This invention relates to packaging and in particular to a method of and means for packaging an object such as a plant.

A highly desirable manner of packaging plants, which has been found to have high customer appeal, is the enclosing of the plants in a transparent plastic envelope. Such packaging permits the potential customer to inspect the plant, while effectively protecting the plant. In addition to maintaining the appearance of the plant by protecting it from damage and dirt, such transparent packaging material has an inherent attractive appearance in and of itself.

While such packaging has the above discussed advantages, heretofore it has had the serious disadvantage of being difficult and, thus, relatively costly to provide.

The instant invention comprehends a new and improved method of effecting such packaging completely obviating this problem. The invention further comprehends a novel means facilitating the novel packaging operation. Thus, it is the principal object of this invention to provide a new and improved method of and means for packaging an object.

Another object is to provide a method of packaging an object wherein a tubular sheet of flexible material is rolled endwise into an annular configuration about the axis of the tube, the outer end of the tubular sheet is secured closed, the object is relatively moved through the annular configuration to urge the closed end away from the annular configuration and cause an unrolling of sufficient length of the sheet to extend beyond the object opposite the closed end, and the portion of the sheet extending beyond the object is secured closed to complete the packaging of the object.

A further object is to provide such a method including a new and improved closing of the sheet ends.

Still another object is to provide a method of packaging an object including guiding the object into a constricted arrangement during passage thereof through the annular configuration to facilitate the packaging operation.

A further object of the invention is to provide new and improved means for packaging an object comprising a tubular sheet of flexible material rolled endwise into an annular configuration and an annular support partially enclosing the rolled sheet to prevent bodily movement thereof in one axial direction while permitting the outer end of the sheet to be unrolled and drawn in that axial direction thereby to provide a tubular packaging enclosure.

Yet another object is to provide such a packaging means including new and improved means for guiding the object into a proper disposition for effecting the packaging operation.

A yet further object is to provide such a packaging means arranged in a novel manner to facilitate the installation of the annular rolled sheet in the support.

Other features and advantages of the invention will be apparent from the following description, taken in connection with the accompanying drawings wherein:

FIG. 1 is a perspective view of a packaging means embodying the invention associated with an object to be packaged as during one step in the packaging operation;

FIG. 2 is a fragmentary elevation thereof illustrating a preferred method of effecting a closure of one end of the tubular sheet;

FIG. 3 is a perspective view illustrating one step in a novel method of effecting the closure of an end portion of the tubular sheet embodying the invention;

FIG. 4 is a fragmentary diametric section of the packaging means of FIG. 1; and

FIG. 5 is a fragmentary diametric section with portions thereof broken away illustrating another form of packaging means embodying the invention.

Referring first to FIGS. 1, 2, 3 and 4 of the drawing, a method of packaging an object such as a potted flower 10 is shown to comprise the enclosing of the potted flower in a new and improved manner in a sheet 11 of flexible material, such as transparent polyethylene plastic. The packaging method comprises, in combination, the steps of providing sheet 11 in elongated tube form, rolling the tubular sheet endwise into an annular configuration 12 (see FIG. 4) about the axis of the tube, closing the outer end 13 of the tubular sheet by juxtaposing opposed portions thereof, securing outer end 13 in the closed arrangement by suitable means such as staples 14, effecting relative movement of potted flower 10 completely through annular configuration 12 to urge outer end 13 away from the annular configuration and cause an unrolling of a sufficient amount of the flexible sheet 11 to extend upwardly beyond the object (oppositely of the closed end 13), and closing the opposite end 15 by suitable means such as staples 16. Such a packaging method permits such objects to be packaged rapidly and neatly and in an extremely economical manner.

Further, the invention comprehends an improved method of closing the opposite end portions 13 and 14. As best seen in FIG. 2, end 13 is arranged to extend in a plane substantially transversely of the axis of tubular sheet 11 to permit the potted flower 10 to maintain an upright position in the completed package. As best seen in FIG. 3, the closure of outer end 13, such as by staples 14, may be effected at the same time that closure of the preceding package upper end portion 15 is effected as by staples 16. The adjacent end portions 13 and 15 may then be separated between staples 14 and 15, as by cutting sheet 11 transversely therebetween, thereby completing the packaging operation of one object 10 and completing a first step in the packaging operation of a succeeding object.

