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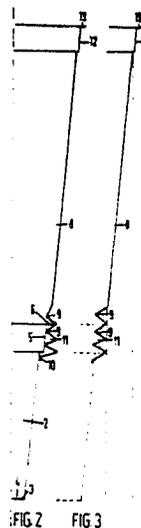
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54 **A wrapping for plants or flowers in a potlike container.**

57 A wrapping for plants or flowers placed in a potlike container (1), comprising a two-end open tubular element (8), one of the end regions of which is provided with means adapted to engage a potlike container to be received. Said means comprise at least one groove (11) extending along at least a part of the circumference of the tubular element and being bounded on either side by an inward bulge (9) defining a free passage smaller than that of an adjoining portion of the tubular element. Said tubular element is made from a resilient material having natural rigidity and preferably a circular cross section.



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A wrapping for plants or flowers placed in a potlike container

This invention relates to a wrapping for plants or flowers placed in a potlike container, such as a potted cactus or similar, whether or not flower-bearing house plant, comprising a tubular element open at both ends, one of the end regions thereof being provided with means engaging a pot to be received.

Potted plants of this type are mostly transported while being placed groupwise in a tray, e.g. from nurseryman to auction or buyer, using standard trays and standard pots, which simplifies the handling and enables mechanical processing.

By using a wrapping of the above type, damage to the transported plants can be avoided. Such a wrapping is known from French patent application 2,477,107. The means for engaging a pot consists of the lower part of the tubular wall having a tapering configuration corresponding with the pot wall, so that when the wrapping is picked up, the pot remains hanging therein. In this manner, the pot is retained in one direction only, which means that during transport the pot containing the plant can move up and down in the wrapping due to shocks or vibrations, so that the plant can still be damaged. Besides, this known wrapping always covers the entire outer face of the pot, which considerably impedes, if not excludes, mechanical handling, among other things since the cut-outs in standard trays are tuned to the form of dimensions of the standard pots to be received, which is disturbed by an intermediate wrapping layer.

Besides, US patent 2,830,405 discloses a similar wrapping, consisting of a tube having a constant, rectangular cross section and pot engaging means in the form of four cut-outs provided in the outer corners. This known wrapping is destined exclusively for specially designed pots, i.e. pots having a rectangular cross section and an upper edge projecting outwardly especially in the corner regions. This wrapping is not suitable for standard pots and in view of the locking through projecting pot portions, cannot be made suitable therefor either due to the circular upper edge of a standard pot. Moreover, the known locking implies that the wrapping has to be bent from blank form about the pot and then connected to a tubular form, which renders the fitting more complicated in comparison with a wrapping wherein the pot can be lowered from the top.

It is an object of the present invention to provide a wrapping for plants or flowers placed in a potlike container, such as a potted cactus or similar, whether or not flower-bearing house plant, avoiding the above drawbacks. The wrapping should be inexpensive and easy to apply and natu-

rally provide sufficient protection. Moreover, the wrapping may not affect the cooperation between standard pots and standard trays and not impede sprinkling, while the potted plants offered for sale should be on display without being unpacked.

This is achieved in accordance with the present invention with a wrapping of the above described type when the above means comprise at least one groove extending along at least a part of the circumference of the tubular element and bounded on either side by an inward bulge defining a free passage smaller than that of an adjoining portion of the tubular element, said tubular element being made of a resilient material having natural rigidity. This feature allows to obtain a wrapping wherein the pot plant can be fitted in a simple manner by first introducing the pot with its underside in front into the other end of the tubular element opposite the one end and subsequently by releasing the same. The pot plant then sags downwards through the tubular element until the upper edge of the pot contacts the upper inward bulge. If necessary aided by pulling at the pot portion then projecting underneath the tubular element, the upper edge comes beyond the first bulge and remains hanging on the underlying bulge, said upper edge then being located adjacent the groove, so that the wrapping is locked relative to the pot. Since the lower end of the pot remains clear of the wrapping, due to the place of the groove, the cooperation between pot and tray is not effected. The introduction from the top into the wrapping enables the insertion in the relatively rigid wrapping without the risk of damage to the pot plant since projecting parts thereof, such as leaves, stems and prickles, by nature can practically always be bent upwards but not downwards. Since the insertion into the wrapping only requires the handling of the pot, this wrapping is excellently suitable for being applied mechanically, while, moreover, in the case of manual introduction, contact with e.g. prickles of cactuses can be avoided entirely.

