Jan. 15, 1963 M. W. KUCHENBECKER 3,073,503

CONTAINER

Filed Nov. 16, 1959 3 Sheets-Sheet 1

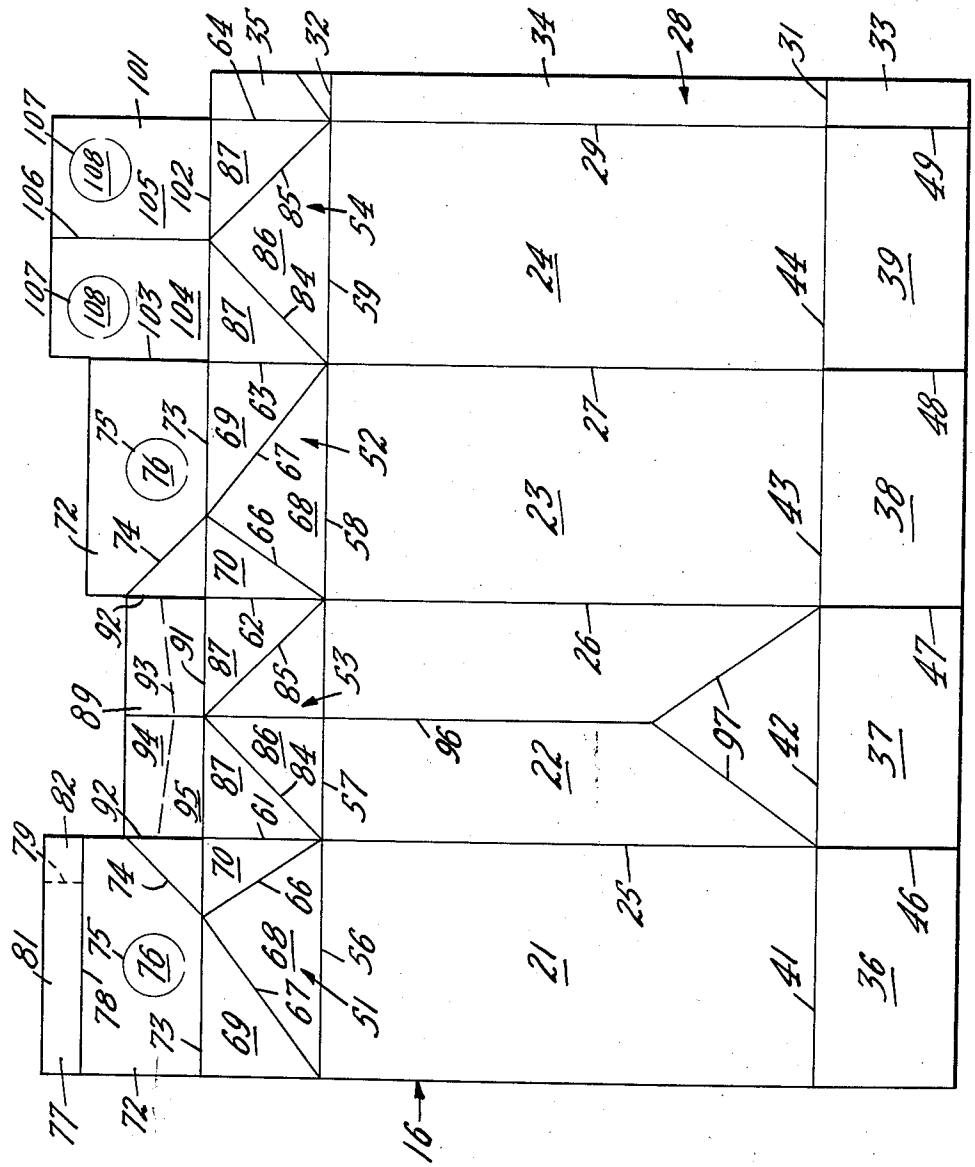


Fig. 1

