HOLDERS, METHOD OF MAKING HOLDERS AND FRAME FOR ACCOMMODATING HOLDERS

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ABSTRACT
Described is a holder for accommodating an aqueous solution and cut flowers, plants, or the like. The holder includes: a flexible film bag sized and shaped to fit within a flower or other bucket for accommodating a plurality of flower stems, the flexible film bag having, on a first end, an opening for receiving the plurality of flower stems, and, a rigid or semi-rigid ring non-detachably affixed about (either internally or externally) the circumference of the flexible film bag. A method of making the holder and a frame for accommodating holders are also disclosed.
HOLDERS, METHOD OF MAKING HOLDERS AND FRAME FOR ACCOMMODATING HOLDERS

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of U.S. Provisional Patent Application Ser. No. 60/901,944, filed Feb. 16, 2007, for “HOLDERS, METHOD OF MAKING HOLDERS AND FRAME FOR ACCOMMODATING HOLDERS,” the entire disclosure of which is hereby incorporated herein by this reference.

TECHNICAL FIELD

[0002] The invention relates generally to packaging for flowers and associated displays, and, in particular, to holders for the shipment, storage, and display of plant materials, cut flowers, and the like, including methods of making holders and frames for accommodating holders.

BACKGROUND OF INVENTION

[0003] Typically, cut flowers are currently displayed, for example, in grocery stores on racks containing elongated flower buckets, filled with water or nutrient solution. The flowers received, are then placed in the buckets for display along with the solution. While suitable for many purposes, there is room for improvement for such conventional display systems.

[0004] Efforts have been made in this regard. For example, U.S. Pat. No. 3,973,356 to Schacht (Aug. 10, 1976), the contents of the entirety of which are incorporated herein by this reference, is directed to a flower caddy for providing a protective enclosure for the display of cut flowers. The caddy includes a receptacle and interlocking cover. The receptacle can include a water impervious lining material so that a water reservoir can be maintained within the receptacle for the cut flowers.

[0005] More recently, U.S. Pat. No. 6,752,270 B1 to Helsloot et al. (Jun. 22, 2004), the contents of the entirety of which are incorporated herein by this reference, describes a long-stemmed floral packaging utilizing “vases” to hold flowers. In a “second embodiment” of the packaging, the vases can consist of flexible film bags, the top edge of each of which is wrapped over a ring and thus removably fixed in place. In a “third embodiment”, the top edges of film vases are wrapped over a ring and held in place by an elastic band. The elastic band extends over a vertical part of the L-shaped ring. The two ends of the top edges of the film vases can also be provided with two or more holes that fit over lips so that the film vases are detachably fixed to a tray for holding the flowers.

[0006] In still a fourth embodiment, Helsloot et al. describes that the top edge of the film vase is attached by means of an elastic band to a separate ring and a horizontal section bears on a horizontal edge of the boundary of an annular opening in the tray. The elastic band is in a concave rounding in the ring.

[0007] Similarly, U.S. Patent Pub. No. US 2003/0078435 A1 to de Puget et al. (Apr. 24, 2003), the contents of the entirety of which are incorporated herein by this reference, describes a “holder” for flowers consisting of a flexible bag for accommodating water. The holder is fixed to a platform by means of a ring over which the top edge of the holder has been wrapped and which has been fastened to the platform, or the platform has, bordering the opening therein, two L-shaped lips opposite one another, over which lips the top of the holder has been wrapped and fastened by means of an elastic band.

[B0008] While these conventional packaging systems are fine for what they achieve, they still have drawbacks. For instance, the flexible bags are not necessarily sized for fitting within standard flower buckets found in, for example, the United States. Further, to remove the bags from such a system after shipping and for display would typically involve, detaching an elastic band or other device from around the top of the bag, or detachment of the holes formed in the top portion of the bag from the lips of the tray.

