July 18, 1967 J. S. GALLO 3,331,547

TOTE BOX

Filed May 25, 1965 2 Sheets-Sheet 1

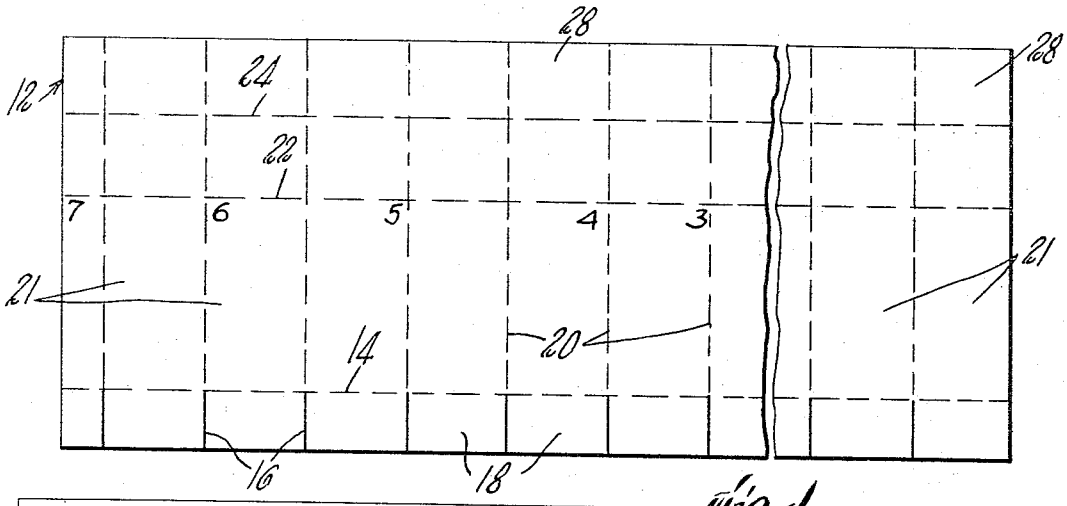


Fig. 1.

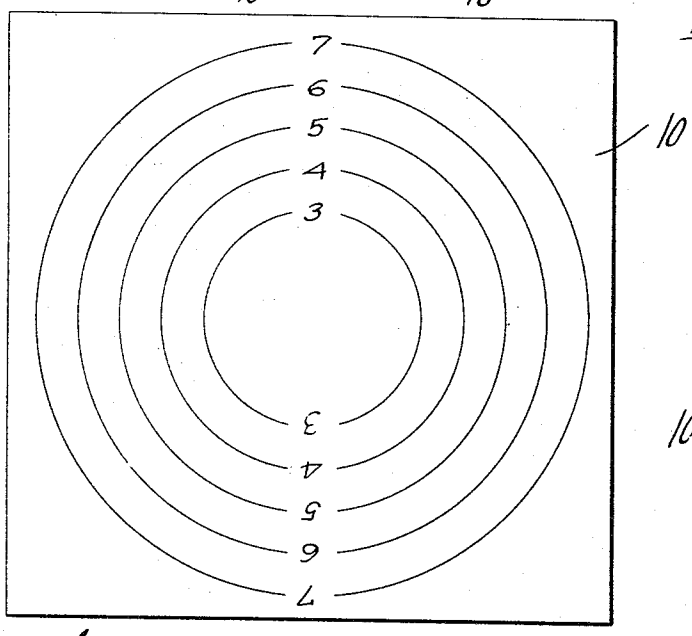


Fig. 2.

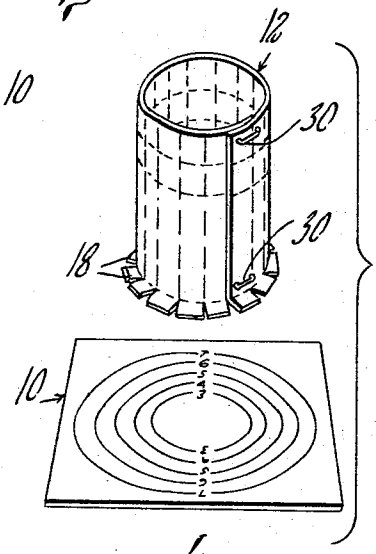


Fig. 3.

