Nov. 13, 1962 D. W. SCHABES 3,063,617

FASHION BOX

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FIG. 1

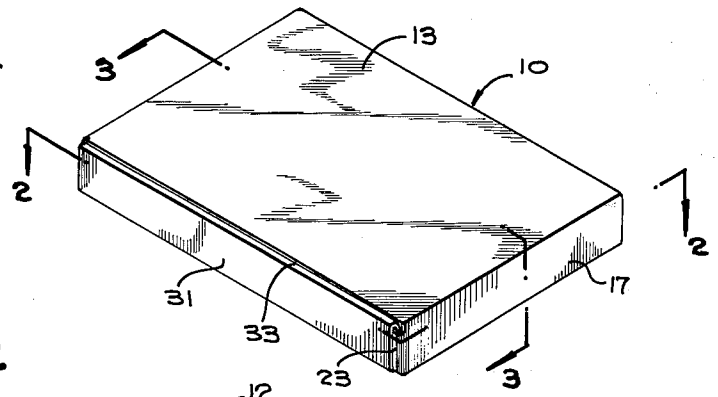


FIG. 2

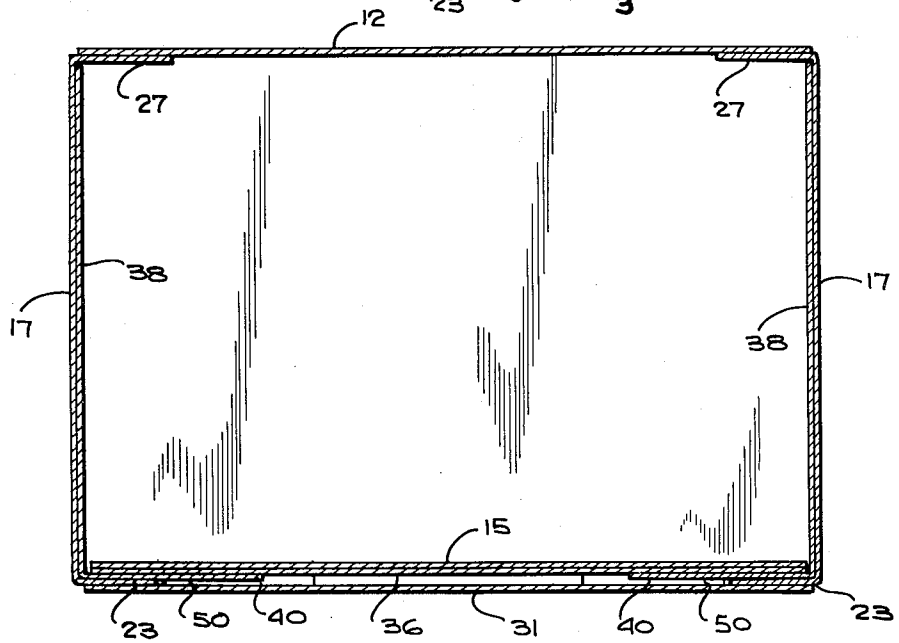


FIG. 3

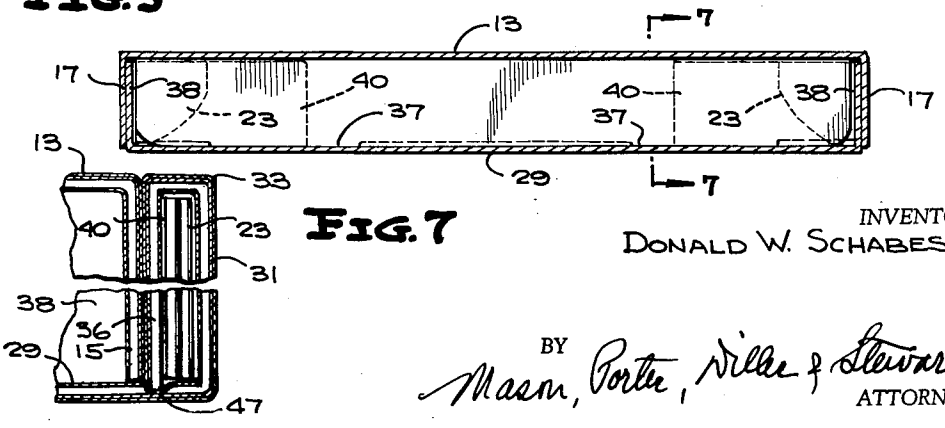


FIG. 7

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FIG. 4

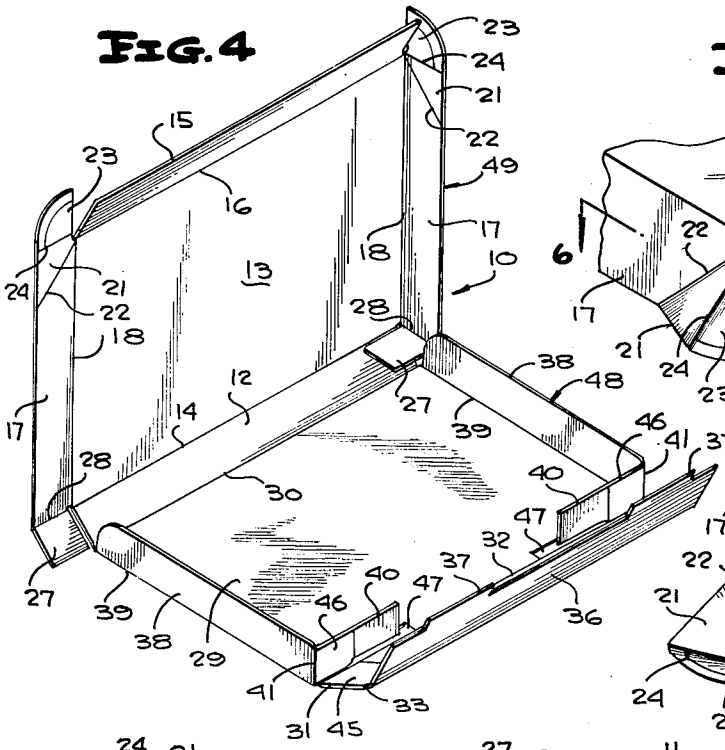


FIG. 5

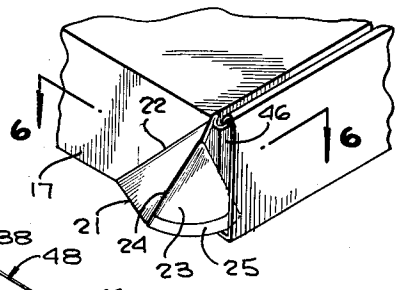
