United States Patent

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[54] **DISPLAY CARTON**
5 Claims, 8 Drawing Figs.

[52] **U.S. Cl.** **206/45.14,** 229/22, 248/152
[51] **Int. Cl.** **B65d 5/50**
[50] **Field of Search** ..... 229/16 D, 22; 206/44 R, 45.14, 45.31, 45.33; 248/152; 40/126

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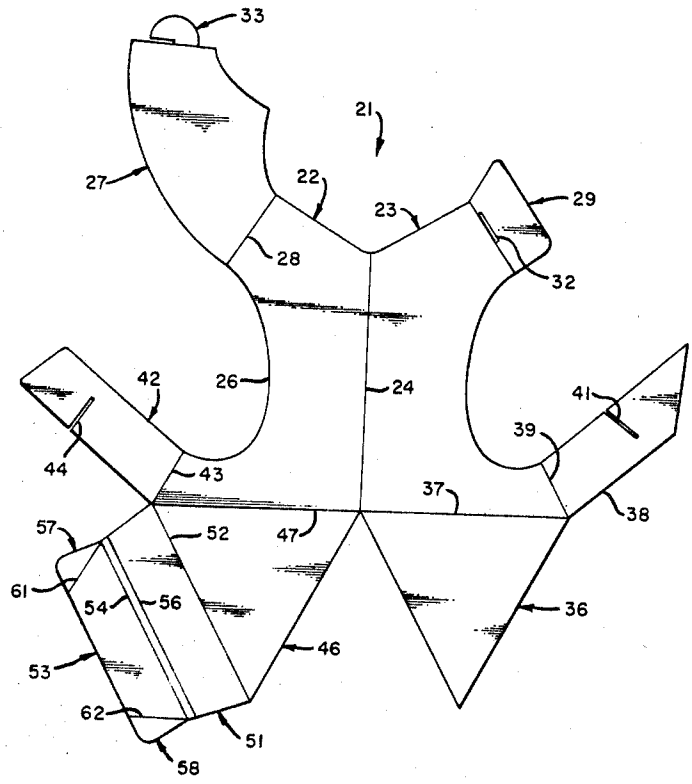
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ABSTRACT: A carton folded together and interlocked from a flat sheet of cardboard or the like and including openings for the display of a sales item disposed therein. A particularly structured folded floor and front wall provides exceptional carton strength and permanency of carton contour.



