

A PLANT CONTAINER BASE

This invention relates to bases for plant containers and relates particularly, but not exclusively, to plant containers bases which are used for household plants.

When plants are grown in containers, it is often necessary to place a saucer or some other receptacle beneath the container to collect excess run-off water or liquid. This is especially important when the plant containers are placed indoors. Usually, the plant container is placed directly on top of the saucer or receptacle. Excess run-off water or liquid escapes from the plant container through drainage holes, and collects in the saucer.

This arrangement is quite acceptable for small plant pots, but problems arise when such saucers are placed beneath big or heavy pots. The massive weight of large plant pots makes it difficult, for some persons, to raise the plant pot in order to remove the water-laden saucer. The collection of water or liquid in the saucer may be undesirable for health or environmental reasons.

An object of the present invention is to overcome or substantially ameliorate at least some of the disadvantages of the prior art.

According to the present invention, there is provided a plant container base adapted to support a plant container, said base comprising a support portion capable of supporting a plant container, and a liquid receptacle positionable generally within said support portion to collect run-off liquid from said plant container, said receptacle being withdrawable from said support portion such that said receptacle is able to be emptied without raising said plant container.

Preferably, the liquid receptacle is laterally withdrawable from the support portion.

The base and the plant container are preferably formed integrally as a single unit.

Preferably, the base is provided with an intermediate collector such that any run-off liquid from the plant container initially collects in the collector and is thereafter directed from the collector to the withdrawable receptacle.

Preferably, the receptacle is withdrawable from a closed position to an opened position, and wherein any run-off liquid from the plant container is able to drain into the receptacle in the closed position.

The receptacle may be reciprocable between the opened and closed positions by means of a guide roller mechanism.

The receptacle may be reciprocable between the opened and closed positions by means of a guiding ledge mechanism.

Any run-off liquid may be emptied from the receptacle when the receptacle is in the open position.

Any run-off liquid may be emptied by rotating the receptacle when the receptacle is in the open position.

The receptacle may be provided with a portion made of transparent material, which enables a user to gauge the amount liquid in said receptacle.

In the embodiment where the base and the plant container are not formed integrally as a single unit, the base and said plant container may be separated by a gap. In such an instance, the base may be provided with a seal which substantially seals the gap.

The support portion may be in the form of a housing.

The receptacle may be in the form of a tray.

The receptacle may comprise an absorbent material which is capable of substantially storing the excess run-off water.

The intermediate collector may be provided with a duct through which said run-off water is able to flow from said intermediate collector into said receptacle.

The receptacle may be provided with an opening adapted to allow entrance of said duct therethrough with a narrow clearance.

According to another aspect of the invention, there is provided a plant container, wherein the plant container is provided with the abovementioned plant container base.

In order that the invention might be more fully understood, embodiments on the invention will be described by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a cross-sectional diagram of a plant container base constructed in accordance with an embodiment of the invention;

Figure 2 is a cross-sectional diagram of another plant container base constructed in accordance with a further embodiment of the invention

Figure 3 is a cross-sectional diagram of another plant container base, formed integrally with a plant pot, in accordance with another embodiment of the invention;

Figure 4 is a cross-sectional diagram of yet another plant container base, formed integrally with a plant pot, showing a well defined intermediate collector for run-off water; and

Figure 5 is a schematic diagram of the embodiment of the plant container base illustrated in Figure 4;

Referring to the accompanying drawings, Figure 1 illustrates a cross-sectional diagram of a plant container base constructed in accordance with an embodiment of

the invention. The plant container base is in the form of base support 10. The base support 10 is adapted to support a plant container in the form of a plant pot 20. A plant (not illustrated) is grown in the plant pot 20. The base of the plant pot is provided with drainage holes 30. When the plant is watered, any excess run-off water drains out of the plant pot 20 through these drainage holes 30. The direction of the flow of water is shown in Figure 1 by arrow B. Of course, the invention is not limited to the collection of water, since other appropriate liquids such as liquid fertilisers may be sprayed or applied to the roots of the plant.

The base support 10 includes a support portion in the form of a housing 40. The housing 40 supports the plant pot 20.

The housing 40 is provided with a liquid receptacle in the form of a tray 50. The tray in the present embodiment is shaped as a trough, but the scope of the invention in its broadest aspect covers liquid receptacles of various shapes and sizes. In fact, the receptacle need not be limited to being shaped as a container. The receptacle may be an absorbent material such as a dense sponge (not illustrated) which has the capability of storing excess run-off water. The dense sponge may be removed when it becomes saturated with water or liquid that has drained from the plant pot 20.

