

**A RECEPTACLE FOR SUPPORTING PLANT GROWTH AND A PLANTER
SYSTEM COMPRISING PLURALITY OF SAID RECEPTACLES**

Technical Field

5 The present invention generally relates to a receptacle for supporting plant growth. The present invention also relates to a planter system comprising a plurality of said receptacles.

Background

10 Plant horticulture is an activity enjoyed throughout the world. The traditional way of plant horticulture occurs outdoors and can be also effectively carried out in a well-controlled environment such as in greenhouses.

15 The urbanization of modern society has resulted in high density cities with high rise buildings with less outdoor space available for horticulture. As such, greenhouses and other outdoor planting activities which require significant outdoor land spaces have become expensive and in some locations are not economically viable.

20 Accordingly, indoor horticulture has received increasing popularity. To ensure successfully cultivation of plants indoors, the basic principles of plant cultivation, namely, sunlight, nutrients, aeration, water and space for plant development, must be sufficient and available. However, known indoor plant growing containers or planter systems are deficient in at least one of the above-mentioned aspects required for healthy plant growth. For instance, some known multi-layered plant

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growing containers or planter systems have fixed and rigid vertical orientations, resulting in the foliage of the plants on the top containers of the top layers blocking off sunlight from reaching the plants on the bottom containers of the bottom layers. As these containers or planter systems have fixed and rigid vertical orientations, rearranging their orientations to maximize sunlight exposure is at times impossible.

Furthermore, most known plant growing containers or planter systems require constant manual watering of the plants and are not self-regulating in maintaining a steady water supply over extended periods of time. Given today's fast-paced society, such requirement may be onerous on the user and may be disruptive to one's personal daily schedule. For example, when the user is away on a holiday for a period of time, the absence of a means to maintain and provide regular water supply to the plants in these containers or systems may impede the healthy growth of the plants. In addition, the absence of an efficient drainage system for some of these containers or systems may result in the plants being submerged in a waterlogged media when too much water is inadvertently introduced during watering. This again may be a stumbling block for healthy plant growth indoors.

Moreover, some of the known indoor planting containers or systems have a relatively large footprint and are not well suited for use in small spaces indoors. Thus, there is a need to provide a receptacle for supporting plant growth that overcomes or at least ameliorates one or more of the disadvantages described above.

There is a need to provide a planter system that is capable of culturing a multitude of plants indoors.

Summary

According to a first aspect, there is provided a receptacle for supporting plant growth comprising a first compartment for holding plant growth media therein; a reservoir for retaining a predetermined amount of water, said reservoir being in fluid communication and being configured to receive water flowing from said first compartment; and a second compartment configured to receive water from a source external to said receptacle and being in fluid communication with, and being configured to pass water to, the first compartment a drainage means for removing excess water from said reservoir, and an inlet in fluid communication with the external water source and the second compartment, wherein the inlet of the receptacle is configured to be fluidly coupled to the drainage means of a second receptacle.

In one aspect, there is provided a receptacle for supporting plant growth comprising:

a first compartment for holding plant growth media therein;

a reservoir for retaining a predetermined amount of water, said reservoir being in fluid communication and being configured to receive water flowing from said first compartment; and a second compartment configured to receive water from a source external to said receptacle and being in fluid communication with, and being configured to pass water to, the first compartment; a drainage means for removing excess water from said reservoir, and an inlet in fluid communication with the external water source and the second compartment, wherein the inlet of the receptacle is configured to be fluidly coupled to the drainage means of a second receptacle, wherein the first compartment is disposed between the second compartment and the reservoir.

Advantageously, the disclosed receptacle has an internal reservoir for storing excess water that may be subsequently used for hydrating the plant growth media.

Advantageously, the drainage means prevents water logging an inordinate amount of water to be stored in the reservoir which may unnecessarily increase the overall weight of the receptacle.

Advantageously, the inlet provides direct access to the second compartment by the external water source.

Advantageously, by having the inlet of the receptacle fluidly coupled to the drainage means of a second receptacle a plurality of receptacles may be

connected together and may share the same water source. More advantageously, when the receptacles are connected in such a manner, the user only has to water the top most receptacle to ensure that the rest of the
5 subsequent receptacles also receive adequate water and nutrients.

