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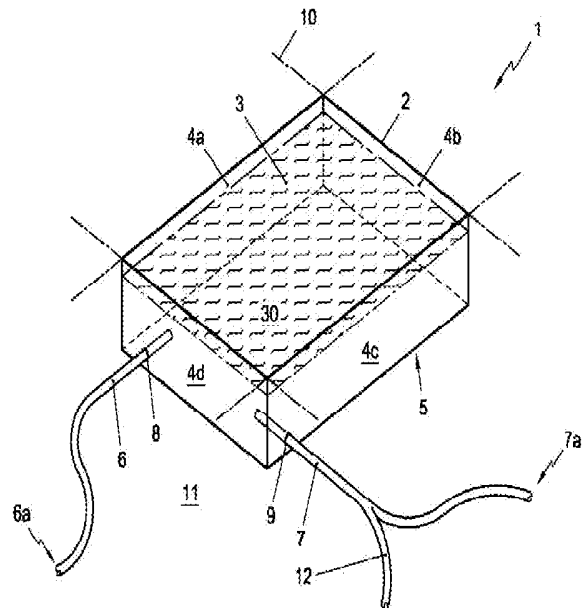
02.02.2011

74 Gemachtigde:

Drs. M.J. Hatzmann c.s. te Den Haag.

54 A water irrigation system.

57 The invention relates to a water irrigation system for irrigating water into the soil. The system comprises a container having a wall defining an inner room for containing water. Further, the system comprises a capillary cord having a capillary end extending outside the container and being arranged to be in fluid communication with water in the container's inner room. The capillary cord comprises a kernel and an enveloping layer surrounding the kernel. The kernel is provided with filaments that are substantially aligned with a longitudinal axis of the cord.



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Dit octrooi is verleend ongeacht het bijgevoegde resultaat van het onderzoek naar de stand van de techniek en schriftelijke opinie. Het octrooischrift komt overeen met de oorspronkelijk ingediende stukken.

P88423NL00

Title: A water irrigation system

The invention relates to a water irrigation system for irrigating water into the soil, comprising a container having a wall defining an inner room for containing water, further comprising a capillary cord having a capillary end extending outside the container and being arranged to be in
5 fluid communication with water in the container's inner room, wherein the capillary cord comprises a kernel and an enveloping layer surrounding the kernel.

Irrigating systems are widely known for providing a dosed water irrigation in subsoil, especially in areas where rainfall is scarce and a
10 relatively humid subsoil is needed, e.g. for growing up vegetation. As an example, a water irrigation system is known that comprises a container wherein rainwater is collected and wherein a pump module pumps the water via pipelines through an area to be irrigated.

However, such a pump driven system needs external energy for
15 proper operation, is subjected to maintenance and/or repairing activities and might be relatively costly.

Further, passive irrigation systems are known using drippers to provide the soil with water. However, a dripper supplies at least
20 approximately 1 liter of water per day which might be too much for certain applications. It also appears that drippers become blocked due to a flow of calcium or sand entering the dripper's internal passage. It is also noted that dripper's are relatively expensive.

In addition, patent publication AU-B-78307 discloses an irrigating system according to the preamble. The system irrigates indoor plant pots
25 using primary, secondary and tertiary capillary systems. The use of capillary cords that are in fluid communication with water inside the container enables a dosed water transport wherein the use of external energy sources is superfluous. The kernel of the capillary cord is constructed

from lengths of sea grass wrapped in a layer of hessian material. However, experiments show that capillary cords in such systems suffer from being blocked after a certain period of time, so that the irrigation function stops.

It is an object of the invention to provide a water irrigation system according to the preamble wherein the irrigation function continues over
5 time without the use of external energy. Thereto, the capillary cord's kernel of the water irrigation system according to the invention is provided with filaments that are substantially aligned with a longitudinal axis of the cord.

By aligning filaments in the kernel with a longitudinal axis of the
10 cord capillary channels are provided that minimize the chance of being blocked by solid particles. From experiments it appears that the water transport function of capillary kernels having longitudinally aligned filaments continues over relatively long time periods, e.g. over months or even years. The capillary transport direction is substantially in said
15 longitudinal direction, through capillary channels created between the filament elements, thereby advantageously providing an effective transport medium for the water.

