

Title (en)
System for storing and purifying water

Title (de)
Wasserspeicherndes und wasserreinigendes System

Title (fr)
Système stockant et nettoyant de l'eau

Publication
EP 2058441 B1 20121010 (DE)

Application
EP 07120361 A 20071109

Priority
EP 07120361 A 20071109

Abstract (en)
[origin: EP2058441A1] The system for storing and purifying water for the horticulture, recultivation of soils and reforestation, comprises a reservoir (2) partly filled with porous material (3), a barrier layer (5) for lengthening the seeping path of the water, and a water collection container, which extends itself from the base of the reservoir up to its surface. The barrier layer is arranged within the water-impermeable, artificial, and outwardly defined reservoir and is provided with a passage (6) for water. The porous material is present itself above and below the barrier layer. The system for storing and purifying water for the horticulture, recultivation of soils and reforestation, comprises a reservoir (2) partly filled with porous material (3), a barrier layer (5) for lengthening the seeping path of the water, and a water collection container, which extends itself from the base of the reservoir up to its surface. The barrier layer is arranged within the water-impermeable, artificial, and outwardly defined reservoir and is provided with a passage (6) for the water. The porous material is present itself above and below the barrier layer. The water collection container comprises an opening (8) above the top barrier layer and below the bottom barrier layer, where the water flows through the opening. The water collection container is connected with a water withdrawal station such as a pumping station over the opening. The barrier layer is horizontally arranged within the reservoir. The passage for water is arranged in the outer area of the barrier layer and is present in form of a slot or a hole. In the two barrier layers, the passages are movably arranged to each other. The reservoir has a tub-shaped or hemispherical shape. The porous material is crushed stone, gravel and/or sand. The water collection container is a well. A planting layer such as humus layer is applied on the porous material above the top barrier layer. The barrier layer and/or the reservoir comprise a geo textile, which comprises a first- and a second layer made of a fabric or a non-woven and polyurethane, which seals holes and spaces in the layer, where the non-woven has spinning fibers with a length of 3-15 cm and wires. The first and second layers are adhered together by the polyurethane and are coated with the polyurethane.

IPC 8 full level
E03B 3/00 (2006.01); **C02F 3/04** (2006.01); **E21B 43/02** (2006.01)

CPC (source: EP US)
E03B 3/00 (2013.01 - EP US); **E03F 1/00** (2013.01 - EP US)

Cited by
EP2486988A1; EP2570201A1; EP2759349A1; WO2013037873A1; WO2012107470A1; EP2468963A1; CN112681476A; CN113252532A; CN102749894A; CN107905334A; CN106869082A; CN103354766A; US2023029351A1; US9630857B2

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