In one embodiment, the second compartment is configured to pass water to the first compartment at a predetermined rate. This may beneficially allow the
10 controlled automatic watering of the plant situated in the first compartment by the second compartment. In one embodiment, the second compartment and the first compartment are separated by perforations which allow water to pass from the second compartment into the first
15 compartment at the predetermined rate. The dimensions and porosity of the perforations may be controlled according to the desired predetermined flow rate of the water flowing from the first compartment to the second compartment.

In another embodiment, the receptacle further comprises an absorbent material for transmission of water from said reservoir to said first compartment. The absorbent material may be disposed between the first compartment and the reservoir. Advantageously, the
25 absorbent material serves as a conduit to hydrate the plant growth media with water stored in the reservoir. In one embodiment, the absorbent material is configured to transport water at a predetermined rate via capillary action. Advantageously, the absorbent material may also
30 be made of a suitable material that gives the

predetermined rate of water movement according to capillary action or wicking effect.

In one embodiment, at least part of the absorbent material is disposed within the reservoir. At least part
5 of the absorbent material may also be disposed within the growth media.

In one embodiment, the receptacle is substantially ovoid in shape. Advantageously, the ovoid shape of the
10 receptacle provides considerable large room internally for containing plant material, whilst at the same time maintaining a relatively small footprint, due to the tapering towards the base. More advantageously, as the receptacle is ovoid in shape and substantially free from
15 corners, the dead spaces (caused by corners which are capable of retaining water undesirably) is substantially reduced. Even more advantageously, the ovoid shape is aesthetically pleasing and can double as a decorative structure.

20 In one embodiment, the receptacle is made of a substantially transparent material to allow ingress of light to the plant media.

In one embodiment, the drainage means comprises an elongated hollow member, said elongated hollow member
25 being at least partially disposed in said reservoir. Advantageously, the height of the part of the elongated hollow member disposed within the reservoir determines the maximum water level that could be stored in the reservoir before drainage of excess water from the
30 reservoir occurs.

In another embodiment, the longitudinal axis of the first compartment is disposed at an angle from the longitudinal axis of the elongated member.

5 Advantageously, this allows the plant material to be cultured at an angle to the normal and accordingly, the plant material may be able to develop lengthwise out of the receptacle without being constrained by the ceiling of said receptacle. Also, as the plant material can be
10 cultured at an angle from the normal, watering of the plant material via the opening of the first compartment can be carried out easily.

 In one embodiment, the first compartment is disposed between the second compartment and the reservoir such that water from an external source may flow into the
15 second compartment, subsequently to the first compartment and finally to the reservoir.

 In one embodiment, at least part of the surface of said receptacle is dimensioned to mate complementarily with a support. Advantageously, this allows the
20 receptacle to be fitted onto the support to provide better stability. In another embodiment, the receptacle comprises an indicator for indicating the water level in the reservoir. This provides the user with a better visual indication on the surplus water remaining in the
25 reservoir and whether further watering is necessary.

 In one embodiment, the disclosed receptacle is formed of a unitary body. Accordingly, receptacle may be used on its own to cultivate plant material or together with a plurality of other similar receptacles.

30 According to a second aspect, there is provided a planter system comprising a plurality of unitary

receptacles as defined herein, wherein said unitary
receptacles are interconnected with each other.
Advantageously, the planter system allows for a
multitude of plant material to be cultivated thereon,
5 with each different plant material being contained in a
separate receptacle. In one embodiment, the unitary
receptacles are interconnected with each other by
conduits, which may be flexible or rigid. This allows
water to pass from one receptacle to another. The excess
10 water from the reservoir of one unitary receptacle may
be drained to the second compartment of another unitary
receptacle by said conduit. Advantageously, this allows
for recycling of excess water from one receptacle to
another receptacle. In one embodiment, the unitary
15 receptacles are arranged substantially vertically on top
of one another.

In one embodiment, at least part of the surfaces of
said receptacles are dimensioned to mate complementarily
with a support. Advantageously, this allows all of the
20 receptacles to be mounted on the support for extra
stability. Hence, in one embodiment, the planter system
further comprises a support coupled to the parts of said
receptacles, which are dimensioned to mate
complementarily with said support. The support may be a
25 standing support or a wall support.