The instant invention further comprehends a facilitation of the packaging operation by effecting a proper constriction of the flower 10 during the packaging operation to permit annular configuration 12 to have a relatively small diameter which increases the ease with which the sheet may be withdrawn therefrom. To this end, the flower portion 10r of the potted flower 10 is constrained toward the axis of the annular configuration as it is passed therethrough. Once flower portion 10r has passed completely through the annular configuration, it may spread laterally within the limits permitted by the enclosing tubular sheet. Some residual constriction of the flower portion 10r within the tubular sheet 11 may be desirable, such as to permit the closer spacing of the packaged flowers in displaying them. Thus, the guiding of the flower into the constricted arrangement during passage through the annular configuration automatically provides in the instant invention a desired constriction in the ultimate arrangement of the flower within the tubular sheet 11.

As discussed above, the instant invention further comprehends a novel means for effecting the above described packaging method. Thus, as best seen in FIG. 4, the annular configuration 12 of tubular sheet 11 is carried by a hollow annular support 17 which partially encloses annular configuration 12 to prevent movement of the annular configuration bodily in one axial direction (down-
wardly as seen in FIG. 4) while permitting the outer end 13 of sheet 11 to be unrolled from the annular configuration and drawn in the downward axial direction to provide the desired tubular packaging enclosure. Annular support 17 is generally semicircular in cross section, as seen in FIG. 4, and terminates in a lip portion 18 over which the flexible sheet is drawn in unrolling it from the annular configuration. The portion of the support diametrically opposite lip 18 comprises a cylindrical extension 19 concentric to the axis of the annular support. The upper end of cylindrical extension 19 defines an outwardly flaring guide portion 20 which may be made separable from cylindrical extension 19 and secured thereto by a suitable clamp means 21. Thus, the annular configuration 12 of the flexible sheet may be installed in annular support 17 by separating flared portion 20 from the cylindrical extension and moving the annular configuration over the cylindrical extension 19. The flared portion 20 may then be secured to the cylindrical extension by clamp 21, the device then being ready for a packaging operation.

Turning now to FIG. 5, a modified form of the invention is shown to comprise a hollow annular support 30 having a generally semicircular cross section providing an inner lip portion 31 and an inwardly curving connecting portion 32 which connects a cylindrical extension portion 33 to the annular support. The spacing between lip portion 31 and connecting portion 32 is preferably slightly greater than the radial sectional diameter of annular configuration 12 of the flexible sheet, permitting the annular configuration to be installed in support 30 by constricting it slightly and passing it upwardly through annular lip portion 31, and allowing it to expand into its normal arrangement whereupon it passes through the space between lip 31 and connecting portion 32 to be received in the support 30.

To reduce the frictional drag on the flexible sheet 11 as it is drawn from the annular configuration 12, support 30 may be cut away, as at portions 34. Further, such cutting out of the annular support 30 imparts an additional springiness thereto, permitting the support to yield slightly and facilitate the installation of the annular configuration 12 therein.

Extending upwardly from cylindrical extension portion 33 is an outwardly flaring guide portion 35 which is similar to flaring guide portion 20. As seen in FIG. 5, cylindrical extension portion 33 and flaring guide portion 35 may be integrally joined.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as defined in the appended claims.

1. Means for use in packaging an object, comprising: an annular support having a semicircular cross section defining an annular lip and an opposed longitudinal extension; and a flared portion extending from said extension away from said support.

2. The packaging means of claims 1 wherein the flared portion is separable from the extension.

3. The packaging means of claim 1 wherein the annular lip comprises a radially inner portion of the support.

4. Means for use in packaging a plurality of objects, comprising: a tubular sheet of polyethylene having a length at least equal to the combined length of said plurality of objects, said sheet being rolled endwise into an annular configuration; and an annular support partially enclosing the annular sheet configuration to prevent movement of the annular sheet configuration in one axial direction while permitting the outer end of the tubular sheet to be unrolled therefrom and drawn in said axial direction to provide a plurality of tubular packaging enclosures, said annular support having a semicircular cross section defining an annular lip and an opposed longitudinal extension having a flared, outwardly extending portion for guiding the objects through the annular support.

5. The packaging means of claim 3 wherein the annular lip is cut away at circumferentially spaced points.

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