CLAIMS

1. A plant cultivation device, comprising a receptacle having at least one peripheral wall and a bottom wall, the bottom wall having at least one hole opening into an irrigation tube, wherein a region of the bottom wall around the, or each, hole comprises guide means adapted to guide roots of a plant around the corresponding hole to keep the irrigation tube substantially clear, the guide means comprising at least one rib adapted to guide the roots of a plant, the or each rib projecting from the bottom wall towards the inside of the receptacle, at least one rib partially surrounding the corresponding hole by creating an area which surrounds the hole and by leaving an opening, so as to enable the roots to rotate around the hole by substantially following the or each rib then to come out from the guide means.

2. The device according to claim 1, wherein the ratio L/d of the width of the opening to the diameter of the hole is comprised between L/d min and L/d max, where L/d min is equal to 1, preferably 1.3, and L/d max is equal to 2.7, preferably 2.5, preferably 2.

3. The device according to claim 1 or 2, wherein the angular sector having as a vertex the center of the hole and delimited by half-lines passing through the ends of the opening forms an angle (α) comprised between αmin and αmax, where αmin is equal to 35°, preferably 45°, preferably 55°, and αmax is equal to 90°, preferably 80°, preferably 70°.

4. The device according to any of claims 1 to 3, wherein at least one rib has a substantially horseshoe-like shaped geometry.

5. The device according to claim 4, wherein the, or each, substantially horseshoe-like shaped rib comprises a curved portion positioned around the hole and having two ends, and two substantially parallel branches each forming an extension of one end of the curved portion, so that the opening forms a section narrowing.

6. The device according to any of claims 1 to 5, wherein at least one rib has a substantially rectilinear geometry.

7. The device according to any of claims 1 to 6, whererin the guide means comprise three substantially rectilinear ribs, arranged to substantially form a U-shape.

8. The device according to claim 7, wherein the U-shape comprises two lateral ribs and a base rib, the base rib having a height with respect to the bottom wall larger than the height of the lateral ribs with respect to the bottom wall.

9. The device according to any of claims 1 to 8, wherein at least one rib has at least one face oblique with respect to the bottom wall.

10. The device according to any of claims 1 to 9, wherein the guide means comprise a collar encircling the hole.

11. A cartridge comprising a substrate, wherein the cartridge is adapted to be positioned in a receptacle according to any of claims 1 to 10, the cartridge having a lower face comprising at least one relief adapted to cooperate with the guide means of the receptacle.

12. The cartridge according to claim 11, wherein the relief is at least partially housed within, or at least partly houses, the guide means of the receptacle, the relief occupying preferably at least partially the area that surrounds the hole of the receptacle.

13. The cartridge according to claim 11 or 12, wherein at least one relief is an imprint.

14. The cartridge according to any of claims 11 to 13, wherein at least one relief is a projection.

15. The cartridge according to any of claims 11 to 14, wherein at least one relief has a geometry complementary to the geometry of the guide means.

16. The cartridge according to claim 15, wherein at least one relief has a substantially horseshoe-like shaped imprint complementary to the geometry of the substantially horseshoe-like shaped rib.

17. The cartridge according to any of claims 11 to 16, wherein the cartridge comprises at least one plant seed, the, or each, plant seed being disposed in at least one housing opening to the outside of the cartridge.

18. The cartridge according to claim 17, wherein the, or each, housing is sealed by a lid fastened to the cartridge.

19. A set comprising a device according to any of claims 1 to 10 and a cartridge, which cartridge may be in accordance with any of claims 11 to 18.

20. A plant cultivation system comprising:

- a tank having an upper opening, the tank being intended to contain water;
- a tray disposed at the level of the upper opening of the tank and having an aperture;
- at least one mast supporting at least one light source;
- at least one set according to claim 19, disposed in the tank and received in the aperture.