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SHEET 1 OF 5

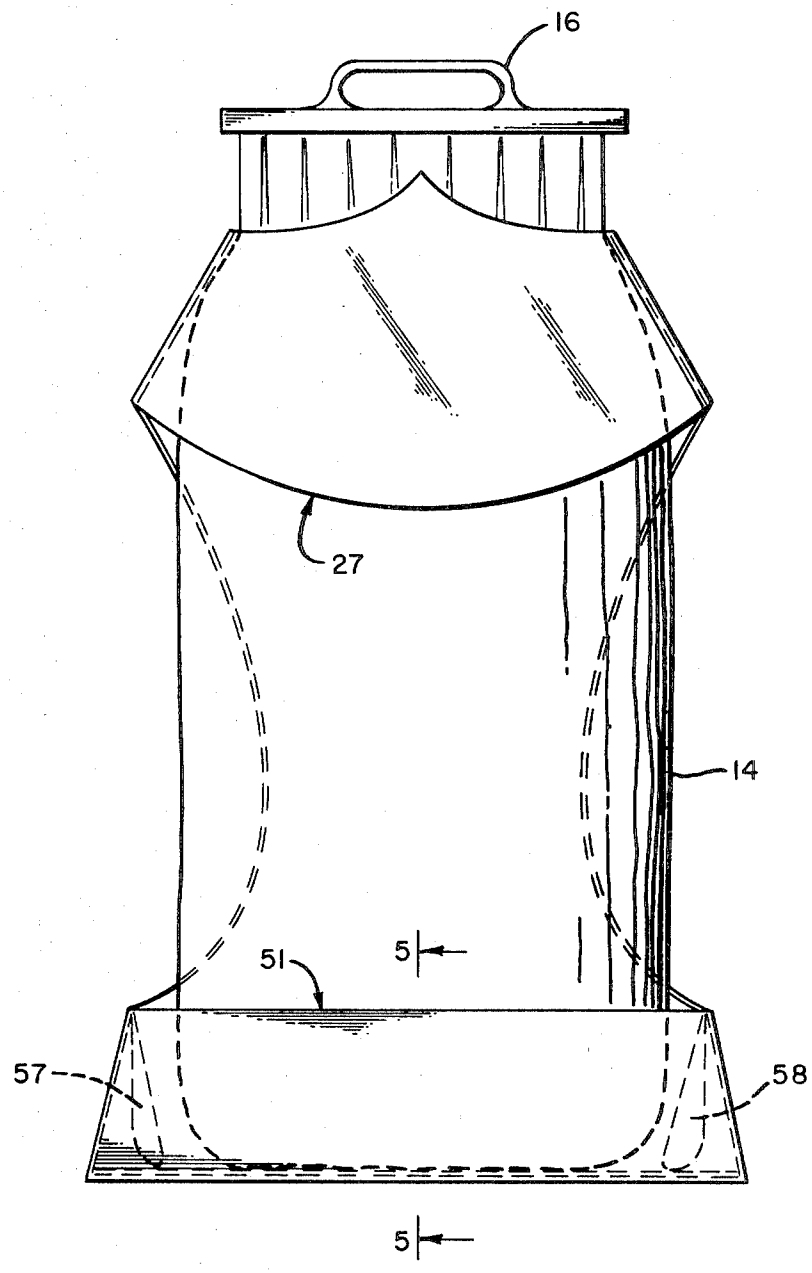


FIG-1

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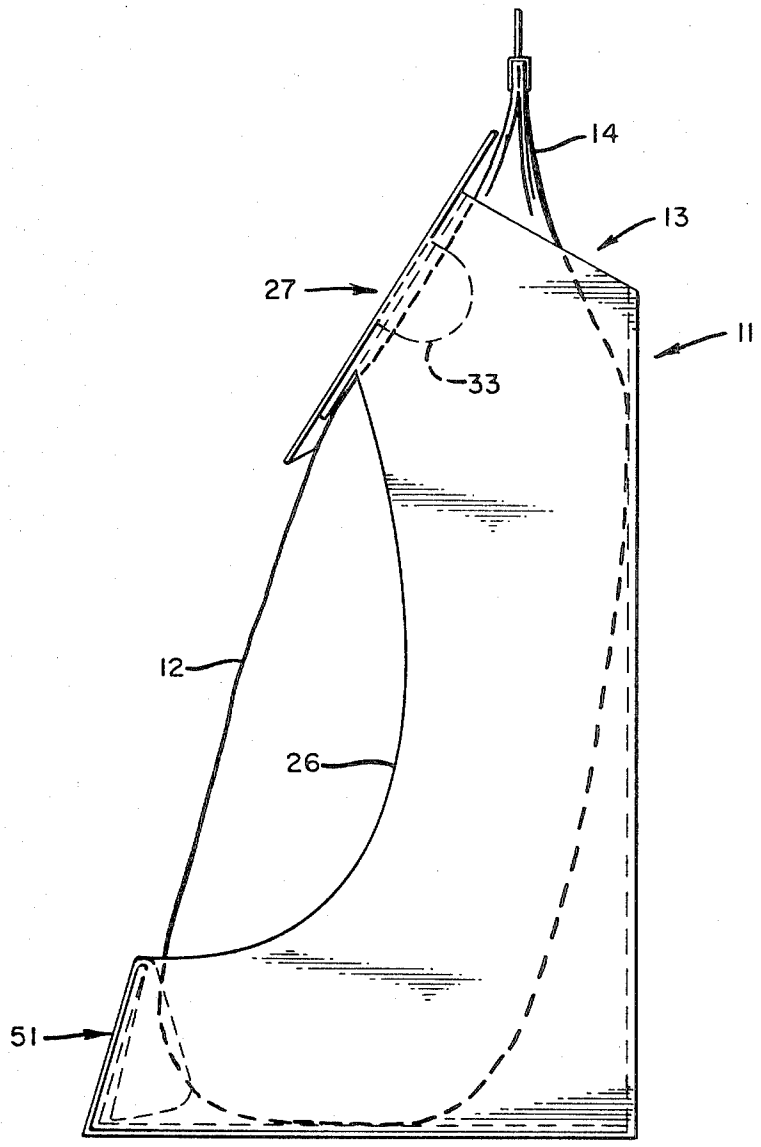


