Jan. 12, 1960 E. B. GARMAN 2,920,757

CARTON CONSTRUCTION

Filed Jan. 30, 1958 2 Sheets-Sheet 1

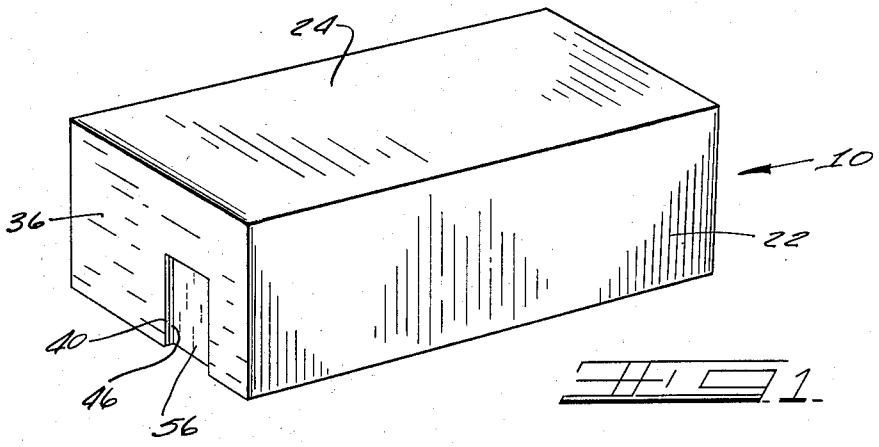
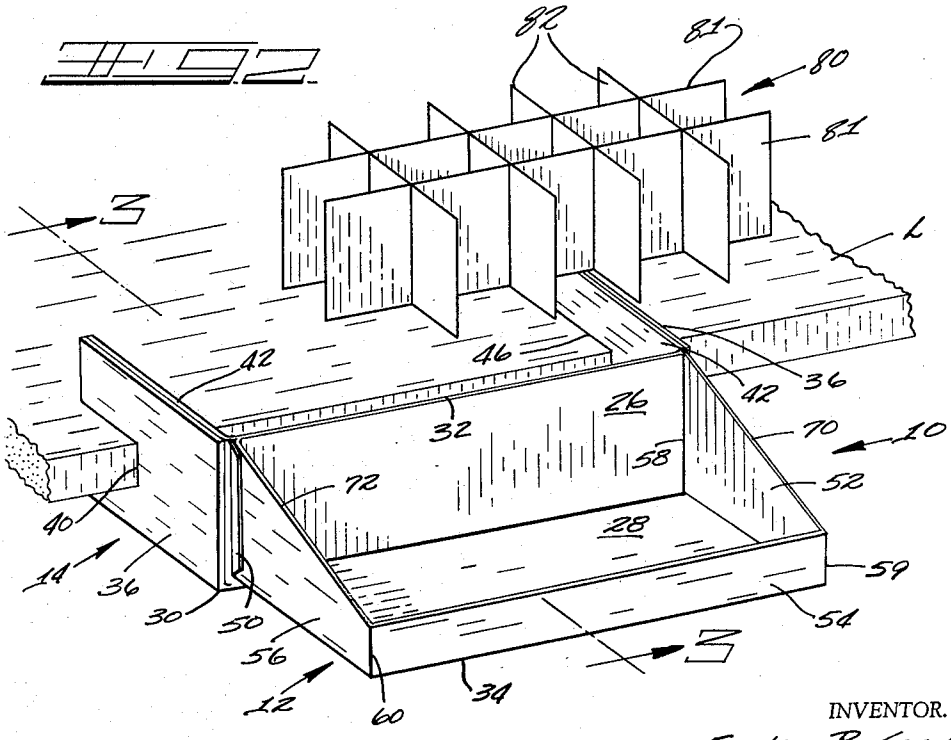


