Dec. 25, 1962 S. F. JONES 3,070,222

DISPLAY AND SHIPPING PACKAGE

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Fig. 1

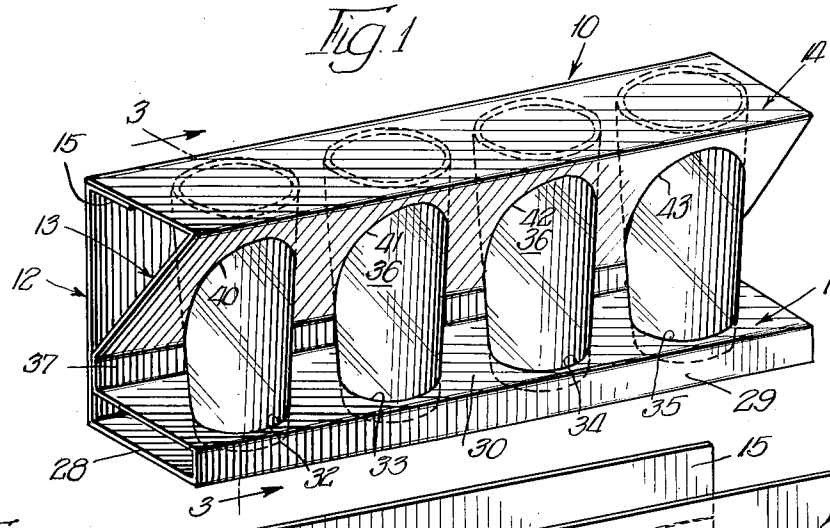


Fig. 2

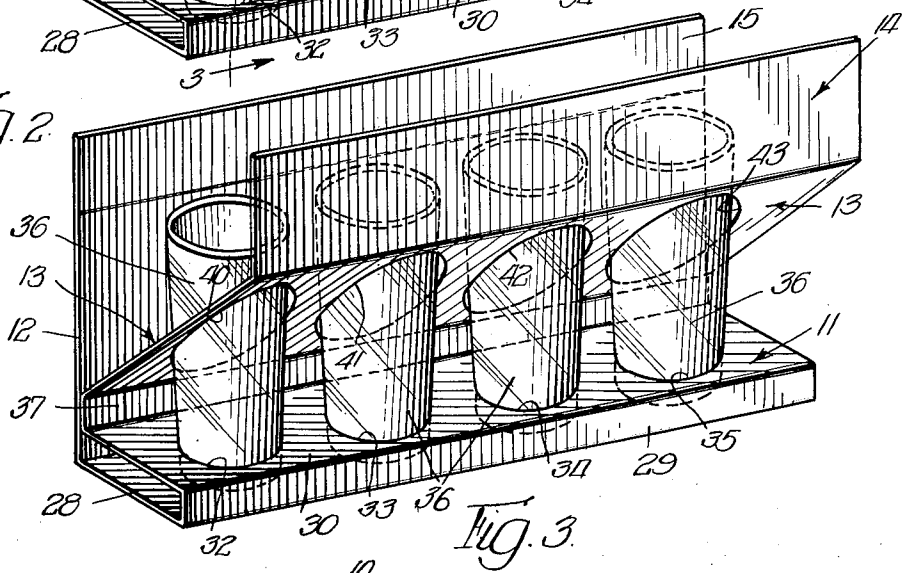
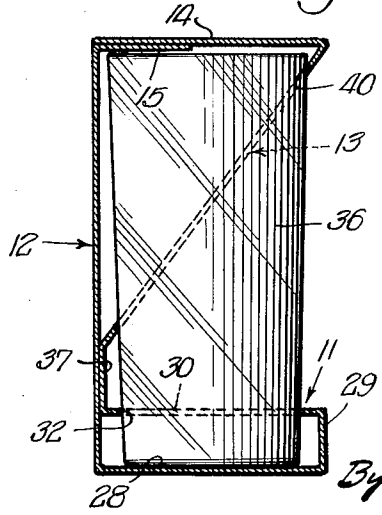