By providing a hygroscopic kernel, the water transport through the capillary cord is further enhanced.

20 Further advantageous embodiments according to the invention are described in the following claims.

By way of example only, embodiments of the present invention will now be described with reference to the accompanying figures in which

Fig. 1 shows a schematic perspective view of a water irrigation
25 system according to the invention; and

Fig. 2 shows a schematic perspective cross sectional view of a capillary cord comprised by the water irrigation system shown in Fig. 1.

It is noted that the figures show merely a preferred embodiment according to the invention. In the figures, the same reference numbers refer
30 to equal or corresponding parts.

Figure 1 shows a schematic perspective view of a water irrigation system 1 according to the invention. The system 1 comprises a container 2 for containing collected rainwater 3. The shown container 2 has a wall including side sections 4a-d and a bottom section 5, thus forming a box-shaped geometry. The wall defines an inner room 30 of the container 2. It is noted, however, that the container 1 may have any geometry that is suitable for containing the rainwater 3. As an example, the container 1 might be cylindrically or tubular shaped. In a practical embodiment, the container 1 might be formed as a tube, a bag or a hose.

It is noted that the container may also contain water that is obtained in another way. As an example, the container can at least partially be filled with fresh water or drinking water. Further, other atmospheric moisture, such as condensed moisture, melted frozen moisture, such as melted hail and/or snow, can be collected in the container.

The shown embodiment of the water irrigation system 1 comprises a container 2 that is open on its upper side, thus allowing rainwater to enter the container 2. In another embodiment, the container 2 comprises an input section for connection to a water filling unit, such as a rainwater collecting unit, a fresh water source, a drainpipe and/or an assembly of drainpipes. The input section may include an inflow aperture for flowing water into the container's inner room 30. Optionally, the container's input section may include a valve for opening and closing the inflow aperture. Then, the container 2 can in principle be formed as a mainly enclosed unit, e.g. including a top cover section. Further, the container's input section may be provided with a coupling unit for coupling with the water filling unit. As an example, a container implemented as a tube might be connected, via the coupling unit, with a further tube providing the water.

Further, the water irrigation system comprises a multiple number of hygroscopic capillary cords 6, 7 extending outside the container 2 and below the soil surface 10. The cords 6, 7 are connected to the container 2

such that they are in fluid communication with water in the inner room 30 of the container 2. Thereto, the wall 2 is provided with a multiple number of corresponding apertures 8, 9. The cords reach through the corresponding apertures 8, 9 into the inner room 30 of the container 2. During use of the system 1, the rain water flows from the inner room 30 into the cords 6, 7 for irrigation outside the container 2. Since the cords have a capillary characteristic, the water flow rate is relatively low, so that the water may be transported and distributed over a relatively long time interval. In principle, the cords may also extend to the corresponding apertures and abut against associated aperture edges to realize the fluid communication.

The apertures 8, 9 are localized in a wall section 4d or in a bottom section 5 so that the water irrigation process might continue also if the amount of water contained in the container 2 is relatively small.

The structure of the hygroscopic capillary cords 6, 7 is described in more detail referring to Figure 2. Due to the capillary effect, rainwater flows through the capillary cords 6, 7, away from the container 2 towards their ends 6a, 7a extending outside the container 2 and into the subsoil 11, wherein the water leaves the cords 6, 7 and enters the soil 11 so that the collected rainwater is irrigated. It is noted that it is in principle not necessary that the cords extend entirely below the subsoil surface 10. By placing the cord ends 6a, 7a in or just above the soil 11, the collected rainwater may be irrigated towards and into the soil 11.

Since the system according to the invention operates without the use of external energy, an autonomous energy friendly irrigation system is obtained. The system does not require an external energy source and is from an energetic point of view passive. As an additional advantage, using the capillary cord also provides for an autonomous regulating feature, since the amount of capillary water transport is lower when the soil near the capillary end is wet, while on the contrary, when said soil is dry, the capillary water

transport increases, thereby obtaining a stable moisture regulating irrigation system.

One of the capillary cords 7 is provided with a branch section 12 so that the rainwater 3 can be distributed at different location in the soil 11, thereby obtaining a more uniform irrigation effect. Obviously, it is also possible to provide cords 7 that have no branches, thus obtaining a simplified and cheaper cord structure.