FIG 1

FIG 2



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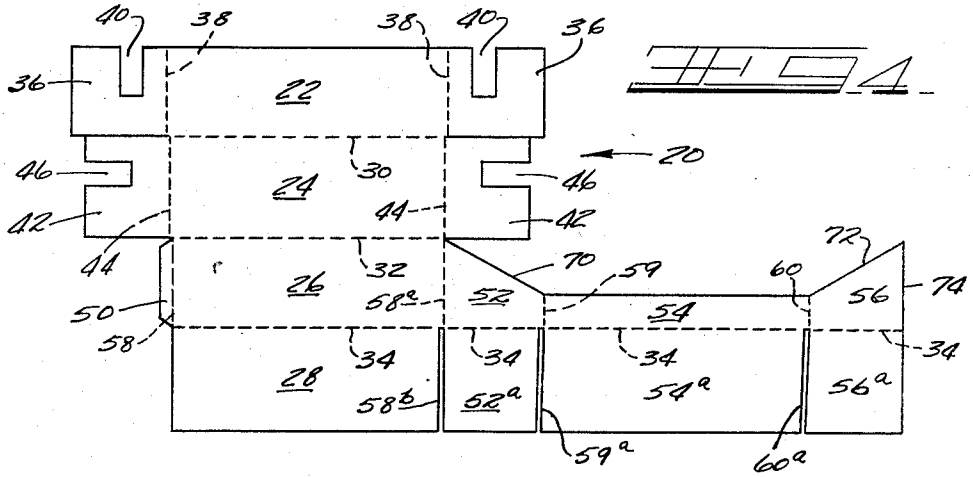


FIG. 4

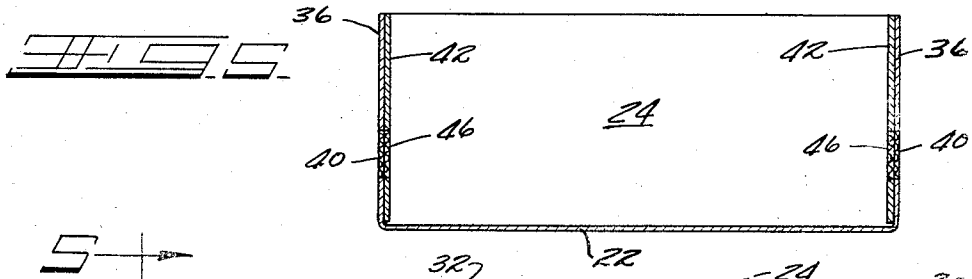


FIG. 5

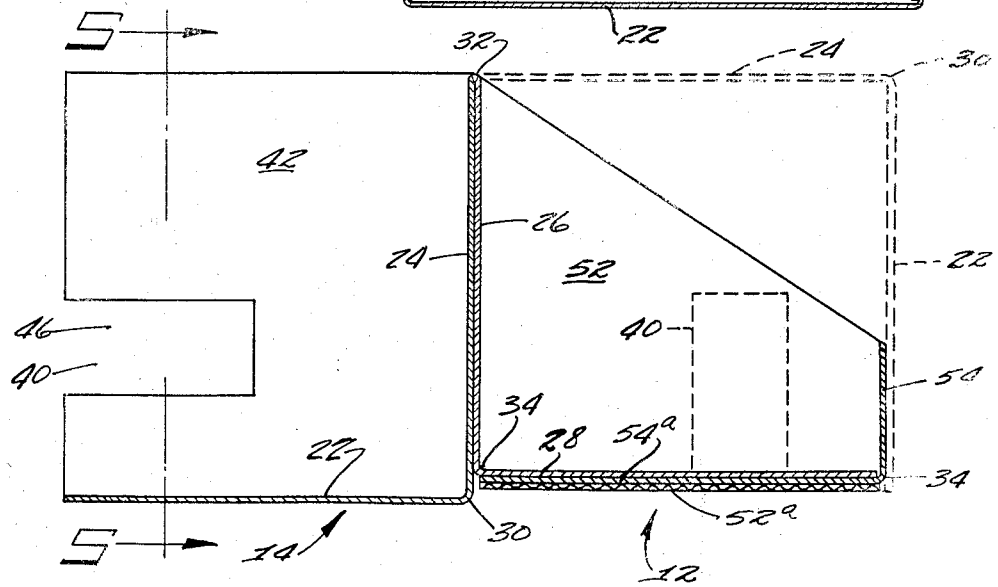


FIG. 2

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2,920,757

CARTON CONSTRUCTION

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Application January 30, 1958, Serial No. 712,197

7 Claims. (Cl. 206—45.21)

The present invention relates to a carton or container construction. More specifically, the present invention relates to a carton having utility as a shipping container, and, as well, has utility for displaying contents thereof.