FIG-2

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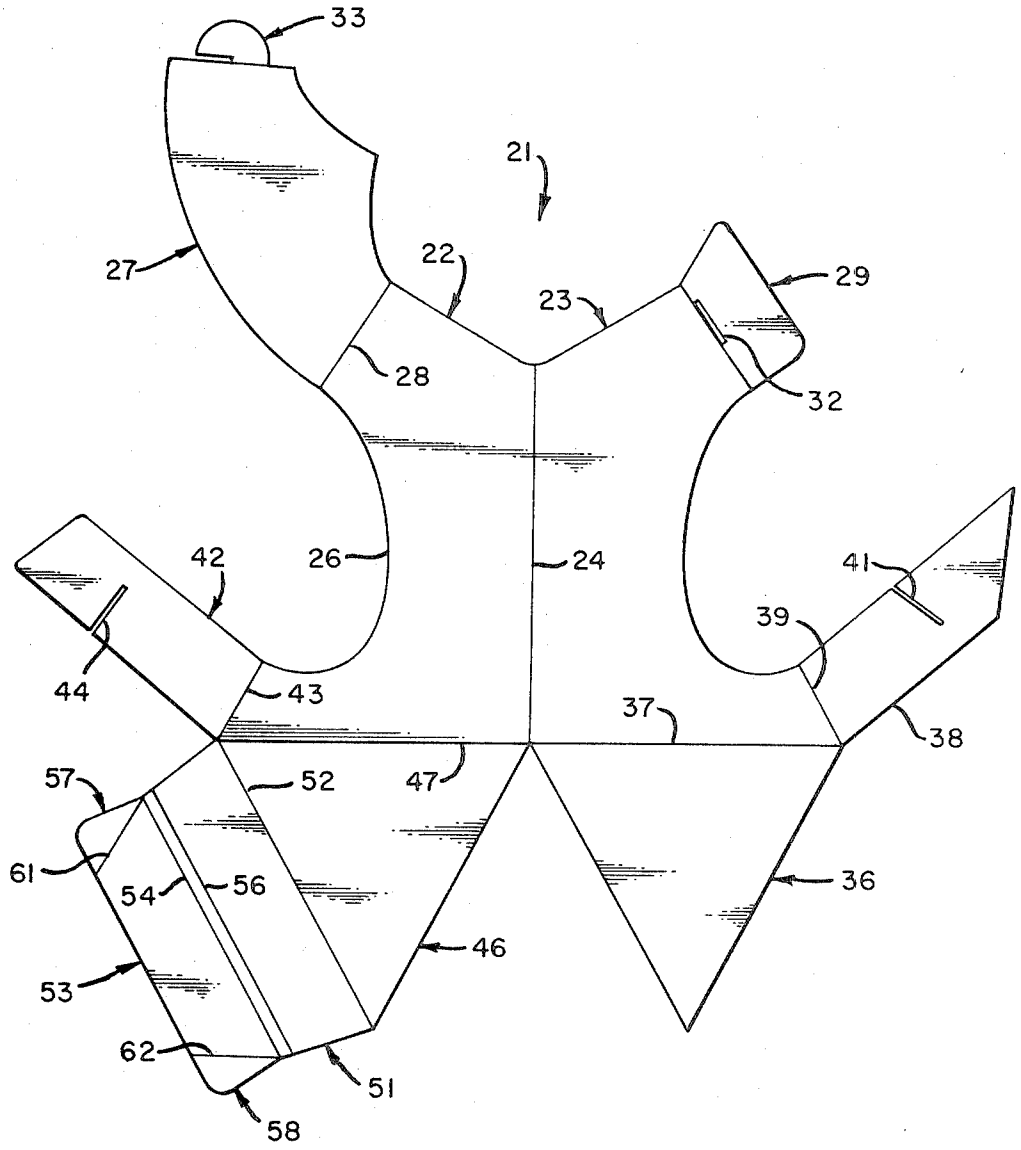


FIG-3

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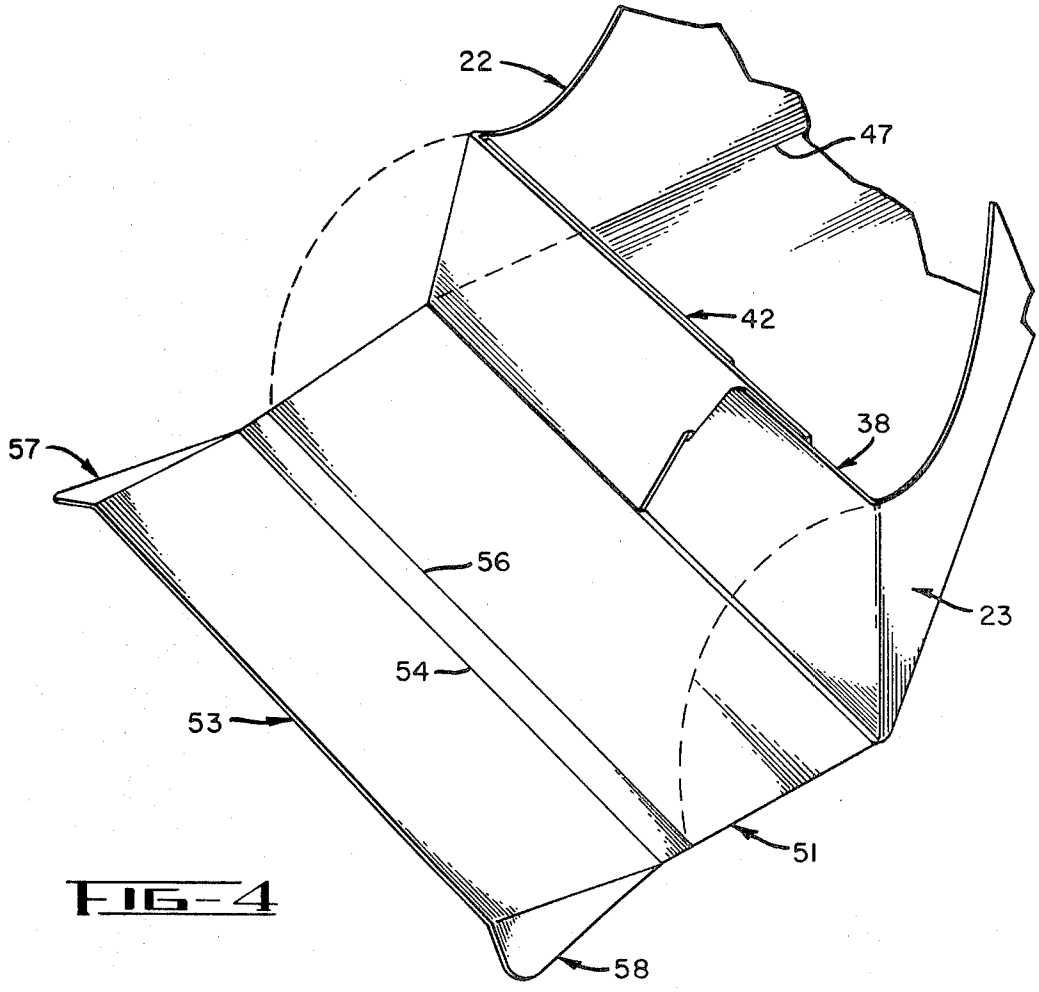