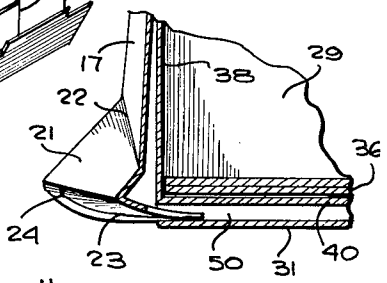


FIG. 6



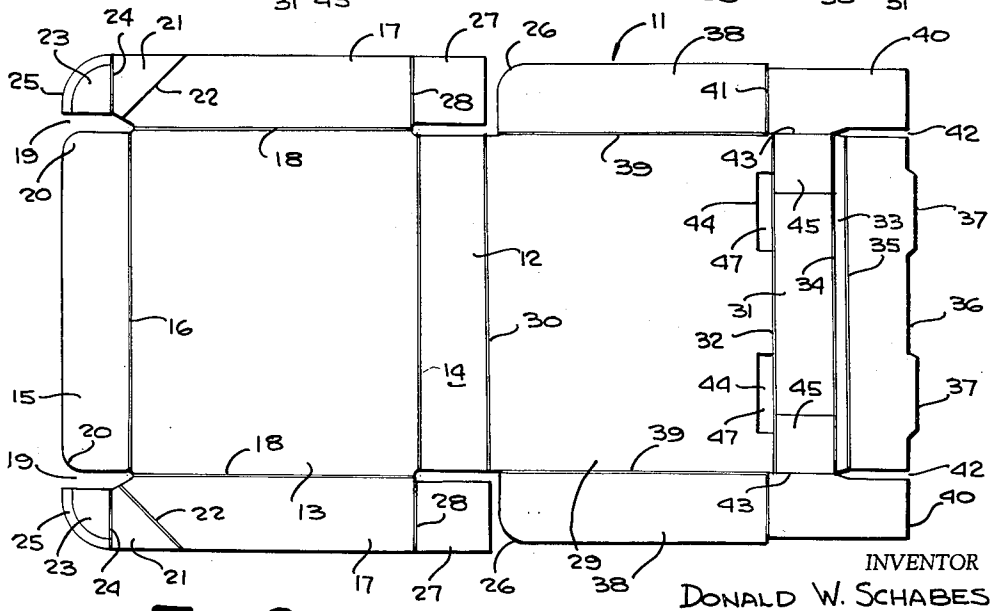


FIG. 8

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3,063,617
FASHION BOX

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Filed Nov. 21, 1961, Ser. No. 153,876
15 Claims. (Cl. 229—33)

This invention relates in general to new and useful improvements in box construction, and more particularly to a novel fashion box.