In an embodiment according to the invention, the diameter of the apertures 8, 9 and the diameter of the corresponding capillary cords 6, 7 have mainly the same size so that the cords fit easy in the apertures. However, experiments have shown that, though the capillary water transport is satisfactory, a reduced water flow might be obtained in an advantageous way if the aperture diameter is slightly smaller than the corresponding capillary cord diameter. As an example, if the aperture diameter is circa 0.1 mm smaller than the capillary cord diameter, corresponding to a relatively diameter decrease of circa 2% to circa 5%, a surprisingly improved reduction in water flow may be obtained.

Figure 2 shows a schematic perspective cross sectional view of a capillary cord 6 comprised by the water irrigation system 1 shown in Fig. 1. The cord comprises a hygroscopic kernel 20 provided with filaments 21a-c substantially aligned with a longitudinal axis A of the cord 6. Further, the capillary cord 6 comprises an enveloping layer 22 surrounding the kernel 20. By providing the enveloping layer surrounding the kernel, leakage of the water, away from the hygroscopic cord kernel, is counteracted, thereby providing an efficient passive transport medium wherein the water may in principle flow without substantial losses to a desired irrigation area

The aligned filaments 21 form microscopic channels 24 a,b providing the capillary transport in the longitudinal axis A direction of the cord 6. The filaments 21 may include string elements and preferably comprise a natural fiber, such as cotton, linen, jute, silk, hair or wool.

Alternatively or additionally, the filaments may also comprise synthetic fibers such as rock wool or, more preferably a polyamide, more preferably a nylon.

The enveloping layer 22 may include braided string elements 23.

5 The string elements may comprise synthetic material, e.g. a synthetic polymer, preferably a polyamide, more preferably a nylon, so that a waste away process of the cord that is continuously exposed to soil, is counteracted. However, also natural, braided material could be used, e.g. for temporal use of the water irrigation system. Preferably, the enveloping
10 layer surrounding the kernel is water impermeable.

In a preferred embodiment according to the invention, a specific nylon type is used, e.g. nylon 6,6 wherein the diamine and the diacid each donate 6 carbons to the polymer chain. Alternatively, other nylon types
15 diamine and sebaic acid, nylon 6,12, nylon 6,11 or nylon 10,12. Molecular chains of nylon fibre are long and straight having no side chains or linkages. By cold drawing, the chains can be aligned and oriented with the lengthwise direction that a highly crystalline structure is obtained, thereby obtaining
20 nearly perfectly aligned filaments in the kernel of the hygroscopic capillary cord.

The invention is not restricted to the embodiments described herein. It will be understood that many variants are possible.

The container might be located above or on the soil surface, but might also be buried, at least partially, e.g. to counteract evaporation
25 processes.

Further, the size of the container is in principle not limited, but may be designed depending on specific irrigation requirements such as the size of the area to be irrigated and the duration of the time period that the system is expected to operate without being replenished.

Instead of using a multiple number of capillary cords, the system according to the invention might also be provided with a single capillary cord, e.g. having a multiple number of branches.

5 The length of the capillary cords is in principle also not limited and might vary between several centimeters to several hundreds of meters.

In a particular embodiment according to the invention, the container is filled with water and than sealed and brought in the neighborhood of soil wherein a plant or tree that has just been planted, e.g. by burying the container near the root structure of the plant or tree, so that
10 the plant or tree is provided with water in a dosed manner during a certain after-plant irrigation period, e.g. a couple of months. Optionally, the container is refilled after a first irrigation period by removing the seal or opening the valve and flowing water in the container. The container might be formed as a flexible bag or hose, e.g. annular-shaped, at least partially
15 surrounding the plant or tree. The wall of the container might include flexible material, such as a synthetic or natural rubber. Preferably, the wall is made from bio-degradable material. Obviously, a single container can be used to irrigate a multiple number of plants and/or trees.

Other such variants will be obvious for the person skilled in the art
20 and are considered to lie within the scope of the invention as formulated in the following claims.

