Nov. 14, 1967 A. J. WEISS 3,352,453

CARRIER WITH CENTER DIVIDER

Filed April 5, 1963

4 Sheets-Sheet 1

FIG. 1

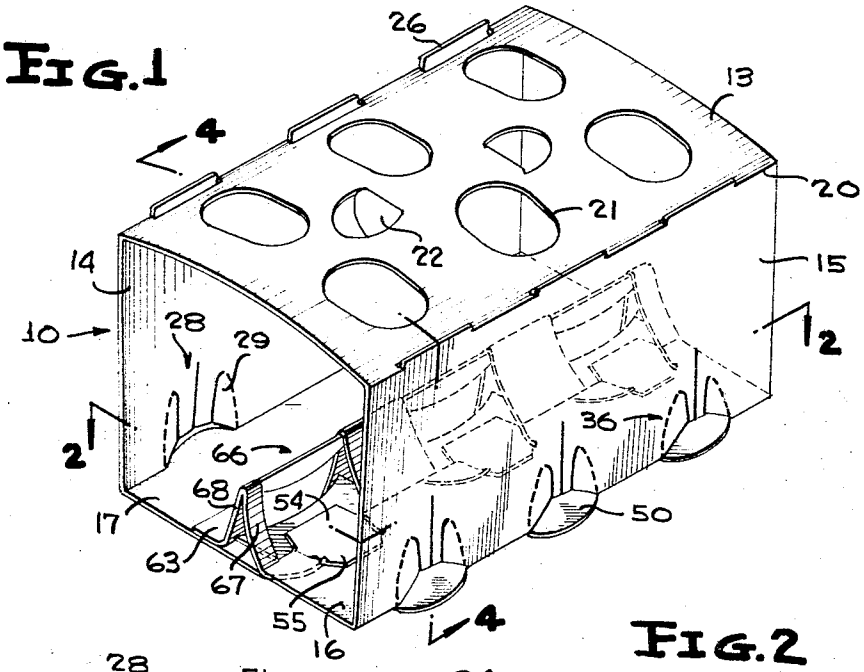


FIG. 2

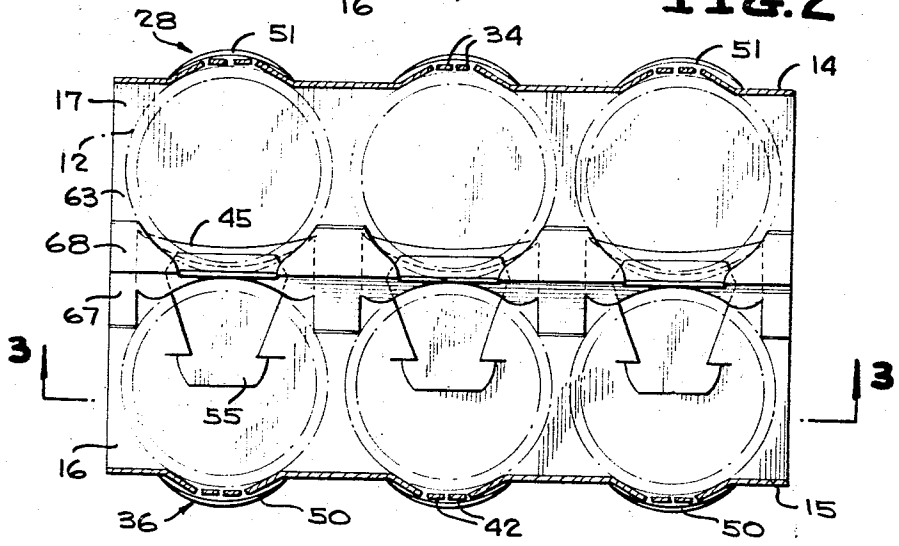
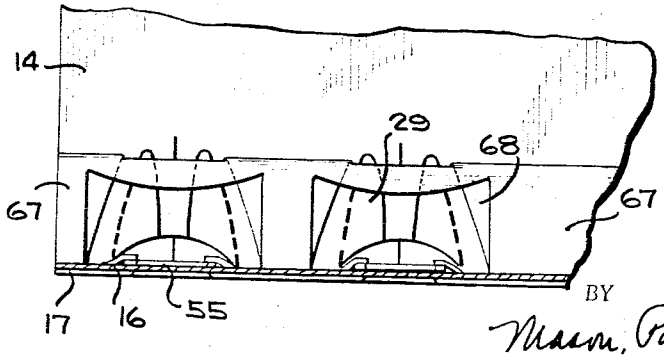