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Fig. 2

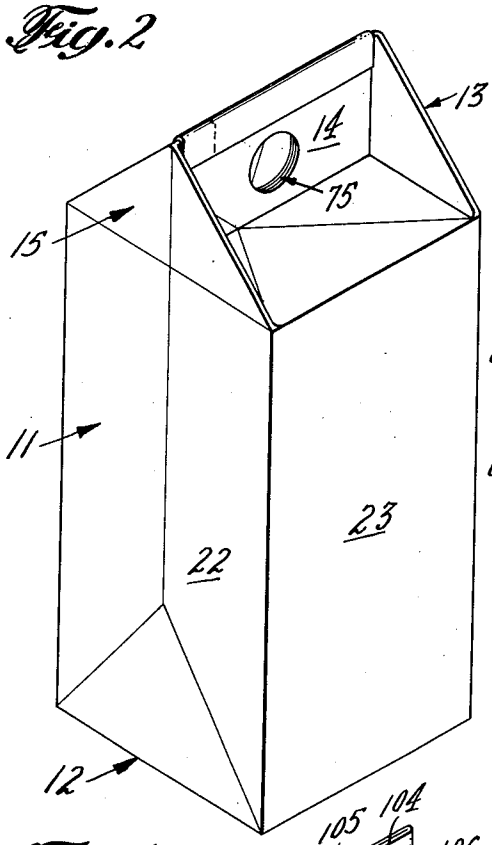


Fig. 3

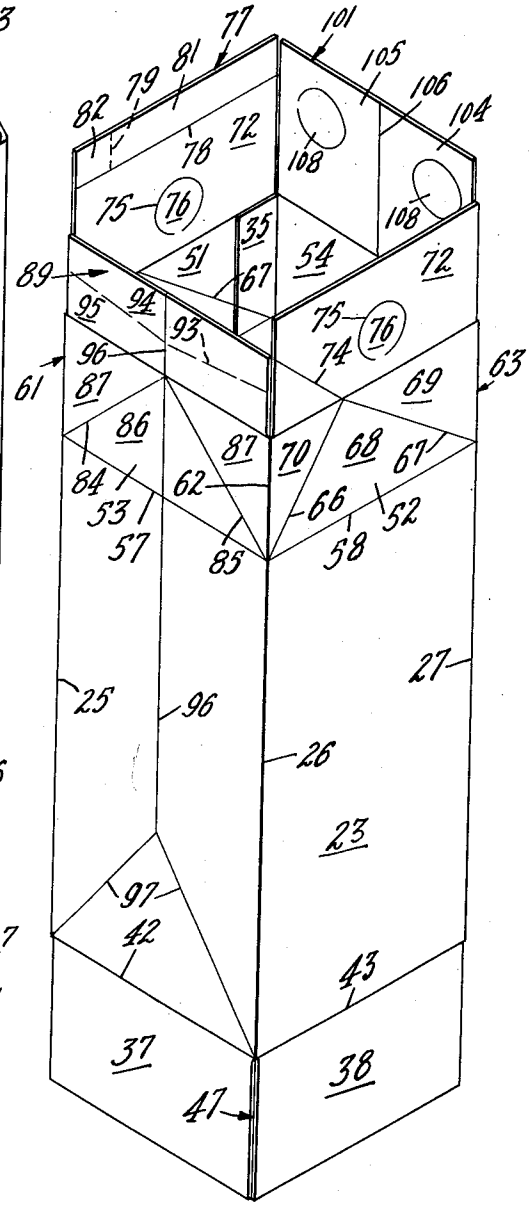
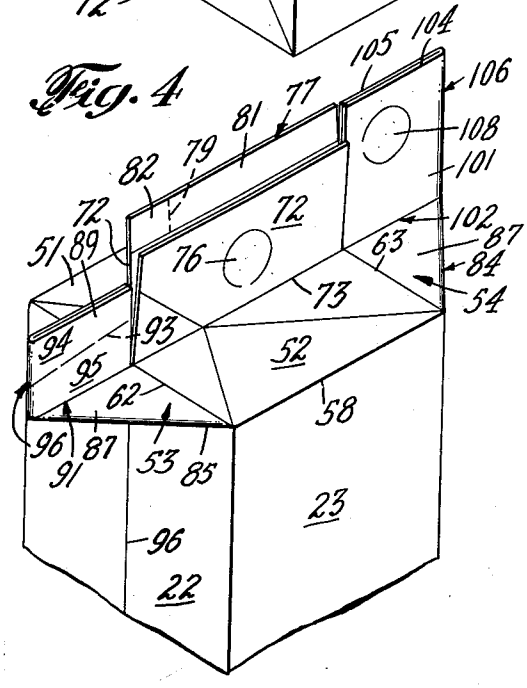


