 TC, 229/44 CB, 229/45,**
229/51 TS
- [51] Int. Cl.**B65d 37/00**
- [58] Field of Search.....**229/51 C, 45, 51 TS, 51 TC,**
229/51 SC, 44 CB

2,355,665 8/1944 Mabee.....229/51 RC

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[57] **ABSTRACT**

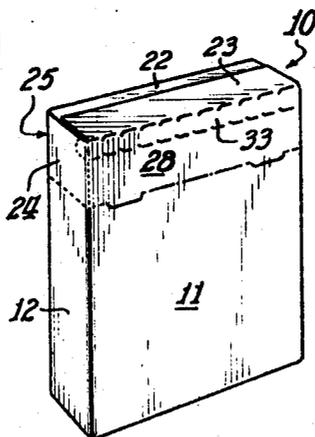
A box is provided with a flip top which is movable to closing position after the movement of a wall flap to a position within the box interior. Such movement of the wall flap provides outward extending locking tabs which cooperate with closure tabs forming part of the flip top, so that the flip top is then locked into position. In one form of the invention a tear strip is provided in the aforesaid wall flap, the tear strip extending between side wall portions and across the wall flap. When the tear strip is removed, the wall flap may be folded to the position normal to the wall panels. In both forms of the invention the subsequent folding of the flip top to locking position results in a box which is reduced in size.

