Patent Claims

1. Container (1) for supplying plant roots with nutrient solution in the absence of soil, having a basic configuration which is selected from the group of basic configurations including cubes, cuboids, ellipsoids, spheres, rings, pyramids, cones, prisms and cylinders as well as combinations and parts of these configurations and asymmetrical configurations, having a container interior, provided for accommodating the plant roots, and having a separating slot (8) arranged at a boundary of the container interior, and designed to subject at least one plant to a clamping effect, while at the same time allowing said plant to grow, the separating slot (8) being configured to clamp at least one part of the plant without clamping roots of the plant,
wherein at least one of the separating slots (8) is arranged within a cover (3) which has a multiple part structure, composed of individual cover segments (10) which are interconnected by hinges (13, 14).

2. Container (1) according to claim 1, characterised in that it includes at least one column body (18), underneath which a basic container (19) is arranged having a larger cross-section in comparison to the column body (18), the column body (18) being connected to the basic container in a detachable manner.

3. Container (1) according to claim 1, characterised in that a basic container body (2) is designed as a structural element suitable to establish a load-bearing wall.

4. Container (1) according to claim 3, characterised in that the basic container body (2) has a decreasing wall thickness towards a container aperture and / or in that the basic container body (2) is designed as a corner element of a wall, or a roof tile, or a shingle suitable to cover a roof.

5. Container (1) according to claim 1, characterised in that it includes a multi-part, adjustable support device (17) fixed to a basic container body (2) in order to support a single plant, in particular a tree.

6. Container (1) according to claim 1, characterised in that it includes a non-load-bearing basic container body (2), which can be used as a component of a load-bearing structure (36) by way of a support structure (37) integrated into the container (1) and adapted to be connected to further structural elements, carrying further, in particular additional containers.

7. Container (1) according to claim 1, characterised in that it is designed as a longitudinally slit hose.

8. Container (1) according to claim 7, characterised in that it is designed to be connected to a scaffolding in the form of an endo-scaffolding (32) or an exo-scaffolding (33) and / or in that it is provided with a row of spaced-apart lip regions (35) at the separating slot (8), placed orthogonally in relation to the hose wall and / or by a line provided and supported directly or indirectly thereon for supplying the plants with nutrient solution.

9. Container (1) according to claim 1, characterised in that it includes a grating (26), allowing the formation of a vegetation area, in particular one on which it is possible to walk, covering the interior of the container, and preferably in which a plurality of gratings (26) are arranged in planes which are parallel to one another and / or that at least one textile mat (31) is arranged in a plane parallel to the grating arrangement.

10. Container (1) according to any one of claims 1 to 9, characterised in that it includes a basic container body (2) and a cover (3) having a non-segmented surface, the separating slot (8) being formed between the basic container body (2) and the cover (3).

11. Container (1) according to claim 1, characterised by a frame (11) encompassing the cover segments (10), and preferably in which the frame (11) is composed of a plurality of frame segments (15) interconnected by hinges (16).

12. Container (1) according to claim 11, characterised in that two cover segments (10) are interconnected by a foil strip (44) folded at least once at minimal spaced-apart relationship of the cover segments (1).

13. Container (1) according to any one of claims 1 to 12, characterised by a foam strip (41) inserted into the separating slot (8), and preferably in which individual sections (42) of the foam strip (41) are connected to one another by a foldable strip (43).

14. Container (1) according to any one of claims 1 to 13, characterised by at least one spacer inserted into the separating slot (8) and preferably in which the spacer includes at least one passage aperture connecting the interior of the container to the exterior.

15. Container (1) according to any one of claims 1 to 14, characterised by lips (34) bounding the separating slot (8), and being orthogonally oriented in relation to adjacent container sections (2, 3, 10).

16. Container (1) according to any one of claims 1 to 15, characterised by a plurality of water-feed elements (40) arranged in the interior of the container.

17. Container (1) according to any one of claims 1 to 16, characterised in that it includes in each case at least one feed duct (4) and one discharge duct (5).

18. Container (1) according to any one of claims 1 to 17, characterised in that at least one container wall is formed by overlapping foil sections (20) permitting access from outside without the use of tools.

19. Container (1) according to any one of claims 1 to 18, characterised in that it includes at least one actuator element (30), selected from the group of actuator elements comprising an automatically operated valve, a pump, a mist generator, a sprinkler, an atomiser, a heating element and a cooling element, and /or an autonomous energy supply.

20. Container (1) according to any one of claims 1 to 19, characterised by comprising at least one sensor from the group of sensors comprising a load sensor, designed to detect the total weight of the container including vegetation, temperature sensors, humidity sensors, conductivity sensors and pH-sensors.

21. Process for supplying plant roots with nutrient solution without the use of soil having the following characteristics:

- A container (1) is made available, designed to hold at least one plant while allowing it to grow,
- Plant material is so placed into the container (1) that it can emerge through a container aperture providing a clamping effect, the said container aperture supporting at least one part of the plant in the course of the plant growth, wherein the clamping effect is applied to a part of the plant without clamping roots of the plant,

wherein the container aperture is formed as a separating slot (8) arranged within a cover (3) which has a multiple part structure, composed of individual cover segments (10) which are interconnected by hinges (13, 14).

22. Process according to claim 21, characterised in that a separating strip (41) consisting of a porous, resilient material for the protection of the plant material is positioned in the container aperture.

23. Process according to claim 21 or 22, characterised in that a nutrient solution is atomised inside the container (1).

24. Process according to any one of claims 21 to 23, characterised in that processes being performed in the container (1) and/or detectable states are detected by sensors integrated in the container (1), and preferably in which processes being performed in the container (1) are stored and statistically evaluated by a data processing system, wherein on the basis of such evaluation actuators (30), provided in the container (1), are controlled, in particular, remote-controlled and partially automated.