FIG. 3



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FIG. 4

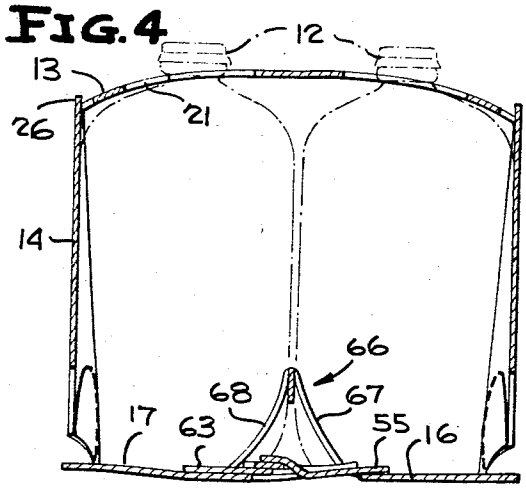


FIG. 5

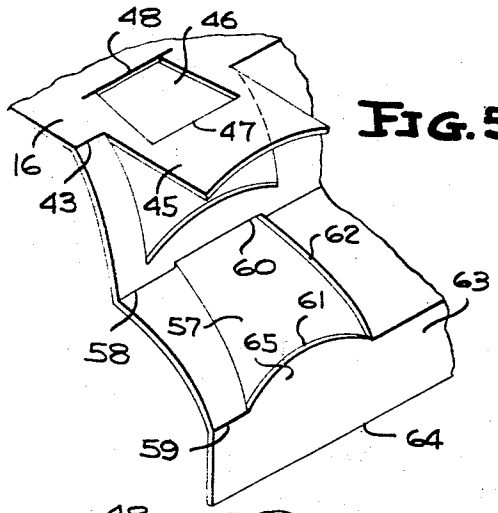


FIG. 6

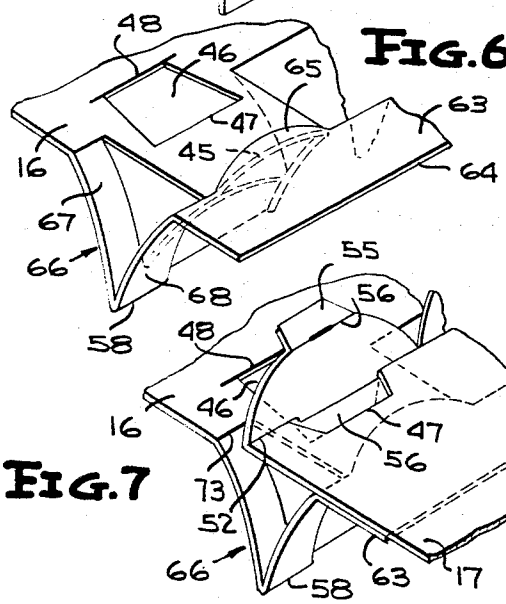
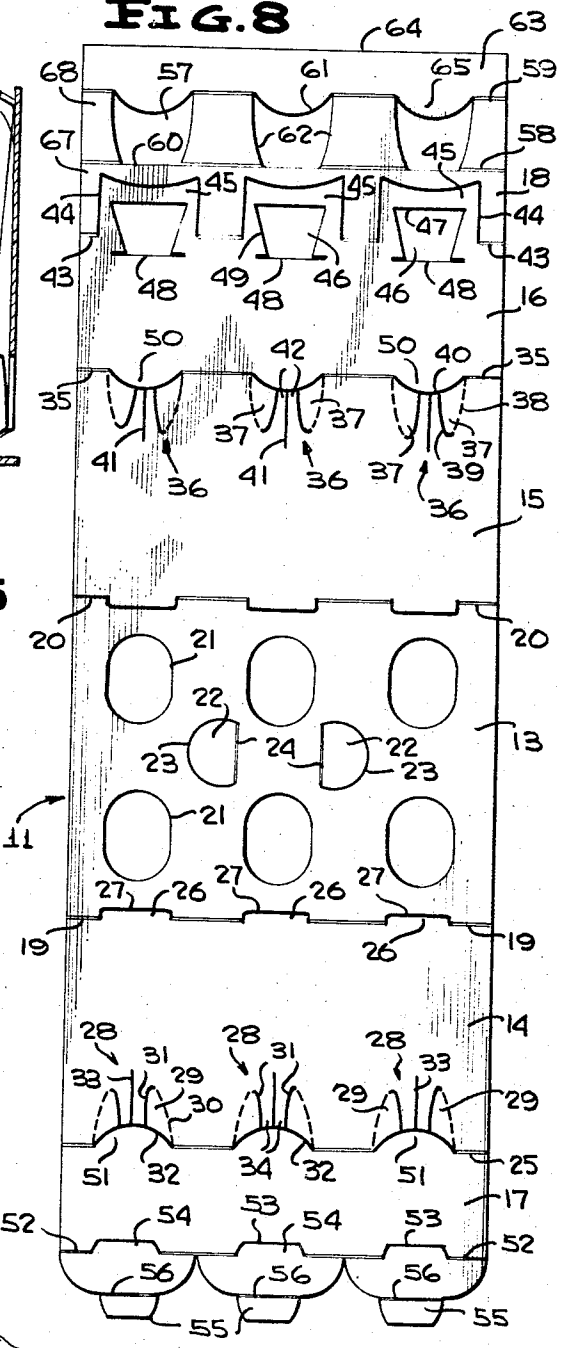