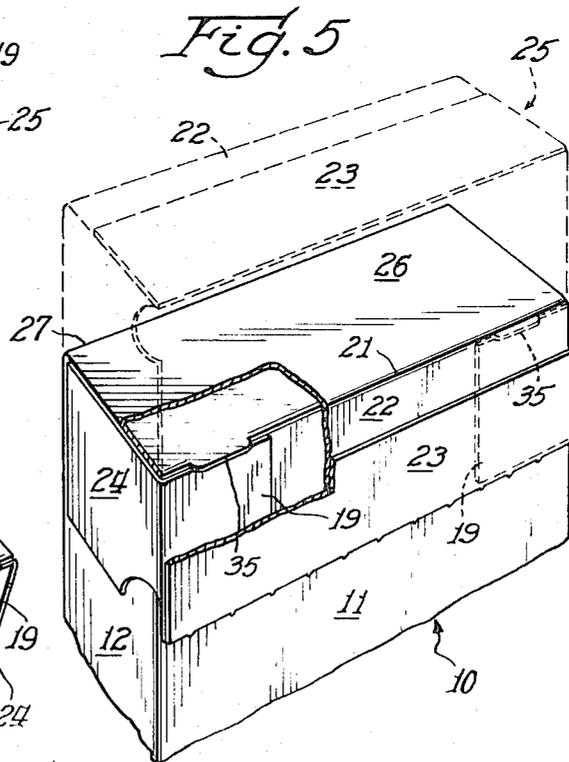
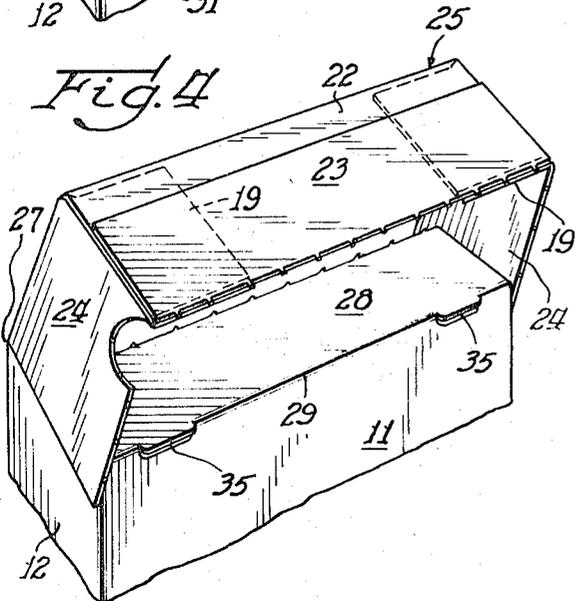
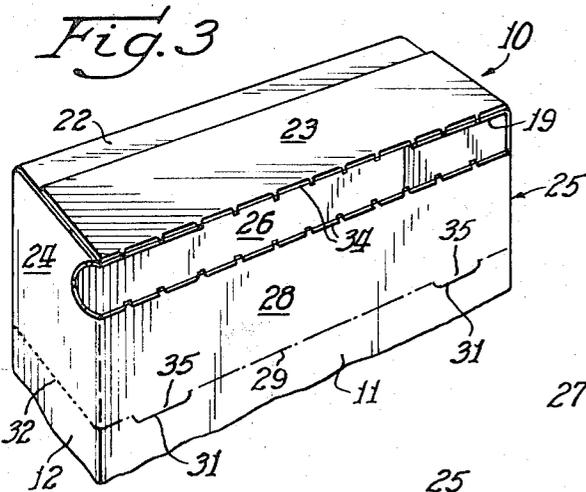
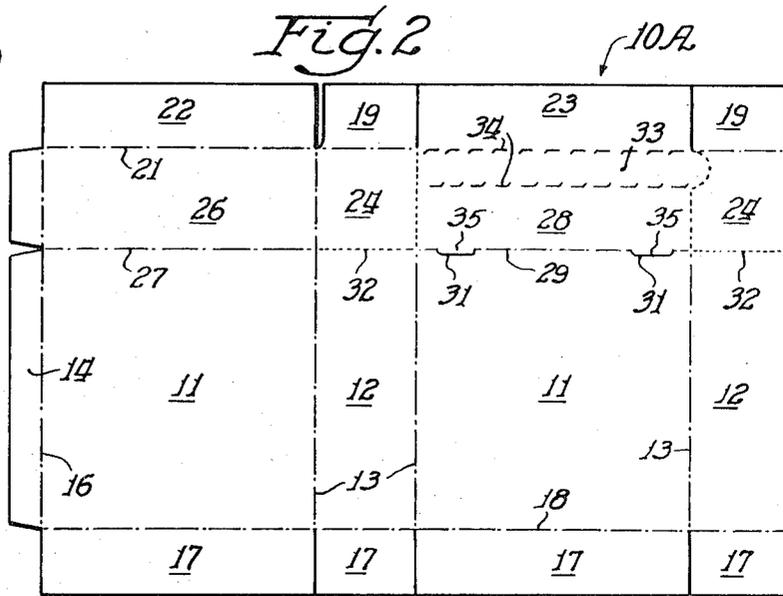
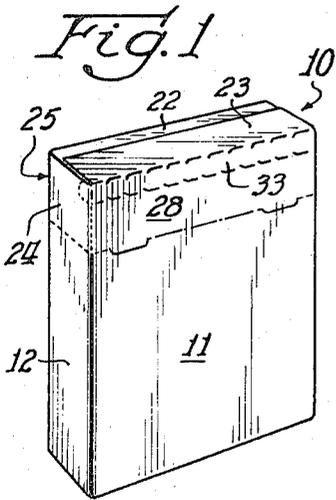
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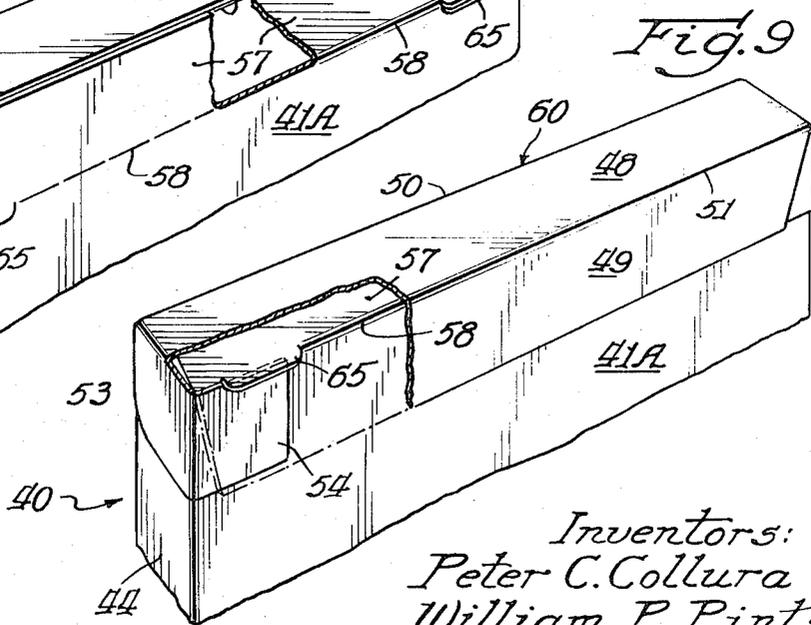