FIG-4

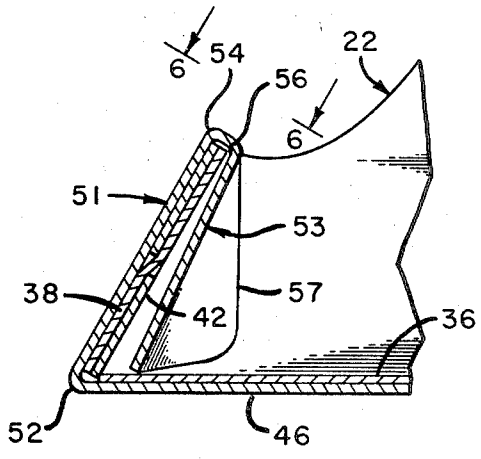


FIG 5

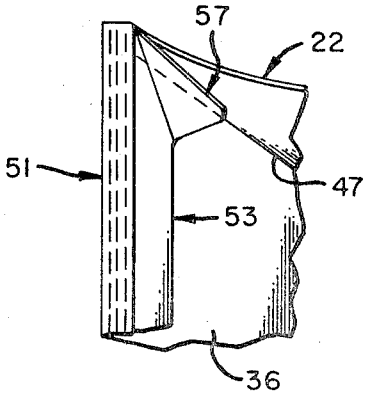


FIG-6

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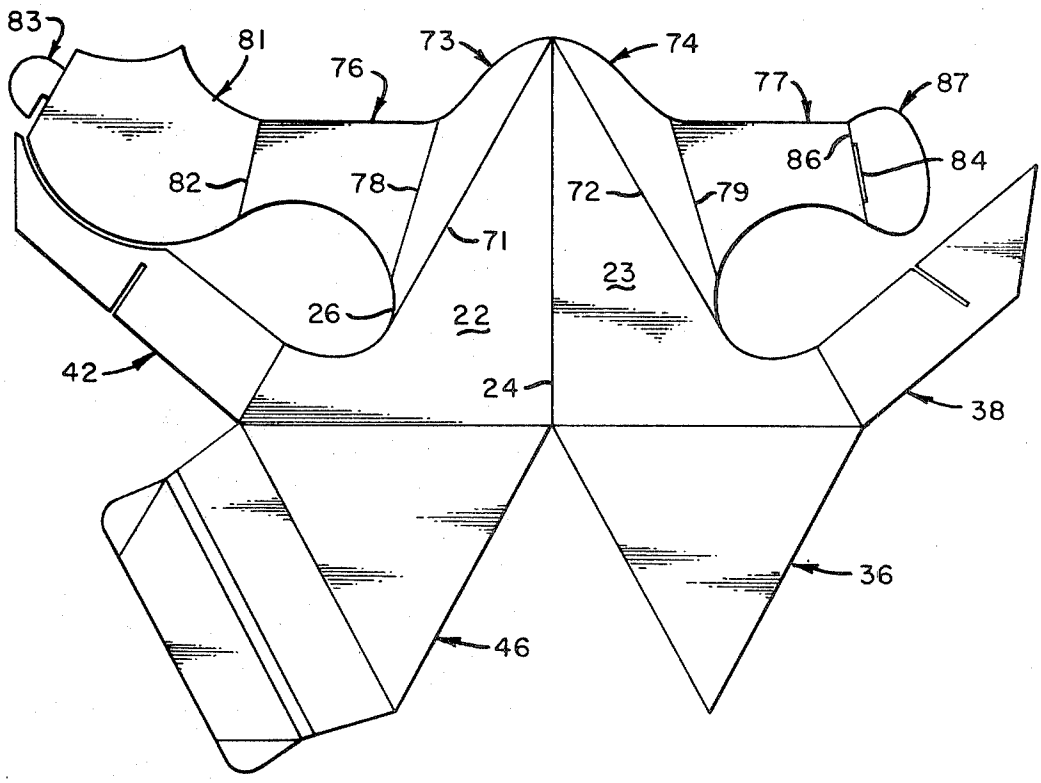