This invention primarily relates to boxes which are used for the purpose of storing and shiping articles, and which must be provided with suitable locking means to retain the boxes in closed positions under various conditions of handling. It is therefore the primary object of this invention to provide a box of the type including a bottom unit and a cover unit, with suitable locking means which will retain the cover unit in a box closing position and which locking means may be easily and readily engaged.

Another object of this invention is to provide a novel box which includes basically a bottom unit and a cover unit integrally connected together by a back panel, the bottom unit having a reversely folded front panel defining pockets at the opposite ends thereof, and the cover unit being provided with locking flaps on side panels thereof whereby after the cover unit has been disposed in a box closing position, the locking flaps may be inserted in the pockets in the reversely folded front panel to effect the locking of the cover unit to the bottom unit in a box closing position.

Still another object of this invention is to provide a novel locking flap arrangement for locking a cover unit to a bottom unit in a box closing position, the locking flaps being carried by side panels of the cover unit of the box and each locking flap being hingedly connected to a folded portion of its respective side wall, with the folded portion of the side wall being hingedly connected to the remainder of the side wall along a diagonal line wherein the locking flap may be swung primarily in the plane of a pocket as it is being inserted in the pocket to facilitate such insertion.

A further object of this invention is to provide in a box suitable locking means for locking a cover unit of the box to a bottom unit thereof, the locking arrangement of the box including a reversely folded front panel and the bottom unit having pockets at opposite ends thereof, and the cover unit including locking flaps carried at the forward ends of side panels thereof, the locking flaps being disposable within the pockets of the front panel, and portions of the locking flaps and the front panel being flattened to facilitate the insertion of the locking flaps between the walls of the pockets.

A further object of this invention is to provide a novel box which is formed from a substantially rectangular one-piece blank with a minimum waste of material and wherein the box is provided with an integral locking flap adapted to be inserted in a pocket defined by a reversely folded front panel so as to provide for a secure locking of the box in a closed position.

Still another object of this invention is to provide a novel box construction which includes primarily a bottom unit and a cover unit connected together by an integral back panel, and the bottom unit having a reversely folded front panel defining pockets for receiving locking flaps carried by the cover unit, the front panel being held in its reversely folded relation by means of tabs projecting therefrom and with the tabs being seated in recessed portions in the upper surface only of the bottom panel.

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 claims and the several views illustrated in the accompanying drawing.

In the drawing:

FIGURE 1 is a perspective view of the fashion box formed in accordance with this invention and shows the box in its closed position.

FIGURE 2 is a horizontal sectional view taken through the upper portion of the box in FIGURE 1, and shows generally the details of construction thereof.

FIGURE 3 is a transverse vertical sectional view taken along the line 3—3 of FIGURE 1, and shows further the specific details of construction of the box.

FIGURE 4 is a perspective view showing the box in a partially erected position.

FIGURE 5 is an enlarged fragmentary perspective view of a front corner of the box showing the cover of the box in the box closing position and the locking flap at the corner of the box being inserted into the pocket therefor.

FIGURE 6 is an enlarged fragmentary horizontal sectional view taken along the line 6—6 of FIGURE 5, and shows further the relationship of the locking flap with respect to the pocket therefor.

FIGURE 7 is an enlarged fragmentary vertical sectional view taken along the line 7—7 of FIGURE 3, and shows the specific relationship of the various panel portions and flaps along the front of the box and the manner in which a panel portion of the reversely folded front panel is interlocked with the bottom panel.

FIGURE 8 is a plan view of the blank from which the box of FIGURES 1 through 7 is formed.

Referring now to the drawings in detail, it will be seen that there is illustrated in FIGURE 1 the fashion box which is the subject of this invention, the fashion box being generally referred to by the numeral **10**. The fashion box **10** is formed from a one-piece blank which is preferably formed of corrugated board, although other types of paperboard may be utilized in the construction thereof. The blank is generally referred to by the numeral **11** and is illustrated in FIGURE 8.