Fig. 3



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Fig. 4

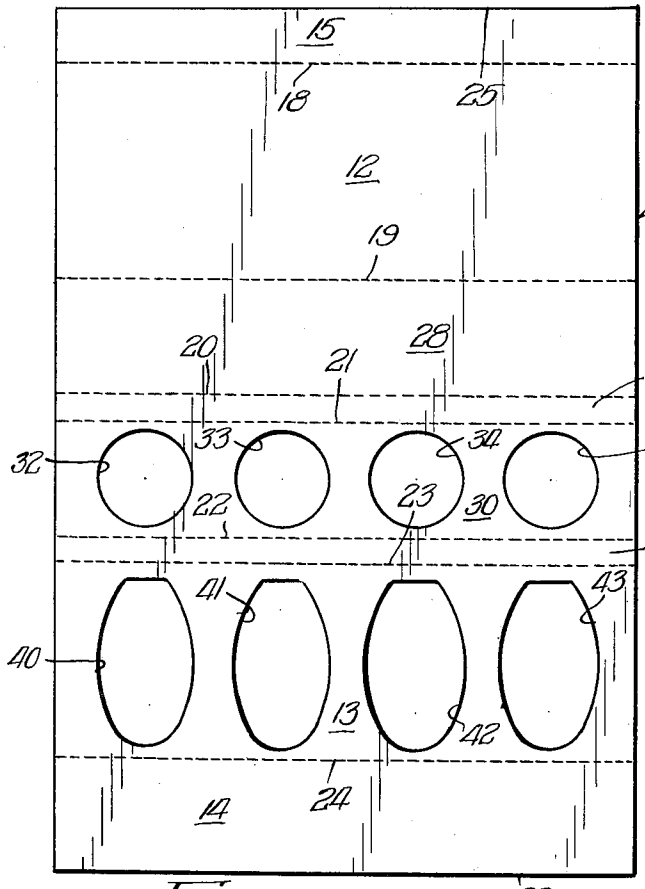


Fig. 5

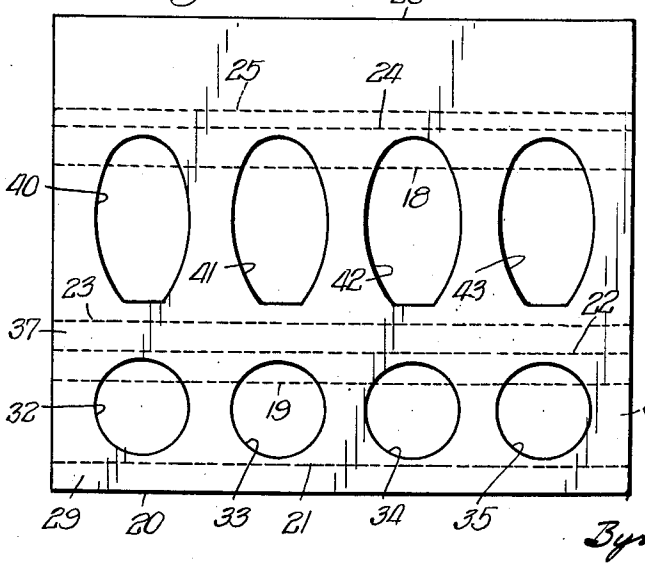
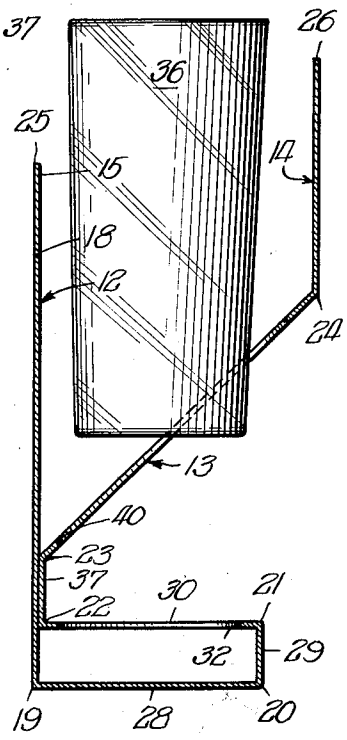