FIG-7

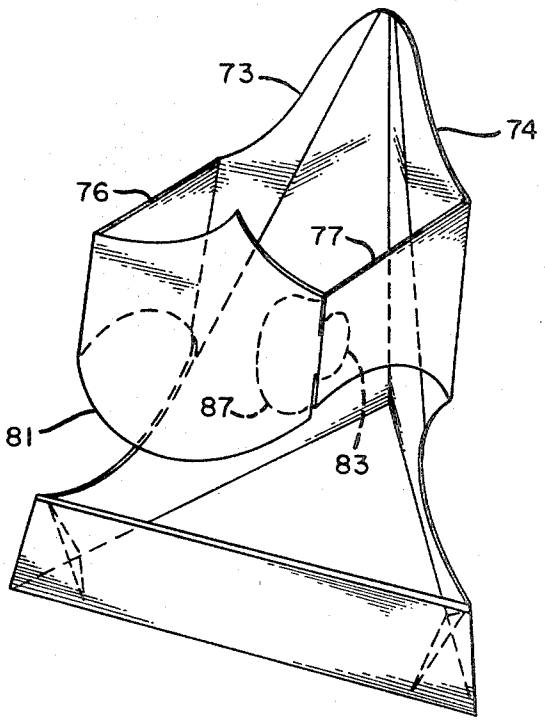


FIG-8

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DISPLAY CARTON

BACKGROUND OF INVENTION

There have been developed a wide variety of cartons and containers folded from one or more sheets of semirigid material such as cardboard. Such cartons may be provided for the purpose of containing sales item for example and in addition may be contoured to display such items. The present invention falls in this general category of display cartons.

Conventionally display and container cartons originate as a flat sheet of semirigid material that is folded with at least certain overlapping portions then being joined together as by glue or the like. It is also known to fold and interlock portions of a carton or the like in such a manner that same will retain its folded condition without the use of additional fastening means. The present invention falls in this latter category of folding interlocking display cartons. The invention provides a container or carton adapted to engage the sales item for retention of same but at the same time providing complete visual access thereto so that printed matter for example appearing upon the sales item may be readily viewed by prospective purchasers.

SUMMARY OF INVENTION

The present invention is comprised as a single sheet of semirigid material such as, for example, corrugated cardboard. A V-shaped back upright has V-shaped floor members extending from each back side thereof for location one upon the other in folded condition of the carton. A top crosspiece extends between upper outer edges of the V-shaped back to interlock with a tab for completing the top front of the carton. Cooperating crosspieces extend across the front of the carton at the bottom thereof and interlock with each other at cooperating slots and a front wall portion extends from one of the above noted V-shaped floor members with a fold portion adapted to extend about and behind the lower cooperating crossmembers and having side tabs adapted to be bent upwardly during such fold operation in order to firmly lock together the carton at the bottom thereof.

The carton of the present invention is particularly adapted to contain a bag or the like which may, for example, be of substantial size and which may be provided with a handle or carrying means at the top thereof. The display carton of the present invention is open at the top and front so that a bag placed in the carton upon the floor may be retained therein by interlocking of the top crossmember and front wall. In this condition the bag or the like within the carton is retained in full view of prospective purchasers and the entire display carton and contents may be readily lifted and moved about either by grasping the carton beneath same or by grasping the handle or the like provided upon the bag disposed in the carton. Additionally the present invention is particularly adapted to carry advertising material particularly upon the upper and lower front pieces of the carton and also upon the outer surface of the V-shaped back wall. Not only does the present invention provide a container for a sales item but furthermore provides an interesting display carton therefor. The configuration of the display carton hereof is particularly arranged to provide a pleasing and eye catching unit having somewhat of a sculptured effect. This is enhanced by concave front edges of the V-shaped backwall and curved edges of the upper crosspiece or portion.

DESCRIPTION OF FIGURES

The present invention is illustrated as to particular preferred embodiments thereof in the accompanying drawings wherein:

FIG. 1 is a front elevational view of a display carton in accordance with the present invention and containing the sales item in the form of a bag;

FIG. 2 is a side elevational view of a display carton of FIG. 1 also containing the sales item as shown in FIG. 1;

FIG. 3 is a plan view of a sheet of semirigid material from which the display carton of FIGS. 1 and 2 is formed and showing the separate portions thereof;

FIG. 4 is a partial perspective view of the lower portion of the display carton partially folded together and indicating the additional fold of a lower front member;

FIG. 5 is a partial sectional view taken in the plane 5–5 of FIG. 1 through the lower front portion of the display carton and illustrating the folded conditions of portions forming same;

FIG. 6 is a partial sectional view taken in the plane 6–6 of FIG. 5;

FIG. 7 is a plan view of a cutout sheet with fold lines indicated thereon from which an alternative embodiment of the present invention may be formed; and

FIG. 8 is a front perspective view of an alternative embodiment of the present invention as may be formed from the sheet of FIG. 7.

