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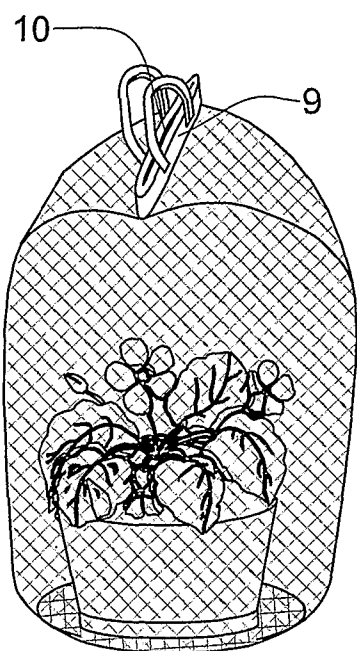
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(54) Title: PLANTER CONTAINER



(57) Abstract: A container for transporting and protecting a plant contained in a planter, made of a flexible net-like material, having at a reversibly sealable opening and at least one carrying handle. The net-like material has a mesh size capable of preventing passage of insects but allowing passage of air and sunlight. Also disclosed is a method for transporting and protecting a plant contained in a planter

PLANTER CONTAINER

5

FIELD OF THE INVENTION

This invention relates to a container for transporting planters.

BACKGROUND OF THE INVENTION

Many types of plants are grown in flowerpots or planters, both in the home
10 environment as well as in plant nurseries. The plants may be exposed to many types of
detrimental agents such as birds, insects, wind, sun, hail, etc. It is therefore necessary to
protect the plants, for example by means of a protective covering. This may be either a
large covering enclosing a plurality of planters, or an individual covering for each plant.
However, when it is desired to move the planter to another location, it becomes
15 necessary to remove the protective covering and replace it in the new location. This can
become a significant disadvantage when a large number of planters need to be moved.

U.S. Patent No. 3,775,903 (Pike) discloses a container intended principally for
use as a plant pot. The container is made of a flexible plastic material, has a semi-rigid
or flexible bottom and stiffening means around at least the upper periphery of the
20 container. Features such as drainage holes, reinforcing straps and carrying handles may
optionally be provided.

GB 2,014,944 discloses a device for use in transporting loose material such as
minerals, fertilizers, corn, fodders, etc. The device consists of a net-like carrying unit
and a flexible tubular container. The unit is equipped with a closing flap at its lower end
25 which is closable by a pin and ring. The container has a filling sleeve at its upper end
and a discharge sleeve at its lower end.

GB 2,383,513 discloses a portable six sided container fitted with handles and
filled with compost or growing medium. The container is constructed from a flexible
plastic material and has a planting hole on its upper side which is covered by a

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removable cover. The base may be punctured to produce draining holes. The container may be fitted with protective bird net covers.

JP 2004/236656 A discloses a protective cover formed from a nonwoven fabric for a plant pot. The cover has an elastic opening which is openable and closable, and
5 which fits over the plant pot. The cover provides moth-proofing and winterizing protection to the plant.

SUMMARY OF THE INVENTION

The object of the present invention is to provide a container which both protects a plant in a planter and is transportable together with the planter.

10 A further object of the invention is to provide a method for transporting a planter while protecting the plant from damage.

In a first aspect of the invention, there is provided a container for transporting and protecting a plant contained in a planter, made of a flexible net-like material, having at one end a reversibly sealable opening and at least one carrying handle, wherein the
15 net-like material has a mesh size capable of preventing passage of insects but allowing passage of air.

The container of the invention functions both as a carrying device for transporting planters from one place to another, as well as a protective cover for protecting the plant from various damaging phenomena such as birds, insects, wind,
20 sun, hail, etc. The container protects the plant both from flying insects and birds as well as from ground-based insects and rodents. The reversibly sealable opening allows one to access the plant for treatment as well as protecting the plant from outside harm when it is not being treated.