BRIEF SUMMARY OF INVENTION

[0009] Described is a holder for accommodating an aqueous solution and cut flowers, plants, or the like. The holder includes: a flexible film bag sized and shaped to fit within a flower bucket or other bucket for accommodating a plurality of flower stems, the flexible film bag having, on a first end, an opening for receiving the plurality of flower stems, and, a rigid or semi-rigid ring non-detachably affixed about (either internally or externally) the circumference of the flexible film bag.

[0010] In embodiments of the invention, the holder further includes one or more handles, extending upwardly from the ring. Further, in certain embodiments, the holder has, at its closed end, a gusset to allow the volume to increase to accommodate the flowers and water. Also in certain embodiments, the holder is tapered downwards toward the closed end.

[0011] A method of making a holder includes folding an hour-glassed shaped folded single piece of flexible film so as to accommodate a gusset by including a sigma shaped fold (sigma in cross-section) in the middle of the hour-glassed shaped folded single piece of flexible film; heat sealing the folded piece of flexible film along two different lateral edges; and heat sealing the edges to form seams while leaving an opening at one end of the resulting bag. Then, a rigid or semi-rigid member is affixed to either the interior or exterior of the opening’s circumference by permanent means. Afterwards, handles may be affixed to the rigid or semi-rigid member.

[0012] Further described is a tray for accommodating holders. The tray includes a primary support element wherein the primary support element has at least one opening to receive at least one holder. The primary support element is adjustable vertically and can be adjusted so that the bottom of the at least one holder is at least partially supported by the floor of the frame. In some embodiments the tray will have at least one second vertically adjustable support element.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is a perspective view of a holder in accordance with an embodiment of the invention.

[0014] FIG. 2 shows a cut away, side view of a tray for accommodating holders.

[0015] FIG. 3 shows a piece of flexible film for use in a process of manufacturing the holder in accordance with the embodiment of the invention.

[0016] FIG. 4 is a top view of a piece useful for forming a rigid or semi-rigid member in accordance with the embodiment of the invention.
FIG. 5 is a cut away side view of a flower bucket containing the holder.

FIG. 6 is a perspective view of a holder in accordance with another embodiment of the invention.

FIGS. 7A and 7B depicts an insert frame in accordance with yet another embodiment of the invention for use with conventional “wet pack” transportation materials.

FIG. 8 is a perspective view of a holder in accordance with a further embodiment of the invention.

FIG. 9 shows a cut away side view of an adjustable tray for accommodating holders.

DETAILLED DESCRIPTION OF THE INVENTION

Reference will now be made to the Figures, wherein like numerals refer to like parts throughout. It will be appreciated that these Figures are not necessarily drawn to scale.

FIG. 1 shows a perspective view of a holder 20 in accordance with an embodiment of the invention. The holder 20 includes a generally elongate flexible film bag portion 22 for containing the cut flowers, bouquets, plants stems, and an aqueous solution (e.g., water or an aqueous solution containing a fertilizer or plant preservative). The flexible film bag portion 22 has an opening 24 with a circumference. The circumference, for example, may typically vary from about fifteen (15 cm) to about twenty-five inches (64 cm) the dimension of which is customizable or conformable to standard bucket or pot openings. Extending about the circumference is a rigid or semi-rigid ring shaped member 26, which holds the opening 24 open. The rigid or semi-rigid ring shaped member may be affixed (e.g., by gluing, heat sealing, stapling, or other such affixing methods) either within or outside of the circumference of the bag portion 22, or between a lapped over flap of the bag portion 22.

As herein described, the terms “rigid” or “semi-rigid” denotes a quality of the material used to make the ring shaped member structurally supportive in relationship with the bag portion. In another aspect the terms “rigid” or “semi-rigid” provide for a relative self-supporting material used to make the ring shaped member relatively supportive of the bag portion, particularly when the bag portion is subjected to or placed under the influence of gravitational forces either caused by the contents therein or the by bag portion’s structure.

In the embodiment shown in FIG. 1, attached to the ring shaped member 26, and extending away from the flexible film bag, are two optional handles 28 and 30, which may be made of the same material as the rigid or semi-rigid ring shaped member. The handles 28 and 30, beneficially, are sized to extend above a flower bucket, or at least above the top rim of the ring shaped member, in which the holder 20 is to be placed so that the holder 20 is easily removed from or placed in a flower bucket or other suitably sized device.

