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This invention relates, generally, to containers, and it has particular relation to ball plant containers.

For the shipping and handling of various varieties of plants, shrubs, and trees whose roots are embedded in a ball of earth or filler material which is enclosed by a covering of paper, burlap, or the like, it is desirable to provide a container which has a separate compartment or portion for receiving and holding the ball and another compartment or portion in which the stem and branches can extend and be protected. Such a container should be capable of withstanding the usual handling and stacking without being crushed or deformed sufficiently to injure the contents.

Accordingly, among the objects of this invention are: To provide for setting up a ball plant container from a single cardboard blank; to provide a closure for the ball by panels struck from the walls of the container at the junction between its upper and lower portions; to brace the closure forming panels by additional panels struck from the container walls; to telescope the upper and lower portions of the container when it is set up to form and brace the closure for the lower ball containing portion; and to lock the upper and lower portions of the container in the set telescoped position.

Other objects of this invention will, in part, be obvious and in part appear hereinafter.

This invention is disclosed in the embodiment thereof shown in the accompanying drawings and it comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the appended claims.

For a more complete understanding of the nature and scope of this invention, reference can be had to the following detailed description, taken together with the accompanying drawings, in which:

Figure 1 is a plan view of a one piece cardboard blank from which the ball plant container of the present invention can be set up;

Figure 2 is a view, in side elevation, of the ball plant container of the present invention in the partially set up position;

Figure 3 is a view, partly in side elevation and partly in section, showing how a ball plant can be packaged in a container constructed in accordance with this invention; and

Figure 4 is a detailed sectional view taken along the line 4—4 of Figure 3.

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Referring now particularly to Figure 1 of the drawings, it will be observed that the reference character 10 designates, generally, a generally rectangular blank which may be formed of cardboard, such as corrugated cardboard.

The blank 10 is made up of five walls 11, 12, 13, and 14 to provide a container having a rectangular cross section. As shown in Figure 2, when the blank 10 is set up, it forms an upper portion, shown generally at 15, for receiving the branches 16 and stem 17, Figure 3, of a plant and a lower portion, shown generally at 18, for receiving the ball 19 of the plant. It will be understood that the ball 19 of the plant comprises the plant roots which are embedded in soil or filler material that is enclosed in a suitable covering of paper or burlap.

Referring again to Figure 1, it will be noted that the walls 11, 12, 13, and 14 are divided by longitudinally extending score lines 22 and that they are divided horizontally by a transversely extending score line 23 which, as shown, is of limited extent for each of the walls. The transversely extending score line 23 divides the walls into upper sections 24, 25, 26, and 27 and into lower sections 28, 29, 30, and 31. It will be understood that the upper sections 24, 25, 26, and 27, when the blank 10 is set up, form the upper portion 15 of the container and that the lower portions 28, 29, 30, and 31 form the lower portion 16 of the container.

With a view to providing a closure for the upper end of the lower portion 16 of the container, trapezoidal panels 32 are struck from the walls 11, 12, 13, and 14 along the bottoms of the upper sections 24, 25, 26, and 27. It will be noted that the trapezoidal panels 32 are fastened to the lower sections 28, 29, 30, and 31 only along the transversely extending score line 22. At their upper ends the trapezoidal panels 32 are joined along a score line 35 to a rectangular panel 36 which is struck from each of the upper sections 24, 25, 26, and 27. It will be observed that each of the rectangular panels 36 is joined to the corresponding upper section along a score line 37. As will appear hereinafter, the rectangular panels 36 form braces for the trapezoidal panels 32 and serve to hold them in the closed position when the container is set up.

It has been pointed out previously that each of the trapezoidal panels 36 is joined to the corresponding lower sections 29, 30, and 31 only along the transversely extending score line 22. A wall part 38 serves to join the main portion of each trapezoidal panel to the corresponding lower section. Each wall part 38 is of slightly
greater width than the width of the corresponding rectangular panel 38. The purpose of this is to permit the ends of each wall part 32 to interfit with slots 33 which are provided in each of the upper sections 24, 25, 26, and 27 along the lower ends of each of the rectangular panels 35. When the upper portion 15 of the container is telescoped with the lower portion 16, the ends of each of the wall parts 32 interfit with the slots 33 and serve to hold and lock the container in the set up position.