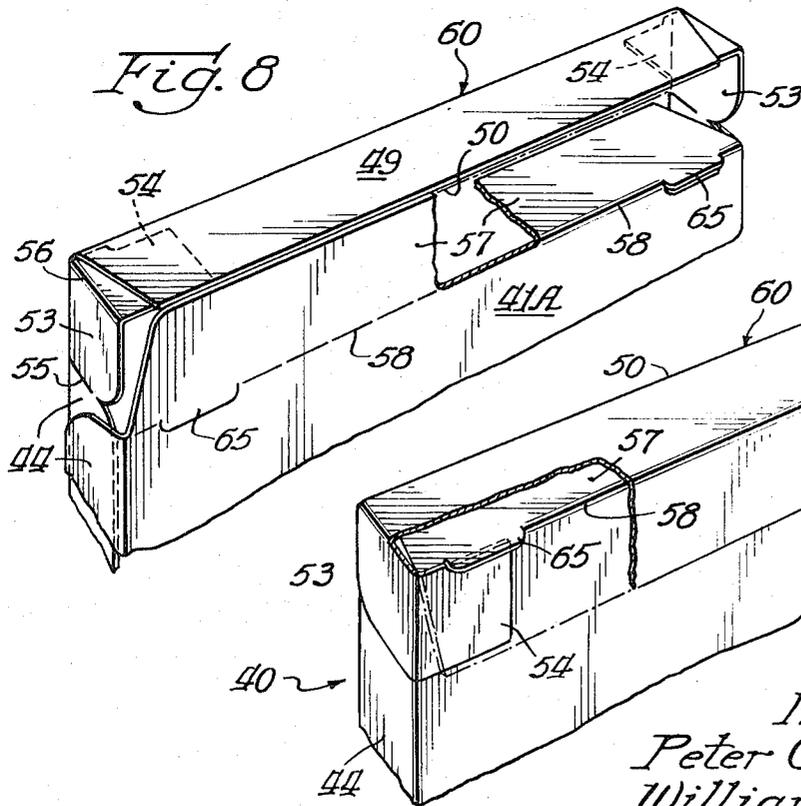
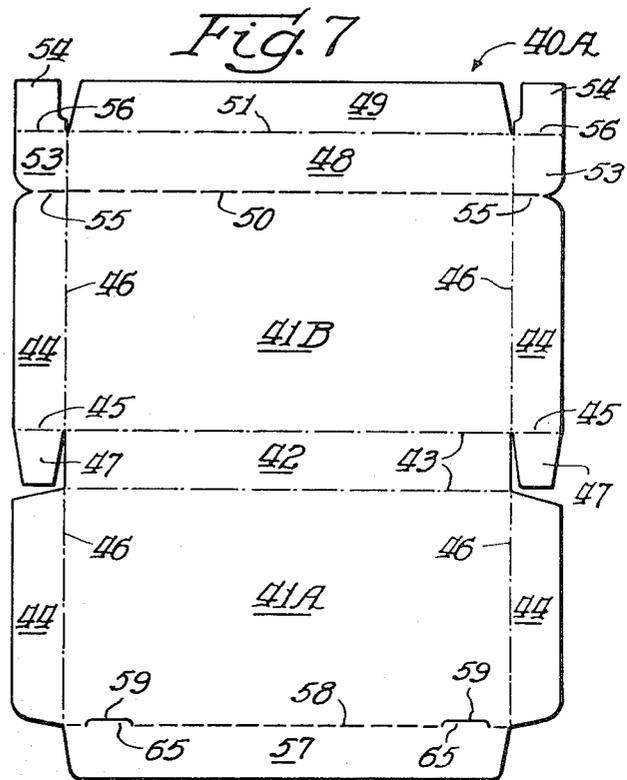
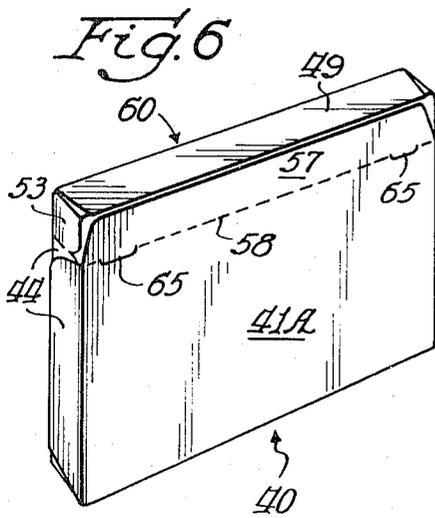
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- 2,839,236 6/1958 Dunning229/45
- 2,139,021 12/1938 Johnson229/51 TS