The tray 50 is substantially positionable within the housing 40. Any run-off water or liquid from the plant pot 20 is able to drain into the tray 50 through the drainage holes 30.

The tray 50 is able to be withdrawn from the housing 40, so that the tray 50 is able to be emptied without lifting or raising the plant pot 20. The direction of withdrawing the tray 50 from the housing 40 is illustrated in Figure 1 by the arrow A. This is an important advantage of the invention, especially when very heavy, massive pots are being supported by the housing 50. In the prior art, plant pots are placed on top of collection saucers. Excess run-off water collects in these saucers. However, when the saucers have to be emptied, it is necessary to physically raise or lift the plant pot. This may present difficulty for some persons, especially when the pots and plants are heavy or massive. In contrast, in the present embodiment, the excess run-off water may be removed without having to lift or raise the plant pot. The water is removed simply by removing the withdrawable tray 50.

The tray 50 in the present embodiment is laterally withdrawable from the housing 40. The motion of the tray need not be precisely horizontal, and the actual motion of the withdrawal of the tray is not critical to the invention in its broadest aspect. Since the intention of the removal of the tray 50 is to facilitate removal of excess run-off water without the user having to lift the plant pot 20, it is merely important that the tray, containing the excess run-off water, be removable from the housing without having to lift the plant pot 20. In the present embodiment, the tray 50 is removable with a lateral motion. However, it is conceivable that other movements may be contemplated while allowing the tray 50 to be removed without the user lifting the pot 20. For example, the removal action could include the step of initially lowering the tray 50, and could conceivably consist of other movements, such as rotation, or elevation.

In the present embodiment in Figure 1, the housing 40 and the plant pot 20 are two separable items. This means that any conventional plant pot may be placed on top of the housing 40. Since there is a gap between the housing 40 and the plant pot 20, a seal in the form of a circumferential rubber gasket 45 is provided. The gasket 45 seals the gap between the housing 40 and the plant pot 20, which may, amongst other things, prevent mosquitoes having access to the liquid in the tray 50.

Another embodiment of the invention, illustrated in Figure 2, consists of a housing 40. The housing in Figure 2 is illustrated without a pot supported therein. Any convention pot or plant container may be positioned within the body of the housing (C). In the embodiment of Figure 2, excess run-off water would drain from the pot and collect in an intermediate collector. In this case, the intermediate collector is the base of the body of the housing (C). Once the run-off water, collecting in the base of the body (C), reaches a critical amount, the run-off water is able to drain from the base of the body, through an aperture 70 in a side wall of an inner wall of the housing 40. The aperture 70 leads to a duct 80 which directs the water or liquid from the intermediate collector to the tray 50. The tray 50 is provided with an opening 71 through which the end of the duct 80 is able to enter with a narrow clearance. An advantage of having a narrow opening for water to enter the tray, is that the limited access to the tray may prevent mosquitoes from having access to the stagnant water in the tray 50. This would be an advantage especially in those areas where stagnant run-off water from plant pots creates an attractive breeding place for mosquitoes.

In other embodiments of the invention, such as the one illustrated in Figure 3, the base support and the plant container may be inseparable and/or may be formed integrally as a single unit. In the embodiment of Figure 3, as in the previous embodiment, excess run-off water drains from the pot 20 and collects in the base of the pot 60. Once the run-off water, collecting in the base of the pot 60, reaches a critical amount, the water drains from the pot through an aperture 70 in a side wall of the pot 20. The aperture 70 leads to a duct 80 which directs the water or liquid from the intermediate collector to the tray 50.

In the embodiment illustrated in Figure 3, the base support 10 is provided with an intermediate collector in the form of the base of the pot 60. However, in other embodiments such as the one illustrated in Figure 4, this intermediate collector may be of a more clearly identifiable form. In Figure 4, the intermediate collector is a well defined reservoir 85. In this embodiment, excess run-off water drains from the pot 20 and is able to flow freely through the reservoir 85 through an aperture 70 in a side wall of the pot 20. The direction of the flow of water is indicated by arrow D. The aperture 70 similarly leads to a duct 80 which directs the water from the reservoir 85 to the tray 50.

The tray 50 is withdrawable from a closed position to an opened position. The tray is illustrated in the closed position in Figures 1 to 4, and is illustrated in the open position in Figure 5. The run-off water from the plant pot 20 is able to drain into the tray when it is the closed position. Any run-off liquid contained in the tray 50 may be emptied when the tray is in the open position.

