Nov. 24, 1959 M. D. SHAPIRO 2,914,236

FOLDING BOX CONSTRUCTION

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Fig. 1

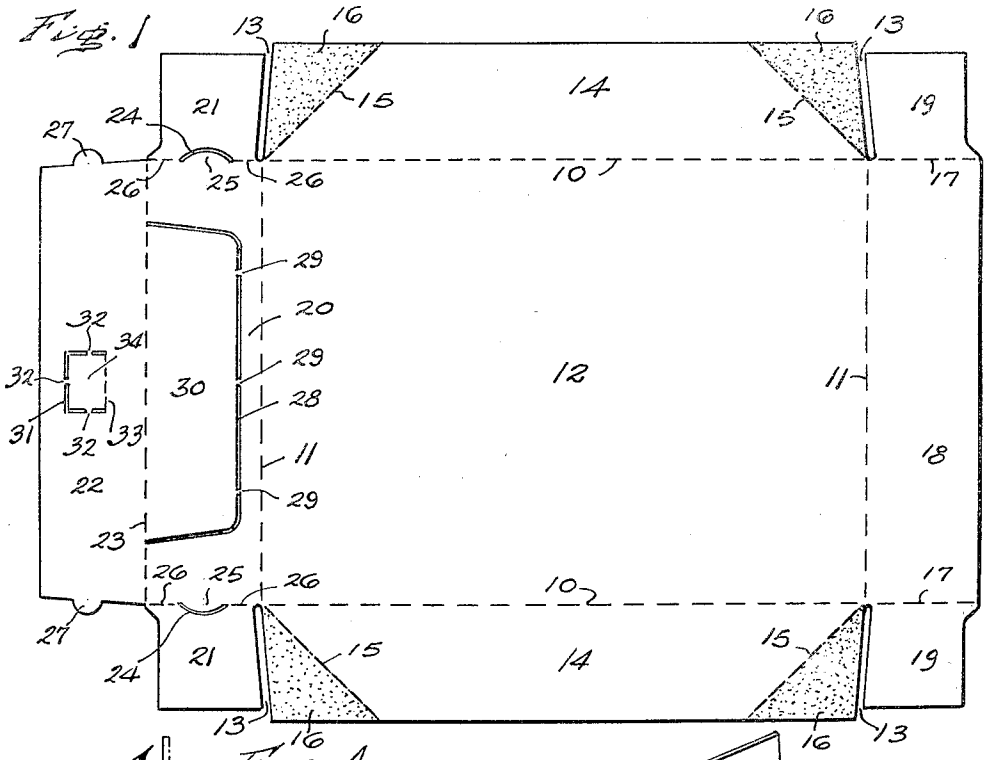



Fig. 4

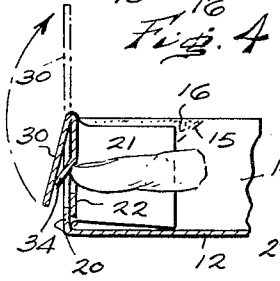



Fig. 2

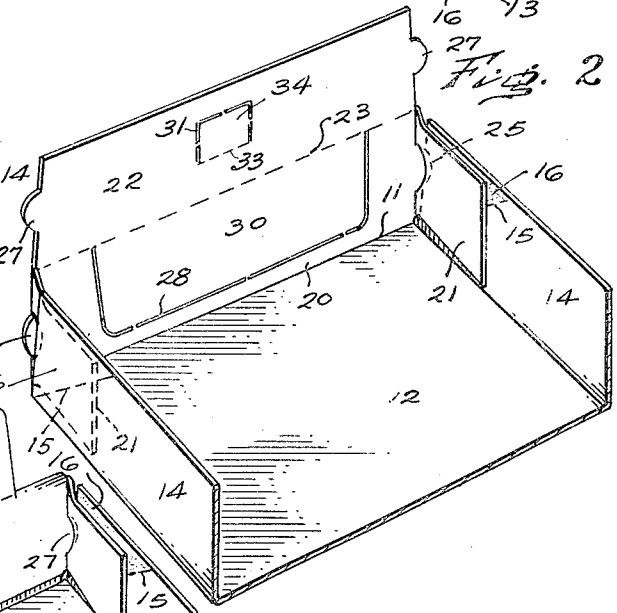
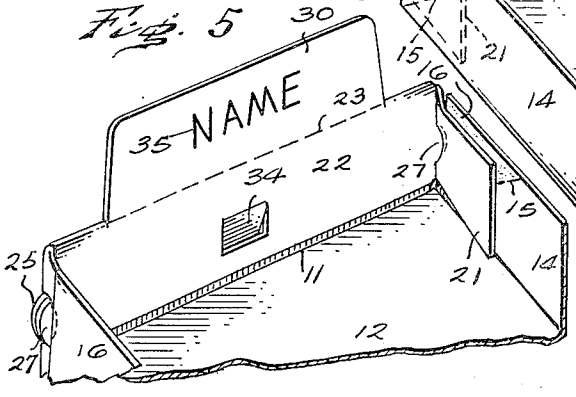