It is believed that the construction of the box **10** may be best understood by first making reference to the blank **11**. Accordingly, referring to FIGURE 8, it will be seen that the blank **11** is formed of a substantially rectangular sheet of material with there being a minimum of waste. The blank **11** is divided by a plurality of fold lines and cut lines to define various panels and flaps, including a back panel **12** which is generally centrally located with respect to the blank **11** and extends transversely of the blank **11**. The back panel **12** does not extend the full width of the blank **11**. A top panel **13** is hingedly connected to the back panel **12** along a transverse hinge line **14**. A top front panel **15**, which is of a slightly lesser width than the top panel **13**, is connected to the top panel **13** along a transverse hinge line **16**.

The top panel **13** has a pair of top side panels **17** connected to the opposite ends thereof along longitudinal hinge lines **18**. It is to be noted that the hinge lines **18** do not extend the full length of the top panel **13**, but terminate short of the hinge lines **14** and **16**.

A portion of the blank **11** is cut away at the end thereof in alignment with a respective one of the fold lines **18**, as at **19**. This cut-away portion serves to make the top front panel **15** of a slightly lesser width than the top panel **13** and provides the top front panel **15** with rounded corners **20**. The portion of the blank **11** removed at **19** also permits the side panels **17** to be slightly longer than the top panel **13**. Each side panel **17** is provided with a portion **21** which is separated from the remainder thereof along a diagonal fold line **22**. Each portion **21** has a locking flap **23** connected thereto along a transverse fold

line 24. It is to be noted that the corner of each locking flap 23 remote from the top front panel 15 is rounded, and the edge portions of the locking flaps 23 are flattened, as at 25.

A generally L-shaped portion of the blank 11 is removed from each side thereof, as at 26, with a part of the removed portion defining the ends of the back panel 12 and being disposed in alignment with the fold lines 18. The portions removed at 26 in part define rear flaps 27 which are spaced transversely outwardly of the ends of the back panel 12 and which are connected to the top side panels 17 along transverse fold lines 28 which are offset from the fold line 14 in the direction of the top panel 13.

The blank 11 also includes a bottom panel 29 which extends longitudinally of the blank 11 from the back panel 12 and is hingedly connected to the back panel 12 along a transverse fold line 30 which has the ends thereof terminating in the cut-outs defined by the portions of the blank 11 removed at 26.

A first bottom front panel portion 31 is connected to the bottom panel 29 along a transverse fold line 32 disposed remote from the back panel 12. A narrow transversely extending connecting portion 33 is connected to the panel portion 31 along a fold line 34. A fold line 35, which extends transversely of the blank 11, is disposed between the connecting portion 33 and a second bottom front panel portion 36. The free edge of the panel portion 36 is provided with transversely spaced, longitudinally projecting tabs 37.

A pair of bottom side panels 38 are connected to the bottom panel 29 at the opposite ends thereof along fold lines 39. It is to be noted that the fold lines 39 are inwardly offset with respect to the fold lines 18. The bottom side panels 38 terminate short of the opposite side edges of the bottom panel 29.

An elongated flap 40 is hingedly connected to each of the bottom side panels 38 along a transverse fold line 41. The fold lines 41 are offset from the fold line 32 on the bottom panel 29 side thereof. The flaps 40 are separated from the connecting portion 33 and the panel portion 36 by means of relatively wide cut-outs 42 which are centered on the fold line 39. Each cut-out 42 is provided with a line type slit extension 43 which extends between the end of each cut-out 42 and the fold line 39 and separates each flap 40 from the ends of the panel portion 31. It is also to be noted that each of the flaps 40 is narrower than its associated side panel 38, due to the removal of additional material along the transversely outer edge of each flap 40.

The bottom panel 29 is provided with a pair of C-shaped slits 44 disposed in alignment with the tabs 37 and terminating at the fold line 32. Each C-shaped slit 44 extends only partially through the material of the blank 11 and is for the purpose of defining areas of the bottom panel 29 which may be crushed for the reception of the tabs 37 so that the tabs 37 may interlock with the bottom panel 29. As will be described in more detail hereinafter, it is preferred that the blank 11 be formed of corrugated board and when the blank 11 is so formed, the slits 44 will extend through the top facing panel and the corrugated intermediate web, but will terminate short of the bottom facing panel.