Fig. 4



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Fig. 5

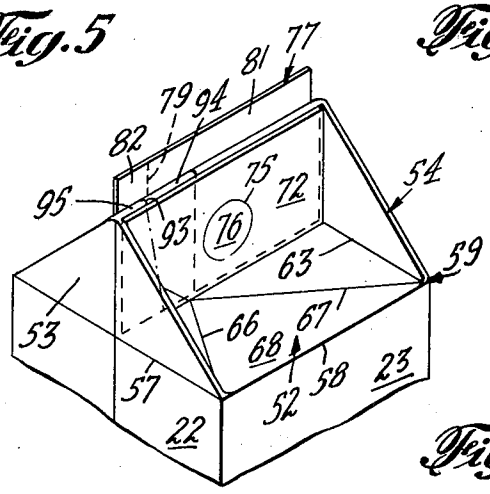


Fig. 8

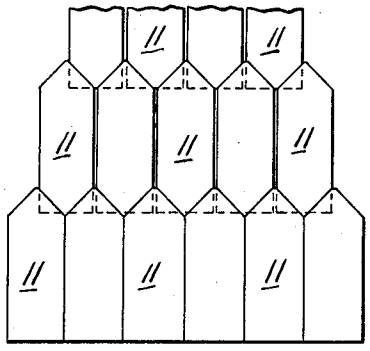


Fig. 6

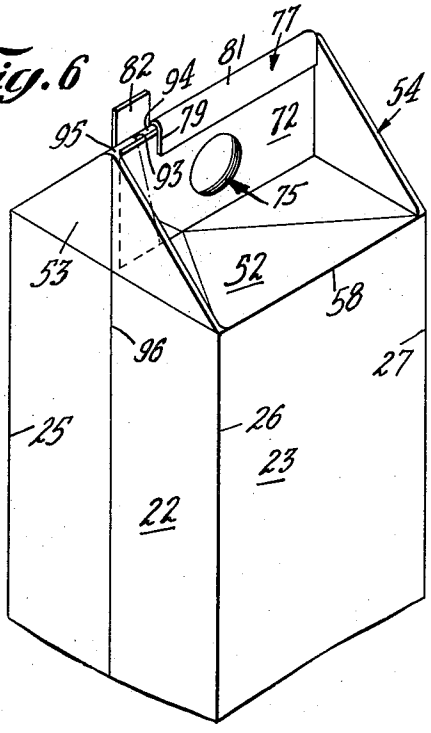
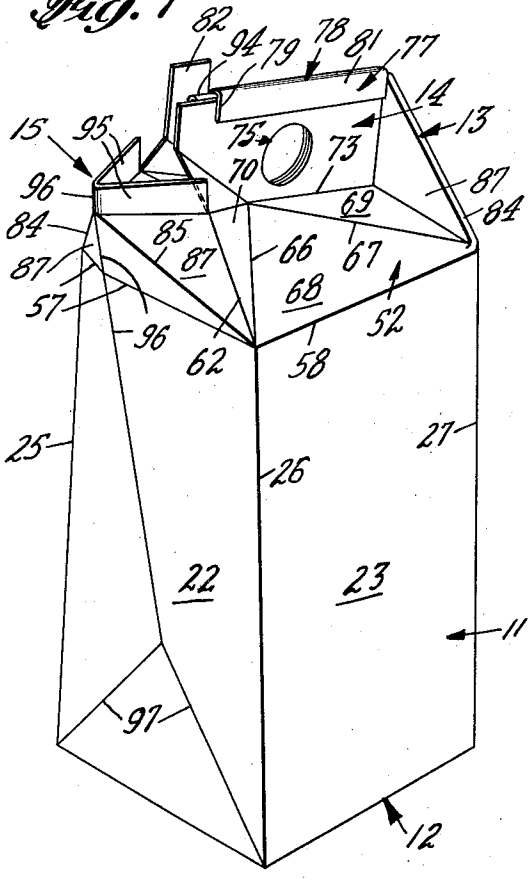


Fig. 7



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CONTAINER

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Filed Nov. 16, 1959, Ser. No. 853,366
12 Claims. (Cl. 229—17)

The present invention relates to a self-sustaining carton or container and a unitary blank therefor, for the packaging and dispensing therefrom of flowable products such as liquids, granulated substances and the like and has particular reference to a top end closure which includes a conveniently available dispensing means and a handle for carrying the container.