FIG. 7

FIG. 8



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FIG. 9

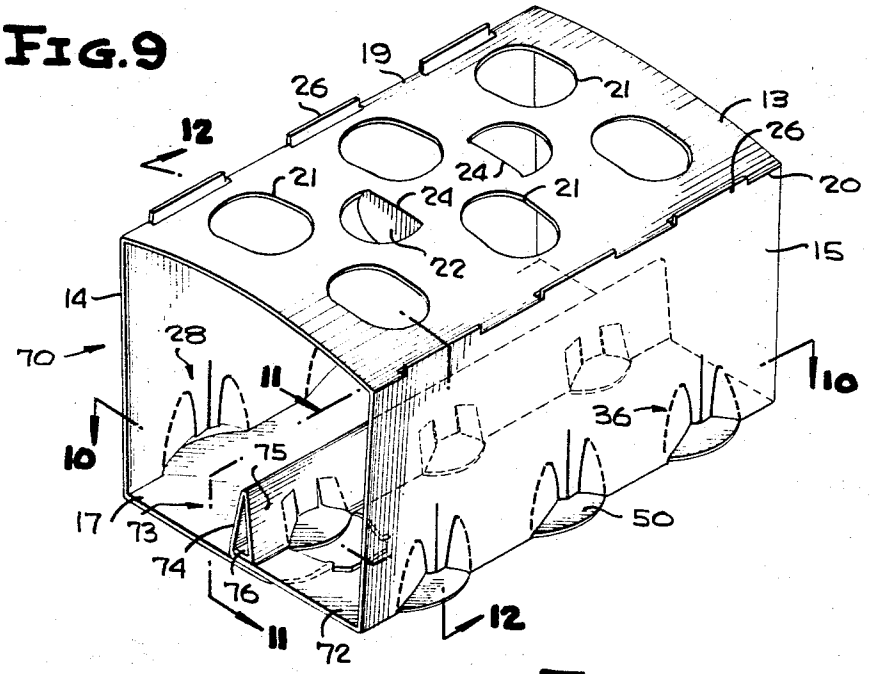


FIG. 10

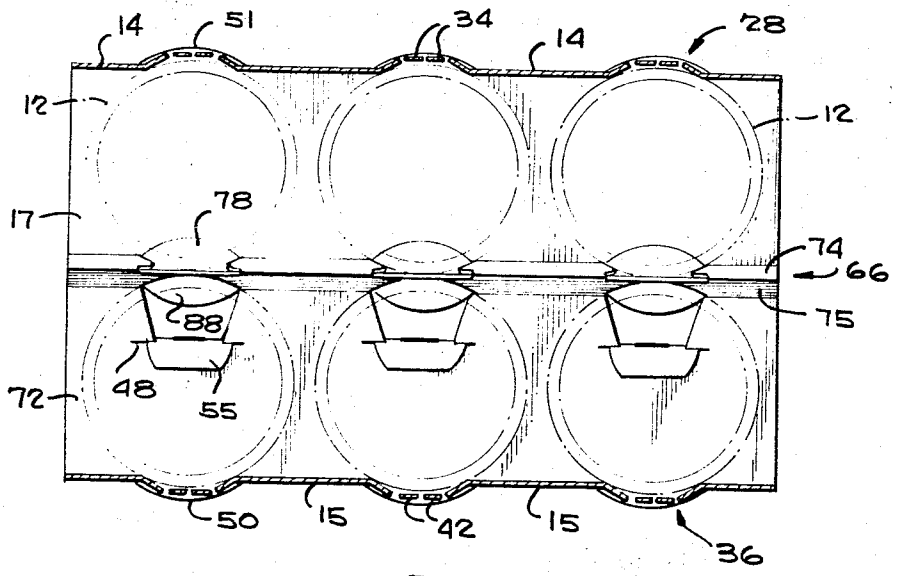
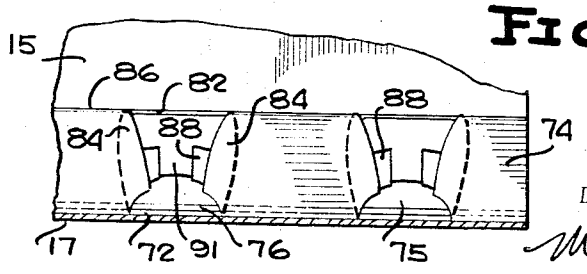