Opposite the opening 24, the flexible film bag portion 22 may optionally include a gusset arrangement 32 so that the flexible film bag can expand after being filled with water or other aqueous solution.

The flexible film bag portion 22 is sized to be received within a flower bucket 33 (FIG. 5). Conventional flower buckets for use with the invention are readily commercially available. For instance, an HM20-916SZ3S36 available from Hernando Moss, Inc. of Hernando, Fla., US works with the holders. In the case of such a flower bucket, the dimensions of the holder 20 may be about nine inches (22 cm) in height by about sixteen inches (41 cm) at the top and by about ten inches (26 cm) at the bottom, is this respect, the holder is tapered, e.g., as shown in FIG. 5. Beneficially such tapering allows for more adequate interaction with the flower bucket.

Tapering the holder 20 may be accomplished by heat sealing two different portions of a somewhat hour-glass shaped piece of flexible film, for example, by symmetrically folding the piece of flexible film about its “center” and then sealing edges 34 and 36. The gusset may be accommodated by including a sigma shaped fold (sigma in cross-section) in the “bottom” of the holder before heat-sealing the edges 34 and 36 forming the sealed seams. An opening 24 is left as such on the second end of the resulting bag. The forming of bags having openings is known to a person having skill in the art. While the bag portion 22 includes edges that are sealingly seemed together, it may have fewer or greater number of edges than the two edges 34 and 36 herein illustrated.

After the heat sealing of the edges 34 and 36 to form the sealed seams and optional gusset, the rigid or semi-rigid ring shaped member 26, as shown in FIG. 4, may be affixed to either the interior or exterior of the opening’s circumference (e.g., by gluing, heat sealing, stapling or other such permanent means for affixing the rigid or semi-rigid shaped member 26 to the flexible bag portion to form a holder). The optional handles 28 and 30 may now be formed to the holder 20 in like fashion.

The flexible film bag portion 22 may be made from a water proof, printed, non-printed, transparent flexible film such as nylon, propylene, polypropylene and vinyl, for example, and may further include materials such as fiber reinforced plastics, paper materials, or plastic coated paper materials. An exemplary shape of the material from which the flexible film bag portion 22 may be formed is shown in FIG. 3. While the bag portion 22 is being made from an hour glass shaped sheet of material it is also recognized that other shapes are within the scope of this invention.

It is to be recognized that the bag portion 22 while made from a transparent material, it may also be made from a translucent, opaque or other material, for example, without limitation. While the bag portion 22 is shown as being made from a single sheet of material, it is recognized that the bag portion may be conveniently made from two material sheets or multiple material sheets.

Also, the rigid or semi-rigid ring shaped member 26 may be made from a semi rigid material such as polypropylene, for example, and without limitation. The handles are also optionally made of the same or similar material.

FIG. 8 is a perspective view of a holder 20 in accordance with a further embodiment of the invention. The holder 20, comprising a rigid or semi-rigid ring shaped member 78, includes a tapered exterior surface 80 and an interior surface 82. The tapered exterior surface 80 and the interior surface 82 forms a lip that may receive, for example, a metal or other rigid material ring shaped member 84. The ring shaped member 78 may be affixed to the flexible film bag portion 22 by the ring shaped member 84 by folding the open end of the bag portion 22 upon the ring shaped member 84 and then affixing the ring shaped member 84 to the ring shaped member 78 (e.g., by clamping, gluing, heat sealing, stapling, or other such means).

The rigid or semi-rigid ring shaped member 78 depicted in FIG. 8 may be made from a material such as nylon or other suitable material particularly suited to interact with the ring shaped member 84 for retentively securing the open end portion of the bag portion 22 therein. Moreover, one or
more handles may be attached to the ring shaped member in accordance with the invention herein presented.

