United States Patent [19]

McHan

[11] 3,861,578

[45] Jan. 21, 1975

[54] **TOMATO CARTON**

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[52] **U.S. Cl.** **229/15,** 206/806, 206/521, 229/27

[51] **Int. Cl.** **B65d 1/36**

[58] **Field of Search** ..... 806/80 R; 229/56, 15, 27; 206/DIG. 6, 46 FR, 65 R

[56] **References Cited**

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1,136,505	4/1915	Calahan	217/28
2,112,433	3/1938	Boeye	229/15
2,971,639	2/1961	McHann	206/45.34

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[57] **ABSTRACT**

A tray-like carton including a longitudinally extending bottom wall provided with upstanding transverse end panels and including an upstanding longitudinal partition secured to and extending between the end walls. The partition includes longitudinally spaced transversely extending and upwardly opening slots formed therein whose lower ends terminate above the lower marginal edge of the partition. A plurality of endless flexible strap members are provided for use with the carton and may have equidistant spaced portions thereof twisted together and passed through corresponding slots in the partition with the remaining portions of each band disposed on opposite sides of the partition defining article encircling loops for encircling globular produce and retaining the produce in position on the bottom wall on opposite sides of the partition.

6 Claims, 8 Drawing Figures

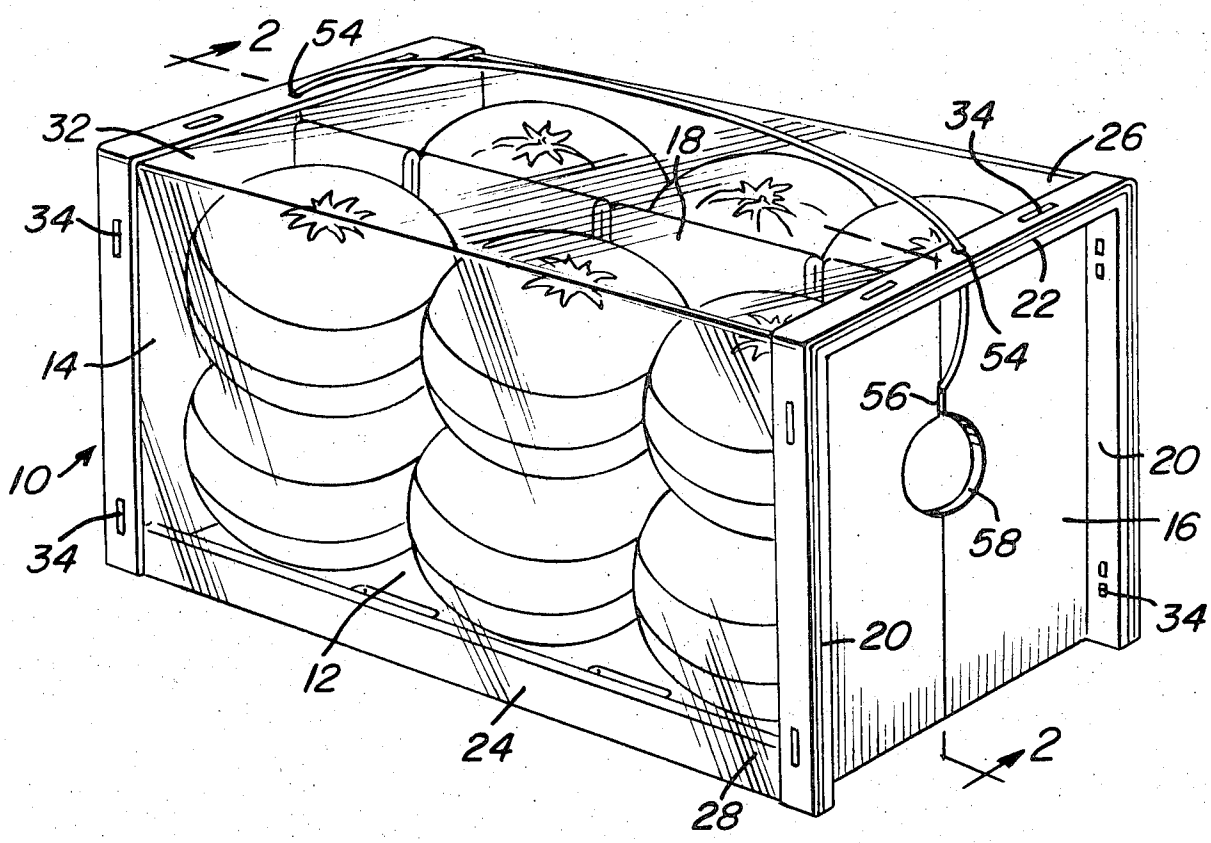


Fig. 1

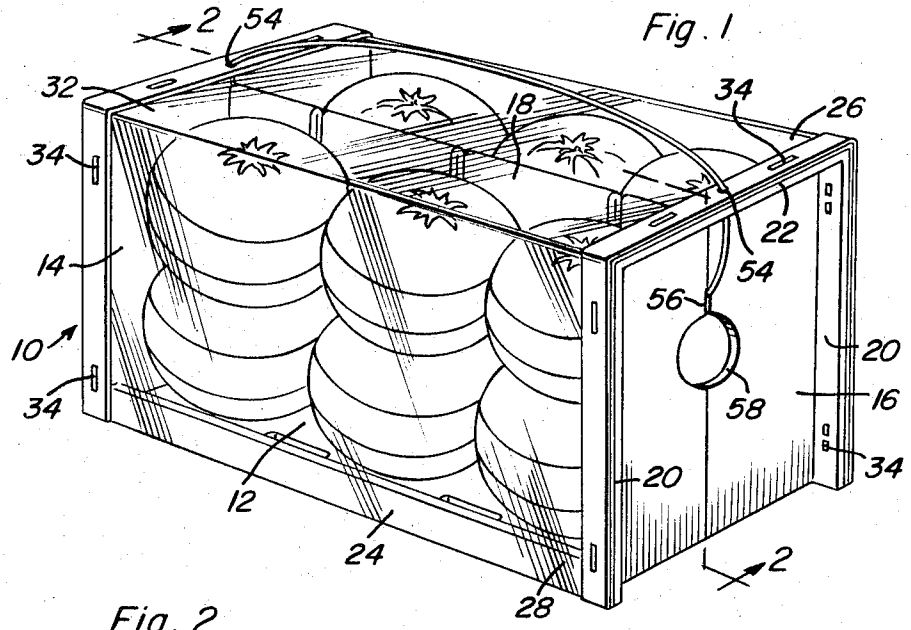


Fig. 2

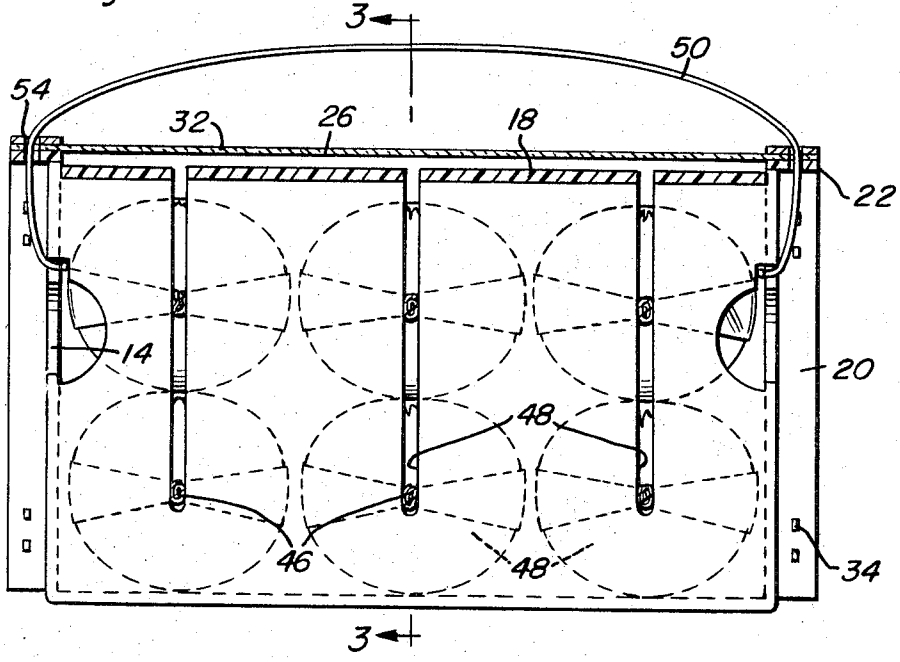


Fig. 4

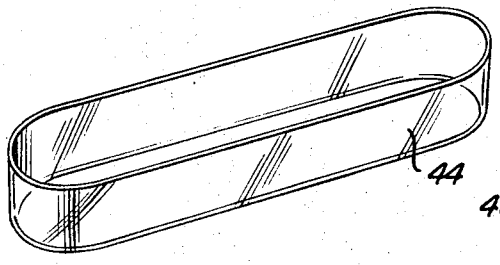


Fig. 5

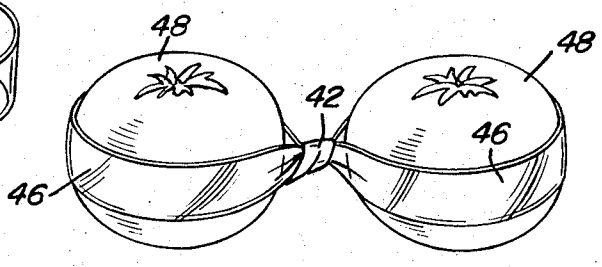


Fig. 3

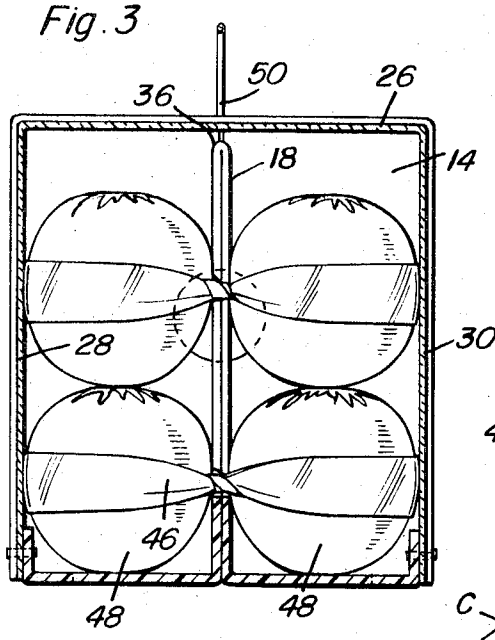


Fig. 7

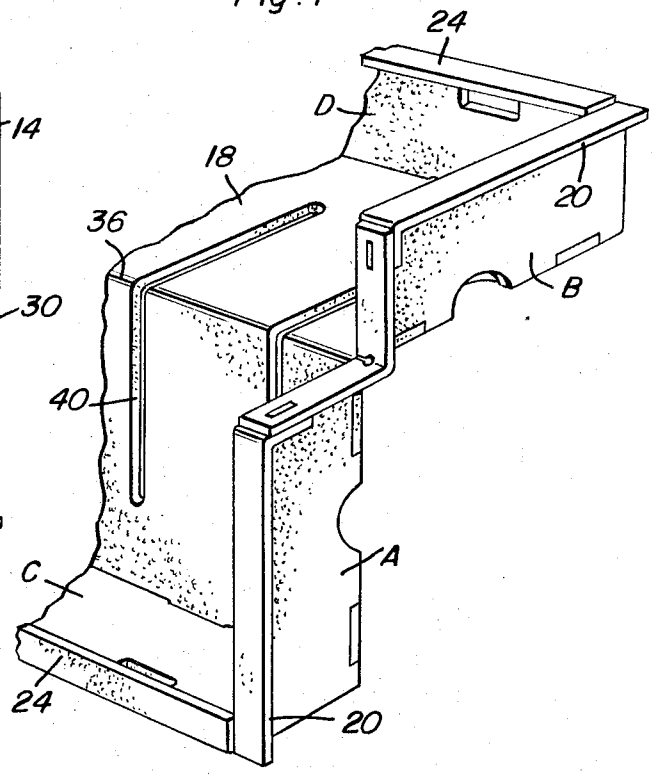


Fig. 6

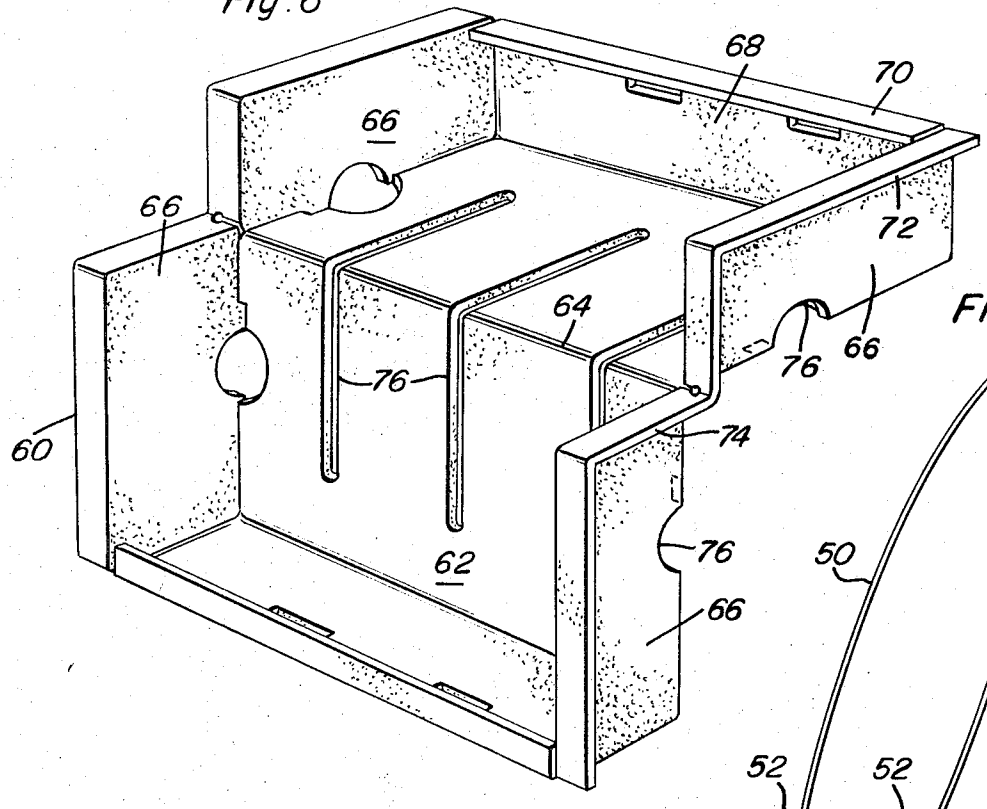


Fig. 8

TOMATO CARTON

This invention relates to packaging and more specifically to a carton specifically designed for packaging globular fruit and other similarly shaped produce.

The invention comprises an improvement of the tomato carton disclosed in my prior U.S. Pat. No. 2,971,639, dated Feb. 14, 1961. The basic improvement of the instant invention over my previous tomato carton resides in the provision of transversely extending and upwardly opening slots in the center longitudinal partition of the carton, which slots enable the use of endless flexible bands having equidistant intermediate portions thereof twisted together and passed through the slots with the remaining end portions of the bands disposed on opposite sides of the partition encircled about produce to be secured within the carton. In this manner, an outer cover (such as that disclosed in my prior patent) may or may not be used and is not required to maintain articles of produce within the carton.