Fig. 6



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DISPLAY AND SHIPPING PACKAGE

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Fig. 7

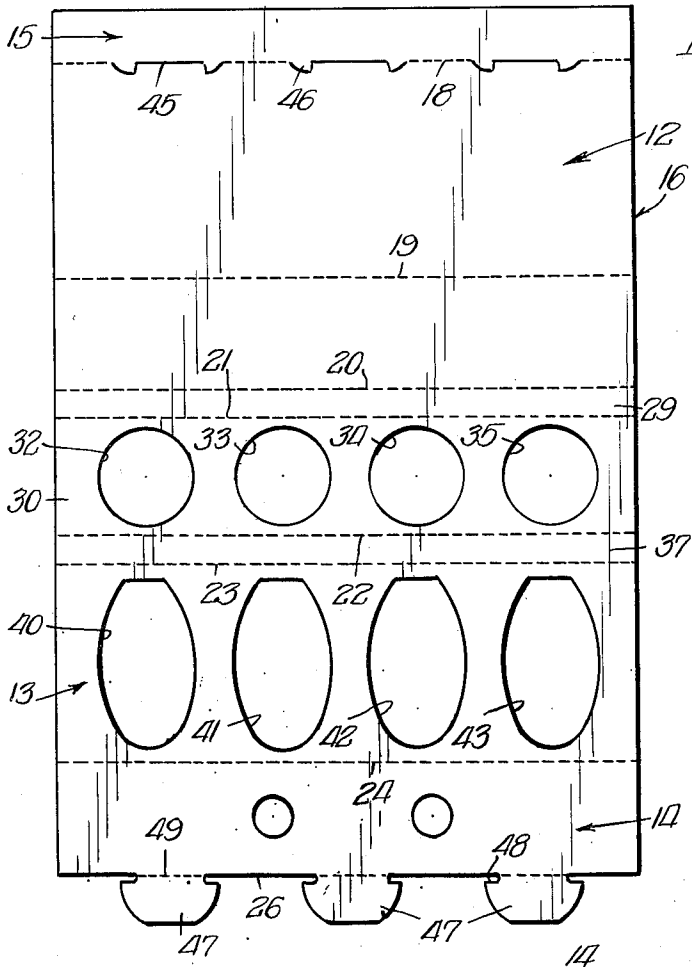


Fig. 8

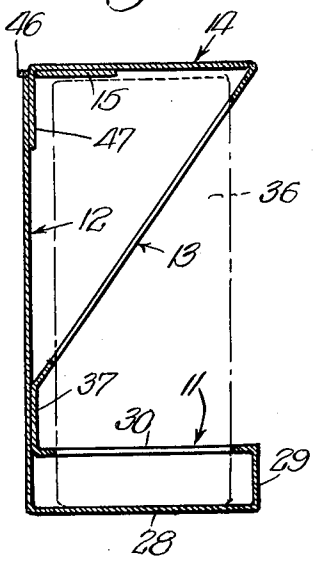
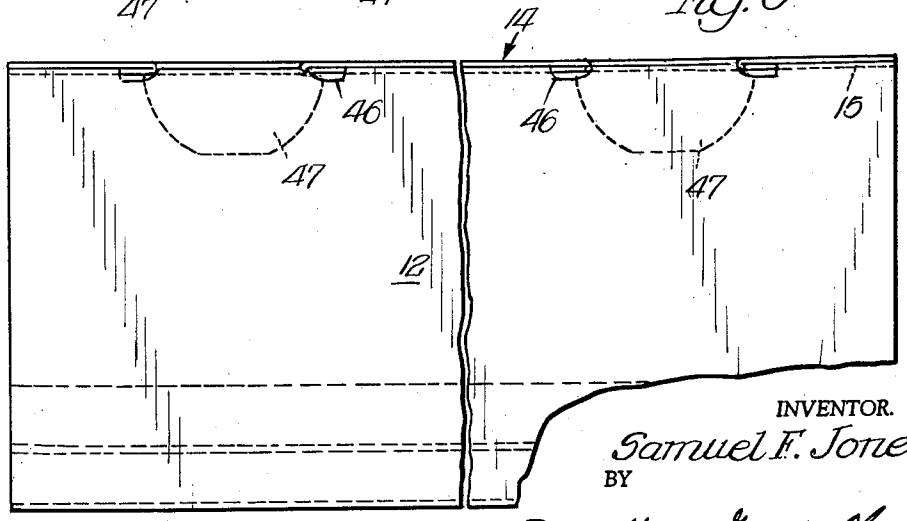