Usually, goods such as baby food, spices, jellies, lighter fluid, and the like, which are normally put up in small quantities for sale to the buying public, are shipped to the ultimate retail outlet in a corrugated carton which is designed for the primary object of safely protecting the goods. This is particularly true where such goods are packaged in glass containers. The use of such cartons requires labor at the retail outlet to open the carton, remove the plurality of individually packaged items, and place them on shelves within the retail outlet for display and sale to the consumer. Unfortunately, it can be seen that the use of such a carton entails considerable labor on the part of the retailer.

It is a primary object of this invention to provide a carton of this general type which eliminates the attendant labor necessary in transferring the articles shipped therein to the shelves, as described hereinbefore.

It is another object of this invention to provide such a novel container which includes a special cover arrangement having means for engaging an existing shelf or ledge, and which functions in supporting and extending the receptacle portion of the carton for advantageous display purposes of articles at the retail level.

It is yet another object of this invention to provide a carton construction which includes reinforced end walls to thereby insure safe shipment of the contents.

It is yet another object of the present invention to provide a carton which is quickly convertible from shipping assembly to display assembly.

Another object of this invention is directed to providing a novel blank which is composed of one piece and is so slitted and scored that it may be simply and easily erected into an operative structure for the purposes intended.

These and other objects of the present invention will become apparent to those skilled in the art from the following detailed description, taken in conjunction with the annexed sheets of drawings, on which there is presented for purposes of illustration only, a single embodiment of this invention.

In the drawings:

Fig. 1 is a three-quarter perspective view of the carton of this invention assembled so as to form a shipping assembly.

Fig. 2 is a similar perspective view with the carton opened in display arrangement, and with partition members elevated for clarity of illustration.

Fig. 3 is a sectional view taken on the line 3—3 in Fig. 2, the dotted line portion illustrating the cover in closure relationship.

Fig. 4 is a plan view of the one-piece blank used in assembling the carton according to this invention.

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 3.

Basically, the carton construction according to the present invention comprises an article-receiving receptacle composed of rear, front, and side walls, and bottom closure flaps connected to the bottom edges thereof; and, hingedly connected to the top edge of the rear wall, a cover including a top panel, a forward panel, and flaps extending laterally from each, said flaps containing registering notches when the flaps are arranged in overlapping relationship, said cover being adapted to effectively close the receptacle portion and also to extend rearwardly from the receptacle portion, with the top panel in face-to-face supporting abutment with the rear wall of the receptacle, and with the notches of said flaps opening rearwardly to engage a shelf or ledge.

Referring now more specifically to the drawings, there is shown in Figs. 1, 2, and 3, a receptacle **10** of the present invention. The receptacle is composed principally of an article-receiving receptacle **12** and a cover or closure portion **14**. These elements are hingedly secured together, and the entire construction may be formed from a single piece or blank of material of construction. The blank **20** is shown in flat, knock-down form in Fig. 4. The blank **20** comprises a vertically disposed series of four rectangular panels **22**, **24**, **26**, and **28**, separated by score lines, respectively, **30**, **32**, and **34**, which score lines serve as fold lines and also define the longest dimension of the rectangular panels. A pair of flaps **36** extend laterally from each end of panel **22** beyond score lines **38**, defining the ends of panel **22**. Each flap **36** contains a generally rectangular notch **40**. The notches are spaced from the score or fold lines **38**, and open upwardly or vertically. A generally similar pair of flaps **42** extend laterally from the rectangular panel **24** beyond score or fold lines **44** spaced slightly inwardly from score lines **38**. The flaps **42** each contain a generally rectangular notch **45** in the outermost edge of the flaps, and these notches open outwardly or horizontally. The flaps **36** are separated from the flaps **42** by a slit **46**, so that they are independently foldable about their respective fold lines **38** and **44**. The panels **22**, **24**, and their respective laterally extending flaps **36** and **42** constitute the cover of the carton construction of this invention.

