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A CONTAINER

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The invention relates to a container and especially, a container for holding a plant.

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Conventionally, when plants in holders, such as plant pots are watered, the water drains through the plant and the material, such as earth, in which the plant is growing, and any excess water which is not absorbed, generally drains out of the plant pot through drainage holes in the bottom of the plant pot.

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Therefore, the excess water is water that is wasted as it is not available for absorption by the plant.

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In accordance with a first aspect of the present invention, there is provided a container for holding a plant, the container comprising an opening through which the plant may grow or through which the plant may receive light, and the container having a base portion which comprises a container outlet having a coupling device to permit a conduit to be coupled to the container outlet, a support device arranged to support a plant and being mounted within the container between the opening and base portion, and a container inlet arranged for supplying fluid from above the support member for watering the plant.

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In accordance with the second aspect of the present invention, there is provided a watering system for a plant, the system comprising a container in accordance with the first aspect of the invention, an outlet conduit coupled from the

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container outlet to a liquid reservoir, a pump, and an inlet conduit, the pump being coupled to the reservoir and to the inlet conduit to pump liquid from the reservoir to the inlet conduit, the inlet conduit having an exit outlet arranged such that liquid pumped from the reservoir by the pump exits the exit outlet into
5 the container.

Preferably, the system comprises a number of containers in accordance with the first aspect of the present invention, and the pump pumps fluid from the reservoir to a number of inlet conduits, each inlet conduit having an exit outlet
10 arranged such that liquid exits each inlet conduit into a respective container.

Typically, the pump pumps the liquid from the reservoir to a manifold and the manifold comprises a number of outlets, each outlet being coupled to an inlet conduit.
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Preferably, the system may further comprise a supply conduit which permits liquid to be inserted into the reservoir from an external source of water, such as a tap.

20 Preferably, an intermediate conduit couples the reservoir to the manifold.

Typically, the system may further comprise a second manifold, the second manifold being coupled to the outlet conduits and the manifold having an outlet coupled to the reservoir.

Preferably, the container comprises an inlet, the inlet being located between the base portion and the opening.

Preferably, the container outlet may comprise a coupling device which is
5 threadedly attached to the base portion. Alternatively, the coupling device may be integrally formed with the base portion. In a further example of the present invention, the coupling device may comprise a flange which overlaps the internal side of the base portion and a threaded member which engages with the coupling device and an outside section of the base portion to secure the
10 coupling device to the container. In yet a further example of the invention, the coupling device may be a friction or press fit with an aperture in the base portion.

A container in accordance with the invention will now be described with
15 reference to the accompanying drawings, in which:-

Figure 1 is a schematic diagram of an irrigation system with a first example of a plant pot; and

Figure 2 is a cross-sectional view of a second example of a plant pot.

- 5 Figure 1 shows five plant pots 1. Each plant pot 1 includes an outlet coupling 2, a support member 3 and an inlet 4. In addition, each plant pot 1 has an opening 5.

Each of the outlet couplings 2 is coupled to an outlet conduit 6 which is coupled
10 to an outlet manifold 7 in the form of a pipe. The outlet manifold 7 has an outlet 8 which is coupled to a conduit 9 which is coupled to a reservoir 10. The reservoir 10 includes an electrical pump 11 with an on/off switch 12. In addition, the reservoir 10 has a supply conduit 13 which permits water to be inserted into the reservoir 10. An outlet pipe 14 is connected to an outlet from the pump 11
15 and the other end of the pipe 14 is coupled to an inlet manifold 16 which has five outlets 17. Each outlet 17 is coupled to a pipe 18 which terminates at a respective inlet 4 on each of the plant pots 1. In addition, each of the plant pots 1 are supported on a metal grid shelf 20 and each of the outlets 2 extend through apertures in the grid shelf 20.

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Typically, the pipes 6, 18 are flexible pipes and the pipes 9, 14 are non-flexible pipes. However, it is possible that all the pipes may be flexible or non-flexible or only combination of flexible and non-flexible.