Besides, the top opening of the tubular element guarantees a proper air circulation and a good view of the packaged pot plant without necessitating the removal of the wrapping. The view of the plant in the wrapping can be improved by making the tubular element of a transparent material, e.g. a transparent plastics. This allows, partly due to the top opening, sprinkling of the pot plants in the wrapping without any problem. Thus, the wrapping can be installed by the nurseryman and during transport to the auction, during the auction, during the transport to the buyer, during the offering for sale by the florist and during the transport by a private

person to his house, remain installed, so that the pot plant remains always optimally protected, thus considerably reducing the risk of damage to this basically vulnerable article and always ensuring an attractive presentation.

An additional advantage of the use of the relatively rigid tubular element is that it is also suitable for applying a text and the like, e.g. the name of the plant, the nurseryman or the florist, an attendance advice, a device mark, etc. Moreover, a thus effectively packaged, e.g. prickly cactus, will be bought sooner by a private person, while the florist, both for protecting the plant and the private person, need not use an excessive quantity of packaging material, e.g. different layers of paper.

Moreover, each plant is insulated by the wrapping from the other plants, which considerably reduces contamination of healthy plants by one or more diseased plants. This additional advantage is especially important in places where large to very large numbers of plants come together, such as at an auction. When it is borne in mind that by cultivating increasingly new varieties, the resistance of a plant to diseases may decrease, this insulation of each plant by means of its wrapping might become one of the major advantages.

For a proper clamping of the tubular element onto the pot, the two should naturally be tuned to one another. In view of the fact that mostly use is made of standard pots, which is to be prescribed by auctions, a relatively small number of standard sizes for wrappings can suffice in actual practice.

The clamping can take place by one or more grooves extending along a part of the circumference of the tubular element. A number of said grooves may be present in the same cross section of the tubular element. However, in accordance with a further embodiment of the present invention, it is preferred that at least one groove extends along the entire circumference of the tubular element. Since standard pots are mostly provided with a flanged, projecting upper edge, a highly reliable and uniformly engaging clamping and locking is obtained in this manner. For the same reasons, it is furthermore preferred that each groove has substantially the same depth along its entire circumferential length. Although, in general, the use of standard pots in that case should always require a play-free, optimum clamping, it has been found in practice that the diameters of said pot upper flanges, be it slightly, may differ mutually. In order to make allowance for these manufacturing tolerances, if any, it is preferred in accordance with a further embodiment of the present invention that a number of grooves is provided successively longitudinally of the tubular element, the larger diam-

eter of successive grooves diminishing in the direction of the one end, so that an optimum abutment of the pot upper flange in its groove can always be ensured.

A further improvement of the attachment of the wrapping to the pot can be obtained when in accordance with a further embodiment of the present invention, the one end of the tubular element is formed by an edge or edge region having a free passage smaller than any other passage of the tubular element. This feature allows to define a second point of engagement spaced from the first one adjacent the groove of the wrapping with the pot, so that the wrapping is better protected against tilting relative to the pot. This further engagement can be realised in a simple but effective manner when in accordance with a still further embodiment of the present invention, said edge or edge region, as viewed in the direction of the one end, forms the last inward bulge.