Fig. 9



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3,070,222

DISPLAY AND SHIPPING PACKAGE

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2 Claims. (Cl. 206—45.14)

The invention relates to a carton, package or container for shipping and display purposes and has reference in particular to a novel and improved holder for fragile articles and the like which will fully protect the articles during shipment and which will additionally function as a display carton following shipment without requiring removal of the articles or their reassembly in the holder.

An object of the invention resides in the provision of a shipping and display package that can be formed from a single die cut blank of suitable material by relatively simple folding and gluing operations and which can be filled, either manually or automatically, with the said articles in advance of the final closing of the lid or top wall of the package.

Another object of the invention is to provide a package for shipping and for displaying fragile articles such as glassware that can be formed from a single blank and then partially folded and secured prior to supplying the blanks to the manufacturer of the glassware or other articles for use in packaging and shipping the same. However the partially folded blanks are flat so that they require the minimum of storage space and further the partially folded blanks can be easily set up for receiving the articles to be assembled therewith.

Other objects are to provide a package for the purposes described which can be filled with said articles by merely dropping the articles into aligned openings provided by the package; to provide a package which will give maximum protection during shipping since the articles will be securely held and retained by the package in upright position; and a package which will have additional use for displaying the articles.

A further object is to provide a container or package wherein the articles will be held by the package adjacent their bottom and top with full visibility of the center portion of the articles and with complete protection on both sides as a result of outwardly extending package edges.

Another object is to provide a shipping and display package which will have openings in the top wall or lid for ease in lifting or handling the complete package.

Another object is to provide a shipping and display package that can be set up from a single die cut blank and which when set up and containing the articles for shipment will comprise a rigid package wherein the articles are firmly and securely held by reason of a diagonal wall having openings through which the said articles extend.

With these and other objects in view, the invention may consist of certain novel features of construction and operation as will be more fully described and particularly pointed out in the specification, drawings and claims appended thereto.

In the drawings which illustrate an embodiment of the invention and wherein like reference characters are used to designate like parts—

FIGURE 1 is a perspective view of a complete package embodying the improvements of the invention and which is illustrated as containing glass tumblers for shipment and display;

FIGURE 2 is a perspective view of the package of FIGURE 1 showing the lid in open position for inserting the articles in the package;

FIGURE 3 is a vertical sectional view taken substantially along line 3—3 of FIGURE 1;

FIGURE 4 is a plan view of a die cut blank which when set up produces the package of the invention;

FIGURE 5 is a plan view of the blank partly folded and secured, the same comprising the first steps in setting up the blank;

FIGURE 6 is a vertical sectional view similar to FIGURE 3 but illustrating the manner of inserting the articles into the open top package.

FIGURE 7 is a plan view of a modified form of die cut blank such as may be used in producing the package of the invention;

FIGURE 8 is a vertical sectional view of a package produced from the blank of FIGURE 7; and

FIGURE 9 is a detail view illustrating the interlocking members for the top and back walls of the package.

The package, container or carton 10 as disclosed in FIGURE 1 essentially consists of a hollow bottom or base portion 11, a back or rear wall 12, a diagonal wall 13 and a top wall 14 adapted to have overlapping relation with the top end flange 15. The hollow base portion is formed in part by the rear wall 12 and following insertion of the articles to be shipped and displayed by the package the same is closed by gluing or otherwise securing the top wall 14 to the top end flange 15. Upon closing the package in this manner the articles are securely held in place, being retained by the hollow base portion of the package at the bottom and by the diagonal wall 13 and the top wall 14 adjacent the top of the articles. However, intermediate the top and bottom the said articles are fully visible for display purposes.

