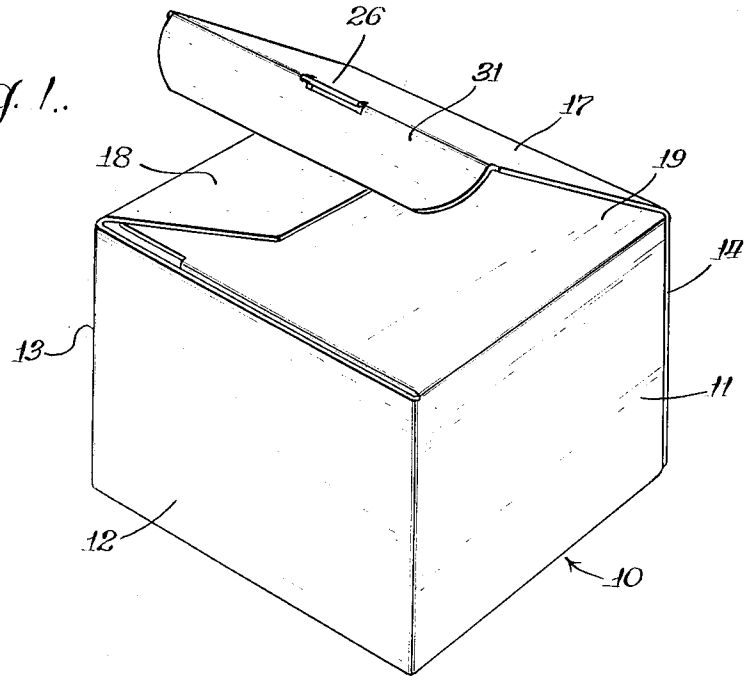
March 22, 1966 F. C. STEINBOCK 3,241,737

DISPLAY, DISPENSING AND SHIPPING CONTAINER

Filed July 22, 1964 3 Sheets-Sheet 1

Fig. 1.



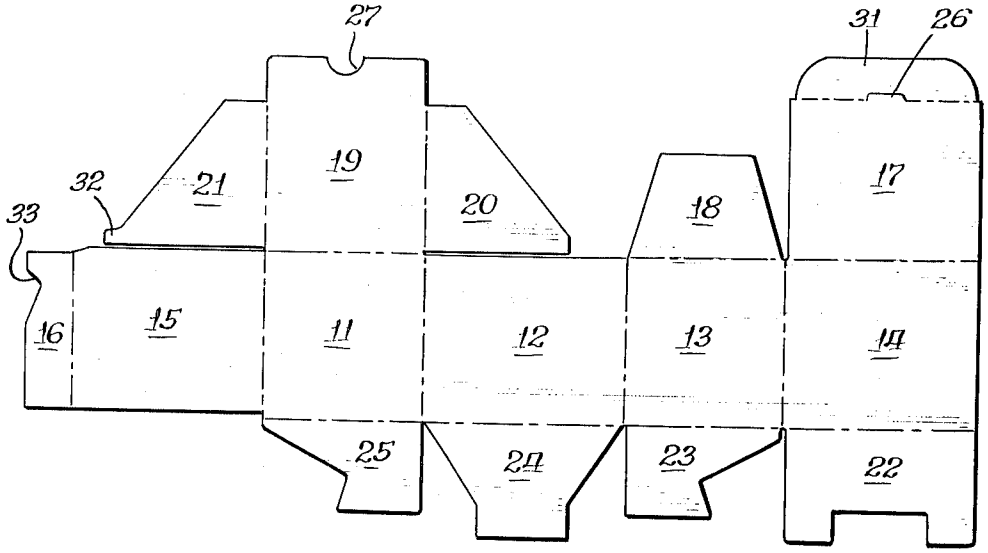




Fig. 6.