The container may have any one of a variety of shapes such as circular,
25 elliptical, square, rectangular, etc. In a preferred embodiment, the container is in the form of a single-walled bag or sack. The term "*single-walled*" means that the walls of the container are continuous so that if the container is slit longitudinally, it will form a single plane. However, the term does not exclude the possibility that the container is manufactured by joining two or more pieces of material. The container may be of any
30 size which may be conveniently carried by a person, and may have room for more than one planter, depending on the size of the planters.

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The container has an opening at one end through which the planter may be placed into the container or removed therefrom, and through which various treatments may be applied to the plant while in the container. The opening includes reversible sealing means by which the opening may be easily sealed and opened. Examples of such means include Velcro-like material, snaps, buttons, zippers, hooks, strings and the like. The sealing means should be capable of tightly closing the opening so as to prevent entry of any damaging agents. In an alternate embodiment, the container has a second reversibly sealable opening positioned at a second end of the container opposite to the one end. The sealing means of the second opening allows the opening to be sealed around the circumference of the planter, or around the bottom wall of the planter. An example of this embodiment is illustrated in Fig. 4. In another alternate embodiment, the opening of the container is located on the lateral side of the container, rather than at the upper end. An example of this embodiment is illustrated in Fig. 5.

The net-like material of the container may consist of any material having a mesh size capable of preventing passage of insects but allowing passage of air and sunlight therethrough. Examples of such materials include plastics such as nylon fibers, polypropylene, polyethylene, PVC or PTFE, fabrics, textiles, woven and nonwoven materials, metal wires, etc. In a preferred embodiment, the mesh size of the net-like material is in the range of 2-80, with the mesh number being defined as the number of openings in one inch of netting. By way of example only, in a plastic material, the maximal size of the holes in the net will be 0.5 inch, and the minimal size, 50-60 mesh. In a metal mesh, the maximal size of the holes in the net will be 0.5 inch, and the minimal size, 80 mesh. The material may be tinted, for example given a white or yellow color, in order to protect the plant from being damaged by the sun or by insects. In one embodiment, a portion of the net-like material is replaced by a transparent material allowing a view of the contents of the container without opening it. The transparent material may be UV-resistant. Rigid poles may be attached to the net-like material, either within or without the container, for distancing the container from the plant, thereby protecting the plant from hail.

The container is lifted by means of at least one carrying handle, which preferably extends above the opening when the container is being carried. The handle or handles may form an integral part of the net-like material, or may be separate entities attached to the container in a variety of ways as is well known to the man of the art. The

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handles may be attached to the container in such a way that the opening of the container is located above the planter when the container is being carried. Alternately, the opening may be in the lateral side of the container, as stated above, while the handle may be near the top of the container.

5 In a second aspect of the invention, there is provided a method for transporting and protecting a plant contained in a planter comprising:

- (a) inserting the planter into a container made of a flexible net-like material, having a reversibly sealable opening and at least one carrying handle, wherein the net-like material has a mesh size capable of preventing passage
10 of insects but allowing passage of air and sunlight,
- (b) sealing the container, and
- (c) transporting the container.

BRIEF DESCRIPTION OF THE DRAWINGS

In order to understand the invention and to see how it may be carried out in
15 practice, exemplary embodiments will now be described, by way of non-limiting example only, with reference to the accompanying drawings, in which:

Fig. 1 is a front schematic view of the container;

Fig. 2 shows the container of Fig. 1 in an open conformation and containing a planter;

20 **Fig. 3** shows the container of Fig. 2 in a closed conformation;

Fig. 4 shows an alternate embodiment of the container of the invention; and

Fig. 5 shows a further embodiment of the container of the invention.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

One embodiment of the container of the invention is shown in Fig. 1. The
25 container **2** consists of a flexible net-like material **4**, an opening **6** and two carrying handles **8**. The container has a cylindrical shape with the opening **4** being located at one end of the cylinder and the opposite end being closed. It will be understood that other shapes are possible, as long as a planter may be placed within the container.