2 Claims, 9 Drawing Figures





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REDUCIBLE FLIP TOP BOX

THE PRIOR ART

The prior art is best exemplified in the following patents:

Johnson	2,139,021
Dunning	2,839,236
Cartonneire et al. (FR.)	1,183,269

SUMMARY OF THE INVENTION

Structure according to the present invention finds particular use in the packaging of articles such as small cigars known in the trade as cigarillos, and affords a structure whereby the size of the carton may be reduced after the removal of one or more articles therefrom.

THE DRAWINGS

FIG. 1 is an isometric view showing a reducible flip top box according to one embodiment of the invention;

FIG. 2 is a plan view of a cut and scored blank from which the box of FIG. 1 may be constructed;

FIG. 3 is an enlarged fragmentary isometric view showing a tear strip removed from the box of FIG. 1;

FIG. 4 shows a wall flap portion thereof folded to a position normal to a front wall panel, and the folding of the top closure of the box to a locked position;

FIG. 5 is an isometric view showing the box reduced in size with the top closure thereof locked in position;

FIG. 6 is an isometric view of another embodiment of the invention;

FIG. 7 is a plan view of a cut and scored blank for forming the box seen in FIG. 6;

FIG. 8 is a fragmentary isometric view showing a locking flap in one of the main panels thereof folded to a position normal to both of the main panels; and

FIG. 9 is a fragmentary isometric view, certain parts being broken away, showing the box reduced in size with the top closure thereof in the locked position.

A first embodiment of a reducible flip top box according to one embodiment of the invention is referred to by the reference numeral 10 and is formed from a cut and scored blank 10A. Box 10 comprises front and rear main panels 11 and opposed side panels 12, all being interconnected along fold lines 13. A glue flap 14 is foldable with respect to one of the main panels 11 along fold line 16, and is adapted to be joined at the remote side panel 12 to define a box sleeve as seen in FIG. 2.

The blank 10A includes a plurality of lower closure flaps and tabs 17, these being foldably connected to the main and side panels 11 and 12 along a common fold line 18. These are joined together to provide a lower closure for the box seen in FIG. 1.

Closure elements for the opposite end of the box include a side closure flap 19 extending from each of the side panels 12, and closure flaps 22 and 23 extending from the main panels 11. Side closure flaps 19 and closure flaps 22 and 23 are foldable with respect to the panels 11 and 12 and are interconnected to define a top closure 25 for the box 10. Each of the side panels 12 has a line of weakness 32 spaced from the closure flaps 19 attached thereto to define side panel elements 24 for top closure 25. One of the main panels 11 includes a closure flap 26 foldable with respect to one of the main panels 11 along a fold line 27.

The other main panel 11 has a locking flap 28 therein foldable with respect to the other wall panel 11 about a fold line 29 which is spaced from closure flap 23. The locking flap 28 is attached to the side panel elements 24 on two sides thereof by lines of weakness 30. Fold line 29 is interrupted by cut lines 31 parallel to the interrupted fold line 29 and spaced a slight distance therefrom to define locking tabs 35 in the locking flap 28.

A tear strip 33 is provided in locking flap 28 and is defined by a pair of spaced lines of weakness 34, one of said lines of weakness being co-extensive with the fold line 21 by which the closure tabs 19, 22, and 23 are joined to the main and side panels 11 and 12.