DESCRIPTION OF PREFERRED EMBODIMENTS

Considering now a preferred embodiment of the present invention and referring to FIGS. 1—3 there will be seen to be illustrated an upstanding display carton 11 having an open front portion 12 and open top portion 13 adapted to contain a display or sales item such as, for example, a bag 14. This bag 14 may of course contain any of a wide variety of different materials for sale and display and may additionally be provided with a top handle 16 as is conventional for various types of bags such as fertilizer bags.

Referring now specifically to FIG. 3 there will be seen to be shown therein a flat sheet 21 cut about the periphery to define a desired configuration from which the display carton of the present invention may be folded. This sheet 21 is formed of a lightweight semirigid material such as for example corrugated cardboard or the like. Centrally of the sheet there are provided backwall portions 22 and 23 having a vertical fold line 24 therebetween. As shown in FIG. 3 each of the backwall portions 21 and 22 have the outer sides thereof curved inwardly as indicated at 26 for purposes as described more fully below. The top surfaces of the backwalls 22 and 23 may be inclined downwardly toward the center fold lines as indicated.

At the upper outer edge of the back wall portion 22 there is formed a projection defining a top crosspiece 27 which in the illustration of FIG. 3 extends upwardly at an angle to the wall portion 22 with a fold line 28 separating this projection and wall portion. At the upper outer edge of the other wall portion 23 there is provided a short tab extension 29. A fold line 31 is disposed between the tab 29 and wall portion 23 and a slot 32 is formed along a portion of this fold line 31. At the outer edge of the top front portion 27 there is formed a locking tab 33 dimensioned to fit into the above noted slot 32 in folded condition of the upper front wall portion 27 and tab 29 as further described below. Further to the upper portion of the display carton it is noted that the undersurface of the upper front wall portion 27 is curved convexly and the upper surface of this portion 27 is also curved as for example by a double curve terminating in a central peak for esthetic purposes.

In extension from the lower edge of the backwall portion 23 there is provided a triangular floor portion 36 separated from the bottom portion of the wall 23 by a fold line 37. The triangular floor portion 36 may have the configuration of an isosceles triangle, as illustrated. Also connected to the wall portion 23 at the bottom of the side thereof is a front locking tab 38 extending angularly upward from the bottom side of the wall portion and separated therefrom by an inclined fold line 39. This locking tab has a transverse slot 41 extending downwardly therein from the upper surface of same.

The other backwall portion 22 also has a locking tab 42 extending outwardly from the lower side thereof at an upward inclination with a fold line 43 disposed between the locking tab and wall portion. This second locking tab 42 has a slot 44 formed therein extending upwardly from the lower surface thereof. There is also provided an extension from the bottom

of the wall portion 22 a second or lower triangular floor portion 46 which may also have the shape of an isosceles triangle and which has the same size as the previously mentioned upper floor portion 36. A fold line 47 which in fact is an extension of the above noted fold line 37 extends between the wall portion 22 and the lower floor portion 46.

Along the outer side of the triangular floor portion 46 there is provided a generally rectangular lower front wall portion 51 with a fold line 52 between such front wall 51 and floor portion 46. The sides of this generally rectangular front wall portion 51 are slightly inclined inwardly thereof from the fold line, again for purposes described in more detail below in connection with the folding together of this flat sheet 21 to form the display carton of the present invention. The sheet 21 extends additionally outward from the lower wall portion 51 to define a front fold wall 53 with a pair of parallel fold lines 54 and 56 between same and the front wall 51. This front fold wall 53 has the sides thereof inclined outwardly from the fold line 54 to thus define corner tabs 57 and 58. Fold lines 61 and 62 inclined inwardly of the front fold wall 53 from the fold line 54 thereof extend between the front wall and the tabs 57 and 58 respectively.

It is to be appreciated that the sheet 21 is formed as a single integral unit incorporating each of the portions defined above. It is intended that this sheet 21 shall be cut and marked as indicated above to define the recited portions and from which the display carton of the present invention may readily be folded. By the provision of a flat sheet from which the carton is formed, it will be understood that the cost and complexity of manufacture is minimized and also the ease of shipping of such cartons in unfolded condition is facilitated.