Attached to the inner side of the rim **9** of the opening is a Velcro-type material
30 **10** which enables the rim to be sealed. The handles **8** are also attached to the rim so that when the container is carried, the opening **4** is at the upper end of the container.

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Use of the container is illustrated in Fig. 2 in which a planter **12** containing a plant **14** is placed in the container **2**. The plant is completely within the container so that when the container is closed, no part of the plant is outside the container. The opening of the container is above the planter. In this open conformation, the plant may be
5 worked on.

Fig. 3 illustrates how the container may be sealed. Two arbitrary halves of the rim **9** of the opening are brought together and become engaged due to the Velcro-type material **10**. Preferably, the rim is closed in such a way that the handles are aligned to facilitate carrying of the container. The container will be in this closed conformation
10 most of the time so as to protect the plant from various damaging elements.

An alternate embodiment of the container of the invention is illustrated in Fig. 4, which shows a container **20** having a first reversibly sealable opening **22** at its upper end and containing a plant **24** in a planter **26**. In order to allow for the growth of the plant, the container has a second reversibly sealable opening **28** located at the bottom
15 end of the container. The sealing means of the second opening are capable of either completely sealing the opening, or constricting the opening around the circumference of the planter to prevent access of damaging agents to the plant, as illustrated in Fig. 4. In this example, the second opening is opened and sealed by use of a pull string **30** which is threaded within the edge of the second opening. When it is desired to transport the
20 planter, the first opening is opened, the container is shifted down so that the second opening is positioned under the planter, and the second opening is sealed.

In operation, initially when the plant is young, the second opening **28** is closed and the container is used as described above with reference to the first embodiment. When the plant reaches the top **32** of the sealed container, the second opening is opened
25 and the container is shifted up to provide more space for the plant. The second opening is then tightly closed around the planter **26**.

A further embodiment is illustrated in Fig. 5, which shows a container **40** having a first reversibly sealable opening **42** on the lateral side **44** of the container. A second opening **46** is at the bottom of the container and envelops the bottom of the planter. A
30 carrying handle **48** is attached to the upper end of the container.

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CLAIMS:

1. A container for transporting and protecting a plant contained in a planter, made of a flexible net-like material, having at a reversibly sealable opening and at least one carrying handle, wherein said net-like material has a mesh size capable of preventing
5 passage of insects but allowing passage of air and sunlight.
2. The container of claim 1 wherein said reversibly sealable opening is located at one end of the container.
3. The container of claim 1 wherein said reversibly sealable opening is located on a lateral side of the container.
- 10 4. The container of any of claims 1-3 having the form of a single-walled bag.
5. The container of any of claims 1-4 wherein the net-like material is tinted.
6. The container of any of claims 1-5 wherein said net-like material is made of a plastic material or a metal material.
7. The container of claim 6 wherein the mesh size of said net-like material is in
15 the range of 3-80.
8. The container of any of claims 1-7 wherein the reversibly sealable opening comprises a Velcro-like material.
9. The container of either of claims 1 or 2 further comprising a second reversibly sealable opening positioned at a second end of the container opposite to said one end,
20 wherein said second opening can be sealed around the circumference or the bottom wall of the planter.
10. A method for transporting and protecting a plant contained in a planter comprising:
 - (a) inserting the planter into a container made of a flexible net-like material,
25 having a reversibly sealable opening and at least one carrying handle, wherein said net-like material has a mesh size capable of preventing passage of insects but allowing passage of air,
 - (b) sealing the container, and
 - (c) transporting the container.