An object of the invention is to provide a top end closure for a container made from a unitary blank of paperboard or the like material wherein the closure includes a handle and a dispensing means which can be quickly and easily opened to dispense the container contents and which provides a convenient reclosure.

Another object is to provide a top end closure of the handle type which permits of the stacking of containers in vertical relation.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

FIG. 1 is a plan view of a unitary blank from which a container embodying the instant invention may be made;

FIG. 2 is a perspective view of a sealed container made from the blank shown in FIG. 1;

FIG. 3 is a perspective view of a partially formed container, the view showing how the blank is folded to form the container body;

FIGS. 4 and 5 are perspective views of the upper end of the container, the views showing how the top closure is formed;

FIG. 6 is a perspective view of the upper end of the container showing how the sealed closure is opened;

FIG. 7 is a perspective view of the fully opened container with its dispensing device in dispensing position; and

FIG. 8 is a schematic view shown at reduced scale and illustrating how the containers can be stacked.

As a preferred and exemplary embodiment of the invention, the drawings disclose a substantially rectangular container comprising a body **11** (FIG. 2), a bottom **12** and a top end closure **13** which includes a carrying handle **14** and a dispensing device **15** (see also FIG. 7) made from a single or unitary paperboard blank **16** (FIG. 1) of generally rectangular configuration.

The blank **16** (FIG. 1) is suitably cut and scored or creased to divide it into a number of walls, panels and tab portions. Four main side walls **21, 22, 23, 24** are respectively separated from each other and hingedly connected together along crease lines **25, 26, 27**. A glue flap **28** is hingedly connected along one side edge of wall **24** by a crease line **29**. The glue flap **28** is divided by crease lines **31, 32** into glue flap portions **33, 34, 35**.

The bottom **12** of the container may be formed in any suitable manner. By way of example, the drawing of the blank shows four bottom closure flaps **36, 37, 38, 39** respectively connected to the container side walls **21, 22, 23, 24** along crease lines **41, 42, 43, 44**. The bottom flaps are separated by cut lines **46, 47, 48, 49**.

The top end closure **13** for the container comprises a pair of top panels **51, 52** and a pair of end panels **53, 54**. These panels are hingedly connected to the respective side walls **21, 23, 22, 24** along hinge crease lines **56, 58, 57, 59** respectively.

The top panels **51, 52** are rectangular in configuration and are connected to the end panels **53, 54** and to the glue flap portion **35** along hinge crease lines **61, 62, 63, 64** which are extensions of the body wall crease lines **25, 26, 27, 29** respectively. Each of these top panels **51, 52** are divided by a pair of diagonal crease lines **66, 67**, into three triangular sections **68, 69, 70**. Along their top edges, the top panels **51, 52** are formed with rectangular handle tabs or sections **72** which are hingedly connected to the panels along crease lines **73**. These handle sections **72** are provided with an angularly disposed crease line **74** which extends from the panel crease line **67** as shown in FIG. 1. The handle sections **72** also are formed with a potential finger hole defined by an incomplete circular cut line **75** which holds a plug **76** temporarily attached to the handle section but which may be punched out to provide a finger hole. One of the handle sections **72** is provided with a flap **77** which extends the full width of the section along a crease line **78**. This flap is divided by a perforated line **79** into a fixed or glue flap portion **81** and a loose portion **82**.

The end panels **53, 54** are each divided by diagonal crease lines **84, 85** into a triangular section **86** and a pair of triangular wing sections **87**. The triangular sections **86** are hinged along the crease lines **57, 59** of the respective body side walls **22, 24** while the wing sections **87** are hinged along the diagonal crease lines **84, 85** and the body wall crease lines **61, 62, 63** and the glue flap crease line **64**.

Above these triangular sections, the end panel **53** is provided with a rectangular tab **89** which is hinged to the panel **53** along a crease line **91**. The tab **89** is disposed between the two handle sections **72** and is separated therefrom by cut lines **92**. A longitudinal perforated tear line **93** divides the tab **89** into a fixed tab portion **94** and a loose tab portion **95** for a purpose to be hereinafter explained.

The end panel **53** and its tab **89** constitute elements of the conveniently available pouring spout or dispensing means **15** hereinbefore mentioned. To facilitate formation of this dispensing means in a finished container the blank is provided with a transverse crease line **96** which extends across the tab **89** and the end panel **53** and into the body side wall **22** where it terminates and joins with a pair of diagonal crease lines **97** defining a triangular section having a base crease line **42** as shown in FIG. 1.