The planter system may also be portable.
Advantageously, this enables the user to easily change
the orientations of the planter system according to
his/her fancy or desire.

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Definitions

The following words and terms used herein shall have the meaning indicated:

5 The word "substantially" does not exclude "completely" e.g. a composition which is "substantially free" from Y may be completely free from Y. Where necessary, the word "substantially" may be omitted from the definition of the invention.

10 The phrase "at least partially" includes "partially" as well as "completely" e.g. X which is "at least partially" disposed in Y may be partially or completely disposed in Y.

 Unless specified otherwise, the terms "comprising" and "comprise", and grammatical variants thereof, are intended to represent "open" or "inclusive" language such that they include recited elements but also permit inclusion of additional, unrecited elements.

 As used herein, the term "about", in the context of concentrations of components of the formulations, typically means +/- 5% of the stated value, more typically +/- 4% of the stated value, more typically +/- 3% of the stated value, more typically, +/- 2% of the stated value, even more typically +/- 1% of the stated value, and even more typically +/- 0.5% of the stated value.

 Throughout this disclosure, certain embodiments may be disclosed in a range format. It should be understood that the description in range format is merely for convenience and brevity and should not be construed as an inflexible limitation on the scope of the disclosed ranges. Accordingly, the description of a range should be

considered to have specifically disclosed all the possible sub-ranges as well as individual numerical values within that range. For example, description of a range such as from 1 to 6 should be considered to have specifically disclosed sub-ranges such as from 1 to 3, from 1 to 4, from 1 to 5, from 2 to 4, from 2 to 6, from 3 to 6 etc., as well as individual numbers within that range, for example, 1, 2, 3, 4, 5, and 6. This applies regardless of the breadth of the range.

Detailed Disclosure of Embodiments

Exemplary, non-limiting embodiments of a receptacle for supporting plant growth and a planter system, will now be disclosed.

There is provided a receptacle for supporting plant growth comprising a first compartment for holding plant growth media therein; a reservoir for retaining a predetermined amount of water, said reservoir being in fluid communication and being configured to receive water flowing from said first compartment; and a second compartment configured to receive water from a source external to said receptacle and being in fluid communication with, and being configured to pass water to, the first compartment a drainage means for removing excess water from said reservoir, and an inlet in fluid communication with the external water source and the second compartment, wherein the inlet of the receptacle is configured to be fluidly coupled to the drainage means of a second receptacle.

In one embodiment, the first compartment for holding plant media may be dimensioned to be large enough to

receive and contain a plant pot. This allows plant material which is already being cultivated in an existing plant pot to be directly inserted into the first compartment together with the plant pot. In such cases, 5 the receptacle can serve as an aesthetic holding unit while still allowing water to be transmitted from and to the plant pot. In another embodiment, the plant material may be directly cultivated *in situ* in the receptacle without the presence of plant pots. The first compartment 10 may have a volume space of from about 1200 to about 1500 cubic centimeters , about 1250 to about 1450 cubic centimeters, about 1300 to about 1400 cubic centimeters. In one embodiment, first compartment has a volume space of from about 1,360 to about 1,380 cubic centimeters

15 In one embodiment, the opening of the first compartment to the external environment is dimensioned for easy access to the plant material contained therein as well as for easy watering of the plant material. The opening of the first compartment may have the dimensions 20 of about from about 10 cm to about 20 cm in diameter or from about 10 cm to about 15 cm in diameter. In one embodiment, the opening of the first compartment is 12 cm in diameter.

In one embodiment, at least one surface of the first 25 compartment is permeable to water to allow water from the first compartment to be transmitted into the reservoir. In another embodiment, at least one surface of the first compartment is permeable to water to allow water from the second compartment to pass into the first compartment.

30 In one embodiment, the drainage means may be any means that is capable of draining excess water from the

reservoir. In one embodiment, the drainage means may comprise an elongated hollow member being at least partially disposed in said reservoir. In one embodiment, the vertical height of the part of the hollow member being disposed within the reservoir determines the maximum water storage level possible in the reservoir. The elongated hollow member may be disposed substantially vertically in the reservoir. In one embodiment, the elongated hollow member is disposed at an angle to the horizontal within the reservoir. The diameter of the hollow member may be chosen in accordance to the desired flow rate of drainage of excess water to a second receptacle.