With a view to facilitating the telescoping of the lower end of the upper portion 15 with the upper end of the lower portion 16, a part 42 of each of the upper sections 24, 25, 26, and 27 between each of its sides, the base 43 of trapezoidal panel 34 and the adjacent side 44 thereof is removed so as to provide two pointed lower ends 45 for each of the upper sections 24, 25, 26, and 27. As shown in Figure 2 these pointed lower ends 45 slip inside of the upper edges of each of the lower sections 28, 29, 30, and 31 along the base 43 of each of the trapezoidal panels 34 which at the corners, are severed completely from the adjacent walls. This construction permits the telescoping of the lower corners of each of the upper sections 24, 25, 26, and 27 over the adjacent corners of the intersected pyramid which is formed by the trapezoidal panels 34 when they are folded inwardly and downwardly to provide the closure for the lower portion 18 of the container.

The juxtaposed vertical edges of the walls 11 and 14 can be held together by any suitable means when the container is set up. For example, a flap 46 may be provided along the left hand side of the wall 11 to which it is joined along a score line 47. The flap 46 may be secured, as by gluing or stapling, to the juxtaposed edge of the wall 14. In Figure 4 the junction is illustrated as being made by staples. However, as indicated, the flap 46 may be secured by glue or other means.

The bottom of the lower portion 18 may be closed by flaps 48, 49, 50, and 51. The flaps 48 and 51 are of equal width and may be folded over first so that their edges are juxtaposed. The flap 50 may be provided with a rectangular opening 52 and a parallel slot 53 for receiving respectively a tab 54 struck from the central portion of the flap 48 and a second tab 55 at the outer end thereof. It will be understood that other conventional closure arrangements can be employed for closing the bottom of the lower portion 18.

The upper end of the upper portion 15 may be closed by flaps 56, 59, 60, and 61 which extend from the upper ends of the upper sections 24, 25, 26, and 27. It will be noted that the flaps 59 and 61 are severed along lines 62 for receiving tabs 63 that are formed near the sides of the upper ends of the flaps 56 and 58. The construction is such that, when the flaps 56, 58, 60, and 61 are folded over in an interlocked relation, a rectangular opening is provided to permit inspection of the interior of the upper portion 15 of the container.

In order to facilitate gripping of the container when it is set up tabs 64 may be struck from the upper sections 24, 25, 26, and 27 along score lines 65 which will be undercut so that the tabs 64 may be thrust inwardly by the fingers to permit gripping of the container from opposite sides.

The container constructed in accordance with this invention is set up from the blank 10 by folding the walls 11, 12, 13, and 14 along the score lines 22 and then securing the flap 46 in position along the juxtaposed edge of the wall 14. Next, the flaps 49 and 51 are folded over at the bottom and then flaps 48 and 50 are folded therewith with the tabs 54 and 55 being inserted in the rectangular opening 52 and slot 53 respectively. The container is now open at the top, as shown in Figure 2, and is ready to receive the plant.

The plant is inserted through the open upper end of the upper portion 15 and the ball 19 is placed in the lower portion 18 thereof. Now, the upper portion 15 is moved bodily downwardly so that the pointed lower ends 45 of the upper sections 24, 25, 26, and 27 slip inside of the upper edges of the lower sections 28, 29, 30, and 31 as shown in Figure 2. This telescoping movement causes the trapezoidal panels 34 to swing inwardly so as to provide a closure for the lower portion 18 and to fit against the upper surface of the ball 19 of the plant contained therein. At the same time, the rectangular panels 35 swing inwardly so that, in the final position as shown in Figure 3, they serve as braces for the trapezoidal panels 34 and hold them in place. A rectangular opening 66, Figure 4, is provided at the juncture of the upper edges of the trapezoidal panels 34 through which the stem 17 of the plant can project as illustrated in Figure 3.

Thereafter, the flaps 58, 59, 60, and 61 are folded over with the tabs 63 interfitting with the flaps 50 and 51 through the openings provided along the lines 62.

Since certain changes can be made in the foregoing construction and different embodiments of the invention can be made without departing from the spirit and scope thereof, it is intended that all matter shown in the accompanying drawings and described hereinbefore shall be interpreted as illustrative and not in a limiting sense.