[0035] The ring shaped member 78 is advantageously disposable within a container such as the flower bucket 33 shown in FIG. 5. In this respect, the tapered exterior surface 80 conforms to the inner surface toward the open end of the flower bucket to hold and support the bag portion 22 therein. Moreover, the ring shaped member provides support for retaining the bag portion 22 within the bucket 33 at a particular retention height, thereby allowing the contents to be provided within the holder 20 and maintained at a specific height relative to the holder 20 indifferent of the height of the bucket 33. Also, the ring shaped member 78 supports the bag portion 22 from dropping within a container in which it is placed.

[0036] In accordance with another embodiment of the invention, a frame or tray 38, as illustrated in FIG. 2, may be used to support and receive one or more holders 20. The frame 38 has a primary support 40 supported by multiple sidewalls 42, 44 at an elevated height and a secondary support member 46, at a lower height. The primary support 40 retains the ring shaped member 26 of the holder 20 at an elevated height preventing loss of contents from within the bag portion 22 of the holder. The secondary support member 46 suitably contains apertures to support the bottom portions of each holder 20 placed, including any contents, therein. The illustrated frame 38 may also include a top portion 48 for surrounding and protecting the continents, such as blossoms or critical plant features (not shown). Such a frame, generally 38, is suitable for use as the shipping container, while selectively designed to support the holders 20 and selected contents therein. Such a frame is thus advantageously used with ready packed shipping applications to be shipped by transport (e.g., in the back of a truck, van, utility vehicle, or airplane) transporting the ready packed holders 20 deliverable to customer or vendors in a condition ready for display or show.

[0037] FIG. 9 depicts an alternative embodiment of the frame or tray 86, wherein the primary support member 40 and the secondary support member 46 may be adjusted upwardly and downwardly within frame or tray 86. Primary support member 40 and the secondary support member 46 would usually be adjusted vertically until the bottom of holder 20 makes at least partial contact with the bottom of frame or tray 86 therefore alleviating pressure upon the flexible film bag portion 22.

[0038] The trays 38 or 86 in accordance with the embodiment of the invention shown in FIGS. 2 and 9, may be formed from an insert 60 shown in FIG. 7A. Such an insert may receive the holders as shown in FIG. 7B, and used as part of a shipping transport system, allowing for improved transportation, efficient processing and packaging for ready to show arrangements, particularly in existing store flower displays. After placing water and flowers inside the holder, the filled holder is placed into a conventional wet pack box with the aid of the novel insert 60. The insert being specially designed from a material such as cardboard or other suitable material. The insert 60 includes apertures 62, 64, 66, 68 for receiving the holder(s). Side walls 70, 72, 74, 76 are formed from side portions of the insert. The side portions are folded along the construction lines depicted in FIG. 7A, and the folded insert is placed within an existing wet pack box for receiving each holder 20. Another Insert may also be placed within a conventional wet pack box, stacked below the insert 60, for receiving and supporting the bottom end of the holders 20 as described above.

[0039] Optionally, whether the primary support member 40 or the secondary support member 46 are included as separate inserts for insertion into a packaging container or whether they form part of a custom made tray as described herein, the members 40 and/or 46 may be designed to readily fit within a display rack at a retailer or include removable sidewalks for instantaneous display of the holders 20 while providing support thereto.

[0040] FIG. 5. The holder 20, having been transported, may be removed from the frame or tray and placed in a flower bucket 33 as shown, or may be placed within a similarly shaped device or container (e.g., a paint bucket). The holder 20, being filled with water or aqueous solution (water line 50) and flowers or bouquets (not shown) prepared and placed therein, have been supported, shipped, and displayed for ready reception into the bucket 33 without intervening preparation thereof during the packaging, shipping and displaying process. The optional handles 28, 30 shown extending above the top of the flower bucket help to assist a user in withdrawing the holder 20 from the frame or tray, and into the flower bucket, and further help in removing the holder 20 from the bucket when to discard. Accordingly, the holder 20 provides a receptacle suitably selected to display, support and provide nourishment to the contents contained therewithin, allowing for efficient packaging, shipment and display with minimal intervention and providing additional cost saving conventionally experienced with preparing, shipping and displaying flowers.