In order to provide an interlock with the flattened areas 25 of the locking flaps 23, transversely outer portions of the panel portion 31 are provided with flattened or crushed areas 45 on the upper surface of the panel portion 31. Similar flattened surfaces (to be described in detail hereinafter) are formed on the undersides of the flaps 40 in the showing of FIGURE 8.

Reference is now made to FIGURE 4 in particular, wherein the partially erected box 10 is illustrated. It is to be noted that the box 10 is erected with the bottom panel 29 disposed downwardly and acting as a support for the entire box 10. The bottom side panels 38 are folded upwardly along the fold lines 39 and the flaps 40 are swung inwardly into alignment with each other along the fold lines 41. It is to be noted that the aforementioned flattened areas of the flaps 40, which flattened areas are referred to by the numeral 46, now face forwardly.

The panel portions 31 and 36 are swung upwardly, together with the connecting portion 33, along the fold line 32. The flattened areas 45 of the first bottom front panel portion 31 now oppose the flattened areas 46, but are spaced therefrom a distance substantially equal to the thickness of the paperboard or corrugated board from which the blank 11 is formed. The connecting portion 33 overlies the flaps 40 and the second bottom front panel portion 36 is disposed inwardly or rearwardly of the flaps 40, as is best shown in FIGURES 2 and 7. The tabs 37 enter into the crushed areas defined by the C-shaped slits 44, as is best shown in FIGURE 7, the crushed areas, for identification purposes, being referred to by the numeral 47. The reversely folded bottom front panel defined by the panel portions 31 and 36, as well as the connecting portion 33, is now self-sustaining and serves to hold the side panels 38 in their upright positions. For identification purposes, the bottom panel 29, the bottom side panels 38, the flaps 40, the panel portions 31 and 36, and the connecting portion 33, may be considered to define a bottom unit, which is generally referred to by the numeral 48.

The box 10 may also be considered as having a cover unit, generally referred to by the numeral 49. The cover unit 49 is formed of the top panel 13, the top side panels 17, the flaps 27 and the top front panel 15.

When the cover unit 49 is to be formed and moved into a box closing position, the side panels 17 are swung along the fold lines 18 to positions generally normal to the plane of the top panel 13. At the same time, the flaps 27 are swung along the fold lines 28 to positions generally overlying the back panel 12. The cover unit 49 is then swung along the fold line 14 while the back panel 12 swings along the fold line 30, with the top side panel 17 moving downwardly outwardly of the bottom side panels 38. The flaps 27 engage the rear edges of the bottom side panels 38 and are clamped between the rear edges of the bottom side panels 38 and the front surface of the back panel 12, as is best shown in FIGURE 2.

When the cover unit 49 approaches a box closing position, the top front panel 15 is swung along the fold line 16 to a position where it would be disposed within the bottom unit 48 rearwardly of the panel portion 36, as is clearly shown in FIGURES 2, 6 and 7. The box 10 is now fully closed and is ready to be locked in its closed state.

In the formation of the reversely folded front panel on the bottom unit 48, two end opening pockets 50 are formed between the panel portion 31 and the flaps 40. These pockets 50 are for the reception of the locking flaps 23.

Referring now to FIGURES 5 and 6, it will be seen that when the cover unit 49 is in its box closing position, it is locked in this position by folding the portion 21 along the fold line 22 and simultaneously folding the locking flap 23 along the fold line 24. This places the locking flap 23 substantially in the plane of the pocket into which it is received. The locking flap 23 at each side of the box 10 is then free to be easily swung into its associated pocket 50, with the locking flap 23 swinging along the fold line 24 and the portion 21 swinging along the fold line 22 as the locking flap 23 enters into the pocket 50. The insertion of the locking flaps into the pockets 50 is greatly facilitated by the crushing or flattening of the areas 25, 45 and 46.

Although the locking flaps 23 are securely held in place, it will be understood that when it is desired to open the box, the locking flaps 23 can be pulled out of the associated pockets 50 so as to release the cover unit 49 for swinging to a box open position.

The box 10 is of an extremely simple construction and

at the same time provides for a very secure closing so as to protect the contents thereof. On the other hand, this closing feature does not utilize any additional material and the box may be readily formed from a rectangular blank.

From the foregoing, it will be seen that novel and advantageous provision has been made for carrying out the desired end. However, attention is directed to the fact that minor variations may be made in the example box construction disclosed herein without departing from the spirit and scope of the invention, as defined in the appended claims.