In addition, the construction of the instant invention differs from the tomato carton in my prior patent in a manner such as to enable the carton to be readily formed as a one-piece construction by molding processes for folding into the final configuration of the carton, the aforementioned flexible bands also serving to maintain the carton in a folded operative condition.

The main object of this invention is to provide a useful carton and method of making the same whereby various articles may be packaged in an attractive manner.

Another object of this invention, in accordance with the immediately preceding object, is to provide a carton which may be readily formed out of one piece of sheet material and subsequently folded, by a single folding step, into the final shape of the carton.

Another important object of this invention is to provide a carton which is particularly well adapted to package delicate produce such as tomatoes.

A final object of this invention to be specifically enumerated herein is to provide a tomato carton which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long lasting and relatively trouble free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout.

FIG. **1** is a perspective view of a first form of carton constructed in accordance with the present invention;

FIG. **2** is an enlarged longitudinal vertical sectional view taken substantially upon the plane indicated by the section line **2—2** of FIG. **1**;

FIG. **3** is a transverse sectional view taken substantially upon the plane indicated by the section line **3—3** of FIG. **2**;

FIG. **4** is a perspective view of one of the endless flexible bands utilized in conjunction with the carton in order to retain produce such as tomatoes in position within the carton;

FIG. **5** is a perspective view illustrating the manner in which one of the endless flexible straps or strips may be utilized to encircle a pair of tomatoes and maintain the encircled tomatoes against separation relative to each other;

FIG. **6** is a perspective view of a formed one-piece blank or panel of polystyrene material as it may be formed by molding processes preparatory to the blank being folded into a carton of the same configuration as that illustrated in FIGS. **1** and **2**;

FIG. **7** is a fragmentary perspective view of the carton illustrated in FIGS. **1** and **2** which is constructed of faced corrugated cardboard and preparatory to final folding of the pasteboard carton into the configuration thereof illustrated in FIGS. **1** and **2**; and

FIG. **8** is a perspective view of a bail type handle which may be utilized in conjunction with either the corrugated cardboard or polystyrene forms of the invention.