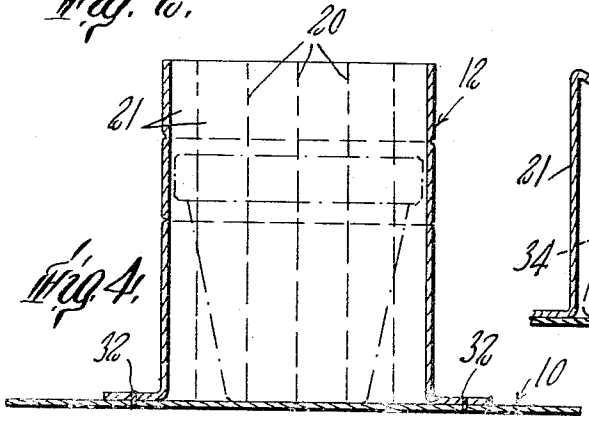


Fig. 4.

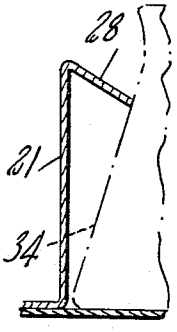


Fig. 5.

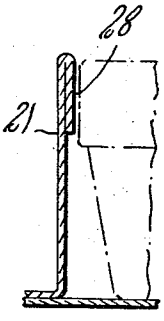


Fig. 6.

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TOTE BOX

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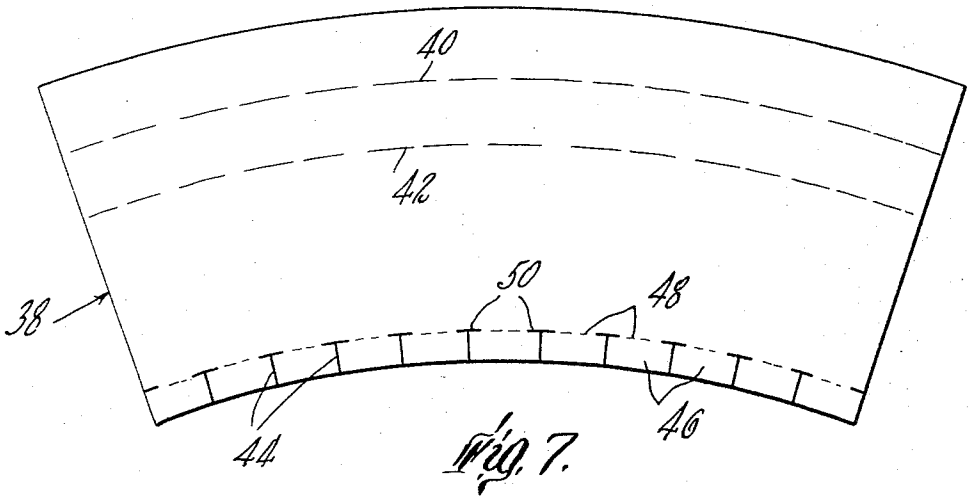


Fig. 7.

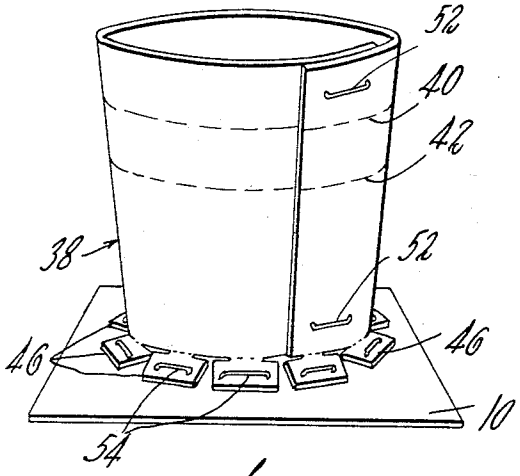


Fig. 8.