The box 10 is formed as seen in FIG. 1 and the contents thereof may be removed therefrom after removal of the tear strip 33 in a well-known fashion. After articles are removed from the box the top closure may be locked into a position whereby the overall dimension of the box 10 is reduced in size. The top closure 25 is folded about the fold line 27 after the side flaps 24 are separated from the side panels 12 along the lines of weakness 32. Upon folding of the top closure 25 to the position seen in FIG. 5, the locking tabs 35 extending from the locking panel 28 engage with the edges of the side closure flaps 19.

A second embodiment of the invention is shown in FIGS. 6 to 9 inclusive, and is denoted generally by the reference numeral 40. The reducible flip top box 40 seen in FIG. 6 is formed from a cut and scored blank 40A seen in FIG. 7.

It comprises respective front and back main panels 41A and 41B which are joined along the bottom edges thereof by a bottom closure panel 42, panels 41A and 41B being foldably connected to bottom closure panel 42 along fold lines 43. Each of the front and rear panels 41A and 41B has side flaps 44 extending therefrom, these being foldably connected to the said main panels 41A and 41B along fold lines 46. The side wall flaps 44 connected to the rear main wall 41B have closure flaps 47 hingedly connected thereto along fold lines 45.

The aforesaid front and rear main panels 41A and 41B, the bottom closure panel 42 and the side wall flaps 44 are joined together in a conventional fashion to define a box of a conventional kind. It may be noted that the closure flaps 47 are glued to the bottom closure panel 42 in forming the box seen in FIG. 6.

Rear wall panel 41B has a closure panel 48 extending therefrom, it being foldably connected to top closure flap 49 at a fold line 51. Side wall flaps 53 are joined to the side wall flap 44 along lines of weakness 55 which are co-extensive with a fold line 50 between rear main wall panel 41B and closure panel 48. Each of the side wall flaps 53 is joined to a closure flap 54 along a fold line 56, and the closure flaps 54 are joined to the underside of the top closure flap 49 to provide a top closure 60 seen in FIGS. 6, 8, and 9.

The front wall 41A has a front wall extension 57 therefrom, it being foldable with respect to the front wall 41A along an interrupted fold line 58. Extension 57 normally occupies the position seen in FIG. 6, which illustrates the flip top box 40 in its condition when first shipped in trade. Boxes of this type are generally enclosed in some type of clear film material and upon removal thereof, the box is ready for removal of the contents therefrom. In so doing, top closure 60 has the

side flaps 54 thereof separated from the side walls 44 along the lines of weakness 55, top closure 60 being rockable about fold line 50. After removal of some of the contents from the box 40, the front wall extension 57 is folded about its interrupted fold line 58 to the position seen in FIG. 8, at which time locking tabs 65 extend normal to the plane of the front wall 41A. The locking tabs 65 are defined by spaced cut lines 59 in blank 40A, cut lines 59 being spaced from the interrupted fold line 58 and being parallel thereto.

The top closure 60 is then adapted to be rocked about the fold line 50 to the position seen in FIG. 9 at which time the locking tabs 65 engage with the edges of the closure flaps 54 to lock the top closure 60 into position as seen in FIG. 9, at which time the dimensions of the box are reduced.

I claim:

1. A reducible flip top box formed from a sheet of paperboard or the like, comprising:
 - a. interconnected main and side panels defining a sleeve;
 - b. at least one closure element for closing one end of said sleeve to define a box;
 - c. closure elements for the opposite end of said box including:
 - i. a side closure flap extending from each of said side panels;
 - ii. a closure flap extending from at least one of said main panels;

- iii. said closure flaps being foldable with respect to their respective panels and interconnected to define a top closure for said box;
- d. a line of weakness in each of said side panels spaced from the closure flap attached thereto;
- e. a fold line in said one main panel spaced from the closure flap thereof;
- f. A locking flap in the other of said main panels connected to each of said side panels by a line of weakness:
 - i. said locking flap being defined by an interrupted fold line spaced from the end of said other main panel, and
 - ii. having cut portions between interrupted portions of said interrupted fold line slightly displaced from said fold line and defining locking tabs;
 - iii. said locking flap being foldable with respect to the plane of said main panel and having the locking tabs thereof engageable with said top closure;
- g. said top closure being movable about said fold line in said one main panel after separation of said side panels at the lines of weakness therein, with the edges of said side closure flaps being in engagement with the locking tabs of said locking flap.
2. A reducible flip top box according to claim 1 wherein one of said main panels has a tear strip therein.

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