Panels **52**, **54**, and **56** extend laterally, in that order, from one end of rectangular panel **26**, while a glue flap **50** extends laterally from the other end of rectangular panel **26**. The glue flap **50** and the panel **52** are separated from the rectangular panel **26** by score lines **58** and **58***a*, respectively, which serve as fold lines. Panel **54** is separated from panel **52** by a score line **59** spaced from and parallel to score line **58***a*. Panel **56** is separated from panel **54** by a score line **60** spaced from and parallel to score line **59**. The score or fold line **34** of panel **26**, as shown, extends laterally to span panels **52**, **54**, and **56**. Depending beyond this score line are, respectively, closure flaps **52***a*, **54***a*, and **56***a*, which depend from the corresponding panels **52**, **54**, and **56**. These closure flaps are separated from each other by slits **59***a* and **60***a* which extend to the score line **34** and in alignment with score lines **59**, **60**. Similarly, slit **58***b* separates panel **28** from flap **52***a*. Panel **54** has a linear dimension (horizontal dimension) which conforms to the length of rectangular panel **26**, but has a height or width measured on the score lines **59** which is less than the height of the rectangular panel **26** as measured on score line **58***a*. The upper free edge **70** of panel **52** slopes downwardly away from flap **42**. Panel **56** is of identical contour to panel **52**, but its upper free edge **72** slopes in the reverse direction so as to define a panel which is of opposite or reverse hand to panel **52**. The vertical free edge **74** of panel **56** has a dimension identical to score line **58***a*.

In assembling the blank as just described, the blank

is folded on score lines 58, 59, and 60 to bring the vertical edge 74 of panel 56 into contacting relationship with the glue flap 50 which may be stapled or otherwise secured to the panel 56. Next, the rectangular panel 28, the flap 54*a*, and the flaps 52*a* and 56*a* are folded in that order about score line 34 into overlapping relationship. They may be secured by staples or glue or other convenient means. At this stage, there will be described the receptacle component of the construction according to this invention, in which the panel 26 and 54 will comprise the rear and front walls, respectively, and the panels 52 and 56 comprise the side walls, respectively. The rectangular panels 28 and the flaps 52*a*, 54*a*, and 56*a* will constitute the bottom of the receptacle. The full overlapping of the bottom closure flaps as described may be replaced by non-overlapping flaps, and full closure effected by the utilization of a separate pad which defines an area identical to that enclosed by the upstanding walls 26, 52, 54 and 56. The cover component is now asesmbled by first folding the flaps 42 about fold line 44 until normal to the associated rectangular panel 24. Next, the rectangular panel 22 is folded about the fold line 30, while the flaps 36 are simultaneously folded about fold line 38. It will be noted that the score line 38 is offset slightly outwardly with respect to the fold line 44, so that the flap 36 will telescope over flap 42. When the panels 22 and 24 have been folded into perpendicular relationship with each other, the side flaps will be in overlapping relationship, and these can be secured together by staples, or other means. It will be noted that the notches 40 and 46 and the respective flaps 36 and 42 are positioned so that when the flaps are in overlapping relationship as defined, the notches will be in registry with the openings facing in the same direction. The carton construction as now assembled is adapted to assume either the displaying assembly of the parts as shown in Fig. 3 in full solid lines, wherein it is adapted for having the cover portion notches engage a shelf or ledge and with the rear panel 26 of the receptacle portion in supporting face-to-face contact with the top wall 24 of the cover to thereby hold the receptacle portion outwardly from the shelf or ledge, or in the closed shipping assembly as indicated by the dotted lines in Fig. 3, wherein the forward wall 22 telescopes down over the front wall 54 of the receptacle portion. It will be appreciated that the overlapped flaps 36 and 42 will telescope over the side walls 52 and 56 of the receptacle portion.

The dimensions of the various panels, flaps, etc., in the carton construction of this invention, and the location of the notches 40 and 46 are carefully controlled so that the edges of the notches do not intersect the upper free edges 70, 72 of the side wall of the receptacle. This is illustrated in Fig. 3 in a satisfactory manner. It will be appreciated that if there were intersection between the contour of the notches and the free edges of the side walls of the receptacle, there would be a hole leading from the outside of the container to the inside when the carton construction was in shipping arrangement. This, of course, would be highly undesirable. It may be seen that, when in shipping arrangement, the major portion of the side walls is composed of three thicknesses of the wall, namely, thickness of flap 36, thickness of flap 42, and thickness of panel 52. This double thickness with respect to the flaps also provides strength for the display arrangement, wherein the notches are slipped over a shelf or ledge L as shown in Fig. 2.

The display feature of the carton construction of this invention is aided by the provision for a front wall of less height than the rear wall which, with the cut-away side walls, permits the contents of the receptacle to be seen for a substantial portion of their length, assuming that they are packed upright in the receptacle. The front wall should, however, be sufficient in height to preclude items slipping from the receptacle.