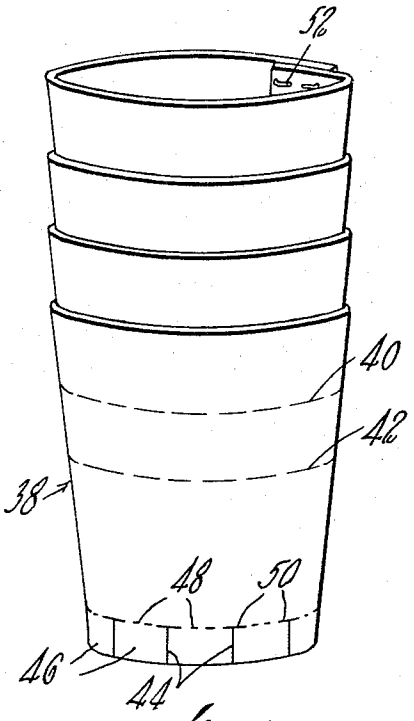


Fig. 10.

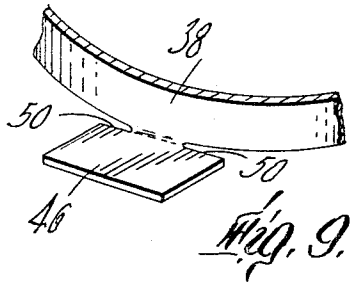


Fig. 9.

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3,331,547

TOTE BOX

Joseph S. Gallo, 938 East St., Walpole, Mass 02081

Filed May 25, 1965, Ser. No. 458,606
4 Claims. (Cl. 229—23)

The present invention relates to an improved tote box for potted plants and the like, and more particularly to a tote box kit which is readily assembled as a part of a packaging operation to fit a pot or other container of any specified size or shape.

It is a principal object of the invention to provide a novel and improved tote box, and a kit from which my improved tote box is readily assembled as a packaging operation during which the elements of the box are adjusted to the size of the article to be packaged, and are fastened together to produce a tote box which is accurately fitted around the contained pottend plant or similar packaged item.

It is a further object of the invention to provide a tote box kit comprising a rigid pasteboard bottom element and a pasteboard side wall strip which are especially constructed and arranged to be assembled in accordance with the size and shape of the packaged item to provide a sturdy, closely fitting tote box therefor.

With these and other objects in view as may hereinafter appear the several features of the invention will be readily understood by one skilled in the art from the following description taken in connection with the accompanying drawing in which:

FIG. 1 is a plan view of a pasteboard side wall strip forming part of the tote box kit;

FIG. 2 is a plan view of the pasteboard bottom element of said tote box kit;

FIG. 3 is an exploded perspectivee view illustrating the flat bottom element and the sidewall strip which has been bent along the panel separating scores to a cylindrical shape preparatory for fastening to the bottom element;

FIG. 4 is a side section of my improved tote box assembly assembled on guide line 4 of FIG. 2 substantially as shown in the exploded perspective view FIG. 3, and with a potted plant supported therein;

FIG. 5 is a fragmentary section similar to FIG. 4 illustrating an arrangement of tote box supporting a vase of generally conical shape;

FIG. 6 is a fragmentary section similar to FIGS. 4 and 5 showing the upper section of the side wall folded down to reduce the height thereof;

FIG. 7 discloses a modified side wall strip;

FIG. 8 is a perspective view of the assembled modified tote box;

FIG. 9 is a fragmentary view illustrating the outwardly bent bottom tabs as shown in FIG. 8; and

FIG. 10 is a perspective view of the nested side wall assemblies.

Referring to the drawing the tote box which forms the subject matter of the invention comprises a flat bottom element **10** and sidewall strip **12** which is so shaped and scored as to be readily fitted around the potted plant or similar item to be packaged and finally to be secured in place on the base **10**. The base element and side wall strip are both made of pasteboard, preferably a reasonably stiff grade of cardboard, which is readily scored and bent to a desired shape, and is readily fastened in place as by stapling to provide an inexpensive, and at the same time, a sturdy tote box of good quality. While cardboard is preferably employed it will be understood that any material having qualities comparable to the cardboard disclosed may be employed, and is intended to be included

within the definition of the term pasteboard as used herein.