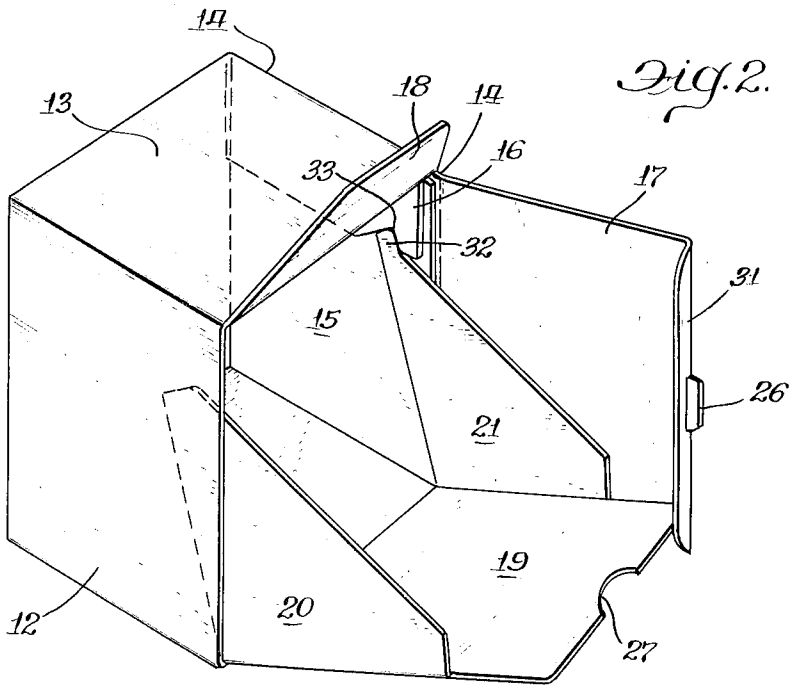
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DISPLAY, DISPENSING AND SHIPPING CONTAINER

Filed July 22, 1964 3 Sheets-Sheet 2

Fig. 2.



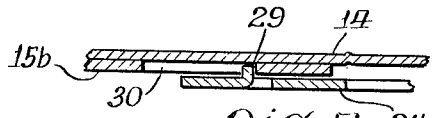




Fig. 5.

Fig. 3.

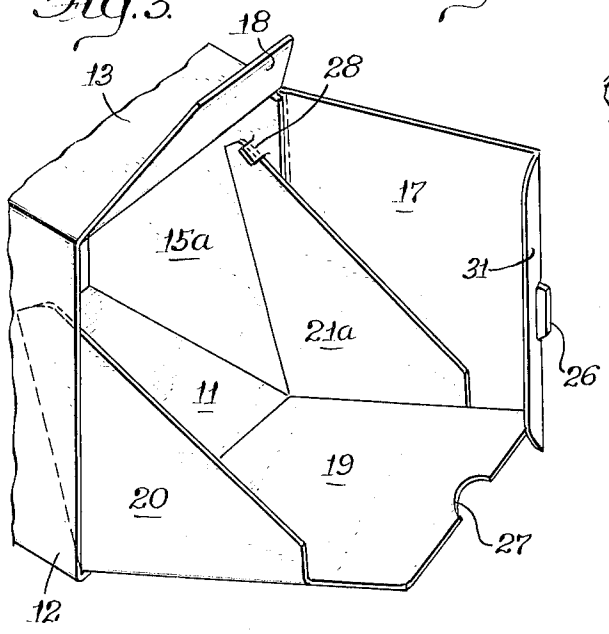
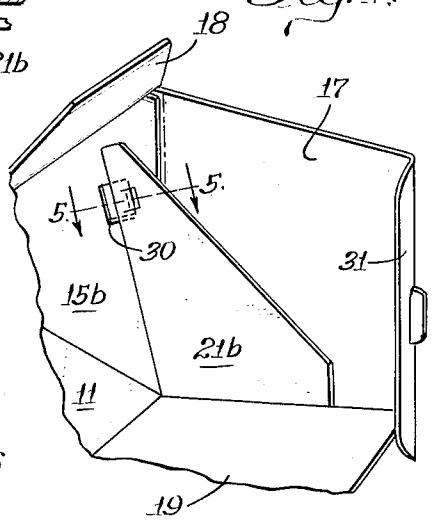



Fig. 4.