Above the point of engagement with the round pot, the tubular element may have any random and longitudinally varying cross section, however, it is preferred that the tubular element has a circular cross section along its entire length. When the tubular element has a cylindrical configuration, at least partly tapering in the direction of the one end, the introduction of the pot and the plant, as well as the bringing into its clamping position of the pot is further facilitated. These advantages can also be realized when the tubular element has a configuration at least partly convex in the direction of the one end. While the first mentioned wrapping is especially destined for long and slender pot plants, such as certain types of cactuses, and for pot plants whose leaves can be bent upwards to within the outer circumference of the pot, the latter wrapping is suitable for more voluminous plants extending to beyond the outer circumference of the pot.

It has already been observed that the wrapping is highly suitable for being applied mechanically. This possibility of mechanically handling can be further enhanced when in accordance with another embodiment of the present invention, the tubular element terminates at its other end in a circular flange which, in the direction of the one end, links up with a cylindrical edge having an outer diameter larger than that of the connecting portion of the tubular element. In that case, the upper edge of the tubular element has the same has the same configuration as the upper edge of the standard pot, which is thus standardized in connection with mechanical handling. After application of the wrapping, said upper edge of the pot is covered. By applying the same upper edge at the upper end of the relatively rigid tubular element, mechanical handling is again possible in the conventional known manner. Moreover, such an edge may be thicker

and hence more rigid, which offers the possibility to make at least a part of the remaining portion of the tubular element thinner than in the absence of said upper edge. Thus, in total, a saving in material and a weight reduction can be effected and hence a saving in cost.

When the tubular element is provided with a continuous peripheral wall, this can be made as a bottomless cup. The earlier mentioned tapering form is then preferred, since in that configuration, the tubular element can be nested during storage and transport in order to minimize the space occupied. The advantage of this embodiment is that it is always in the condition of use and thus can be applied with minimal time in the above described manner. This is not the case when the tubular element is made from a sheetlike blank, which embodiment, on the other hand, has the advantage that the sheetlike blank can be stored and transported with minimal space occupied. Moreover, this embodiment is preferred when large, heavy plants are to be packaged. The lowering into the tubular element may then give problems in connection with e.g. the weight of the pot plant and/or the distance along which this has to be conducted manually into the tubular element in order not to obtain too large a drop. When the starting point is a sheetlike blank, this is to be folded and closed to a tubular element about a pot plant, during which operations the pot plant is present on a supporting surface. During the bending, the blank and hence the tubular element to be formed therefrom, may be in such a position relative to the pot that the upper flange of the pot is in the retaining groove. After closing the tubular form, the wrapping is then immediately in the clamping locking position. However, this means a highly accurate positioning during the application of the wrapping, which may be time-consuming, reason why it is preferred to place the blank initially in a slightly lower position - which, in view of the taper of the pot also facilitates the closure of the bent blank adjacent the pot - and after closure, to pull the resulting tubular element upwards relative to the pot, until the desired clamping locking is achieved. This operation, consequently, entails the same displacement pattern as with the earlier discussed lowering of the pot plant into the tubular element.

The closure of the tubularly bent blank may take place in many ways: bonding by means of adhesive, adhesive tape, staples, etc, or other jointing methods, e.g. sealing or fusion. However, it is preferred that the sheetlike blank is provided in its longitudinal edge regions with connecting means in the form of press studs, insertion lips and slots, Velcro, etc., which has the advantage that the clos-

ing means are always present and cannot get lost or run out, or are lacking by another reason, so that an optimum operation and an optimally short packaging time can always be realized.

Some embodiments of the wrapping according to the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view of a wrapping according to the present invention applied on a standard pot;

Fig. 2 is a longitudinal section of the wrapping with pot according to Fig. 1;

Fig. 3 is a longitudinal section of the wrapping according to Fig. 1 without pot;

Figs. 4-6 show further possible embodiment variants of the wrapping according to Fig. 1;

Fig. 7 shows a second embodiment of the wrapping according to present invention; and

Fig. 8 shows a part of a sheetlike blank for realizing the wrapping according to Fig. 7.

Figs. 1 and 2 show a standard pot 1 provided with a tapering cylindrical body 2 shut off at its lower end by a bottom 3 containing holes 4. To the top end of body 2 connects a stepwise enlarged edge 5 terminating in its turn in a cylindrical flange 6.