The present invention further contemplates the utilization of a partitioning assembly 80 (Fig. 2). This partitioning asssembly is composed, as shown, of two vertical strips 81 conforming to the length of the carton, and a plurality of transverse strips 82, both of which are slotted so as to engage, as shown, and in the manner known in the art. It will be appreciated that the receptacle of this invention, when assembled onto a ledge or shelf, will have its closure flaps completely out of the way, and the partitioning assembly can be easily removed permitting continuous sight of the contents of the receptacle.

An added feature of the receptacle of this invention is that it permits the operator of the retail outlet to obtain more efficiency out of his existing shelves available for container display. Thus, with reference to Fig. 2, it can be seen that only a very small portion of the shelf is taken up by the rearwardly projecting vertical flaps which slip over the ledge or shelf. In addition, the carton incorporating the shelf extension display feature permits flexibility in the merchandising of associated items. Thus, the principal shelf or ledge may be utilized to display a particular article, and on the same shelf may be slipped the display receptacle of this invention containing a product or article which is complimentary to those products on the principal shelf or ledge.

It has been found that the carton construction of this invention may be conveniently fabricated from corrugated board of the type known in the art and consisting of two outer sheets embracing therebetween corrugating medium. When this type of material is used, it is preferred that the forming of the blank be such that the corrugations run in the direction shown in Fig. 4; that is, in the direction traversing the score line separating the rectangular panels 22, 24, 26, and 28. In this fashion, all of the vertical components or upstanding components of the receptacle have the corrugations running in that direction, so that the ultimate in strength is provided. This is particularly desirable to permit stacking of the cartons when in shipping assembly. Thus, the upstanding walls of the receptacle portion, namely, panel 26, 52, 54, and 56, will have the corrugations running parallel with their height as assembled, as will the panel 22, constituting the forward panel of the closure member. It will be appreciated however, that other materials of construction may be utilized so long as the material is relatively stiff and sheet-like. Chip board is an example of an alternative material.

While the description of the invention above has been limited to essentially a single embodiment, it is intended to cover all changes of form and structure which might be accomplished by persons skilled in the art, and it is not intended to limit myself to the embodiment shown, except as required by the scope of the appended claims.

I claim:

1. A combined shipping container and display receptacle comprising a chamber having a bottom and upstanding side and end walls; and an integral cover including a first panel, foldably connected to an upper edge of one of said walls, adapted to span the area outlined by said upstanding walls of said chamber when in shipping assembly, and to lie in flush supporting abutment with one of said upstanding walls of said chamber when in displaying assembly, a second panel normal to said first panel and foldably secured thereto opposite the attachment to said upper edge, adapted to telescope over one of said upstanding walls of said chamber when in shipping assembly, and double-thickness end walls connecting said panels and holding same in perpendicular relationship, said end walls each being provided with generally rectangular notches adapted to engage a ledge or shelf when the container is disposed in display assembly.

2. A combined shipping container and display receptacle comprising an article-receiving chamber having a bottom wall and upstanding side and end walls; and an integral cover for said chamber including a first panel,

foldably connected to an upper edge of one of said walls, adapted to span the area outlined by said upstanding walls of said chamber when in shipping assembly, and to lie in flush supporting abutment with one of said upstanding walls of said chamber when in displaying assembly, a second panel normal to said first panel and foldably secured thereto opposite the attachment to said upper edge, adapted to telescope over one of said upstanding walls of said chamber when in shipping assembly, and flaps foldably secured to each end of each of said first and second panels, each of said flaps being provided with a generally rectangular notch, said flaps at the same end being disposed in overlapping relationship with their respective notches in registry to define additional side walls when in shipping assembly, said notches being engageable with a ledge or shelf to hold said container with the said chamber extending outwardly for display of articles contained.

3. A combined shipping container and display receptacle comprising an article-receiving chamber defined by a rear wall of rectangular configuration, a front wall spaced therefrom having a height less than said rear wall, a pair of spaced side walls connecting said front and rear walls, and bottom closure means; and an integral cover member including a top wall, foldably secured to the upper edge of said rear wall, adapted to span the distance between the rear and front wall of said chamber when in shipping assembly, and to lie in flush supporting abutment with the outside surface of said rear wall of said chamber when in displaying assembly, a folded wall, foldably secured to said top wall, adapted to telescope over said front wall of said chamber in shipping assembly and in alignment with the bottom wall of said chamber in displaying assembly, and flaps foldably secured to each end of said top and forward walls, each of said flaps being provided with a generally rectangular notch, said flaps at the same end being constructed and arranged in flush relationship with their respective notches in registry and define side wall panels for said cover member, said notches being engageable with a ledge or shelf, and thereby hold said container with the said chamber extending outwardly for display of articles contained.