The bottom member **10** preferably consists of a stiff grade of cardboard which may be of any suitable shape such as the square illustrated and which must in any event be large enough to provide a surface outside the sidewall enclosure to permit the outwardly bent bottom tabs to be engaged and stapled thereto. A series of concentric circles numbered consecutively from **3** to **7** marked on the top face of the bottom element **10** can be compared with the diameter of the article to be packaged, and serve as an indication for shortening the side wall strip, and for positioning the same for stapling to the bottom element **10**.

The side wall strip **12** shown in FIG. 1 which forms a further element of my improved tote box is scored along a line **14** lengthwise of the strip, this score representing the bottom edge of the side wall when assembled with the base. A series of cuts **16** are made into the bottom edge of the side wall strip, each cut terminating at the point of intersection with the lengthwise bottom marking score **14**. The cuts **16** are spaced from one another to provide tabs **18** of a convenient size to accept a standard staple.

In the preferred construction shown a series of scores **20** are formed in the side wall strip **12** extending from the base score **14** to the upper side of the strip thus marking the side wall strip off into a series of panels **21**. These scores permit the strip to be readily bent at each said score **20** so that the strip is molded into a multisided generally circular shape. It will be noted that the cuts **16** are so placed that each alternate cut **16** forms a continuation of a score **20**. With this construction two adjacent tabs **18** are hinged to each of the panels **21** so that each individual tab **18** may be readily bent to an outwardly facing right angle position with respect to the adjacent panel **21** after the sidewall strip has been bent along the scores **20** and secured in a substantially cylindrical shape. Two additional scores **22** and **24** are provided along the length of the strip **12**, spaced from one another and from the upper edge of the strip. These scores permit an upper portion of the sidewall to be folded inwardly before it is bent to a cylindrical shape to lessen the height of the sidewall if so desired. For the support of containers having irregular shapes, as for example the container **26** illustrated in FIG. 5 having a generally conical shape, that segment **28** of each panel **21** to be folded inwardly is separated from the adjacent panel segments **28** along the dividing scores **20** from the upper edge to the bending point at the score **22** or **24** as the case may be, and is then bent downwardly to a variable extent, which may, for example, be slightly more than a right angle, so that when the side wall strip is rolled and fastened into a cylindrical form these individual segments **28** will project inwardly into engagement with the irregularly contoured container **26**.

The operation of assembling the base and sidewall strip elements of my tote box kit into a fully assembled tote box which is accurately fitted to a potted plant or similar article to be packed will be described briefly as follows:

The florist will have at hand a supply of cardboard bottom elements and sidewall strip elements and a conventional staple gun. The article to be packaged is now compared with the ring markings **3** to **7** on the bottom element **10** in order to determine the diameter of the tote box and sidewall which when assembled will most closely fit the article. A portion of the sidewall strip is now removed by tearing off along that score **20** having a marking corresponding with the marking of the ring on the bottom element chosen as providing a sidewall enclosure of the correct size. The sidewall strip **12** is now bent

along each of the scores **20** into a multi-sided generally cylindrical shape, and the two ends of the sidewall strip are now fastened together by staples **30** as shown in FIG. 3. The bottom tabs **18** are bent outwardly, and the cylindrically formed sidewall strip is positioned on the bottom member **10**, being fastened thereto by staples **32** as shown in FIG. 4.

In the event that it is proposed to package a conically shaped vase such as that suggested at **34** in FIG. 5 the upper end sections **28** of the panels **21** are separated along the scores **20**, and are then bent downwardly and inwardly so that they will be brought into abutting relation to the surface of the packaged vase. In the event that a tote box having lower sidewalls is desired the upper edge sections **28** of the several panels **21** may be bent downwardly and inwardly as a unit so that these sections **28** will occupy the folded down position suggested in FIG. 6.