Fig. 5




INVENTOR
MARTIN D. SHAPIRO
BY Lear Edelson
ATTORNEY

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Fig. 3

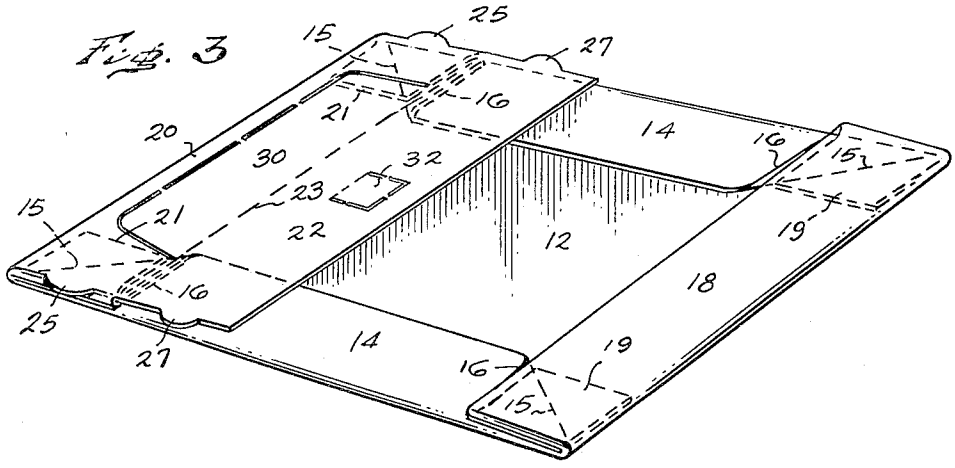



Fig. 6

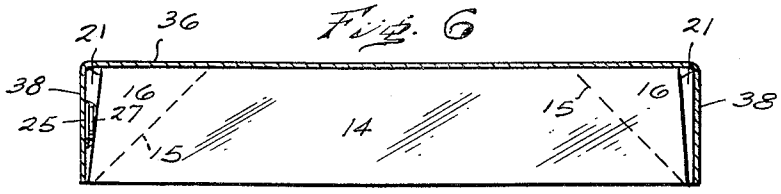



Fig. 7

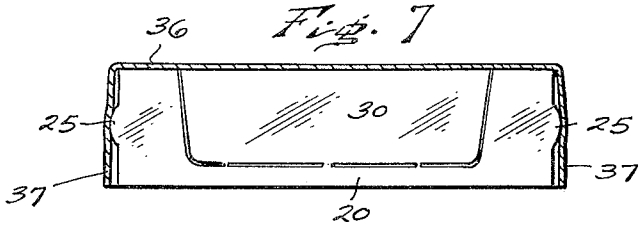
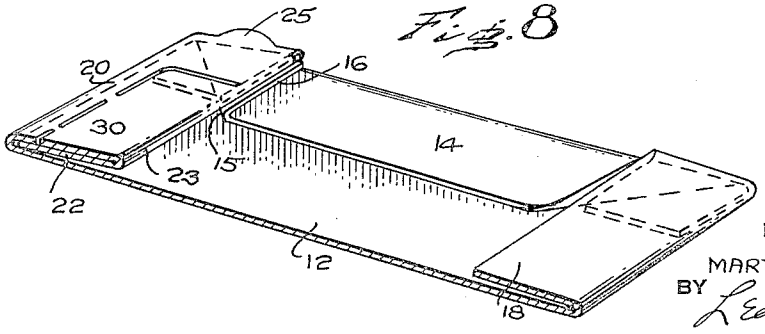



Fig. 8




INVENTOR
MARTIN D. SHAPIRO
BY Lear Edelson
ATTORNEY

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2,914,236

# FOLDING BOX CONSTRUCTION

Martin D. Shapiro, Jenkintown, Pa., assignor to Royal-Pioneer Paper Box Mfg. Co., Inc., Philadelphia, Pa., a corporation of Pennsylvania

Application April 1, 1957, Serial No. 649,927

1 Claim. (Cl. 229—34)

This invention relates generally to boxes and more particularly to a type thereof made of cardboard or the like and equipped with means that facilitates the prominent display of merchandise packed in the box.