Placed on pot 1 is a wrapping 7 consisting of a tubular element of cylindrical configuration slightly tapering in the direction of pot 1. At the lower end of the tubular element 8, there are provided three inward bulges 9 defining together with the likewise inwardly pointing lower edge 10 on the tubular element 7 three grooves 11. At the top end, wrapping 7 has the same configuration as at the top end of pot 1. Thus, tubular element 8 connects to a stepwise enlarged rim 12 terminating in its turn in a circular flange 13.

Fig. 3 shows the wrapping 7 in its starting position, in which for the sake of elucidation the pot 1 to be installed subsequently is indicated by a dotted line. As shown therein, the free passage adjacent the second and third inward bulge 11, as well as that adjacent the rolled lower rim 10 of the wrapping, is smaller than the cross section of the pot 1 to be installed subsequently at that location.

The installation of a pot 1 with a plant placed therein, not shown, is effected by supplying the pot to the top of wrapping 7 and releasing the same after insertion into the wrapping. The pot will then slide through the wrapping and be brought into the position shown in Figs. 1 and 2. It appears from comparison of Figs. 2 and 3 that the rim 5 of pot 1 has pressed two inward bulges in outward direction, while the cylindrical upper flange 6 is present

in the upper groove 11. Furthermore, the lower edge 10 engages body 2 of pot 1, thus realizing a highly reliable locking and clamping of wrapping 7 on pot 1.

It has been found in practice that standard pots may have slight dimensional variations. In case a used pot has smaller dimensions than shown in Fig. 2, this pot will sag one level lower and be confined and supported in the next groove.

Figs. 4-6 show a number of embodiment variants wherein the tubular element 8 each time has a different configuration, so that allowance can be made for different desired or minimal forms pot plants may have.

Fig. 7 shows a tubular element 20 made by bending a sheetlike blank partly shown in Fig. 8 according to arrow A. In order to maintain the resulting tubular form, closing means are provided in the form of two press studs 21 and two lips 22. Both studs and lips are provided in and made from the blank material itself. One portion of the press studs, e.g. the upper portion 21a, is disposed adjacent the one longitudinal edge of the blank to be connected and the other portion, lower portion 21b, adjacent the other longitudinal edge to be connected. Lips 22 have been provided in the sheet material by punching, while holes are provided at the ends in order to prevent tearing and further tearing. When bending the blank, which can be done both around a pot plant and prior to the insertion of a pot plant, lips 22 will project tangentially due to the rigidity of the material, thereby forming an insertion slot for the opposite longitudinal edge to be connected. After this relative positioning of the longitudinal edges by means of the lips, press studs 21 can be closed for completing the tubular element 20. In this manner, a tubular element can be made from the blank practically without the necessity of inserting a hand into the tubular form for that purpose. This is important when the blank has to be bent for instance around a large and heavy plant, since then the wrapping can be installed without manually contacting the plant, let alone pressing it sideways. Naturally, the closing can also be effected in many other ways. For instance, the lips may be provided with barbed projections which, after insertion of the lips through associated slots, not only effect a positioning but also a locking of the tubular form, in which case a number of lips securable possibly in different positions for adjustment to different pot diameters will be sufficient and the press studs can be omitted. Further possibilities for realizing the closure are gluing, sealing, fusing, stapling, etc. or bonding by means of adhesive tape, Velcro, etc.

It stands to reason that many alterations and variants are possible within the scope of the present invention. For instance, the number of grooves and bulges may be varied, while a groove or bulge need not extend along the entire circumference of the wrapping. Furthermore, the construction of the upper edge of the wrapping similarly as the upper edge of the pot is not necessary. In case the wrapping need not be used for mechanical handling of pot with wrapping, said upper edge may be designed in many other ways. For instance, a florist might prefer that said upper end consists of two or more flaps that can be tied up with a colourful ribbon, thus producing a gift wrapping. In view of the nature and design of the wrapping, it is also possible to close this with e.g. a cover, so that, if desired, the wrapped plant can be transported into a moist atmosphere, while in case intensive ventilation is desired, perforation can be made in the tubular element. Besides, the wrapping can also be used for protecting bundles of cut flowers placed in buckets, such as handleless buckets used at auctions.