FIG. 11



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CARRIER WITH CENTER DIVIDER

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FIG. 12

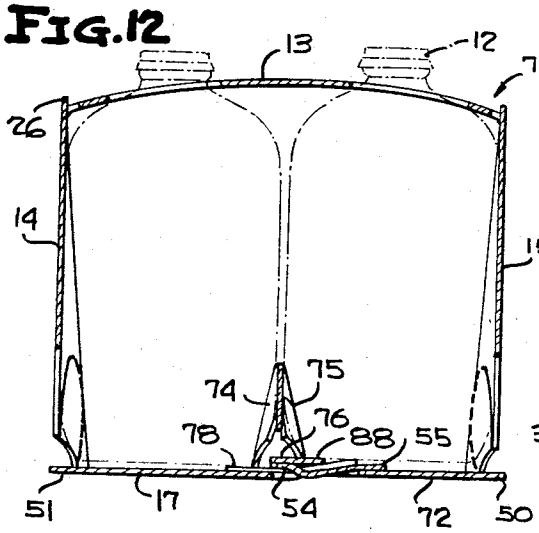


FIG. 13

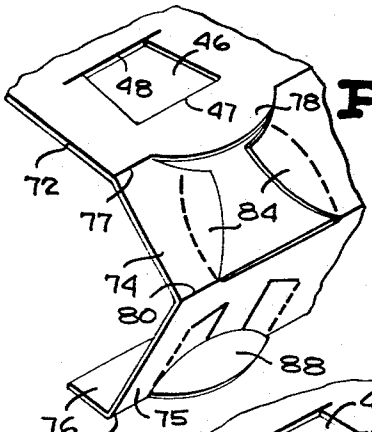


FIG. 14

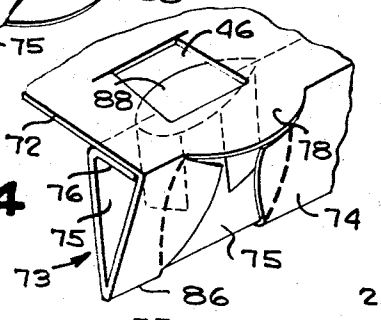


FIG. 15

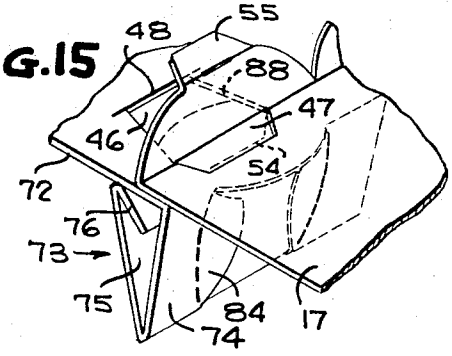
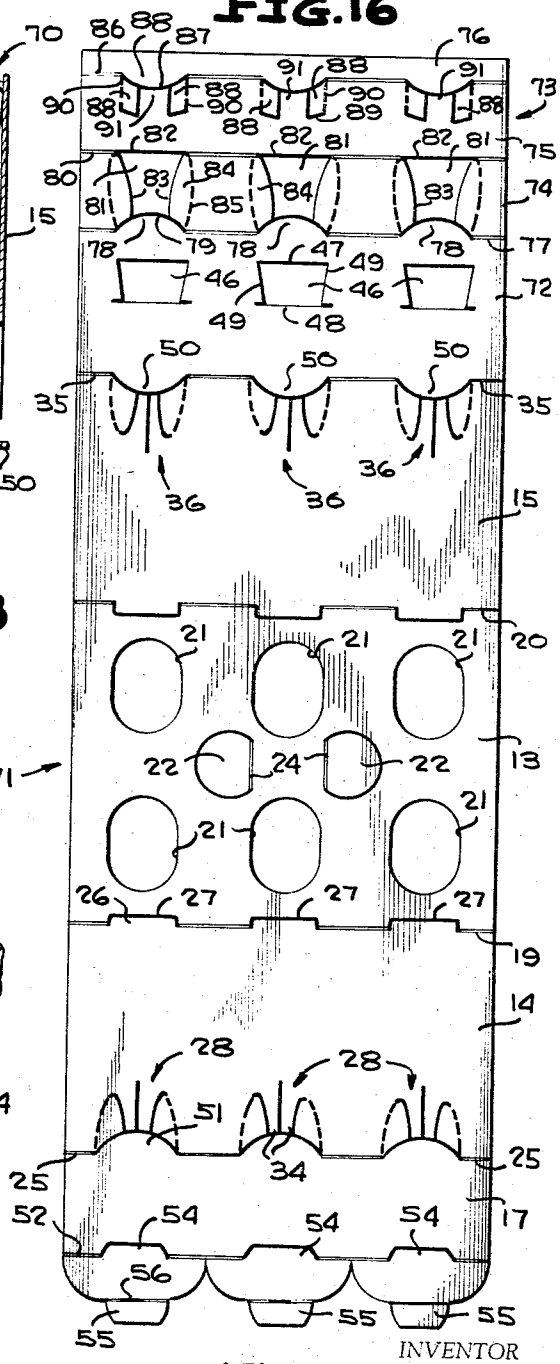


FIG. 16



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United States Patent Office 3,352,453 Patented Nov. 14, 1967

3,352,453

CARRIER WITH CENTER DIVIDER

Arthur J. Weiss, Bergenfield, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Apr. 5, 1963, Ser. No. 270,837
16 Claims. (Cl. 220—115)

This invention relates to a carrier for containers and more particularly to a center divider for separating the container.

It is an object of this invention to provide a carrier for holding a plurality of containers.

A further object of this invention is to provide a divider for the carrier for separating the plurality of containers from each other.

Another object of this invention is to provide a wedge-shaped divider for separating the plurality of containers from each other.

A further object of this invention is to provide a plurality of container-receiving recesses in the wedge-shaped divider.

Another object of this invention is to provide the carrier with a wedge-shaped divider which is formed by folding an inner panel member of a pair of overlapping bottom panels.

A further object of this invention is to provide a wedge-shaped divider for a carrier wherein the divider is comprised of a base portion disposed parallel to the bottom panels and a pair of converging sides tapering toward each other outwardly from the base portion.

A further object of this invention is to provide a unitary blank for a carrier wherein the blank is provided at one end thereof with portions for forming a wedge-shaped divider and with flap receiving openings, and the other end of the blank is provided with a plurality of flaps and tabs in longitudinal alignment with the flap receiving openings.

A still further object of this invention is to provide a blank for forming a carrier wherein the carrier is provided with a wedge-shaped divider which has container-receiving recesses for holding a plurality of containers in spaced relationship.

Another object of this invention is to provide a modified form of carrier wherein a wedge-shaped divider comprises an end portion of the inner bottom panel which is reversely folded upon itself.

A further object of this invention is to provide a modified unitary blank for a carrier wherein the modified blank is provided at one end thereof with portions for forming a wedge-shaped divider part of which is to be reversely folded upon itself, and the one end is further provided with flap receiving openings; the other end of the blank is provided with a plurality of flaps and tabs in longitudinal alignment with the flap receiving openings.