The end panel **54** is provided with a projecting tab **101** which is hingedly connected to the panel along a crease line **102** and is separated from the adjacent handle section **72** by a cut line **103**. This tab **101** is transversely divided into two sections **104, 105** by a crease line **106** and each section is formed with a potential finger hole defined by an incomplete circular cut-line **107** which holds a plug **108** temporarily in place. These potential finger holes are located in a predetermined relation to the potential finger holes in the handle sections **72** so as to align with them when the blank **16** is folded along its various crease lines to produce the container shown in FIG. 2.

In order to produce the container shown in FIG. 2 the blank **16** is first folded along the side wall crease lines **25, 26, 27** and glue flap crease line **29** to form the rectangular body **11** as best shown in FIG. 3, the side walls **21, 22, 23, 24** being tied together by the glue flap portion **34** which is bonded by a suitable adhesive to the inner face of the side wall **21** along its free edge. The glue flap portion **35** is also bonded to the top panel **51** along its free edge. The four bottom flaps **36, 37, 38, 39** and the glue flap portion **33** are then folded in the usual manner into overlapping position perpendicular to the side walls, along their respective crease lines **41, 42, 43, 44** and are adhesively se-

cured together to form the bottom **12** of the container. This is a conventional bottom construction.

In this open top end condition, with the body **11** and the bottom **12** fully formed, the resulting container is ready for filling. For liquid products the open end container is usually immersed in or otherwise coated with molten wax or other liquid-proofing substance to render the container leak-proof.

The filled container is closed and sealed by folding the top panels **51, 52** inwardly and the end panels **53, 54** outwardly as shown in FIG. 4. The folding of the top panels **51, 52** inwardly hinges them on their respective crease lines **56, 58** and also bends the handle sections **72** along their crease lines **73**, so that the two handle sections **72** are in an upright juxtaposed relation as shown in FIG. 4.

The outward folding of the end panels **53, 54** hinges them on their respective crease lines **57, 59** and collapses the panels so that the triangular wing sections **87** fold along their diagonal crease lines **84, 85** into place against the back of the triangular section **86**. Simultaneously with this wing folding action, the tab **89** of the end panel **53** hinges along its crease lines **91, 96** to fold the tab back on itself in a double thickness relation and to locate the folded tab in an upright position adjacent one end of the juxtaposed handle sections **72**. In a similar manner the tab **101** on the end panel **54** hinges along its crease lines **102, 106** to fold the tab portions **104, 105** into a contiguous relation and to locate these tab portions in an upright position adjacent the other end of the juxtaposed handle sections **72** as shown in FIG. 4.

With the tabs **89, 101** of the respective end panels **53, 54** in the positions shown in FIG. 4, the panels are bent upwardly along their crease lines **57, 59** into a position surmounting the top panels **51, 52**. This action interposes the tabs **89, 101** into the space between the upright handle sections **72** as shown in FIG. 5. In this position the tab **101**, the fixed portion **94** of the tab **89**, and the handle section **72** are adhesively bonded together in a permanent joint. The flap **77** of one of the handle sections **72** projects above the other handle section and is hinged downwardly along its crease line **78**, over this other handle section and its glue portion **81** is adhesively secured in place, the loose portion **82** of the flap remaining free but in folded-over position as a coextensive part of the adhesively bonded portion as shown in FIG. 2. There thus results a tight top closure for the container, with the potential carrying holes in alignment and ready for use in carrying the container, and with the top panels **51, 52** in a horizontal position which permits of the stacking of a plurality of such containers as best shown in FIG. 8.

To open the container, it is merely necessary to tear the loose flap portion **82** free of the adhesively bonded portion **81**, along its tear line **79**, as shown in FIG. 6. The end panel **53** is then pulled out to the position shown in FIG. 4. This action breaks the loose tab portions **95** free of the adhesively bonded tab portions **94** of the tab **89**, the break being effected along the tear line **93**. The handle sections **72** are then pulled up and this expands the end panel **53** and the side wall **22** connected thereto, along their crease lines **84, 85, 57, 96, 97, 91** and bulges the top panels **51, 52** along their crease lines **66, 67, 74** to provide the pouring spout or dispensing device **15** as shown in FIG. 7.