I claim:

1. A box comprising a bottom unit and a cover unit, said bottom unit including a bottom panel, upstanding side panels, and a reversely folded front panel defining end opening pockets at opposite ends thereof, said cover unit including a top panel, depending side panels and a depending front panel, a back panel common to said bottom unit and said cover unit and being integrally connected to rear edges of said bottom panel and said top panel, and said depending side panels having locking flaps at the forward ends thereof for reception into said pockets to secure said cover unit to said bottom unit in a box closing position.

2. The box of claim 1 wherein said locking flaps and said reversely folded front panel have flattened surfaces providing clearance for the insertion of the locking flaps into the pockets.

3. A box comprising a bottom unit and a cover unit, said bottom unit including a bottom panel, upstanding side panels, and a reversely folded front panel defining end opening pockets at opposite ends thereof, said cover unit including a top panel, depending side panels and a depending front panel, a back panel common to said bottom unit and said cover unit and being integrally connected to rear edges of said bottom panel and said top panel, said depending side panels being disposed outwardly of said upstanding side panels, said depending front panel being disposed rearwardly of said reversely folded front panel, and locking flaps at the forward ends of said depending side panels extending into said pockets and locking said cover unit to said bottom unit in a box closing position.

4. The box of claim 3 wherein said locking flaps and said reversely folded front panel have flattened surfaces providing clearance for the insertion of the locking flaps into the pockets.

5. The box of claim 3 wherein said upstanding side panels have inwardly directed front flaps at the forward ends thereof received in said pockets.

6. The box of claim 3 wherein said upstanding side panels have inwardly directed front flaps at the forward ends thereof received in said pockets, said inwardly directed front flaps and said reversely folded front panel have opposed spaced flattened surfaces and said locking flaps having oppositely directed flattened surfaces providing clearance for the insertion of said locking flaps into said pockets.

7. The box of claim 6 wherein each depending side panel has a forward part connected to the remainder thereof along a fold line and the respective one of said locking flaps is connected to said forward part along a fold line whereby insertion of each locking flap in its associated pocket is facilitated.

8. The box of claim 6 wherein each depending side panel has a forward part connected to the remainder thereof along a diagonal fold line, the respective one of said locking flaps is connected to said forward part along a transverse fold line, and each locking flap is rounded to facilitate the insertion of each locking flap into the respective pocket.

9. The box of claim 3 wherein each depending side panel has a forward part connected to the remainder thereof along a fold line and the respective one of said locking flaps is connected to said forward part along a fold line whereby insertion of each locking flap in its associated pocket is facilitated.

10. The box of claim 3 wherein each depending side panel has a forward part connected to the remainder thereof along a diagonal fold line, the respective one of said locking flaps is connected to said forward part along a transverse fold line, and each locking flap is rounded to facilitate the insertion of each locking flap into the respective pocket.

11. The box of claim 1 wherein said reversely folded front panel has an outer panel portion and an inner panel portion, said inner panel portion having a free edge opposing said bottom panel, tabs projecting from said free edge, and said bottom panel having recesses in the upper surface thereof receiving said tabs.

12. The box of claim 11 wherein said upstanding side panels have inwardly directed front flaps at the forward ends thereof received in said pockets.

13. A blank for a box comprising a single generally rectangular sheet divided by a plurality of cut lines and fold lines to define a centrally located transversely extending back panel having hingedly connected thereto along opposite sides thereof a top panel and a bottom panel, a top front panel hingedly connected to said top panel along the side thereof remote from said back panel, top side panels hingedly connected to said top panel along the ends thereof, a locking flap connected to each of said top side panels and disposed adjacent to but transversely spaced from said top front panel, a first bottom front panel portion hingedly connected to said bottom panel remote from said back panel, a transversely extending narrow connecting panel portion connected to said first bottom front panel portion and to a second bottom front panel portion, bottom side panels hingedly connected to said bottom panel along the ends thereof, and longitudinally extending flaps connected to said bottom side panels and disposed alongside said first and second bottom front panel portions.

14. The blank of claim 13 wherein said locking flaps, said first bottom front panel portion and said longitudinally extending flaps each has a surface portion thereof flattened to facilitate interlocking of these portions in an assembled box.

15. The blank of claim 13 wherein each top side panel has a potrion bearing a respective one of said locking flaps connected to the remainder thereof along a diagonal fold line.

No references cited.