What is claimed as new is:

1. A blank forming when set up a container for a ball plant or the like comprising a rectangular sheet of paper-board divided by longitudinally extending score lines into walls and by a transversely extending score line into upper and lower sections, a trapezoidal panel struck from the bottom of the upper section of each wall with its base extending along said transverse score line for the full wall width and its intermediate portion joined to the corresponding lower section along said transverse score line and forming with the other trapezoidal panels when the container is set up a closure for its lower portion while the top of the trapezoidal panels define an opening for the stem of the plant or the like, and a rectangular panel struck along its sides from the upper section of each wall with one attached thereto along a score line and the other end attached to the top of the corresponding trapezoidal panel along a score line and foldable to provide a brace therefor when the container is set up, each trapezoidal panel being joined to the corresponding lower section for an extent greater than the width of the corresponding rectangular panel and there being a pair of slots in the corresponding upper section on opposite sides at the rectangular panel for interfitting with the wall part joining the wall to said trapezoidal panel to lock the container in the set up condition.

2. A blank forming when set up a container for a ball plant or the like comprising a rectangular sheet of paperboard divided by longitudinally
extending score lines into a plurality of walls and by a transversely extending score line into upper and lower sections, a trapezoidal panel struck from the bottom of the upper section of each wall with its base extending along said transverse score line for the full wall width and its intermediate portion joined to the corresponding lower section along said transverse score line and forming with the other trapezoidal panels when the container is set up a closure for its lower portion while the tops of the trapezoidal panels define an opening for the stem of the plant or the like, and a rectangular panel struck along its sides from the upper section of each wall with one end attached thereto along a score line and the other end attached to the top of the corresponding trapezoidal panel along a score line and foldable to provide a brace therefor when the container is set up, a part of each upper section between each of its sides, the base of its trapezoidal panel and the adjacent side thereof being removed to facilitate when the container is set up the telescoping of its upper and lower portions, each trapezoidal panel being joined to the corresponding lower section for an extent greater than the width of the corresponding rectangular panel and there being a pair of slots in the corresponding upper section on opposite sides of its rectangular panel for interfitting with the wall part joining the wall to said trapezoidal panel to lock the container in the set up condition.

3. A paperboard container for a ball plant or the like comprising, a lower portion for receiving the ball of a plant, an upper portion for receiving the top part of the plant and adapted to be telescopically joined to said lower portion, trapezoidal panels formed from the walls of said upper and lower portions at the junction between said portions and together providing a closure for said lower portion with the tops of said trapezoidal panels defining an opening through which the stem of the plant can extend, and rectangular panels formed from said walls with one end attached thereto and the other end attached to the top of the corresponding trapezoidal panel to provide a brace therefor, each trapezoidal panel being joined to the corresponding lower section for an extent greater than the width of the corresponding rectangular panel and there being a pair of slots in the corresponding upper section on opposite sides of the opening provided by the removal of its rectangular panel for interfitting with the wall part joining the wall to said trapezoidal panel and thereby locking the container in the set up condition.

4. A blank for forming when set up a container for a ball plant or the like having upper and lower compartments with a restricted opening therebetween, said blank comprising a substantially rectangular sheet of paperboard cut and scored to provide a plurality of wall panels each having an upper section and a lower section, an intermediate trapezoidal panel between the upper and lower sections of the respective panels attached at the midportion of its base to the lower section along a transverse fold line, a rectangular connecting panel struck from the upper section of the respective wall panels attached thereto at its upper end along a transverse fold line and attached at its lower end to the corresponding intermediate panel along a transverse fold line, and downwardly directed guide and positioning elements at the opposite sides of the respective intermediate panels extending downward from the upper sections of the respective wall panels beyond said connecting panels and disposed to enter said lower compartment at opposite sides of said midportion of said intermediate panels and along the inner faces of said lower sections of said wall panels in the setting up operation.

5. A blank for forming when set up a container for a ball plant or the like having upper and lower compartments with a restricted opening therebetween, said blank comprising a substantially rectangular sheet of paperboard cut and scored to provide a plurality of wall panels each having an upper section and a lower section, an intermediate trapezoidal panel between the upper and lower sections of the respective wall panels attached at the midportion of its base to the lower section along a transverse fold line, a rectangular connecting panel struck from the upper section of the respective wall panels attached thereto at its upper end along a transverse fold line and attached at its lower end to the corresponding intermediate panel along a transverse fold line, and downwardly directed guide and positioning elements at the opposite sides of the respective intermediate panels extending downward from the upper sections of the respective wall panels beyond said connecting panels and disposed to enter said lower compartment at opposite sides of said midportion of said intermediate panels and along the inner faces of said lower sections of said wall panels in the setting up operation.

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The following references are of record in the file of this patent:

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