In use, water is inserted into the reservoir 10 through the supply pipe 13 and the pump 11 is switched on using the switch 12. The pump pumps water from the reservoir 10 through the pipe 14 to the inlet manifold 16. The water then drains out of the inlet manifold 16 through the outlets 17 into the pipes 18 which
5 transport the water to the inlets 4. At the inlets 4 the water exits from the pipes 18 into the plant pots 1 and onto plants 25 on the support members 3 in the plant pots 1. Excess water which drains through the support members 3 exits from the plant pots 1 through the outlets 2 and into the conduits 7 and the outlet manifold 8, and then drains back into the reservoir 10 through the pipe 9.

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Therefore, the invention has the advantage that excess water which is not absorbed by the plant or by the material which supports the plant, is returned to the reservoir and can be used again to water the plants in the plant pots 1. In addition, the reservoir 10 can be topped up, as necessary, by water through the
15 supply pipe 13.

Figure 2 shows a second example of a plant pot 30, in which the support member 3 is located on flanges 31 so that the inlet 4 is located below the support member 3. Typically, the volume between the support member and the
20 base portion of the plant pot 30 would be filled with a medium which supports growth of the plants 35, such as earth. Hence, water passes into the material and is retained within the material to be available to the plants growing on the support member.

The output couplings 2 may be integrally formed with the main body of the plant pots 1. Alternatively, the output couplings 2 may be a separate component which are a friction or press fit in an aperture in the bottom of the plant pots 1, or may be threadably connected with the plant pot 1.

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Typically, the pump 11 may be operated by means of a timer (not shown) which automatically switches the pump 11 on and off at predetermined intervals so that water is pass to the plant pots 1 at regular intervals.

- 10 Alternatively, it is possible that the apparatus further include a moisture detector located in one or more of the plant pots which detects the moisture within the plant pots and when the moisture falls below a minimum level, switches the pump 11 on to supply water to the plant pots 1.

CLAIMS

1. A container for holding a plant, the container comprising
an upper opening
5 a base portion which comprises a container outlet having a coupling device to
permit a conduit to be coupled to the container outlet,
a support device arranged to support a plant and being mounted within the
container between the opening and base portion, and
a container inlet arranged for supplying fluid from above the support member for
10 watering the plant.
2. A container according to claim 1, wherein the coupling device is
threadedly attached to the base portion.
- 15 3. A container according to claim 1, wherein the coupling device is integrally
formed with the base portion.
4. A container according to claim 1, wherein the coupling device extends
through an aperture in the base portion, and the coupling device comprises a
20 flange which overlaps the internal side of the base portion and a locking
member which engages with the coupling device and an outside section of the
base portion to secure the coupling device to the container.
5. A container according to claim 1, wherein the coupling device is a friction
25 fit with an aperture in the base portion.

6. A watering system for a plant, the system comprising a container in accordance with any one of claims 1 to 5, an outlet conduit coupled from the container outlet to a liquid reservoir, a pump, and an inlet conduit, the pump
5 being coupled to the reservoir and to the inlet conduit to pump liquid from the reservoir to the inlet conduit, the inlet conduit having an exit outlet arranged such that liquid pumped from the reservoir by the pump exits the exit outlet into the container.

10 7. A system according to claim 6, wherein the system comprises a number of containers in accordance with any one of claims 1 to 5, and the pump pumps fluid from the reservoir to a number of inlet conduits, each inlet conduit having an exit outlet arranged such that liquid exits each inlet conduit into a respective container.

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8 A system according to claim 7, further comprising a first manifold, the pump pumping the liquid from the reservoir to the first manifold, and the first manifold comprising a number of outlets, each outlet being coupled to an inlet conduit.

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9 A system according to any one of claims 6 to 8, further comprising a supply conduit coupled to the reservoir, the supply conduit being enabling liquid to be inserted into the reservoir from an external source of water.

10. A system according to any of claims 6 to 9, further comprising a second manifold, the second manifold being coupled to the outlet conduits and the manifold having an outlet coupled to the reservoir.