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DISPLAY, DISPENSING AND SHIPPING CONTAINER

Filed July 22, 1964 3 Sheets-Sheet 3

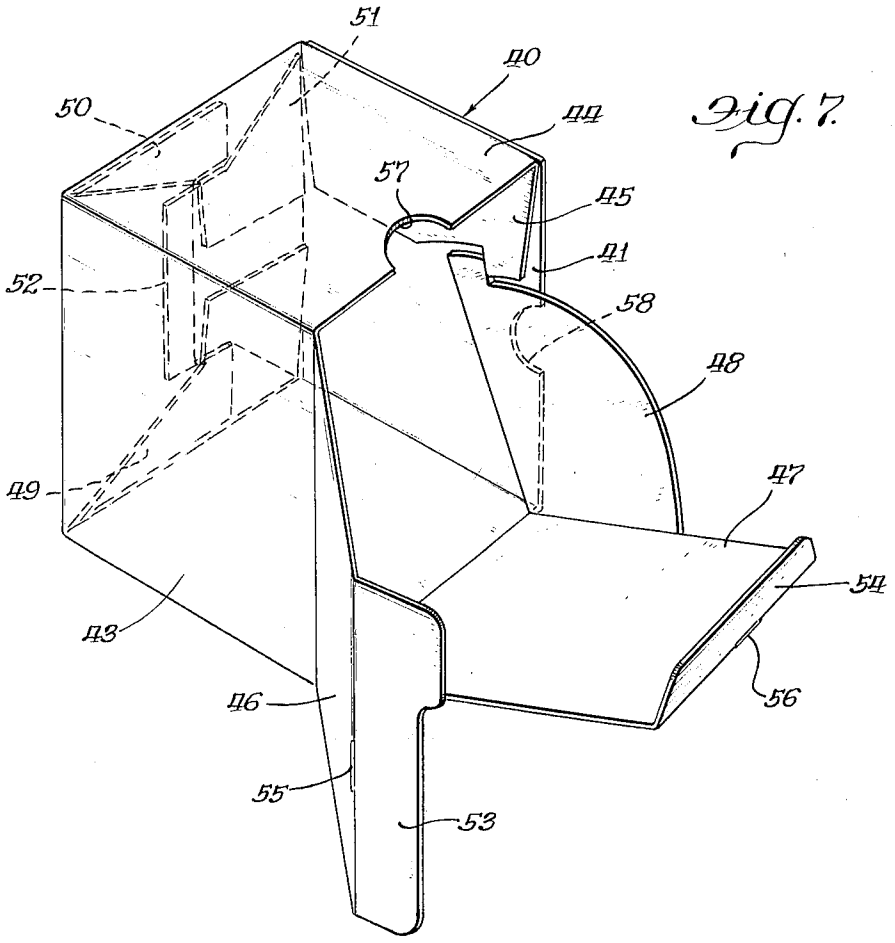



Fig. 7.

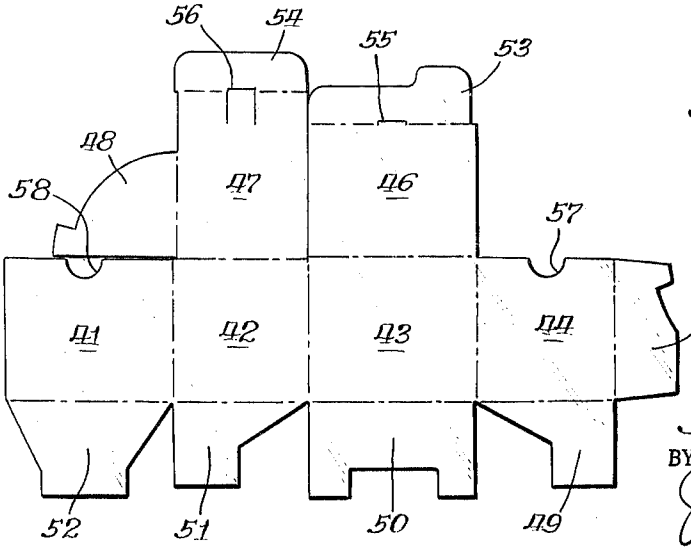



Fig. 8.

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United States Patent Office 3,241,737 Patented Mar. 22, 1966



3,241,737

# DISPLAY, DISPENSING AND SHIPPING CONTAINER

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Filed July 22, 1964, Ser. No. 384,360
10 Claims. (Cl. 229—17)

This invention is concerned with substantially flat-sided containers of the type made from die-cut and fold-scored or otherwise "hingedly-connected" sheets of paperboard, corrugated board or plastic which are glued, sealed or otherwise fastened to form four-sided sleeves which fold flat for compact shipping and storage. When containers of this type are needed, the sleeves may be opened and containers may be readily assembled by interlocking or tucking in the end panels.