Claims

1. A wrapping for plants or flowers placed in a potlike container, comprising a two-end open tubular element one of the end regions of which is provided with means adapted to engage a potlike container to be received, characterized in that said means comprise at least one groove extending along at least a part of the circumference of the tubular element and being bounded on either side by an inward bulge defining a free passage smaller than that of an adjoining portion of the tubular element, said tubular element being made from a resilient material having natural rigidity.

2. A wrapping as claimed in claim 1, characterized in that at least one groove extends along the entire circumference of the tubular element.

3. A wrapping as claimed in claim 1 or 2, characterized in that each groove has substantially the same depth along its entire circumferential length.

4. A wrapping as claimed in any one of the preceding claims, characterized in that a number of grooves is disposed successively in longitudinal direction of the tubular element, the largest diameter of successive grooves becoming smaller in the direction of the one end.

5. A wrapping as claimed in any one of the preceding claims, characterized in that one end of the tubular element is formed by an edge or edge region having a free passage smaller than any other passage of the tubular element.

6. A wrapping as claimed in claim 5, characterized in that said edge or edge region, as viewed in the direction of the one end, forms the last inward bulge.

7. A wrapping as claimed in any one of the preceding claims, characterized in that the tubular element has a circular cross section along its entire length. 5

8. A wrapping as claimed in claim 7, characterized in that the tubular element has a cylindrical configuration at least partly tapering in the direction of the one end. 10

9. A wrapping as claimed in claim 7, characterized in that the tubular element has a configuration at least partly convex in the direction of the one end. 15

10. A wrapping as claimed in any one of the preceding claims, characterized in that the tubular element terminates at its other end in a circular flange connecting, in the direction of the one end, to a cylindrical rim, said rim having a diameter larger than that of the portion of the tubular element linking up therewith. 20

11. A wrapping as claimed in any one of the preceding claims, characterized in that the tubular element is provided with a continuous peripheral wall. 25

12. A wrapping as claimed in any of claims 1-10, characterized in that the tubular element is formed from a sheetlike blank. 30

13. A wrapping as claimed in claim 12, characterized in that the sheetlike blank is provided in its longitudinal edge regions to be connected with bonding means in the form of press studs, insertion lips and slots, Velcro, etc. 35