4. A combined shipping container and display receptacle comprising an article-receiving chamber defined by a rear wall of rectangular configuration of a height conforming to the article thereby contained therein, a front wall spaced therefrom having a height less than said rear wall, a pair of spaced side walls connecting said front and rear walls, the upper edge of said side walls slanting downwardly in spanning the distance between said rear wall and the front wall, and bottom closure means; and an integral cover member including a top wall, foldably secured to the upper edge of said rear wall, adapted to span the distance between the rear and front wall of said chamber when in shipping assembly, and to lie in flush supporting abutment with the outside surface of said rear wall of said chamber when in displaying assembly, a forward wall foldably secured to said top wall adapted to telescope over said front wall of said chamber in shipping assembly and in alignment with the bottom wall in displaying assembly, and flaps foldably secured to each end of said top and forward walls, each of said flaps being provided with a generally rectangular notch, said flaps at the same end being adapted to overlap with their respective notches in registry and define side wall panels for said cover member, said notches being engageable with a ledge and thereby hold said container with the said chamber extending outwardly for display of articles contained.

5. A combined shipping container and display receptacle comprising an article-receiving chamber having a bottom wall and upstanding side and end walls; and an integral cover including a first panel, foldably connected to an upper edge of one of said upstanding walls, adapted to span the area outlined by said upstanding walls of said chamber when in shipping assembly, and to lie in flush supporting abutment with one of said upstanding walls of said chamber when in displaying assembly, a second panel, foldably secured to and normal to said first panel opposite the attachment to said upper edge adapted to telescope over one of said upstanding walls of said chamber when in shipping assembly, and double-thickness end walls connecting said panels and holding same in perpendicular relationship, said end walls being provided with elongated rectangular notches in parallel spaced relationship with said second panel and being adapted to engage a ledge or shelf when the container is disposed in display assembly.

6. A one-piece blank of relatively stiff, sheet-like material being formable into a one-piece combined shipping container and display receptacle, said blank comprising a vertical series of four panels separated by spaced score lines; a pair of end flaps extending laterally from each end of the uppermost panel of said series, each being provided with an upwardly opening notch; a second pair of end flaps extending laterally from each end of the panel just below said uppermost panel, each being provided with an outwardly opening notch, said notches being so positioned that they will lie in registry when their associated panels are perpendicularly disposed and the flaps at each end are folded into flush relationship with each other; a side panel extending laterally from the next to lowermost panel of said series; a strip panel extending laterally from the said side panel; a second side panel extending laterally from said strip panel, and being substantially identical to said first side panel but of opposite hand; and closure flaps depending from said side panels and strip panel adapted to form with said lowermost panel of said series, a closure wall spanning the area defined when said side panels, strip panel, and second lowermost panel of said series are disposed end-to-end.

7. A one-piece blank of relatively stiff, sheet-like material being formable into a combined shipping container and display receptacle, said blank comprising a vertical series of four generally rectangular panels separated by spaced score lines; a pair of foldable end flaps extending laterally from each end of the uppermost panel of said series, each being provided with an upwardly opening notch; a second pair of independently foldable end flaps extending laterally from each end of the panel just below said uppermost panel, each being provided with an outwardly opening notch, said notches in adjacent flaps being so positioned that they will lie in registry when their associated panels are perpendicularly disposed and the flaps are folded into overlapping relationship; a side panel extending laterally from the next to lowermost panel of said series and separated therefrom by a score line, the upper edge of said side panel sloping downwardly to span a distance substantially equal to the distance between the score lines enclosing the panel to which are attached the flaps having outwardly opening notches; a strip panel extending laterally from the said side panel and separated therefrom by a score line, said strip panel having a length no greater than the length of the panels in said series, a second side panel extending laterally from said strip panel and separated therefrom by a score line, said second side panel being substantially identical to said first side panel but of opposite hand; and closure flaps depending from said side panels and strip panel adapted to form with said lowermost panel of said series, a closure wall spanning the area defined when said side panels, strip panel, and second lowermost panel of said series are arranged end-to-end.

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