The rectangular blank 16, FIGURE 4, of paper-board, cardboard or other suitable material and from which the carton is formed, is provided with a plurality of fold lines to form walls or panels and certain of the same are provided with openings. More particularly the blank 16 is creased or scored to form the fold lines 18, 19, 20, 21, 22, 23 and 24 which extend transversely of the blank 16 although the fold lines are disposed longitudinally as regards the completed package, and of course it will be observed that the fold lines are all parallel to each other and parallel to the edges 25 and 26 of the blank.

The portion of the blank between fold lines 18 and 19 forms the back or rear wall 12 of the package. The area between fold lines 19 and 20 comprises the bottom wall 28 of the hollow base portion previously identified by numeral 11. Between fold lines 20 and 21 a panel is formed which serves as the front wall 29 of the base portion and the top wall 30 of said portion consists of the area between fold lines 21 and 22. The openings 32, 33, 34 and 35 are formed in the top wall 30 by die cutting the blank and these openings are circular for receiving the base portions of the tumblers 36 as best shown in FIGURE 1. Openings of other shapes may be employed depending on the shape of the articles to be inserted in the package.

A second panel 37 is formed by the fold lines 22 and 23 and this panel may be termed the secured or glued panel since it is suitably adhered to the back wall 12 as is clearly evident from the showing in FIGURES 1, 2 and 3. The diagonal wall 13 comprises the area of the blank between fold lines 23 and 24 and said diagonal wall has the elliptical openings therein, namely 40, 41, 42 and 43. The top wall 14 is formed by the area of the blank between fold line 24 and the edge 26 whereas the end flange 15 is formed by the fold line 18 and the edge 25.

The first step in setting up the present carton, container or package is to fold the blank along the fold line 20 and adhesively secure the panel 37 to the back wall 12. The securing of panel 37 to the back wall can be accomplished by a gluing operation such as may be performed by any of the commercial gluing machines, and

when this operation is completed the blank has the form as shown in FIGURE 5. In this partially set up condition, the blanks can be stacked one on top of the other and shipped in stacked relation to the manufacturer of the glassware or other article to be inserted in the container. Although partially set up the blanks are still in a flat condition and thus they can be stacked one on the other so that they occupy a minimum of space. Also it is relatively simple to complete the additional bending operations for completing the setting up of the blank.

To form the hollow base portion of the package the folding or bending of the same is completed along lines 19, 20, 21 and 22. The panel 29 accordingly becomes the front wall of the base portion, the same being disposed parallel to the back wall 12, and the walls 28 and 30 become, respectively, the bottom and top of the hollow base portion. The next operation in setting up the package is to position wall 13 diagonally by bending the wall along fold line 23. With the wall 13 in a diagonal position it will be observed that the elliptical openings such as 40, 41, etc. are located above and in substantial vertical alignment with openings 32, 33, etc. Accordingly with the package set up to this extent it is possible to insert the articles in the aligned openings which merely requires that they be dropped in through the open top of the package. The operation can be performed by hand or in an automatic manner. With the tumblers 36 or other articles properly positioned in the package the same can now be closed by bending the top wall 14 along fold line 24 and by similarly bending the top flange 15 along fold line 18. By a gluing operation, such as may be performed on a conventional machine, the top wall 14 is glued in overlapping relation to side flange 15 and upon completion of this operation the package is closed and the articles are locked in place in the package, being firmly and securely retained thereby in an upright position.

The shipping and display package of the invention is relatively simple in construction and the same has the advantage that it can be formed from a single die cut blank by a series of folding operations. The articles are inserted in the package by being dropped into place and the said package in its completed form will give maximum protection to the articles to protect against breakage during shipment. The articles are firmly and securely held in spaced relation and damage to the articles is additionally prevented by the fact that the said package provides outwardly extending package edges. In other words the articles are locked in place within the package and the same provides extending portions both top and bottom which have a cushioning action to prevent the impact from any damaging blows from being transmitted to the article.