An important object of the present invention is to provide a box section that can be easily set up from a single blank and which has a panel extending upright above the rim of the box for prominently displaying any desired legend.

Another important object of the present invention is to provide a box section with such stick up display means and incorporating therein means for engaging the lid of the box to thereby frictionally secure the same against displacement.

Still another object of the present invention is to provide a box section with such stick up display means operating to reinforce the box section.

A further object of the present invention is to provide a box section with such stick up display means and to arrange the box section for being collapsed and folded flat for shipping and storing purposes.

And a further object of the present invention is to provide a collapsible stick up display box section that is simple in design, rugged in construction and economical in manufacture.

Other objects and advantages of the present invention will appear more fully hereinafter, it being understood that the present invention consists in the combination, construction, location and relative arrangement of parts, all as will appear more fully hereinafter, as shown in the accompanying drawings and as finally pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a view of a blank from which the box section constructed in accordance with and embodying the principles of the present invention may be set up.

Figure 2 is a perspective view showing one end of the box section partially set up.

Figure 3 is a perspective view showing the box section in a collapsed, flatly folded condition.

Figure 4 is a fragmentary longitudinal section showing the box section in the process of being fully set up.

Figure 5 is a perspective view similar to Figure 2, but showing the box section fully set up.

Figure 6 is a side view of the box section fitted with a lid section, the side wall of the latter being omitted to expose the side wall of the box section.

Figure 7 is an end view of the box section fitted with a lid section, the end wall of the latter being omitted to the end wall of the box section.

Figure 8 is a perspective view, partly in section, showing the box section in its preferred folded condition for shipping and storing purposes.

A box section constructed in accordance with and embodying the principles of the present invention may be set up from the generally rectangular cardboard blank shown in Figure 1, which blank is provided with a pair of laterally spaced longitudinally extending score lines



10—10 and a pair of longitudinally spaced transversely extending score lines 11—11 that conjointly define an approximately centrally disposed rectangular bottom panel 12.

On each side of the blank, extending from the panel 12 outwardly to the periphery of the blank, respectively in longitudinal continuation of the score lines 11—11, are a pair of slits 13—13, which latter define the opposite end portions of a longitudinally extending side panel 14. These opposite end side panel portions are scored, as at 15—15, to thereby form triangular areas 16—16, which areas are coated with an adhesive agent, as shown.

At one end of the blank, extending from the corners of the bottom panel 12, in longitudinal continuation of the score lines 10—10, are score lines 17—17, which latter define the opposite end portions of a transversely extending rectangular end panel 18. Each of the opposite end portions of the end panel 18 has extending therefrom, in longitudinal continuation of the end panel 18, a flap 19, which latter is separated from the proximate side panel 14 by one of the slits 13.

At the opposite end of the blank are an end panel 20 and a pair of flaps 21—21 that are generally similar respectively to the end panel 18 and the flaps 19—19. Extending longitudinally along the outer side of this end panel 20 is an auxiliary panel 22 that is separated from the end panel 20 by a score line 23 which is parallel to the score lines 11—11. The length and width of the auxiliary panel 22 is substantially the same as the length and width of the end panel 20.

Intervening each opposite end portion of the end panel 20 and the flap 21 that extends therefrom is an arcuate slit 24 that defines a tab 25 which protrudes beyond the main body of the panel 20, the end of which latter is defined by score lines designated 26. The auxiliary panel 22 is similarly provided with a pair of tabs 27—27 so located that when the blank is folded upon the score line 23 and the auxiliary panel 22 is disposed in overlying relation to the end panel 20, the tabs 27—27 overlie and register respectively with the tabs 25—25.

The end panel 20 is provided with a generally U-shaped slit 28 having slight interruptions at several points along its length, as at 29, and which forms a generally rectangular subpanel 30 adjoining the auxiliary panel 22. The auxiliary panel 22 is provided with a generally U-shaped slit 31 having slight interruptions at several points along its length, as at 32, and which forms, conjointly with a score line 33, a generally rectangular subpanel 34.