Referring now more specifically to the drawings, the numeral **10** generally designates a first form of carton constructed in accordance with the present invention. The carton **10** includes a bottom wall **12** including upstanding generally parallel opposite end walls **14** and **16.** The end walls **14** and **16** are interconnected by means of an upstanding longitudinally extending center partition **18** extending and secured therebetween and also secured to the bottom wall **12.** The end walls **14** and **16** include reinforced laterally outwardly projecting opposite side flanges **20** as well as upper marginal edge portion horizontally outwardly directed reinforced flanges **22.** Also, the opposite side marginal edges of the bottom **12** include upturned opposite side flanges **24.**

An inverted generally channel shaped transparent cover **26** is provided and includes opposite side flanges **28** and **30** interconnected at their upper marginal edge portions by means of a horizontal bight portion **32** extending therebetween and formed integrally therewith. The end edges of the cover **26** overlap the flanges **20** and **22** are secured thereto in any convenient manner such as by staples **34.** Also, the opposite end and lower edges of the partition **18** and the opposing portions of the end walls and bottom of the carton include interfitting tabs and openings whereby the partition **18** is securely supported between the end walls **14** and **16,** suitable adhesive (not shown) also being usable to fasten the partition **18** between the end walls **14** and **16.**

However, as may be seen from FIG. **7** of the drawings, the partition **18** is formed in one piece and is folded along its longitudinal centerline as at **36.** In addition, each end wall consists of a pair of end wall sections A and B secured to the corresponding ends of the partition **18.** In addition, the bottom wall **12** consists of a pair of bottom wall sections C and D secured to and extending along the corresponding side edge portions of the partition **18.** Of course, the flanges **24** comprise integral portions of the bottom wall sections C and D and the flanges **20** comprise integral portions of the end wall sections A and B.

Although the end walls **14** and **16** and the bottom wall **12** may be formed of the various sections A, B, C and D, the end walls **14** and **16** may be formed integrally with the bottom wall **12** so that each of the end walls **14** and **16** as well as the bottom wall **12** is of one-piece construction.

In any event, the partition **18** includes a plurality of longitudinally spaced transversely extending and upwardly opening slots **40** through which the twisted mid-portions **42** of a plurality of elongated endless flexible

straps **44** may be passed with the opposite ends of the twisted straps forming loops **46** to encircle globular produce such as the tomatoes **48** illustrated in FIG. **5.** Once the straps **44** have been engaged with pairs of the tomatoes **48,** the tomatoes may be placed within the carton **10** prior to securement of the cover **26** thereover with the twisted portions **42** of the straps **44** extending through the slots **40.** In this manner, the tomatoes will be held firmly in position within the carton **10.** Also, an elongated flexible bail type handle **50** may be provided and includes T-shaped end portions **52.** The end portions of the handle **50** pass through apertures **54** formed in the flanges **22** and then through the narrow portions **56** of keyhole openings **58** formed in the end walls **14** and **16** with the T-shaped heads or end portions **52** held captive against the inner surfaces of the end walls **14** and **16** defining the upward extremities of the narrow portions **56** of the openings **58.**