14. A sheetlike blank destined for manufacturing a wrapping as claimed in claim 12 or 13. 40

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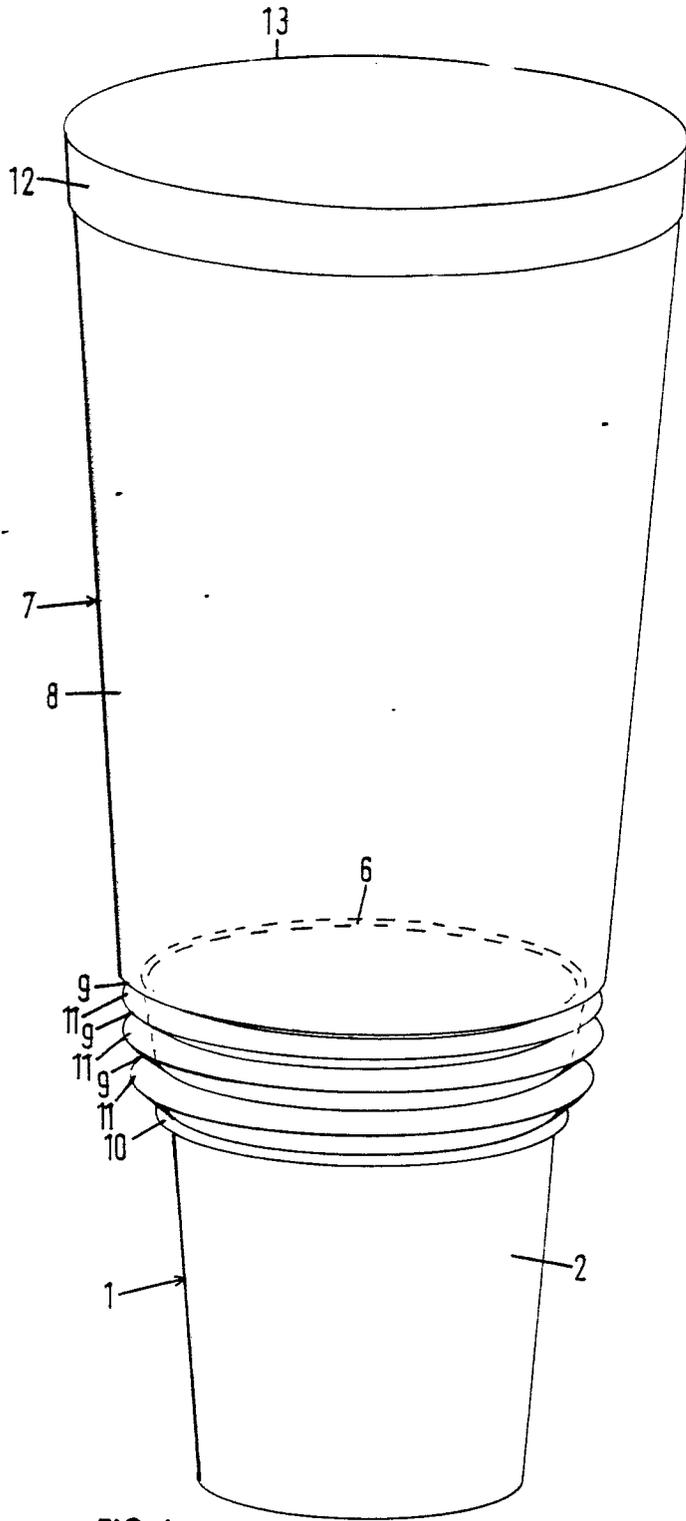