Referring to Figure 5, the tray is able to move backwards and forwards, or reciprocate, between the opened and closed positions by means of a guiding ledge mechanism in the form of a pair of internal ledges 90a, 90b. Each lower edge of the tray 50 is provided with a groove 100a, 100b, each of which is adapted to engage with one of the corresponding ledges 90a, 90b to facilitate a sliding motion between the tray 50 and the housing 40. In the present embodiment, the tray 50 has a front face 110 that is made of transparent material, which enables a user to gauge the amount of liquid in the tray.

In a further embodiment (not illustrated), the reciprocal motion of the tray 50 with respect to the housing is facilitated by a guide roller mechanism (not shown). This guide roller mechanism is similar to the guiding ledge mechanism, except that guide rollers are used to further enhance the ease of the lateral movement of the tray 50.

In the above embodiments, the tray is simply withdrawn from the housing 40, after which it may be taken away by the user to be emptied. However, it is conceivable that other embodiments of the invention may incorporate some extra mechanism for emptying the receptacle. For instance, any run-off liquid may be able to be emptied by rotating the receptacle when the receptacle is in the open position. All these embodiments would fall within the broad scope of the invention, which allows run-off water to be removed from the pot plant, without having to lift or raise the pot, by the use of a removable receptacle.

In cases where the plant container and the plant container base are formed integrally as a single unit, the invention may be regarded as being directed to a plant container provided with a plant container base described above with reference to the various embodiments.

In each of the above embodiments illustrated in the diagrams, features of the invention, which are embodied in a different manner in each embodiment, are given the same reference numeral for the sake of clarity. Hence, features with the same reference numeral in each diagram should not be assumed to be identical to another feature in another diagram having the same numeral.

The embodiments have been advanced by way of example only, and modifications are possible within the spirit and scope of the appended claims.



CLAIMS

1. A plant container base adapted to support a plant container, said base comprising a support portion capable of supporting a plant container, and a liquid receptacle positionable generally within said support portion to collect run-off liquid from said plant container, said receptacle being withdrawable from said support portion such that said receptacle is able to be emptied without raising said plant container.
2. A plant container base according to claim 1, wherein said liquid receptacle is laterally withdrawable from said support portion.
3. A plant container base according to either claim 1 or 2, wherein said base and said plant container are formed integrally as a single unit.
4. A plant container base according to any one of the preceding claims, wherein said base is provided with an intermediate collector such that any run-off liquid from said plant container initially collects in said collector and is thereafter directed from said collector to said withdrawable receptacle.
5. A plant container base according to any one of the preceding claims, wherein said receptacle is withdrawable from a closed position to an opened position, and wherein any run-off liquid from said plant container is able to drain into said receptacle in said closed position.
6. A plant container base according to claim 5 wherein said receptacle is reciprocable between said opened and closed positions by means of a guide roller mechanism.



7. A plant container base according to claim 5 wherein said receptacle is reciprocable between said opened and closed positions by means of a guiding ledge mechanism.
8. A plant container base according to any one of claims 5 to 7, wherein any run-off liquid is able to be emptied from said receptacle when said receptacle is in said open position.
9. A plant container base according to claim 8, wherein any run-off liquid is able to be emptied by rotating said receptacle when said receptacle is in said open position.
10. A plant container base according to any one of the preceding claims, wherein said receptacle is provided with a portion made of transparent material, which enables a user to gauge the amount of run-off liquid in said receptacle.
11. A plant container base according to any one of the preceding claims, except when dependent on claim 3, wherein said base and said plant container are separated by a gap and wherein said base is provided with a seal which substantially seals said gap.
12. A plant container base according to any one of the preceding claims, wherein said support portion is in the form of a housing.
13. A plant container base according to any one of the preceding claims, wherein said receptacle is in the form of a tray.
14. A plant container base according to any one of the preceding claims, wherein said receptacle comprises an absorbent material being capable of substantially storing said excess run-off water.



15. A plant container base according to any one of claims 4 to 14, and only when dependent on claim 4, wherein said intermediate collector is provided with a duct through which said run-off water is able to flow from said said intermediate collector into said receptacle.

16. A plant container base according to claim 15 wherein said receptacle is provided with an opening adapted to allow entrance of said duct therethrough with a narrow clearance.

17. A plant container, wherein said plant container is provided with said plant container base which is according to any one of the preceding claims.

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