In one embodiment, the second compartment is configured to pass water to the first compartment at a predetermined rate. The second compartment and the first compartment may be separated by perforations which allow water to pass from the second compartment into the first compartment at the predetermined rate. In one embodiment, the volume of the second compartment ranges from about 1,000 to about 2,000 cubic centimeters, about 1,200 to about 1,800 cubic centimeters or about 1,500 to about 1,700 cubic centimeters. In one embodiment, the second compartment is located at the top portion of the receptacle in its upright position.

In one embodiment, the reservoir comprises at least part of the volume of the receptacle that is not the first and/or the second compartment. In one embodiment, the volume of the reservoirs ranges from about 1,000 to about 2,000 cubic centimeters, about 1,200 to about 1,800 cubic centimeters or about 1,500 to about 1,700 cubic

centimeters. The interior surfaces of the reservoir may comprise a water proofing membrane to prevent water from escaping the receptacle except through the drainage means. The interior surfaces of the reservoir may also
5 comprise a layer of felt to prevent particulates from entering the reservoir.

In one embodiment, the receptacle may also comprise an absorbent material for transmission of water from said reservoir to said first compartment. At least part of the
10 absorbent material may be disposed between the first compartment and the reservoir. At least part of the absorbent material may also be disposed within the plant growth media and the reservoir.

The absorbent material may be any material that is
15 capable of absorbing water from the reservoir and transmit it to the first compartment. In one embodiment, the absorbent material comprises either woven or non woven natural fiber. In another embodiment, the absorbent material comprises a synthetic fiber. In yet another
20 embodiment, the absorbent material comprises a mixture of synthetic and natural fiber in a proportion that gives the predetermined rate of water movement according to capillary action or wicking effect. The composition of the absorbent material may also vary accordingly
25 depending on the types of growing media and plants used.

In one embodiment, the inlet may be capable of providing direct access from the external environment to the second compartment.

The receptacle can take the form of any shape or
30 size, be it curved or angled. In one embodiment, the longitudinal and transverse cross sections of the

receptacle are made of curvilinear lines. The receptacle may be tubular, cylindrical, spherical, cuboid, ovoid, or irregularly shaped. The receptacle may have a total volume of from about 6,000 to about 7,000 cubic centimeters, from about 6,200 to about 6,800 cubic centimeters, from about 6,400 to about 6,800 cubic centimeters, from about 6,500 to about 6,800 cubic centimeters or from about 6,700 to about 6,800 cubic centimeters.

In one embodiment the receptacle is made of polymers such as plastic. Said plastic materials may be selected from a group consisting of a polyvinyl resin, a vinyl acetate-ethylene copolymer, a vinyl polymer, an acrylic resin, a cellulose derivative and a polyolefin. Advantageously, said plastic material may be selected from the group consisting of poly(ethyl vinyl acetate), polyethylene, polypropylene, polystyrene, polyvinyl chloride and polyamide. The material receptacle may be manufactured by plastics molding, such as cold molding, compression molding, injection molding etc. In another embodiment, the receptacle is selected from the group consisting of fiberglass, glass crystal and polymers. In one embodiment, the receptacle is made of a substantially transparent material selected from the group consisting of polyester, polyvinyl chloride and polypropylene, polycarbonate, polymethyl methacrylate, polyethylene, polystyrene, copolymer of methylmethacrylate and styrene, quartz, glass, crystal, ceramic and any combination thereof.

In one embodiment, the longitudinal axis of the first compartment is disposed at an angle from the

normal. The angle formed between the longitudinal axis of the first compartment and the normal may range from about 30 degrees to about 90 degrees, from about 40 degrees to about 80 degrees, from about 45 degrees to about 70 degrees, or from about 45 degrees to about 60 degrees. Accordingly, in one embodiment, the orientation of the first compartment is such that the first compartment extends from the top half of the receptacle to the bottom half of the receptacle. When in use, the opening of the first compartment on the receptacle may be facing skywards.