After a dispensing operation, the container may be readily reclosed by pushing the bulged end panel **53** back into its original position and inserting the loose flap portions **95** of the panel into position between the unsecured portions of the adhesively bonded together handle sections **72** as shown in FIG. 6.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A top end closure for a self-sustaining tubular container having a body portion defined by four substantially rectangular side walls, said top end closure comprising a pair of top panels extending in a common horizontal plane from a pair of oppositely disposed side walls and projecting in opposite directions across and closing the top end of said container body portion, a handle section on each of said top panels, said handle sections being disposed in upright and juxtaposed relation, a pair of end panels arranged with each end panel integrally joined with its respective of the remaining pair of oppositely disposed side walls and extending outwardly therefrom past said top panels, said end panels being disposed exteriorly of and parallel to the adjacent end edges of said top panels and said handle sections, and tab portions arranged with each tab portion integrally joined to its respective of said end panels and extending towards the opposing end panel, said tab portions of one of said end panels being permanently secured to said handle sections and said tab portions of the other of said end panels being releasably secured to said handle sections to facilitate release of said other of said end panels for use as a dispensing means.

2. A top end closure of the character defined in claim 1 wherein said tab portions are interposed between said handle sections.

3. A top end closure of the character defined in claim 1 wherein said handle sections and said tab portions of said one of said end panels are provided with aligned finger holes for carrying said container.

4. A top end closure of the character defined in claim 1 wherein said end panels are of triangular configuration and are formed with triangular wing sections disposed contiguous with said triangular panel and are hingedly connected to said top panels, and wherein said tab portions are hingedly connected to said wing sections.

5. A top end closure of the character defined in claim 1 wherein said top panels are provided with crease lines to facilitate formation of said other of said end panels for use as a dispensing means.

6. A top end closure of the character defined in claim 1 wherein one of said handle sections is provided with a flap, said flap being folded over the other of said handle sections and secured thereto.

7. A top end closure of the character defined in claim 6 wherein said flap is provided with a tear line setting off a pull portion of said flap unsecured to said other of said handle sections, said pull portion being disposed adjacent the tab portion of the other of said end panels.

8. A top end closure for a self-sustaining tubular container having a body portion defined by four substantially rectangular side walls, said top end closure comprising a pair of top panels extending from a pair of oppositely disposed side walls and projecting in opposite directions across and closing the top end of said container body portion, a handle section on each of said top panels, said handle sections being disposed in upright and juxtaposed relation, a pair of end panels extending from the remaining pair of oppositely disposed side walls and formed integral with and surmounting said top panels, said end panels being disposed adjacent the end edges of said top panels and said handle sections, and tab portions integral with and extending from said end panels, said tab portions of one of said end panels being permanently secured to said handle sections and said tab portions of the other of said end panels being releasably secured to said handle sections to facilitate release of said other of said end panels for use as a dispensing means, said tab portions of the other of said end panels being divided by a tear line into a fixed tab portion and a loose tab portion, said fixed tab portion being secured to said handle sections,

said tear line being rupturable by an outward pull on said end panel.

9. A container comprising a pair of spaced opposing end walls, a pair of spaced opposing side walls integrally interconnected with and disposed entirely between the planes of said end walls, a pair of top portions between said end walls and including a separate top portion integral with its respective one of each of said side walls, each top portion extending inwardly towards and meeting the other top portion to close the top end of said container, a pair of handle portions including a handle portion integral with its respective one of each of said top portions, said handle portions being disposed entirely between said end walls and juxtaposed to each other, a plurality of wing portions arranged with each integrally joined to its respective of said end walls, each said wing portion lying alongside of and generally parallel with its respective end wall with all of the wing portions disposed between the end walls and with each wing portion integrally joined with its respective next adjacent top portion, a plurality of handle engageable portions arranged with each handle engageable portion integrally joined with at least one of the wing portions and extending from one of the end

walls towards the opposite end wall in juxtaposed relationship to the handle portions.

10. The structure as defined in claim 9 additionally including each wing portion being attached to its respective top portion along a line disposed in the plane of the top portion and directed at an angle to the side walls.

11. The structure as defined in claim 9 additionally including said handle portions being parallel to and between said side walls.

12. The structure as defined in claim 9 additionally including said top portions being transverse to all of said walls.

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