CONCLUSIES

1. Water irrigatie-systeem voor het irrigeren van water in de grond, omvattende een houder met een wand die een inwendige kamer definieert voor het bevatten van water, voorts omvattende een capillair koord met een capillair uiteinde dat zich uitstrekt buiten de houder en is ingericht om in
5 vloeistofverbinding te zijn met water in de inwendige kamer van de houder, waarbij het capillaire koord een kern omvat en een omgevende laag die de kern omgeeft, waarbij de kern is voorzien van draden die in hoofdzaak zijn uitgelijnd met een lichaamsas van het koord.
2. Water irrigatie-systeem volgens conclusie 1, waarbij de kern
10 hygroscopisch is.
3. Water irrigatie-systeem volgens conclusie 1 of 2, waarbij de omgevende laag geweven koordelementen omvat.
4. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij de omgevende laag synthetisch materiaal omvat.
- 15 5. Water irrigatie-systeem volgens conclusie 4, waarbij het synthetische materiaal van de omgevende laag een synthetische polymer, bij voorkeur een polyamide, meer in het bijzonder een nylon omvat.
6. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij de draden een natuurlijke vezel, bij voorkeur katoen, of een
20 synthetisch materiaal, bij voorkeur een polyamide, meer bij voorkeur een nylon omvat.
7. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij de diameter van de opening en de diameter van het capillaire koord in hoofdzaak dezelfde afmeting hebben.
- 25 8. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij de diameter van de opening enigszins geringer is dan de diameter van het capillaire koord.

9. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij het capillaire koord een vertakkingsdeel omvat.
10. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij de wand is voorzien van een opening waardoor het capillaire koord
5 zich uitstrekt.
11. Water irrigatie-systeem volgens één der voorgaande conclusies, omvattende een meervoudig aantal capillaire koorden die zijn ingericht om in vloeistofverbinding te zijn, via corresponderende openingen in de houderwand, met water in de inwendige kamer van de houder.
- 10 12. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij het capillaire koord zich uitstrekt onder het grondoppervlak.
13. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij de container een invoerdeel omvat voor verbinding met een watervullende eenheid.
- 15 14. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij het invoerdeel van de houder is voorzien van een instroomopening om water door te laten stromen tot in de inwendige kamer van de houder, en een klep voor het openen en sluiten van de instroomopening.
- 20 15. Water irrigatie-systeem volgens één der voorgaande conclusies, waarbij het invoerdeel van de houder is voorzien van een koppeleenheid voor koppeling met de watervullende eenheid.