In one embodiment, the first compartment is disposed between the second compartment and the reservoir. In one embodiment, the coupling of the inlet of the second compartment to the drainage means of a second receptacle may be carried out by the use of a conduit in the form of a rigid or flexible tube. In another embodiment, the coupling of the inlet of the second compartment to the drainage means of the second receptacle may be carried out by an inter-locking arrangement wherein one conduit is flexible (ie such as the inlet of the second compartment) while the other conduit is the use of a conduit in the form of a rigid or flexible tube so that the flexible tube inter-locks with the rigid tube when inserted therein. The coupling of the inlet of the second compartment of the first receptacle is configured to the drainage means of a second receptacle may allow water to flow from the reservoir of the second receptacle to the second compartment of the first receptacle.

In one embodiment, at least part of the surface of the receptacle is dimensioned to mate complementarily

with a support. In one embodiment, the drainage means of the receptacle is dimensioned to mate complementarily with a support. In another embodiment, the surface of the receptacle which is opposite to the surface comprising the opening into the first compartment is capable of mating complementarily with a support. The surface of the receptacle may comprise a groove which mates complementarily with a projection on the support. Alternatively, the receptacle may comprise a projection which mates complementarily with a groove on the support. In one embodiment, both grooves and projections are present on the surface of the receptacles to mate with the complementary grooves and projections on the support.

In one embodiment, the receptacle comprises a water indicator for indicating the water in the reservoir. In another embodiment, the receptacle is formed of a unitary body.

There is also provided a planter system comprising a plurality of receptacles disclosed herein, wherein the receptacles are interconnected with each other. The planter system may comprise at least 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10 receptacles interconnected together. In one embodiment, excess water from the reservoir of one receptacle is drained to the second compartment of another receptacle. The receptacles may be arranged in any manner and at any angle as long as drainage of the reservoirs of the receptacles via gravity is adequate. In one embodiment, the receptacles are arranged substantially vertically on top of one another. The receptacles may be interconnected to each other by solid or flexible conduits. The planter system may also

comprise a support that is capable of mating complementarily with the receptacles. The support may be a standing support or wall mountable support. In one embodiment, when the support is a standing support, the support comprises a stand member and a spine member which may be assembled together to form the standing support.

Brief Description Of Drawings

The accompanying drawings illustrate a disclosed embodiment and serves to explain the principles of the disclosed embodiment. It is to be understood, however, that the drawings are designed for purposes of illustration only, and not as a definition of the limits of the invention.

Fig. 1a and Fig. 1b respectively show a side cross-sectional view and a front cross-sectional view of one embodiment of a receptacle disclosed herein.

Fig. 2a shows a side view of a standing support that is able to mate complementarily with the receptacle shown in Fig. 1a and Fig. 1b.

Fig. 2b shows a side view of a wall mountable support that is able to mate complementarily with the receptacle shown in Fig. 1a and Fig. 1b.

Fig. 3a and Fig. 3b show the front view and side view respectively of one embodiment of a disclosed planter system mounted by the standing support of Fig. 2a.

Fig. 4 shows the side view of one embodiment of a disclosed planter system mounted by the wall mountable support of Fig. 2b.

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Detailed Description of Figures

Referring to Fig. 1a and Fig. 1b, there is shown one embodiment of a receptacle disclosed herein. The receptacle (100) comprises a first compartment (102) that is large enough for containing a planting pot (112) having the longest dimension of 12 cm with planting media (110) therein. The first compartment (102) is orientated in a tilted fashion such that the first compartment opens out into the exterior environment skywards. A reservoir (104) is located adjacent to the first compartment (102). The reservoir (104) is capable of receiving water flow from the first compartment (102) through perforations (120). The reservoir (104) also comprises a drainage means in the form of a hollow tube (116) that drains excess water in the reservoir out of the receptacle (100). An absorbent material (114) such as a felt is disposed partly in the reservoir (104) and partly in the first compartment (102). The absorbent material (114) serves to transmit water from the reservoir (104) up to the first compartment (102). The receptacle (100) also comprises a second compartment (106) adjacent to the first compartment (102) such the first compartment (102) is located between the second compartment (106) and the reservoir (104). The second compartment (106) is capable of receiving water from an external source via an inlet (118) before passing the water on to the first compartment (102) at a predetermined rate through

perforations (108) located at the base of the second compartment (106). The plant pot (112) may be adapted to contain perforations (not shown) thereon so that water passing from the second compartment (106) to the first compartment (102) may be able to reach the planting media (110) contained in the planting pot (112). The receptacle (100) has dimensions of 30 cm in height and 21 cm wide.