FIGS. 7 to 10 inclusive illustrate a modified form of tote box which includes the base and side wall strip adapted to be bent and stapled together in a generally cylindrical shape of the desired diameter, with bottom tabs adapted to be bent outwardly for stapling to the base. FIG. 7 discloses a sidewall strip **38** which is arcuately shaped to be molded or turned into the shape of a slightly tapered cylinder. As here shown the transverse scores **20** provided with the side wall strip **12** of FIG. 1 have been omitted. Two longitudinal scores following the arcuate outline of the strip are provided at **40** and **42** along which the upper edge portion of said sidewall can be torn off to adjust the height of the tote box.

A series of transverse cuts **44** formed in the longitudinal bottom edge of the side wall strip **38** provide a series of bottom tabs **46** by means of which the side wall strip can be stapled to the flat bottom element **10**. In order that the tabs may be readily bent outwardly in relation to the continuously rounded side wall element of the tote box there is provided a longitudinally extending score **48** which cuts across the base of each tab **46**. Further there is provided adjacent the base of each cut **44** a short transverse cut **50** which substantially reduces the length of the hinge about which each tab **44** is bent. The length of hinge is thus made sufficiently short so that the tab **44** can be bent at right angles with relation to the cylindrical surface of the sidewall element within the stretch tolerance of the scored pasteboard.

The tote box of FIGS. 7 to 10 is assembled for use in the same manner as that described for the construction of FIGS. 1 to 6. The sidewall strip **38** is bent into the shape of a slightly tapered cylinder as shown in FIGS. 8 and 10, the two ends being fastened together by staples **52**. The bottom tabs **46** are bent outwardly as shown in FIGS. 8 and 9, and the cylindrically formed sidewall **38** is then attached by staples **54** to the bottom member **10**. With the modified construction it is contemplated that the tote box may be partially assembled by the manufacturer to the extent that the arcuate side strip **38** is bent into the circular shape and the staples **52** are inserted to provide a preassembled sidewall unit. A series of such assembled side strips **38** may now be nested in the manner shown in FIG. 10. The florist is then required only to select the proper size of said wall assembly, and to secure said sidewall assembly to a base member **10** by means of the staples **54**.

The invention having been described what is claimed is:

1. A tote box kit adapted for assembly as a bottom and sidewall packaging enclosure for potted plants and similar articles having, in combination, a flat pasteboard bottom element providing a sidewall enclosing area and a fastening receiving area exterior to and surrounding said sidewall enclosing area, said flat pasteboard element being marked with a series of concentric sidewall locations enclosing areas of different sizes, and a pasteboard sidewall strip of a length to extend entirely about said enclosed area with the ends thereof overlapping, having a series of transverse cuts from one longitudinal edge of said sidewall strip providing bottom edge tabs depending from said area enclosing sidewall strip to be bent outwardly therefrom, said sidewall strip being marked with indicia corresponding to each of said concentric sidewall locations indicating the length of said strip suitable for each said sidewall location, fastening means for fastening together said overlapping sidewall strip ends, and fastening means for securing the said outwardly bent tabs to the supporting area of said bottom element.

2. A tote box kit according to claim **1** in which the pasteboard sidewall strip is formed with spaced transverse scores for bending to form said enclosure and providing panels therebetween, transverse cuts coinciding with the lower ends of said transverse scores, said transverse scores providing bottom edge tabs depending from said panels, and a bottom edge score extending lengthwise of said sidewall strip at the base of said tabs providing a hinge about which said bottom edge tabs are bent outwardly.

3. A tote box kit according to claim **2**, in which a score is formed in said sidewall strip lengthwise thereof spaced from the upper edge providing with the upper end portions of said transverse scores separable upper end sections of said panels adapted for bending inwardly.

4. A tote box kit according to claim **1** in which the pasteboard sidewall strip is a cardboard sufficiently flexible to be disposed about said enclosed area along a curved path, a score is formed in said sidewall strip across the base of said tabs, and short cuts extend inwardly from the edges from each edge of said tabs along said score thereby forming for each tab a short hinge on which said tab is bent outwardly relative to the curved position of said sidewall strip about said enclosed area.

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JOSEPH R. LECLAIR, *Primary Examiner.*

R. PESHOCK, *Assistant Examiner.*