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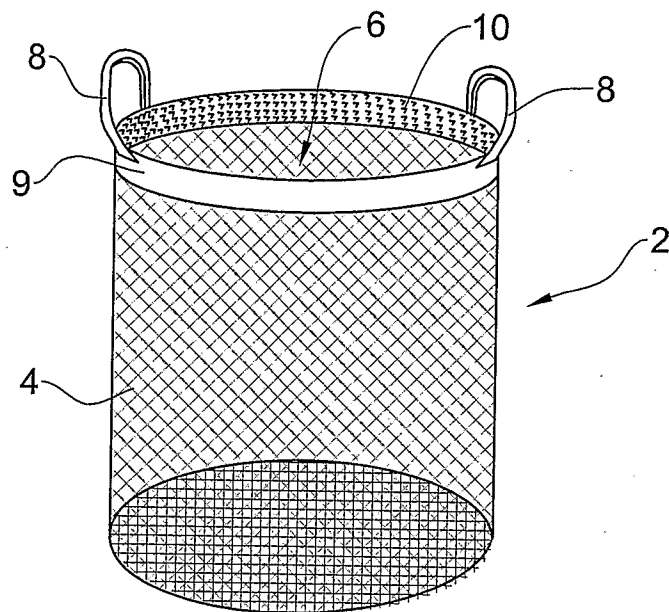


FIG. 1

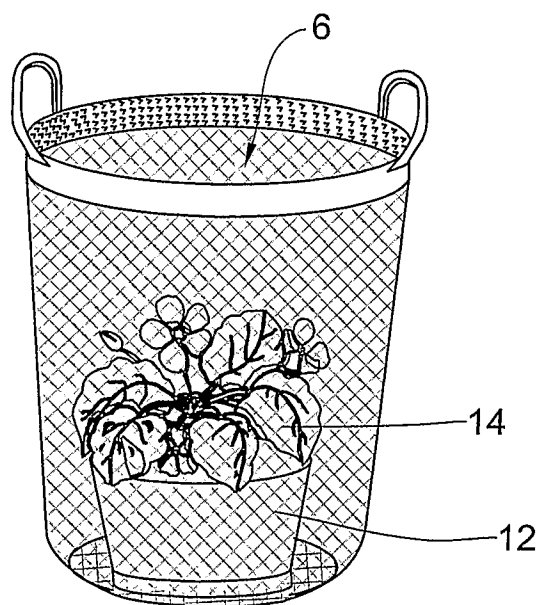


FIG. 2

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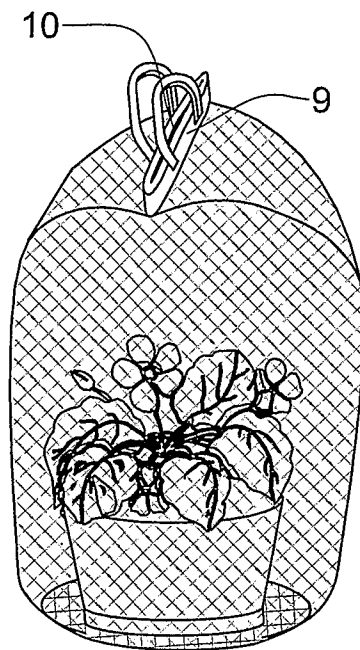
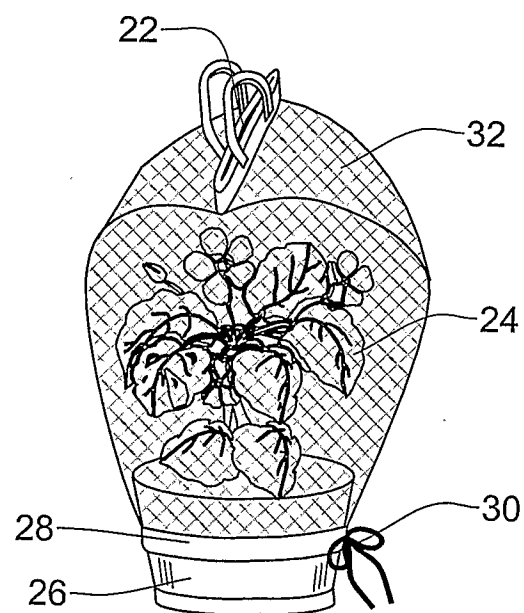