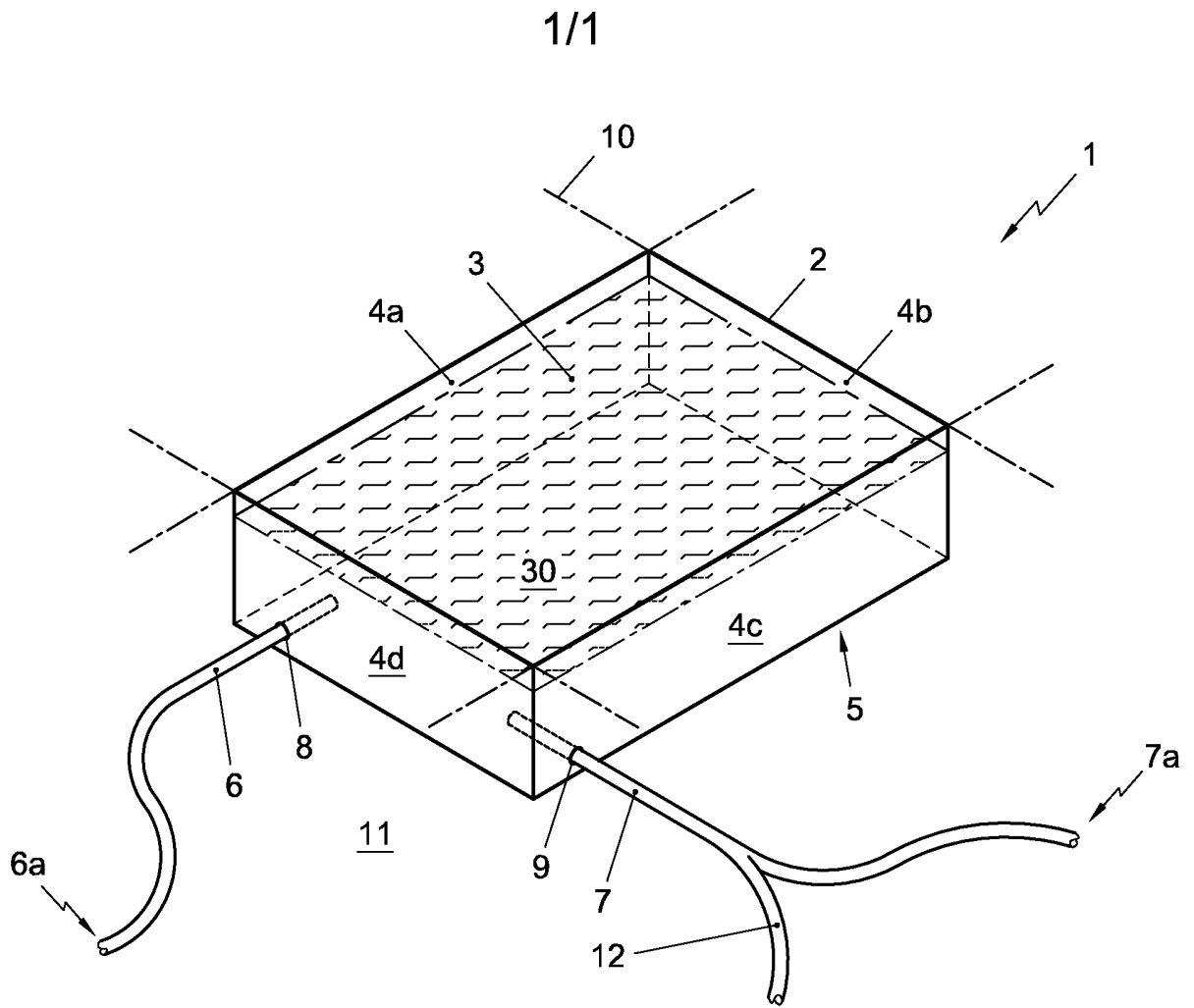


Fig. 1

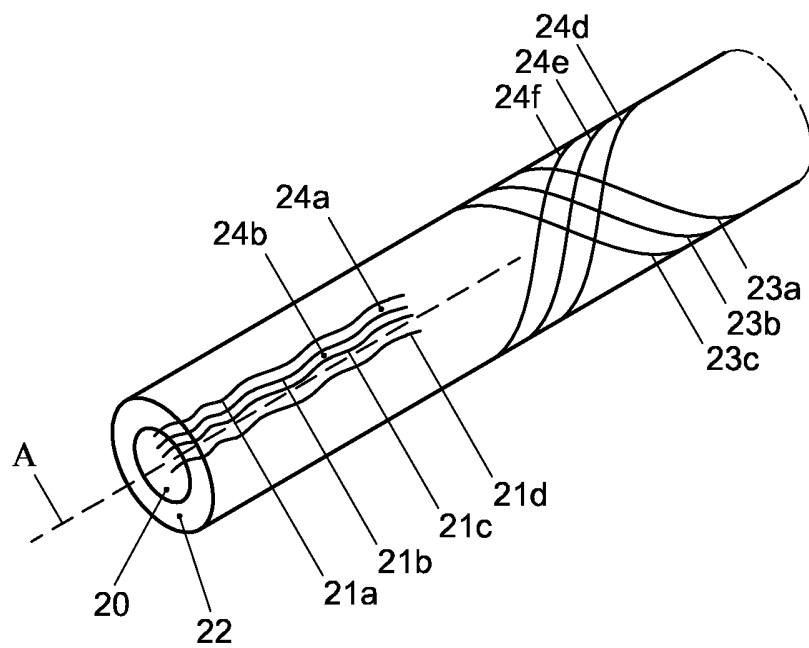


Fig. 2

SAMENWERKINGSVERDRAG (PCT)