Considering now formation of the carton from the sheet 21 there may be first formed folds along the fold lines 37 and 47 at the bottom of the wall portions to thus extend the floor portions 36 and 46 at right angles forwardly of the wall portions. A fold is then made along the centerline 24 between the wall portions to incline these portions at an angle of about 60° to each other while at the same time sliding the upper floor portion 36 over the lower floor portion 46. As noted above both of the floor portions may have the configuration of an isosceles triangle so that they fit together one above the other in the folded condition noted above. The lower front locking tabs 38 and 42 are then folded at the fold lines 39 and 43, respectively, to extend across the bottom opening between the wall portions 22 and 23 atop the floor and these tabs are interlocked by engagement of the tab slots 41 and 42 in the manner illustrated in FIG. 4. The lower portion of the display carton, as shown in FIG. 4, is thus locked together at the front thereof and the front wall portion is then folded upwardly as indicated by the dotted lines in FIG. 4 to lie flat against the front of the interlocked tabs 38 and 42. The sheet is then folded at the fold line 56 to extend the front locking wall 53 inwardly of the carton and is then folded further about the fold line 54 to extend the front locking wall 53 downwardly behind the front locking tabs 38 and 42 as shown in FIG. 5. The separation of the fold lines 54 and 56 is provided to encompass the thickness of the joined locking tabs 38 and 42 when the front locking wall is folded entirely within the carton, again as illustrated in FIG. 5. During this latter fold operation the locking tabs 57 and 58 are folded back from the front locking wall 53 as indicated in FIG. 4 to thus bear tightly against the front lower portions of the sidewalls 22 and 23 as indicated in FIGS. 5 and 6. These locking tabs then are wedged into the acute corners formed at the lower front portion of the display carton and consequently firmly lock together the entire structure at this point. This locking action is highly important for it will be seen that the folded bottom portion of the display carton is comprised as a double floor which is in fact firmly joined to the upright portions of the carton by this locking action which also firmly anchors together the front lower portion of the carton. The angled relationship of sidewalls 22 and 23 and the lower front walls of the carton provide for a very firm gripping locking action by the folded tabs 57 and 58 at this location. The interlock tabs 38 and 42 are firmly held together to prevent any possible vertical slippage by the front wall 51 and front locking wall 53 disposed on opposite vertical sides of these locking tabs and furthermore the lower front portion of the carton is presented as an unbroken front wall 51 hiding the locking members of the carton.

The top of the carton is locked together by folding the tab 29 inwardly and then folding the tab 27 inwardly over the tab 29 so that the locking projection extends beyond the corner or fold line 31 of the tab 29. This locking projection 33 is then folded over toward the back of the carton and the upper front wall 27 is moved slightly upwardly so that the locking projection 33 may be slipped into the slot 32 and then pulled downwardly to firmly lock together the top of the carton.

Following the described folding operations the carton is completed. As a practical matter the last-mentioned folding operation wherein the upper portion of the carton is locked together may be deferred until a display item such as a bag 14 is placed in the carton upon the floor thereof. Then as the top portion is folded and locked together it firmly engages the bag 14 to hold it within the carton as illustrated in FIGS. 1 and 2. It is to be appreciated that the display carton of the present invention may be dimensioned to contain any desired size of display item. It is, however, intended that the carton shall be so dimensioned that closing or locking of the top portion will so reduce the size of the top that the bag or the like disposed therein is engaged at the top of the bag to prevent it from slipping out of the carton. This engagement is illustrated in FIGS. 1 and 2 wherein it will be seen that the carton tapers inwardly at the very top thereof adjacent the top opening 13 so as to engage the bag about the decreasing circumference thereof adjacent to handle 16. In engaged position the front of the bag 14 is fully displayed by the carton. Not only is the front of the bag displayed but also the front sides thereof by virtue of the curved configuration 26 of the vertical walls 22 and 23.

The display carton of the present invention in folded condition about a display item such as the bag 14 presents somewhat of a sculptured effect resembling for example a surrealistic statue or the like. This is generally indicated in FIGS. 1 and 2 of the drawing but in fact the effect is much more pronounced than that possible to show by planar drawings. Obviously the configuration of the top cross or front wall 27 may be varied and also the curvature of various edges such as the curved sidewall edges 26 may also be changed at will to present particular desired effects. There is however, provided by this invention a highly advantageous carton for containing display items. The interlocking measure of the lower portion prevents any slippage or dislocation of the engaged portions and the readily closed upper portion of the carton is advantageous in engaging the carton about the display item disposed therein. The display carton of the present invention may be employed solely for display purpose or alternatively may be affixed about sales items to be displayed and sold and distributed with such items at the time of sale. Of particular importance is the general nature of this invention which provides firm engagement with and about a display item while at the same time fully displaying same in an attractive container. It is to be appreciated that bagged goods do not normally present a particularly pleasing appearance for display at least individually inasmuch as the bag itself is normally deformable. The present invention, however, provides for constraining a bag of goods to a sufficient extent that it may be pleasingly displayed in such a manner that written material on the face thereof is maintained in unwrinkled condition for easy reading. Additionally the otherwise somewhat crumpled outline of a bag of powder, pellets or the like is obscured from view by the display carton hereof so that a bag of goods may be advantageously displayed for viewing by prospective purchasers.