This invention is particularly concerned with such containers which are useful for displaying or serving a multiplicity of individual similar or dissimilar items and which additionally may be used to store or ship the items.

There has been a need for some time for a versatile container in which individual items sold by weight or by numerical count might be contained, displayed, served and shipped in the same container. Sales and/or dispensing of such items as individually wrapped candies, toothbrushes, and toothpicks, loose hardware items such as nuts, bolts, screws, hooks and the like, button and snap cards, etc., may be facilitated when packages of this invention are used.

It is an object of this invention to provide an economical, easily assembled container which may be used for shipping, displaying and serving small individual items.

Referring to the drawings:

FIGURE 1 illustrates in perspective a container of this invention partially opened.

FIGURE 2 illustrates in perspective the container of FIGURE 1 in the fully opened condition.

FIGURE 3 illustrates in perspective a partial view of the container of FIGURE 1 showing an alternative bin locking device.

FIGURE 4 illustrates in perspective a partial view of the container of FIGURE 1 showing another alternative bin locking device.

FIGURE 5 shows in cross section the locking device of FIGURE 4.

FIGURE 6 illustrates the blank of the container of FIGURE 1.

FIGURE 7 illustrates in perspective a container of the invention with the panels rearranged and suitable for items extending the full width of the container.

FIGURE 8 illustrates the blank of the container of FIGURE 7.

The containers of this invention are preferably made of corrugated board. Double-faced corrugated in the range of 125 to 275 pounds per square inch bursting strength by the Mullens test and in A, B, C and E flutes is preferred. E flute corrugated makes an excellent container of the invention particularly when white facings are used. Paperboard is also suitable in proper thickness of about 20–36 points (.020–.036 inch). All grades of paperboard such as lusterboard, clay-coated news, patent-coated, bleached manila and chipboard are suitable. Fairly rigid plastics are also suitable and 10 to 20 mil sheets of polypropylene make very attractive containers.

Referring once more to the drawings:

In FIGURES 1, 2 and 6, the container **10** of this embodiment is seen to consist of seven main panels **11, 12, 13, 14, 15, 17** and **19**, wing brace panels **20** and **21**, protective flap **18**, bottom panels **22, 23, 24** and **25** which



form a snap bottom, lock strip **16** and tuck-in flap **31**. Of the main panels, panels **11, 12, 13** and **15** form the container sides while panel **17** forms the cover and panel **14** overlaps and is fastened in superimposed position to panel **15** preferably by gluing or sealing. Lock strip **16** also is similarly fastened to panel **15**. The panels **22, 23, 24** and **25** form the true container bottom but for purposes of display and dispensing, the container rests on panel **11**.

Panels **11, 12, 13** and **15** are "hingedly-connected" in sequence, that is, panel **12** is connected to **11** and **13** and panel **15** is connected to **11** and **13** to form a collapsible four-sided sleeve.

As shown in FIGURES 1 and 2, the flap **31** which normally tucks between panel **12** and wing brace panel **20** carries an opening tab **26** which permits the cover **17** to be raised. In FIGURE 1, it is clear that protective flap **18** and panel **19** form a dust protective covering along the side edges of the cover **17**.

When the container rests on panel **11** and with flap **18** raised as in FIGURE 2, the panel **19** may be lowered to an inclined position. A finger notch **27** facilitates the initial movement. The protruding flap **32** on wing brace panel **21** catches in the notch **33** of lock strip **16** to provide a lock which retains the panel **19** in its inclined position. The individual contained items thus spill down in contact with panel **19** where they may be displayed as in a bin and from which they may be served. At any time the container may be placed back on its true bottom and the container closed. The particular embodiment depicted in FIGURES 1 and 2 might be suitable for individually wrapped candies and for loose small hardware items such as rivets, bolts, nuts, screws, fuses, ball bearings and the like. Where the items are larger such as needle envelopes, button cards and other items whose width approximates that of the container, a less elaborate and hence less expensive container **40** as illustrated in FIGURE 7 may be entirely adequate. The inclined panel **47** does not have wing brace panels on both sides to form a bin-shaped spillway. But with wide comparatively flat packages, it is unnecessary to have guards at the sides and wing brace panel **48** acts chiefly as a locking device.