With attention invited now more specifically to FIG. **6** of the drawings there may be seen a performed blank referred to in general by the reference numeral **60** and which may be constructed of polystyrene by any suitable molding processes. The blank **60** comprises a main panel **62** including opposite side halves disposed at approximately 90° relative to each other and joined together along a fold line **64.** Each half of the panel **62** includes upstanding outwardly directed end wall panels **66** and bottom wall panels **68.** In addition, the bottom wall panels **68** include upstanding outer edge reinforcing flanges **70** and the end wall panels **66** include outer edge outturned reinforcing flanges **72.** Also, the flanges **72** are formed integrally with relatively angulated top wall flanges **74** extending along the upper marginal edge portions of the end wall flange **66.** The panel **62** is provided with slots **76** extending transversely thereof and spaced longitudinally therealong and the opposite end portions of each slot **76** disposed on opposite sides of the fold line **64** are registrable with each other when the panel sections on opposite sides of the fold line **64** are folded toward each other so that the sides of the opposite side panel sections remote from the sides thereof from which the bottom wall flanges **68** project are disposed in closely juxtaposed and generally parallel relation. In this manner, the panel **62** may be folded into a carton of the configuration illustrated in FIG. **1** and after the tomatoes **48** have been secured in position within the folded carton by means of the straps **44** the straps **44** will not only serve to maintain the tomatoes **48** within the carton, but also serve to maintain the panel **62** in its folded carton-defining configuration. Of course, the end wall flanges **66** include notches **76** whereby to form keyhold openings similar to the keyhole openings **58** of the carton **10** when the panel **62** is folded into its carton-defining configuration. Accordingly, it may be readily appreciated that the cover **26** may be utilized with the carton defined by the folded panel **62** as may be the handle **50.**

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

What is claimed as new is as follows:

1. A carton for packaging produce or other articles, said carton comprising a panel of generally rectangular configuration including opposite side generally planar panel sections joined along a center fold line extending longitudinally of said panel, the side marginal edges of said panel sections remote from said fold line including generally right-angled side flanges generally paralleling and equally spaced from said fold line and projecting outwardly of one pair of corresponding sides of said panel sections, the opposite ends of said panel sections each including a generally right-angled end flange extending along substantially the full length of the corresponding panel section end edge and of a width at least generally equal to the width of the corresponding side flange, said end flanges also projecting outwardly from said corresponding sides of said panel sections, said panel being foldable along said fold line to swing said panel sections into parallel closely juxtaposed relation with the other pair of corresponding sides of said panel sections opposing each other and said end flanges at each end of said panel disposed in substantially coplanar relation, whereby each pair of end flanges at an end of said panel define an end wall for said carton and said panel sections, exclusive of said side and end flanges define a double thickness upstanding partition extending centrally lengthwise along said carton between said end walls and said side flanges define bottom sections of said carton on opposite sides of said partition extending between said end walls, said bottom sections being substantially coplanar.

2. The combination of claim **1** wherein said partition includes at least one upstanding transverse slot formed therein opening upwardly through the upper marginal edge of said partition, the lower end of said slot terminating above said bottom sections.

3. The combination of claim **2** including a closed flexible band having equidistant spaced portions thereof twisted together and passed through said slot with the remaining portions of said band disposed on opposite sides of said partition defining article encircling loops for retaining articles on said side sections of said bottom between said end panels and drawing said articles together and into contact with the remote sides of said panel sections to maintain said panel fully folded along said fold line.

4. The combination of claim **1** including a downwardly opening elongated and inverted generally channel shaped cover downwardly telescoped over said carton with the end walls thereof received between corresponding end portions of the opposite sides of said cover and the opposite ends of the bight portion of said cover overlying the upper marginal edge portions of said end walls.

5. The combination of claim **2** wherein said panel comprises a cardboard panel.

6. In combination, an article support comprising a panel of generally rectangular configuration including opposite side generally planar panel sections joined along a center fold line extending longitudinally of said panel, the side marginal edges of said panel sections remote from said fold line including generally right-angled side flanges generally paralleling and equally spaced from said fold line and projecting outwardly of one pair of corresponding sides of said panel sections, said panel being foldable along said fold line to swing the panel sections into parallel closely juxtaposed relation with the other pair of corresponding sides of said

panel sections opposing each other, whereby said panel sections, exclusive of said side flanges define a double thickness upstanding partition extending centrally lengthwise along said support and said side flanges define bottom sections of said support on opposite sides of said partition, said bottom sections being substantially coplanar, said partition including at least one upstanding transverse slot formed therein opening upwardly through the upper marginal edge of said partition, the lower end of said slot terminating above said bottom sections, a closed flexible band having equidistant spaced portions thereof twisted together and passed through said slot with the remaining portions of said band disposed on opposite sides of said partition defining article encircling loops for retaining articles in position on said bottom sections on opposite sides of said partition and drawing said articles together and into contact with the remote sides of said panel sections to maintain said panel fully folded along said fold line.

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