With the above and other objects in view which will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claimed subject matter and the several views illustrated in the accompanying drawings.

In the drawings:

FIGURE 1 is a perspective view of an assembled carrier for a plurality of containers, with the containers omitted for clarity, and shows a novel wedge-shaped divider for separating the containers.

FIGURE 2 is a cross-sectional view taken on line 2—2 of FIGURE 1 with the containers shown in broken lines, and shows container-receiving recesses in the wedge-shaped divider and in a pair of upstanding side panels.

FIGURE 3 is a fragmentary view taken on line 3—3 of FIGURE 2 and shows a pair of container-receiving recesses in the wedge-shaped divider.

FIGURE 4 is a cross-sectional view taken on line 4—4 of FIGURE 1 and shows the wedge-shaped divider formed by a folded portion of an inner bottom panel, and also shows an outer bottom panel with interlocking portions linked with the inner bottom panel.

FIGURE 5 is a fragmentary perspective view and shows a portion of the bottom panel in a partly folded position to illustrate the manner in which the wedge-shaped divider is constructed.

FIGURE 6 is a fragmentary perspective view and shows a portion of the container, similar to FIGURE 5, and illustrates the completed wedge-shaped divider and a flap receiving opening formed in the inner bottom panel.

FIGURE 7 is a fragmentary perspective view of the inner panel and the outer panel and illustrates the positioning of a flap in the flap receiving opening of the inner bottom panel, and also shows a tab on a free end of the outer panel prior to insertion of the tab into the flap receiving opening.

FIGURE 8 is a plan view of a blank for forming the novel carrier which is illustrated in FIGURES 1 through 7.

FIGURE 9 is a perspective view of an assembled carrier for a plurality of containers, with the containers omitted for clarity, and shows a modified form of a novel wedge-shaped divider for separating the containers.

FIGURE 10 is a cross-sectional view taken on line 10—10 of FIGURE 9 with the containers shown in broken lines, and shows container-receiving recesses in the modified wedge-shaped divider and in a pair of upstanding side panels.

FIGURE 11 is a fragmentary view taken on line 11—11 of FIGURE 9 and shows a pair of container-receiving recesses in the wedge-shaped divider.

FIGURE 12 is a cross-sectional view taken on line 12—12 of FIGURE 9 and shows the wedge-shaped divider formed by a reversely folded portion of an inner bottom panel, and also shows an outer bottom panel with interlocking portions linked with the inner bottom panel.

FIGURE 13 is a fragmentary perspective view and shows a portion of the bottom panel in a partly folded position to illustrate the manner in which the modified wedge-shaped divider is constructed.

FIGURE 14 is a fragmentary perspective view and shows a portion of the container, similar to FIGURE 13 and illustrates the completed wedge-shaped divider and a flap receiving opening formed in the inner bottom panel.

FIGURE 15 is a fragmentary perspective view of the inner panel and the outer panel and illustrates the positioning of a flap in the flap receiving opening of the inner bottom panel, and also shows a tab on a free end of the outer panel prior to insertion of the tab into the flap receiving opening.

FIGURE 16 is a plan view of a blank for forming the modified novel carrier which is illustrated in FIGURES 9–15.

Referring to the drawings in detail, there is seen in FIGURE 1 a carrier, generally indicated by the numeral 10, which is constructed from a blank which is generally indicated by the numeral 11 in FIGURE 8. The carrier 10 is of such size as to hold six containers 12 which containers are shown for illustrative purposes as being stub-necked bottles.

The blank 11, as shown in FIGURE 8, comprises a top panel 13, a first side panel 14, a second side panel 15, an inner closure or bottom panel 16, an outer closure or bottom panel 17, and a divider panel 18.

The top panel 13 is separated from the first side panel 14 by an interrupted transverse fold line 19 and is sepa-

rated from the second side panel **15** by an interrupted transverse fold line **20**.

A plurality of substantially elliptical openings **21** are provided in the top panel **13** for receiving therein the neck portions of the containers **12**. A pair of arcuate flaps **22** are formed by arcuate severance lines **23** and are attached to the top panel **13** along fold line **24**.

The first side panel **14** is defined by the transverse fold line **19** and an interrupted transverse fold line **25**. The fold line **19** is interrupted by a plurality of projection members **26** which are defined by a plurality of severance lines **27** which are transversely spaced on the blank **11**. The side panel **14** is provided along the fold line **25** with a plurality of container engaging portions generally designated by the numeral **28**. Each of the engaging portions **28** include a pair of flaps **29** which are defined by a weakened arcuate line **30** and a severance line **31**. The severance line **31** extends from an end of the weakened line **30** to an arcuate severance line **32** which connects the interrupted portions of the fold line **25**. A slit **33** extends longitudinally of the blank **11** between the flap **29** and intersecting with the severance lines **32**. Each of the engaging portions **28** include a pair of tabs **34** which are defined by the severance lines **31**, **32**, and the slit **33**.