In FIGURES 7 and 8 there are six main panels **41, 42, 43** and **44** forming the container sides, **46** being the container cover and **47** being the inclined spill panel. The panels **49, 50, 51** and **52** form the snap bottom. Their assembled relationship can be seen in FIGURE 7. These panels are similar to the bottom panels of FIGURES 1, 2 and 6. In the embodiment illustrated in FIGURES 7 and 8, the lock strip **45** is slightly modified. The finger notches **57** and **58** are at the top of the container sides while each of the tuck-in flaps **53** and **54** have opening tabs **55** and **56** which are placed to fall each within its respective finger notch area when the flaps are tucked in.

In FIGURE 3, the container of FIGURES 1 and 2 is shown with modified panels **15***a* and **21***a*. These panels take the place of panels **15** and **21** of FIGURES 1 and 2. Panel **15***a* has a protruding flap **28** which catches the leading edge of panel **21***a*. Lock strip **16** has been eliminated from this modification as well as that shown in FIGURE 4.

In FIGURE 4, the container of FIGURES 1 and 2 is shown with modified panels **21***b* and **15***b*. Panel **15***b* has a slot **30** into which a short flap **29** in panel **21***b* fits. This is shown more clearly in FIGURE 5. In both FIGURES 3 and 4, the modifications show alternative means of stopping the movement downward of spill panel **19**. Obviously, other stop means may be substituted without departing from the invention.

The term "hingedly-connected" as used in the claims and specification of this invention to describe the relationship between two panels means that the flat panels are joined substantially along the line of their intersection in such a way that the angle between the panels may be varied, the hinging action occurring in the area of the connection. The two panels may be, and preferably are, integral, in which case where corrugated board or paperboard are the materials used, scoring and bending along the line of demarcation between panels will cause them to be "hingedly-connected." On the other hand, some plastics may require heat scoring with actual thinning of the material along the score line so that the panels are "hingedly-connected." But the term "hingedly-connected" also applies to a structure in which the panels are not integral but rather are joined by flexible material glued, sealed or otherwise fastened to join the slightly separated panel edges.

I claim:

1. A display, dispensing and shipping container comprising sheet material assembled into a flat-sided box, said box including a snap bottom, four sides, an inner cover and an outer cover, said covers being respectively hingedly-connected to next adjacent sides of said box, means attached to said outer cover for detachably retaining it in closed position and at least one wing brace panel hingedly-connected to said inner cover, said wing brace panel projecting when said box is closed into said box parallel to the box sides adjacent that side to which said inner cover is connected and means including said wing brace panel supporting said inner cover in an inclined position when said box is open and resting on the box side to which said inner cover is connected.

2. The container of claim 1 wherein said means supporting said inner cover in an inclined position include interacting flap means which arrest further movement of said wing brace panel outwardly of said box when said wing brace panel is supporting said inner cover.

3. The container of claim 1 wherein means for retaining said outer cover in closed position is a tuck flap.

4. The container of claim 1 wherein the container is integral.

5. The container of claim 1 wherein the sheet material is first assembled into a four-sided, flat-folding sleeve.



6. The container of claim 1 wherein the sheet material is corrugated board.

7. The container of claim 1 wherein the sheet material is paperboard.

8. The container of claim 1 wherein the sheet material is a thermoplastic resin.

9. A display, dispensing and shipping container erectable from a collapsed, substantially flat four-sided sleeve, comprising a snap bottom formed of interlocking substantially flat panels, four side panels hingedly-connected in sequence and upstanding from said bottom when said container is resting thereon, each side panel hingedly-connected to a panel of said bottom, a spill panel hingedly-connected to the top edge of one of said side panels and constituting an inner cover for said container, an outer cover panel for said container hingedly-connected to the top edge of a second side panel next adjacent said one side panel, a tuck-in flap for securing said outer cover in closed position hingedly-connected to the edge of said outer cover panel opposite its connection to said second side panel, a wing brace panel, vertical when said container is resting on said one side, hingedly-connected to the side edge next adjacent the edge of said spill panel connected to said one side panel, said wing brace panel being progressively exposed as said spill panel hinges from a position vertical to said one side panel to a position inclined thereto and interacting means arresting exposure of said wing brace panel, limiting the inclination of said spill panel and supporting it in said inclined position.

10. The container of claim 9 wherein the interacting means are flap and notch means.

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