In setting up the box from the blank just described, first each flap 19 is turned up on score line 17 and each flap 21 on score lines 26—26. Then the blank is folded upon the score lines 11—11 and 10—10 to thereby turn up the side panels 14—14 and the end panels 18 and 20 and to position the corner flaps 19—19 and 21—21 on the inner sides of the side panels 14—14, each in side abutting relation to one of the adhesive coated triangular areas 16. Now these flaps and the areas 16 are secured together through the medium of the adhesive agent. As illustrated in Figure 2, the bottom panel 12, side panels 14—14 and end panels 18 and 20, respectively form the bottom, side end walls of the box, and in this condition of the box the auxiliary panel 22 extends upwardly from the end panel or wall 20, in the plane thereof. Now referring to Figures 3 and 8, for shipping and storing purposes the box may be folded flat by simply pushing the side walls thereof inwardly, whereupon they fold over the base wall. Simultaneously, the triangular side wall areas 16 fold outwardly upon the score lines 15 as the corner flaps fold under the end walls, the latter being drawn inwardly thereby over the folded corner flaps and folded ends of the side walls. As shown in Figure 3, the box may be folded flat with the panel 22 thereof disposed in

coplanar extension of the end panel **20**. Preferably, however, the box is collapsed and folded flat with the panel **22** thereof inturned to overlie the inner face of the end panel **20** as shown in Figure 8, the panels **20** and **22** being interlocked by the interengagement of the tabs **27—27** and the slits **24—24** to provide the box with an end wall of double thickness.

From the condition of the box illustrated in Figure 2, the operation of setting up the same may be continued by turning the auxiliary panel **22** downwardly into the box on the score line **23** to thereby position the same in overlying relation to the adjoining end wall. Simultaneously, the tabs **27—27** are disposed in overlying registering relation respectively to the tabs **25—25** by projection thereof freely through the slits **24—24**, which latter are now somewhat enlarged openings as a consequence of the corner flaps being turned at right angles to the end wall. Normally, this is the condition of the box section when it is packed and shipped, and the operation of setting up the same is continued after the box section arrives at its destination.

Referring to Figure 4, finger pressure is applied to the sub-panel **34**, whereupon the several slit interrupting portions **32** are ruptured and the sub-panel **34** is turned outwardly and upwardly upon the score line **33**. The sub-panel **34** engages the sub-panel **30** and the slit interrupting portions **29** are ruptured. Now the sub-panel **30** may be turned upwardly upon the score line **23**, from the full line position thereof shown in Figure 4 to the dotted line position thereof shown in Figure 4 or the full line position thereof shown in Figure 5, to thereby prominently display a legend **35** printed on the exposed face thereof.

Referring to Figures 6 and 7, the box section may be covered with a lid section preferably having a top wall **36**, a pair of side walls **37—37** and a pair of end walls **38—38**. Before closing the box, the sub-panel **30**, if it has been turned upwardly, as hereinbefore described, is turned outwardly and downwardly back into the plane of the end panel or wall **20**. When the lid section is applied, the ends of the tabs **25—25** and **27—27** engage the side walls **37—37** of the lid section and operate to frictionally secure the lid against displacement, in many cases eliminating any necessity for tying the lid section to the box section after the latter is packed.

The auxiliary panel **22** and the end panel **20** conjointly form an end wall of double thickness, materially increasing the strength of the box. In the event that the adhesive fails to hold, the tabs **27—27** operate nevertheless to lock the auxiliary panel **22** in its position overlying the end panel **20**. Although the auxiliary panel **22** preferably is provided with the sub-panel **34**, this feature is not essential, as will be readily understood.

Preferably, the stick up display feature of the present



invention is incorporated in the bottom section of the box, not in the lid section. However, it could be incorporated in the lid section in which event, in the use of the unit the lid section is turned upside down and used as a tray that receives the bottom section of the unit.

It will be understood, of course, that the present invention as hereinbefore described and as shown in the accompanying drawings is susceptible to various changes and modifications which may be made from time to time without departing from the general principles or real spirit of the invention, and accordingly it is intended to claim the same broadly, as well as specifically, as indicated by the appended claim.

What is claimed as new and useful is:

In a box section made from a single blank of sheet material, a horizontally extending rectangular bottom wall, a pair of opposite side walls and a pair of opposite end walls extending about said bottom wall, said end walls being joined to said side walls by flaps extending therefrom respectively along said side walls, the latter being foldable inwardly toward one another over said bottom wall, each side wall being scored diagonally across each opposite end portion thereof for folding of said end portions outwardly back upon themselves, and said end walls being foldable inwardly toward one another over said side walls, and display means including an auxiliary panel depending from the top of one of said end walls and lining the inner side thereof, a subpanel in the end wall lined by said auxiliary panel, said subpanel being adjacent to the top of and detachable from said paneled end wall for being turned upwardly about the top of the same into upright continuation of said auxiliary panel, a pair of rounded tabs each extending in longitudinal continuation of opposite end portions of said auxiliary panel, freely through an opening in the proximate flap and beyond the associated side wall, and a pair of rounded tabs each extending in longitudinal continuation of one end portion of said paneled wall and underlying the corresponding tab extending from the auxiliary panel, said tabs being thereby adapted conjointly to engage the side walls of a lid and to frictionally secure the same against displacement.

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