[0041] FIG. 6 illustrates another embodiment of the holder 52 wherein support members 54, 56, 58 extend towards the closed end of the holder. Such support members may be made of the same material as the rigid or semi-rigid member. They too are sized to fit within a flower or other bucket (not shown), and aid especially in placing the holder 52 within the bucket. The support members also facilitate support of the bag portion 22 when placed within a frame or tray 38 having only a primary support member 40 hereinabove described.

[0042] In another manner, flowers may be shipped in the holder 52 wet, requiring little or no processing. Upon arrival at a display, the holders are lifted out of the wet pack box, and placed directly into the buckets making up the existing in store display. The flower buckets stay relatively dry and clean, thus reducing employee work and decreasing the temptation to throw away dirty flower buckets.

[0043] When the holder is empty, it can be disposed of by, for example, recycling.

[0044] It is recognized that the invention herein provide above provides for easy shipping/transport of fresh cut flowers reducing the hassle associated with conventional processing of fresh cut flowers in store displays.

[0045] After having been apprised of the disclosure hereof, one of ordinary skill in the art would be able to make and use the invention.

[0046] While particular embodiments of the invention have been shown and described, numerous variations and other embodiments will occur to those of ordinary skill in the art. Accordingly, the invention is only limited in terms of the scope of the appended claims.

What is claimed is:
1. A holder for accommodating aqueous solutions and cut flowers, the holder comprising:
a flexible film bag sized and shaped to fit within a flower bucket for accommodating a plurality of flower stems,
the flexible film bag having, on a first end, an opening for receiving the plurality of flower stems; and a ring non-detachably affixed about the opening of the flexible film bag.

2. The holder of claim 1, further comprising at least one handle, extending from the ring.

3. The holder of claim 2, wherein the at least one handle comprising at least two handles, each of the two handles extending upward from the ring and circumferentially spaced about the ring.

4. The holder of claim 1, wherein the ring is affixed externally about the opening.

5. The holder of claim 1, wherein the ring further includes a tapered surface.

6. The holder of claim 1, wherein the flexible film bag is transparent.

7. The holder of claim 1, wherein the flexible film bag includes a second end forming a gusset.

8. The holder of claim 1, wherein the flexible film bag is in the shape of a conic.

9. A method of making a holder, the method comprising:
   folding a shaped single piece of flexible film substantially about a center forming one or more lateral edges and an opening;
   sealing the one or more lateral edges to form one or more seams; and
   affixing a rigid or semi-rigid member to either the interior or exterior of a circumference of the opening.

10. The method according to claim 10, wherein folding includes forming a gusset by including a sigma shaped fold in the center of the flexible film.

11. The method according to claim 10, wherein sealing the one or more lateral edges to form one or more seams comprising heating the folded piece of flexible film along at least one of the lateral edges.

12. The method according to claim 9, further comprising affixing at least one handle to the rigid or semi-rigid member.

13. A frame for accommodating holders, the frame comprising:
   at least one support element for supporting holders vertically within the frame, the support element comprises at least one opening for receiving one of the holders, one of the holders is a flexible film bag sized and shaped to fit within a flower bucket for accommodating a plurality of flower stems, the flexible film bag having, on a first end, an opening for receiving the plurality of flower stems, and a ring non-detachably affixed about the circumference of the first end of the flexible film bag.

14. The frame of claim 13, wherein the at least one support element is an adjustable support element selectively configured for vertically adjustment within the frame.

15. The frame of claim 14, wherein the adjustable support element is selectively configured for vertically adjustment to at least partially support the holder by the floor of the frame.

16. The frame of claim 13, wherein the at least one support element comprises two support element, the second support element being a secondary support element.

17. The frame of claim 16, wherein the secondary support element is vertically adjustable relative to the other support element and includes at least one opening for supporting receiving one of the holders.

18. The frame of claim 13, wherein the frame further comprising a top portion for surrounding and protecting the contents contained in holders.

19. The frame of claim 13, wherein the frame engages and conforms to the inside of a shipping container.

20. The frame of claim 19, wherein the shipping container is a wet pack box.

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