An additional advantage of the present carton, container or package resides in the provision of the diagonal wall which extends upwardly and outwardly from the rear wall to retain the upper portion of the articles. In fact the articles are engaged by the said diagonal wall to the maximum extent possible while at the same time providing adequate visibility to the articles for display purposes. Due to the sloping angle of the diagonal wall 13 the openings formed therein such as 40, 41, etc. will be elliptical for practically all the articles to be assembled with the package whether the same be tumblers, cans, bottles or tubes. The slope of the said diagonal wall also materially strengthens the package in its completed form since it ties the outer edge of the top wall to the back wall at a location adjacent the hollow base portion.

The modification of the invention as illustrated in FIGURES 7, 8 and 9 differs from the carton shown in FIGURES 1, 2 and 3 only in the means employed for fastening the top wall 14 to the side flange 15. The blank 16 of cardboard or other suitable material is scored or creased along parallel fold lines 18, 19, 20, 21, 22, 23 and 24, all as previously described. When the blank is folded along said lines the panels 29 and 37 and the walls 12, 13, 14, 28 and 30 are formed. Openings such as 32, 33, 34 and 35 of circular or other shape are die cut in the top wall 30 of the base portion. Elliptical openings such as 40, 41, 42 and 43 are formed in the diagonal wall 13.

In this modification the fold line 18 is alternately cut and scored in order to form slits in combination with tongues for receiving tabs provided by the top wall 14. By the insertion of the tabs in the cut slits and the interlocking therewith of the tongues, the top wall 14 can be releasably secured to the top side flange 15 to close the package and lock the articles in place in the same manner as described with the gluing operation of FIGURES 1 to 3 inclusive. Slits identified by numeral 45 in FIGURE 7 extend transversely across the blank 16 and the said slits alternate with scored portions previously identified by the numeral 18. The tongues 46 are cut from the material of the blank simultaneously with the slits 45 and the length of the slits 45 is determined by the size of the tabs 47. It will be observed from FIGURE 7 that the tabs 47 are formed integral with the top wall 14, the same constituting an extension of the edge 26. The tabs 47 are cut back as at 48 immediately adjacent the edge 26 to form notches for receiving the tongues 46 whereby the tabs and the tongues have said interlocking relationship to hold the top wall in secured relation with the flange 15. The tabs 47 are also scored at their base to provide a fold line therefor and which is in alignment with the edge 26.

The blank as shown in the modification of FIGURES 7, 8 and 9 is partially set up in the same manner as described with the panel 37 being glued to the back wall 12. When it is desired to insert articles in the carton or containers, the blank is then completely set up with the exception of the final folding operations on the top wall and top flange. These folds are not made until after the articles have been inserted in the package and then the package is closed by bending the top wall 14 on the fold line 24 and by similarly bending the top flange 15 on the fold line 18. The tabs 47 are then inserted in the slits 45 which results in causing an interlocking relation to take place between the notches 48 and the tongues 46. Thus the parts are securely held to maintain the package closed.

The invention is not to be limited to or by details of construction of the particular embodiment thereof illustrated in the drawings, as various other forms of the device will of course be apparent to those skilled in the art without departing from the spirit of the invention or the scope of the claims.

What is claimed is:

1. In a shipping and display package for fragile articles, said package being formed from a single blank of suitable material and including a vertical back wall when the package is in upright position, a hollow base portion formed in part by the back wall and providing an imperforate bottom wall and a spaced top wall having openings therein, said hollow base portion extending forwardly at right angles from the back wall, said blank providing an intermediate strip connected to the rear edge of the top wall and which is adhesively secured to the back wall, said blank extending upwardly and forwardly from said adhesively secured strip to provide a diagonal wall extending above the base portion, openings in said diagonal wall in alignment respectively with those in the top wall of the base portion for receiving articles to be contained by the package, and a closing top wall for the package, said closing top wall connecting the top of the diagonal wall with the top of the rear wall.

2. A shipping and display package for fragile articles as defined by claim 1, wherein said top wall is formed by an end panel of the blank and which has connected relation with the diagonal wall, and wherein the openings

in the top wall of the base portion and in the diagonal wall are dissimilar in size and shape.

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