The second side panel **15** is defined by the interrupted transverse fold line **20** and an interrupted transverse fold line **35** transversely spaced along the fold line **35** or a plurality of container engaging portions **36**, each of which is in longitudinal alignment with one of the engaging portions **28** in the first side panel **14**. Each of the engaging portions **36** is similar to each of the engaging portions **28** and include a pair of flaps **37** which are defined by weakened lines **38** and a severance line **39** which intersects an arcuate severance line **40**. A slit **41** extends longitudinally of the blank **11** between the severance lines **39** and intersects with the arcuate severance line **40** to provide a pair of tabs **42** between the flaps **37**.

The bottom panel **16** is attached to the second side panel **15** along the interrupted transverse fold line **35** and partially separated therefrom along the arcuate severance lines **40**. The bottom panel **16** is separated from the divider panel **18** along an interrupted transverse fold line **43** and a plurality of severance lines **44** which connect between the interrupted portions of fold line **43**. The interrupted fold line **43** and the severance lines **44** define a plurality of extension members **45** which are spaced transversely of the blank **11** and are in longitudinal alignment with the engaging portions **28** and **36**. Each of the extension members **45** is provided with a flap receiving cut-out **46** which is defined by transverse severance lines **47** and **48** and a pair of oblique severance lines **49** which lie between and connect the severance lines **47** and **48**. The bottom panel **16** is also provided with a plurality of projections **50** which are spaced transversely of the blank **11** between the interrupted portions of the fold line **35**.

The outer bottom panel **17** is distinguished from the first side panel **14** by the interrupted fold line **25** and the arcuate severance lines **32**. The arcuate lines **32** connect adjacent end portions of the interrupted fold lines **25** to define projections **51**. The projections **51** are spaced transversely of blank **11** and are in longitudinal alignment with the container engaging portions **28** and **36**. An interrupted fold line **52** extends transversely across blank **11** and has severance lines **53** which connect the ends of the interrupted fold line **52** to define a plurality of transversely spaced flaps **54**. Each flap **54** has a tab **55** connected integrally thereto along a fold line **56**.

The divider panel **18** is disposed alongside of the inner bottom panel **16** and is distinguished therefrom by the interrupted fold line **43** and severance lines **44**. A plurality of container-receiving openings **57** are spaced transversely of the blank **11** and are disposed between a first transverse interrupted fold line **58** and a second transverse interrupted fold line **59**. Each of the container-receiving openings **57** is defined by a severance line **60** which is colinear with the fold line **58**, an arcuate severance line **61** which connects the interrupted portions of the fold line **59**, and a pair of curved severance lines **62** which extend generally longitudinally of the blank **11**. An end flap **63** is provided between a free edge **64** and the interrupted fold line **59** and includes a plurality of transversely spaced projections **65** which are defined by the arcuate severance line **61**.

The manner in which the carrier **10** is erected can best be seen in FIGURES 5, 6 and 7. The blank **11** is folded along the transverse fold lines **43**, **58** and **59**, as shown in FIGURE 5, such that the extension members **45** may be inserted under the projections **65**, as clearly shown in FIGURE 6. A wedge-shaped member, generally indicated by the numeral **66**, has an apex along the fold line **58** and includes a first side member **67** and a second side member **68**.

FIGURE 7 shows the outer bottom panel **17** overlying the wedge-shaped member **66** with the flap **54** disposed in the flap receiving opening **46** and underlying the severance line **47**. Tab **55** is shown as being bent along the foldline **56** and is to be inserted into the flap receiving opening **46** so as to underlie the severance line **48**.

FIGURES 1, 2 and 4 show the carrier **10** in its finally constructed form. Each of the containers **12** is snugly engaged between the container engaging portions **28** and the wedge-shaped member **66** or between the container engaging portions **36** and the wedge-shaped member **66**. The wedge-shaped member **66** not only separates adjacent rows of containers **12** but also separates adjacent containers in each row from each other.

FIGURES 9 through 16 show a modified form of carrier **70**, similar to the carrier **10** shown in FIGURES 1 through 8, which is constructed from a blank **71** shown in FIGURE 16.

The blank **71** is identical in many respects to the blank **11** and like numerals have been used for like parts.

The blank **71** includes a top panel **13**, a first side panel **14**, a second side panel **15** and an outer bottom panel **17**, all of which are identical to corresponding parts in the blank **11** shown in FIGURE 8. The blank **71** further includes an inner bottom panel **72** and a center divider or wedge-shaped member, generally indicated by the numeral **73**, which has a first side member **74**, a second side member **75**, and a base forming member or end flap **76**.

The inner bottom panel **72** is disposed between the interrupted fold line **35** and an interrupted fold line **77** and extends transversely of the blank **71**. The inner bottom panel **72**, like the inner bottom panel **16** of FIGURE 8, is provided with a plurality of transversely spaced flap receiving cut-outs **46**. A plurality of projections **78** are transversely spaced at the interrupted portions of the fold line **77** and are defined by a severance line **79**.

The first side member **74**, of the wedge-shaped member **73**, lies between fold line **77** and an interrupted fold line **80** and includes a plurality of transversely spaced struck-out portions which are adjacent to the projections **78** and are defined by the severance lines **79**, severance lines **82** which connect the interrupted portions of the fold line **80**, and a plurality of arcuate severance lines **83** which connect the severance lines **79** and **82**. A pair of flap members **84** having weakened or perforated lines **85** are disposed on each side of each of the struck-out portions **81** and are foldable along the lines **85** to provide container-receiving recesses in the first side member **74** of the wedge-shaped member **73**.