When in use, a plant material together with growth media may be directly placed into first compartment (102) or may be placed first into a planting pot (112) before placing into the first compartment. Watering of the plant material in the first compartment (102) can be made through the opening of the first compartment (102) or through the inlet (118) of the second compartment (106). If watering is made via the inlet (118) of the second compartment (106), water flows into the second compartment (106) and into the first compartment (102) via the perforations (108). The excess water in the first compartment (102) then flows to the reservoir (104). The water is then stored in the reservoir until water level reaches a height that is above the vertical height of the hollow tube (116). Excess water in the reservoir (104) then flows out of the receptacle (100) through the hollow tube (116). The remaining water in the reservoir (104) is then absorbed by the absorbent material (114) by capillary action is transmitted to first compartment (102). This results in a constant hydration of the plant material and growth media in the first compartment (102) for a long period of time.

Fig. 2a shows a standing support (202) that is able to mate complementarily with the receptacle (100) shown

in Fig. 1a and Fig. 1b. The standing support (202) comprises a base (210), a neck (212) and an engaging member (214) that is capable of mating complementarily with the receptacle of Fig. 1a and 1b.

5 Fig. 2b shows a wall mountable support (204) that is able to mate complementarily with the receptacle (100) shown in Fig. 1a and Fig. 1b. The wall mountable support (204) comprises a plurality of necks (218), inlets embedded therein and engaging members (216) that are
10 capable of mating complementarily with the receptacle of Fig. 1a and 1b.

 Referring now to Fig. 3a and Fig. 3b, there is shown one embodiment of the disclosed planter system (300) comprising the standing support. The planter system (300)
15 has a number of technical features that are the same as the receptacle (100) and standing support (202) described above which are indicated by the same reference numeral but with a prime symbol ('). The receptacles (100') of the planter system (300) are interconnected vertically
20 with one another via the drainage means in the form of a hollow tube (116') and inlets (118'). The receptacles (100') also comprise a water indicator (122) to visually indicate to the user the water level in the reservoirs (104') of each receptacle (100'). The receptacles (100')
25 are also mounted on a standing support (202') to provide extra stability to the planter system (300). When in use, water flows from the reservoir (104') of one receptacle (100') to the second compartment (106') of the second receptacle (100') and so forth.

Referring now to Fig. 4, there is shown one embodiment of the disclosed planter system (400) comprising a wall mountable support. The planter system (400) has a number of technical features that are the same as the receptacle (100) and wall mountable support (204) described above which are indicated by the same reference numeral but with a prime symbol (''). The receptacles (100'') of the planter system (400) are interconnected vertically with one another via the drainage means in the form of a hollow tube (116'') and inlets (118''). The receptacles (100'') are also mounted on a wall mounted support (204'') to provide extra stability to the planter system (400). The wall mounted support (204'') is in turn mounted onto the wall via securing means such as pins (206). The wall mounted support (204'') also comprises projections (404) that are capable of mating complementarily and securely with grooves (402) present on the receptacles (100''). When in use, water flows from the reservoir (104'') of one receptacle (100'') to the second compartment (106'') of the second receptacle (100'') and so forth.

Applications

The disclosed receptacle and planter system are simple yet efficient for supporting plant growth indoors. Advantageously, the disclosed receptacle and planter system are self sustaining in that each receptacle comprises an internal water reservoir for hydrating the plant material contained therein for long periods of time.

More advantageously, the receptacle and planter system also have a small foot print and can be placed in tight spaces indoors. Due to the receptacle and planter system being relatively light in weight and having a small footprint, the receptacle and planter system are also portable.

Even more advantageous, the each receptacle has a drainage system which allows excess water to be drained to a next receptacle for storage when the receptacles are interconnected to each other in the planter system. This maximizes the utilization of water in the planter system.

The receptacles in the planter system may also be arranged spatially in a customized way to suit the needs of each individual user and/or to maximize sunlight or artificial light exposure. Additional receptacles can also be added to the planter system as and when needed.

The receptacles and planter system disclosed herein also have the flexibility of cultivating plant material *in situ* (i.e. directly in the receptacles) or in a plant pot which is then placed in the receptacles.