FIG. 1

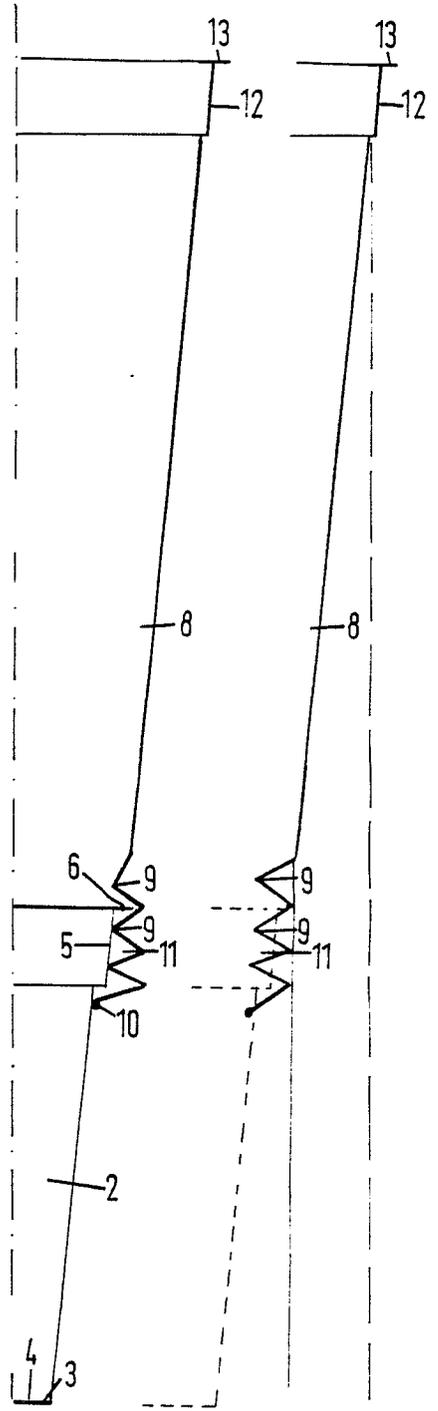


FIG. 2

FIG. 3

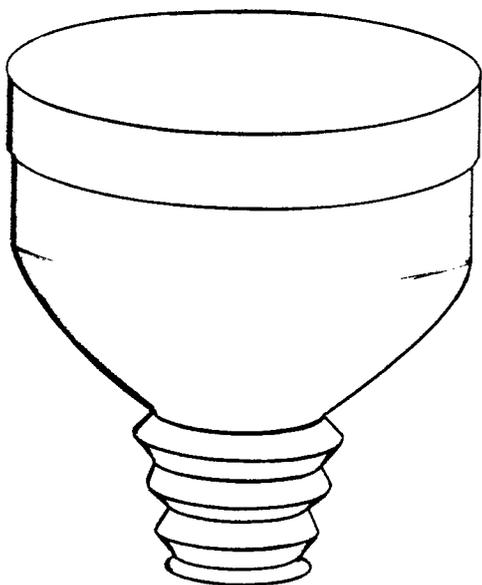


FIG. 4

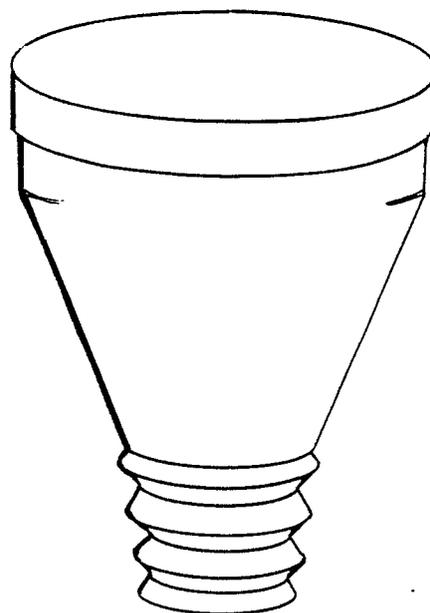


FIG. 5

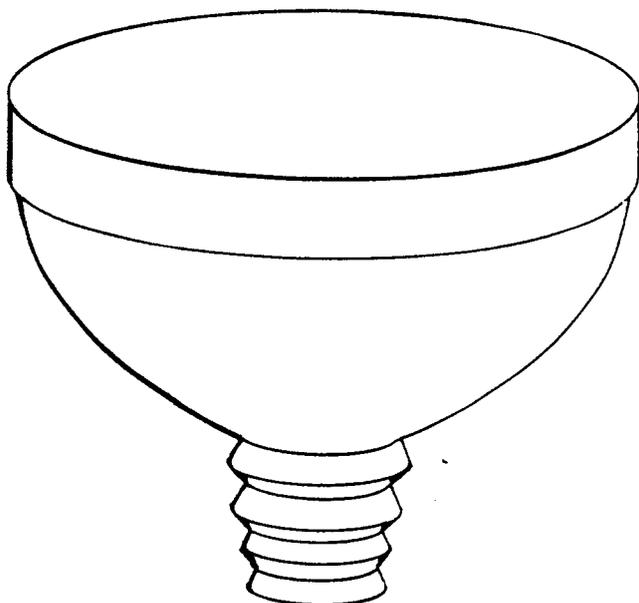
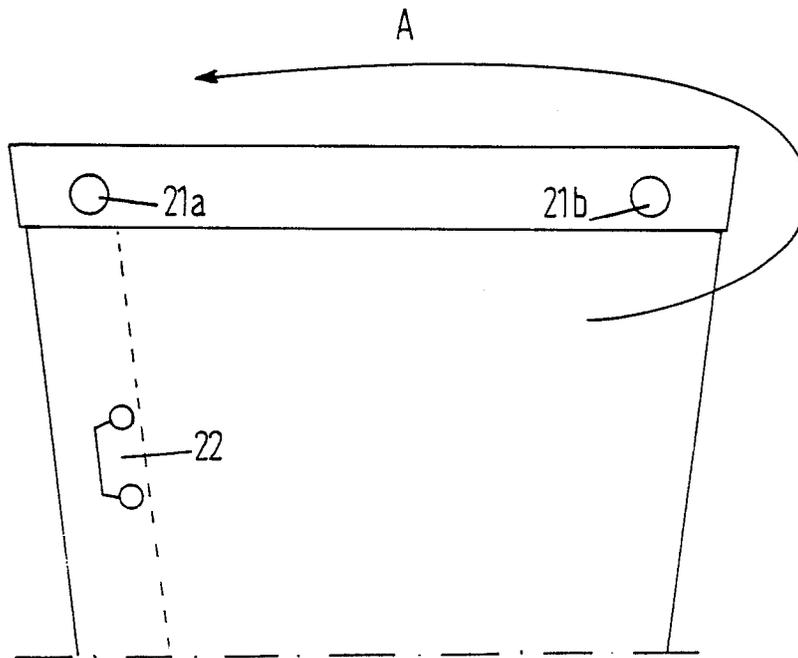
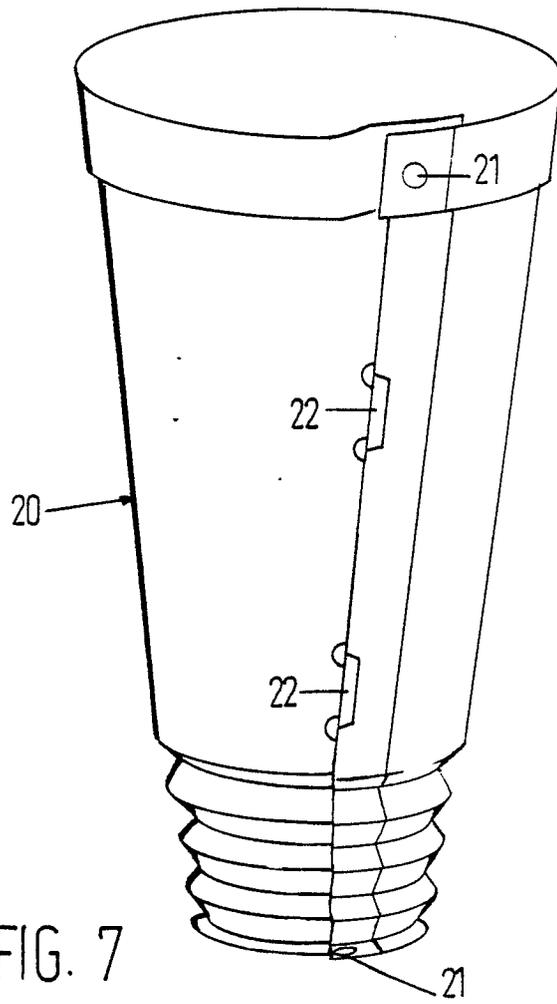


FIG. 6





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A.	FR-A-2 419 868 (VESTRI) * Page 5, line 36 - page 6, line 20; figures 7,8 *	1,7,8, 12,13	B 65 D 85/52

D,A	FR-A-2 477 107 (JOLARD) * Page 2, line 9 - page 3, line 4; figure *	1,7,8, 12,13	

A	FR-A-1 567 255 (SOC. FONCIERE ET AGRICOLE DE LA PIVERDIERE) * Page 1, column 2, lines 7-22; figures 1-3 * & NL-A-6 816 775	1,7,8, 12,13	

D,A	US-A-2 830 405 (NYDEGGER) * Column 2, lines 30-65; figures 1-10 *	1	

A	FR-A-1 412 009 (HORN) * Page 2, column 1, paragraph 4; figure *	1	

			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 65 D B 65 B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 08-12-1987	Examiner VANTOMME M.A.
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			