The second side member **75** is separated from the first side member **74** by the transverse fold line **80** and is separated from the end flap **76** by an interrupted transverse fold line **86**. The ends of the interrupted fold line **86** are joined by a plurality of transversely spaced arcuate severance lines **87** which define projections **88** in the end flap **76**. The second side member **75** is provided with a plurality of flaps **88** with one flap **88** adjacent each end of each of the arcuate severance lines **87**. Each flap **88** is

defined by a portion of the severance line **87** and an intersecting L-shaped severance line **89** and is foldable along the weakened or perforated line **90**. Each of the pair of flaps **88** and a member **91** lying therebetween define container-receiving portions for the second side member **75**.

The manipulations of the blank **71** which are necessary to form the wedge-shaped member **73** and to interlock the inner bottom panel **72** and the outer bottom panel **17** are best shown in FIGURES 13, 14 and 15. The base forming member or end flap **76** is reversely folded along the fold line **86** so as to lie flat against the inner bottom panel **72** thus forming a base for the center divider or wedge-shaped member **73** which has its apex at the fold line **86** and includes the first side member **74** and the second side member **75**.

The outer bottom panel **17** is placed in overlying engagement with the inner bottom panel **72**, as shown in FIGURE 15, and the flap **54** is placed in the flap receiving cut-out **46** so as to underlie the severance line **47**. The tab **55** is then folded along the fold line **56** and is inserted in the flap receiving cut-out **46** at the severance line **48** and thereby interlock the outer panel **17** and the inner bottom panel **72**.

FIGURES 9, 10 and 12 show various views of the completed carton and best illustrate how the center divider or wedge-shaped member **73** holds the containers **12** in spaced relationship. FIGURE 10 shows one row of containers **12** securely held between the container engaging portions **36** and the wedge-shaped member **66** and a second row of containers **12** securely held between the container engaging portions **28** and the wedge-shaped member **66**.

It will be apparent from the foregoing that there has been provided various forms of the novel carrier and center divider member wherein a plurality of containers may be firmly held in spaced relationship from each other during storage and shipment of the containers. The container receiving portions in the upstanding side panels and the container receiving recesses in the center divider member cooperate to prevent the containers from engaging each other, and in addition, to prevent the outermost containers from becoming inadvertently displaced from the carrier. Also, the top panel of the carrier has been provided with finger-receiving openings so that the carriers may be easily carried.

The various novel carriers and center divider members can be made of paperboard, plastic, heavy paper or other similar material.

While preferred forms and arrangement of parts have been shown in illustrating the invention, it is to be clearly understood that various changes in details and arrangement of parts may be made without departing from the spirit and scope of the invention as defined in the appended claimed subject matter.

What I claim is:

1. A carrier for containers comprising top, and bottom panels, said bottom panels comprising an inner panel and an outer panel; a divider for said carrier comprising a substantially wedge-shaped member carried by said inner panel, said member having a plurality of sets of container-receiving recesses therein.

2. A carrier for containers comprising bottom and upstanding side panels, a divider disposed contiguous with and parallel to said bottom and upstanding panels respectively, said divider comprising a substantially wedge-shaped member having upwardly converging sides, said bottom panels comprising an inner panel and an outer panel, flap means on said outer panel, and flap receiving means on said inner panel receiving said flap means to interlock said inner and outer panels.

3. A carrier for containers comprising bottom and upstanding side panels, a divider disposed contiguous with and parallel to said bottom and upstanding panels respectively, said divider comprising a substantially wedge-shaped member having upwardly converging sides, said bottom panels comprising an inner panel and an outer panel, flap means on said outer panel, flap receiving means on said inner panel receiving said flap means to interlock said inner and outer panels, tab means on said outer panel, said tab means being received by said flap receiving means.

4. In a carrier, an inner panel and an outer panel; a divider integral with said inner panel, said divider comprising a substantially wedge-shaped member; said member having a portion disposed parallel to said inner and outer panels, and a pair of sides tapering together outwardly from said inner and outer panels.

5. The carrier of claim **4** wherein each of said sides are provided with a plurality of container-receiving recesses.

6. In a carrier, an inner panel and an outer panel; a divider integral with said inner panel, said divider comprising a substantially wedge-shaped member; said member having a portion disposed parallel to said inner and outer panels, and a pair of sides tapering together outwardly from said inner and outer panels, said portion being attached to one of the sides of said pair of sides along a fold line, said portion extending away from said pair of sides and from said inner panel.

7. In a carrier, an inner panel and an outer panel; a divider integral with said inner panel, said divider comprising a substantially wedge-shaped member; said member having a portion disposed paralled to said inner and outer panels, and a pair of sides tapering together outwardly from said inner and outer panels, said portion being attached to one of the sides of said pair of sides along a fold line, said portion being folded along said fold line to underline said pair of sides.

8. In a carrier, an inner panel and an outer panel; a divider integral with said inner panel, said divider comprising a substantially wedge-shaped member; said member having a portion disposed parallel to said inner and outer panels, and a pair of sides tapering together outwardly from said inner and outer panels, said portion being attached to one of the sides of said pair of sides along a fold line, said portion extending away from said pair of sides and from said inner panel; tab means on an edge of said outer panel, flap means disposed inwardly from said edge, and flap receiving means in said inner panel for receiving said flap means and said tab means for interlocking said inner panel and said outer panel.