While reasonable efforts have been employed to describe equivalent embodiments of the present invention, it will be apparent to the person skilled in the art after reading the foregoing disclosure, that various other modifications and adaptations of the invention may be made therein without departing from the spirit and scope of the invention and it is intended that all such modifications and adaptations come within the scope of the appended claims.

Claims

1. A receptacle for supporting plant growth comprising:

5 a first compartment for holding plant growth media therein;

a reservoir for retaining a predetermined amount of water, said reservoir being in fluid communication and being configured to receive water flowing from said first compartment; and a second compartment configured to receive
10 water from a source external to said receptacle and being in fluid communication with, and being configured to pass water to, the first compartment; a drainage means for removing excess water from said reservoir, and

15 an inlet in fluid communication with the external water source and the second compartment, wherein the inlet of the receptacle is configured to be fluidly coupled to the drainage means of a second receptacle, wherein the first compartment is disposed between the second compartment and the reservoir.

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2. The receptacle according to claim 1, wherein the second compartment is configured to pass water to the first compartment at a predetermined rate.

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3. The receptacle according to claim 2, wherein the second compartment and the first compartment are separated by perforations which allow water to pass from the second compartment into the first compartment at the predetermined
30 rate.

4. The receptacle according to any one of the preceding claims, further comprising an absorbent material for transmission of water from said reservoir to said first compartment.

5 5. The receptacle according to claim 4, wherein at least part of the absorbent material is disposed between the first compartment and the reservoir.

10 6. The receptacle according to claim 5, wherein at least part of the absorbent material is disposed within the reservoir.

15 7. The receptacle according to any one of claims 4 to 6, wherein the absorbent material is configured to transport water at a predetermined rate via capillary action or wicking effect.

20 8. The receptacle according to any one of the preceding claims, wherein the receptacle is substantially ovoid in shape.

25 9. The receptacle according to claim 1, wherein the drainage means comprises an elongated hollow member, said elongated hollow member being at least partially disposed in said reservoir.

10. The receptacle according to claim 1 to 9, wherein the longitudinal axis of the first compartment is

disposed at an angle from the longitudinal axis of the elongated member.

- 5 11. The receptacle according to any one of the preceding claims, wherein at least part of the surface of said receptacle is dimensioned to mate complementarily with a support.
- 10 12. The receptacle according to any one of the preceding claims, further comprising a water indicator for indicating the water level in the reservoir.
13. The receptacle according to any one of the preceding claims, wherein the receptacle is formed of an unitary body.
- 15 14. A planter system comprising a plurality of unitary receptacles as defined in claim 13, wherein said unitary receptacles are interconnected with each other.
- 20 15. The planter system as claimed in claim 14, wherein the unitary receptacles are interconnected with each other by conduits.

16. The planter system as claimed in claim 15, wherein excess water from the reservoir of one unitary receptacle is drained to the second compartment of another unitary receptacle by said conduit.

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17. The planter system as claimed in any one of claims 14 to 16, wherein the unitary receptacles are arranged substantially vertically on top of one another.

10 18. The planter system according to any one of claims 14 to 17, wherein at least part of the surfaces of said receptacles are dimensioned to mate complementarily with a support.

15 19. The planter system as claimed in claim 18, further comprising a support coupled to the parts of said receptacles, which are dimensioned to mate complementarily with said support.

20 20. The planter system as claimed in claim 19, wherein the support is a standing support.

21. The planter system as claimed in claim 20, wherein the support is a wall mountable support.

25 22. The planter system as claimed in any one of claims 14 to 21, wherein the planter system is portable.

**A RECEPTACLE FOR SUPPORTING PLANT GROWTH AND A PLANTER
SYSTEM COMPRISING PLURALITY OF SAID RECEPTACLES**

Abstract

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There is provided a receptacle for supporting plant growth comprising a first compartment for holding plant growth media therein; a reservoir for retaining a predetermined amount of water, said reservoir being in fluid communication and being configured to receive water flowing from said first compartment; and a second compartment configured to receive water from a source external to said receptacle and being in fluid communication with the first compartment and being configured to pass water to the first compartment; a drainage means for removing excess water from said reservoir, and an inlet in fluid communication with the external water source and the second compartment, wherein the inlet of the receptacle is configured to be fluidly coupled to the drainage means of a second receptacle.

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(Figure 1A)