FIG. 3



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FIG. 4

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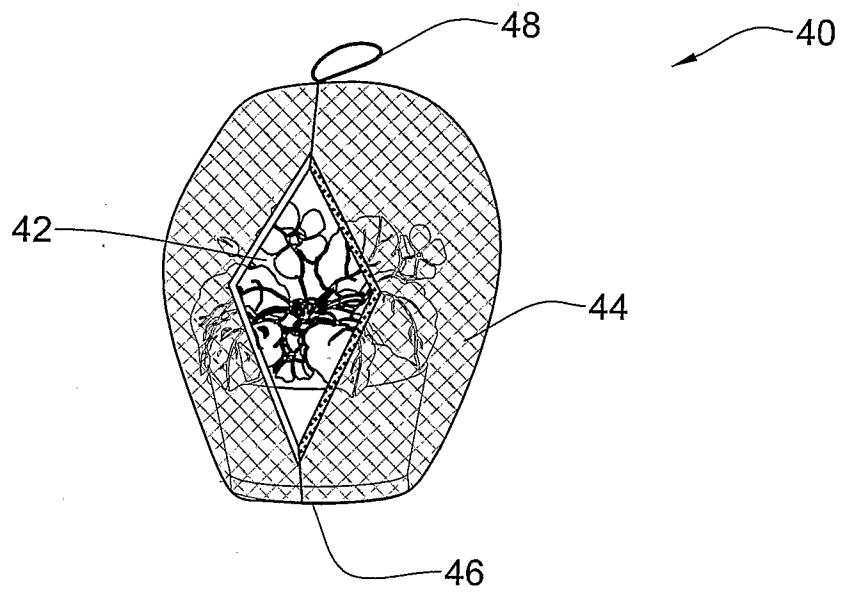


FIG. 5

INTERNATIONAL SEARCH REPORT

International application No
PCT/IL2006/001025

A. CLASSIFICATION OF SUBJECT MATTER INV. B65D30/06 A45C3/04 B65B25/02				
According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) B65D A45C A01G B65B				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EP0-Internal				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	US 3 756 300 A (NALLE G) 4 September 1973 (1973-09-04)	1,2,4, 6-8,10		
Y	column 2, line 46 - column 4, line 46; figures 1,3-5	3,5		
Y	----- GB 2 383 513 A (WOOLLEY RICHARD IAN [GB]) 2 July 2003 (2003-07-02) cited in the application figure 6	3		
Y	----- JP 2004 236656 A (KASAHARA KATSUMI; KAWADA KENJI) 26 August 2004 (2004-08-26) cited in the application abstract	5		
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<div style="display: flex; justify-content: space-between;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex. </div>				
* Special categories of cited documents : <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed </td> <td style="width: 50%; vertical-align: top;"> "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family </td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
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Date of the actual completion of the international search	Date of mailing of the international search report			
3 January 2007	11/01/2007			
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INTERNATIONAL SEARCH REPORT

International application No

PCT/IL2006/001025

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 472 280 A (RITTMASER PETER A [US]) 5 December 1995 (1995-12-05) column 3, line 28 - column 4, line 30; figures 1-8 -----	1,2,4, 6-8,10
A	US 6 014 852 A (WEDER DONALD E [US] ET AL) 18 January 2000 (2000-01-18) column 6, lines 35-65; figures 7,8 -----	1,10
A	US 3 775 903 A (PIKE J) 4 December 1973 (1973-12-04) cited in the application figure 5 -----	1,10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IL2006/001025

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3756300	A	04-09-1973	NONE	
GB 2383513	A	02-07-2003	GB 2390288 A	07-01-2004
JP 2004236656	A	26-08-2004	NONE	
US 5472280	A	05-12-1995	NONE	
US 6014852	A	18-01-2000	NONE	
US 3775903	A	04-12-1973	DE 2144068 A1	23-03-1972
			DE 7133590 U	31-03-1977
			FR 2107247 A5	05-05-1972
			GB 1301259 A	29-12-1972
			NL 7112426 A	13-03-1972
			SE 374008 B	24-02-1975
			ZA 7105448 A	26-04-1972