As noted above, variations in physical configurations of the present invention are possible and in this respect reference is made to FIGS. 7 and 8 illustrating certain alternatives in configuration of the invention. FIG. 7 illustrates a flat sheet of semirigid material such as the sheet 21 of FIG. 3 from which

the embodiment of the invention illustrated in FIG. 8 may be formed by folding and interlocking. The bottom portion of the display carton of FIGS. 7 and 8 is the same as that described above. Consequently further description thereof is not included herein. With regard to the upper portion of the carton however, it is noted that backwalls 22 and 23 are defined along the upper sides thereof by inwardly inclined fold lines 71 and 72 respectively. These fold lines extend upwardly from the inner portion of the curved side edges 26 of the sidewalls to the center fold line 24 therebetween. Above and outwardly of each of the fold lines 71 and 72 there are formed wall portions 73 and 74 respectively with the upper surface of each being curved downwardly from the apex of the rear walls 22 and 23. Top sidewall portions 76 and 77 extend laterally outward from the wall portions 73 and 74 respectively with fold lines 78 and 79 between the adjacent wall portions and sidewall portions. At the outer end of the left sidewall portion 76 as viewed in FIG. 7 there is provided a front wall portion 81 with a fold line 82 between same and the sidewall portion 76. At the outer end of this front wall portion 81 there is provided a locking tab 83 which may have a generally hemispherical outer configuration with a laterally slotted base, as illustrated, and which is adapted to cooperate with a slot 84 along a fold line 86 between the other sidewall portion 77 and a projection 87 therefrom.

In assembly, the embodiment of FIGS. 7 and 8 is assembled at the bottom thereof in the same manner as described above in connection with the embodiment of FIGS. 1—3. With regard to the top portion of the display carton of FIGS. 7 and 8 it is noted that the upper sidewall portions 73 and 74 are folded along the fold lines 71 and 72 respectively and subsequent thereto the sidewall portions 76 and 77 are folded to extend perpendicularly forward toward the front edge of the floor. The top front portion 81 is then folded inwardly of the carton to extend perpendicularly across the front of the carton and with the tab or projection 87 folded similarly across the front of the carton, the locking tab 83 is inserted through the slot 84 and locked therein.

Thus there is achieved the final display carton configuration of FIG. 8 and it is to be appreciated that the extent of the sidewall portions 76 and 77 may be varied in accordance with the type and size of the display item disposed within the display carton. In this embodiment of the present invention the upper portion or enclosure of display carton is not necessarily designed to grip a display item disposed within the carton. It is of course possible to so dimension the upper portion of this embodiment of the present invention that it will fit about a display item but at least some display items do not admit of this type of configuration. It will be seen that the embodiment of the present invention as illustrated in FIG. 8 presents somewhat the same appearance as that illustrated in FIGS. 1 and 2 with the difference that the top of the display carton is enlarged by the provision of upper said wall portions 73 and 74 and perpendicular sidewalls 76 and 77. The outline of the top front wall portion 81 may be made the same as or similar to the front proportion 27 of the above described embodiment or alternatively may be otherwise configured. Again it is noted that the top portion of the display carton of FIG. 8 may be interlocked subsequent to the disposition of a display item in the carton or alternatively, depending upon the type of display item, may be assembled prior to insertion of a display item in the carton.

Although the present invention has been described with respect to particular preferred embodiments thereof it is not intended to limit the invention to the details of illustration or terminology of description. The invention is defined in the following claims.

I claim:

1. A display carton formed of a single sheet of lightweight material having a substantial rigidity comprising:
- a pair of vertical backwalls inclined with respect to each other,
- a pair of like floor portions extending one from the bottom of each backwall and folded upwardly to lie one atop the other,
- an interlocking tab extending laterally from the lower side of each backwall and folded toward each other across the lower front of the carton and interlocked by cooperating slots in the tabs,
- a projection extending from the front edge of the bottom floor portion folded up, over and down behind said interlocking tabs with side tabs on the portion extending down behind the interlocking tabs bent upwardly and bearing on the rear walls, and
- at least one top crossmember extending across the upper front of the display carton from one backwall into engagement with the other backwall.

2. The display carton of claim 1 further defined by said floor portions having the shape of isosceles triangles.

3. The display carton of claim 1 further defined by the projection extending from the bottom floor portion including a front wall contiguous with the floor portion and folded upwardly against the front of said interlocking tabs and a fold wall folded downwardly behind said interlocking tabs, said side tabs extending laterally from the sides of said fold wall and bent inwardly by engagement with the backwalls to firmly lock the lower portion of the carton together.

4. The display carton of claim 1 further defined by the front edges of said backwalls having a concave configuration.

5. The display carton of claim 1 further defined by a first of said top crossmembers extending across the front of said carton from a first backwall to the other backwall with a locking tab at the end of the member and a second of said top crossmembers extending from the other backwall a short distance behind the first member with a tab slot at the edge of the other backwall accommodating the locking tab of the first top crossmember.