9. In a carrier, an inner panel and an outer panel; a divider integral with said inner panel, said divider comprising a substantially wedge-shaped member; said member having a portion disposed parallel to said inner and outer panels, and a pair of sides tapering together outwardly from said inner and outer panels, said portion being attached to one of the sides of said pair of sides along a fold line, said portion being folded along said fold line to underlie said pair of sides; tab means on an edge of said outer panel, flap means disposed inwardly from said edge, and flap receiving means in said inner panel for receiving said flap means and said tab means for interlocking said inner panel and said outer panel.

10. A blank for a carrier, said blank comprising a first panel, a divider panel and an end flap; a first interrupted fold line separating said first panel from said divider panel, a second interrupted fold line separating said divider panel from said end flap, and a third interrupted fold line separating said divider panel into a first side and a second side; a plurality of transversely spaced cut-outs in said first panel, a plurality of openings in said second side of said divider panel, each of said openings being disposed in longitudinal alignment with a respective one of said plurality of cut-outs.

11. A blank for a carrier, said blank comprising a first panel, a divider panel, and an end flap; a first interrupted fold line separating said first panel from said divider panel, a second interrupted fold line separating said divider panel from said end flap, and a third interrupted fold

line separating said divider panel into a first side and a second side; a plurality of transversely spaced cut-outs in said first panel, a plurality of openings in said second side of said divider panel, each of said openings being disposed in longitudinal alignment with a respective one of said plurality of cut-outs; said blank including a second panel at the end of said blank opposite from said end flap, said second panel including a plurality of flaps attached thereto in transversely spaced alignment along an interrupted fold line, each of said plurality of flaps including a tab attached thereto along a transverse fold line; each of said plurality of flaps and each tab being disposed in longitudinal alignment with a respective one of said cut-outs in said first panel.

12. A blank for a carrier, said blank comprising a first panel, a divider panel and an end flap; a first interrupted fold line separating said first panel from said divider panel, a second interrupted fold line separating said divider panel from said end flap, and a third interrupted fold line separating said divider panel into a first side and a second side; a plurality of transversely spaced cut-outs in said first panel, a plurality of projection members on said first panel transversely spaced along said first interrupted fold line, said first side of said divider panel having a struck-out portion adjacent to each of said projection members and a pair of flap members disposed about each struck-out portion.

13. A blank for a carrier, said blank comprising a first panel, a divider panel and an end flap; a first interrupted fold line separating said first panel from said divider panel, a second interrupted fold line separating said divider panel from said end flap, and a third interrupted fold line separating said divider panel into a first side and a second side; a plurality of transversely spaced cut-outs in said first panel, a plurality of projection members on said first panel transversely spaced along said first interrupted fold line, said first side of said divider panel having a struck-out portion adjacent to each of said projection members and a pair of flap members disposed about each struck-out portion; said blank including a second panel at the end of said blank opposite from said end flap, said second panel including a plurality of flaps attached thereto in transversely spaced alignment along an interrupted fold line, each of said plurality of flaps including a tab attached thereto along a transverse fold line; each of said plurality of flaps and each tab being disposed in longitudinal alignment with a respective one of said cut-outs in said first panel.

14. A blank for a carrier, said blank comprising a first panel, a divider panel and an end flap; a first interrupted fold line separating said first panel from said divider panel, a second interrupted fold line separating said divider panel from said end flap, and a third interrupted fold line separating said divider panel into a first side and a second side; a plurality of transversely spaced cut-outs in said first panel, a plurality of openings in one of said sides of said divider panel, each of said openings being disposed in longitudinal alignment with a respective one of said plurality of cut-outs.

15. An open end generally rectangular sleeve-type carton, formed from a unitary blank of foldable paperboard, for holding two parallel, opposing rows of generally cylindrical articles in side-by-side relation, comprising opposing pairs of spaced walls hingedly interconnected to define a tubular structure enclosing the ends and sides of the articles, one of the walls enclosing the ends of the articles being formed by a pair of generally co-plannar panels, said panels having corresponding outboard end portions hingedly connected to respective adjacent walls of the carton, said panels having inboard end portions interconnected and arranged to form a longitudinally disposed center retaining member extending inwardly into the carton between the two rows of articles, said member including a pair of relatively thin outwardly diverging strips inclined with respect to said one wall and having a plurality of longitudinally spaced openings for receiving end portions of the articles to restrict their movement relative to said one wall of the carton, the diverging strips of said center retaining member being formed from the inboard end portion of one of said one wall panels.

16. An open end generally rectangular sleeve-type carton, formed from a unitary blank of foldable paperboard, for holding two parallel, opposing rows of generally cylindrical articles in side-by-side relation, comprising opposing pairs of spaced walls hingedly interconnected to define a tubular structure enclosing the ends and sides of the articles, one of the walls enclosing the ends of the articles being formed by a pair of generally coplanar panels, said panels having corresponding outboard end portions hingedly connected to respective adjacent walls of the carton, said panels having inboard end portions interconnected and arranged to form a longitudinally disposed center retaining member extending inwardly into the carton between the two rows of articles, said member including a pair of relatively thin outwardly diverging strips inclined with respect to said one wall and having a plurality of longitudinally spaced openings for receiving end portions of the articles to restrict their movement relative to said one wall of the carton, said diverging strips being hinged to each other and to the inboard edge of one of said one wall panels, and said panels being secured to each other in overlapped relationship.

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