RAPPORT BETREFFENDE NIEUWHEIDSONDERZOEK VAN INTERNATIONAAL TYPE

IDENTIFICATIE VAN DE NATIONALE AANVRAGE	KENMERK VAN DE AANVRAGER OF VAN DE GEMACHTIGDE P88423NL00
Nederlands aanvraag nr. 2003277	Indieningsdatum 24-07-2009
	Ingeroepen voorrangdatum
Aanvrager (Naam) P.M.M. Hoff Holding BV	
Datum van het verzoek voor een onderzoek van internationaal type 30-12-2009	Door de Instantie voor Internationaal Onderzoek aan het verzoek voor een onderzoek van internationaal type toegekend nr. SN 53409
I. CLASSIFICATIE VAN HET ONDERWERP (bij toepassing van verschillende classificaties, alle classificatiesymbolen opgeven)	
Volgens de internationale classificatie (IPC) A01G25/00 A01G27/00 A01G27/04 A01G27/06	
II. ONDERZOCHE GEBIEDEN VAN DE TECHNIEK	
Onderzochte minimumdocumentatie	
Classificatiesysteem	Classificatiesymbolen
IPC8	A01G
Onderzochte andere documentatie dan de minimum documentatie, voor zover dergelijke documenten in de onderzochte gebieden zijn opgenomen	
III. <input type="checkbox"/>	GEEN ONDERZOEK MOGELIJK VOOR BEPAALDE CONCLUSIES (opmerkingen op aanvullingsblad)
IV. <input type="checkbox"/>	GEBREK AAN EENHEID VAN UITVINDING (opmerkingen op aanvullingsblad)

**ONDERZOEKSRAPPORT BETREFFENDE HET
RESULTAAT VAN HET ONDERZOEK NAAR DE STAND
VAN DE TECHNIEK VAN HET INTERNATIONALE TYPE**

Nummer van het verzoek om een onderzoek naar
de stand van de techniek
NL 2003277

A. CLASSIFICATIE VAN HET ONDERWERP INV. A01G25/00 A01G27/00 A01G27/04 A01G27/06		
Volgens de Internationale Classificatie van octrooien (IPC) of zowel volgens de nationale classificatie als volgens de IPC.		
B. ONDERZOCHE GEBIEDEN VAN DE TECHNIEK		
Onderzochte minimum documentatie (classificatie gevolgd door classificatiesymbolen) A01G		
Onderzochte andere documentatie dan de minimum documentatie, voor dergelijke documenten, voor zover dergelijke documenten in de onderzochte gebieden zijn opgenomen		
Tijdens het onderzoek geraadpleegde elektronische gegevensbestanden (naam van de gegevensbestanden en, waar uitvoerbaar, gebruikte trefwoorden) EPO-Internal		
C. VAN BELANG GEACHTE DOCUMENTEN		
Categorie °	Geciteerde documenten, eventueel met aanduiding van speciaal van belang zijnde passages	Van belang voor conclusie nr.
X	EP 0 893 054 A1 (MOMIYAMA EISUKE [JP]; MOMIYAMA YASUO [JP]) 27 januari 1999 (1999-01-27) * kolom 11, regel 47 - kolom 13, regel 7; figuren 1,2,13 *	1-2,4-7, 10-15
X	DE 24 37 141 A1 (LOMMERZHEIM HANS EKKEHARD) 19 februari 1976 (1976-02-19) * bladzijde 7, alinea 3 - bladzijde 8, alinea 3; figuren 2-5; voorbeelden 1-3 *	1-2,4-6, 9-10
X	US 5 375 371 A (WELLS ANTHONY L [SG]) 27 december 1994 (1994-12-27) * kolom 2, regel 60 - kolom 3, regel 10; figuren 5-7 *	1-2,4, 6-7, 10-13,15
	----- -/--	
<input checked="" type="checkbox"/>	Verdere documenten worden vermeld in het vervolg van vak C.	<input checked="" type="checkbox"/>
	Leden van dezelfde octrooifamilie zijn vermeld in een bijlage	
° Speciale categorieën van aangehaalde documenten		*T* na de indieningsdatum of de voorrangsdatum gepubliceerde literatuur die niet bezwend is voor de octrooiaanvraag, maar wordt vermeld ter verheldering van de theorie of het principe dat ten grondslag ligt aan de uitvinding
A niet tot de categorie X of Y behorende literatuur die de stand van de techniek beschrijft		*X* de conclusie wordt als niet nieuw of niet inventief beschouwd ten opzichte van deze literatuur
D in de octrooiaanvraag vermeld		*Y* de conclusie wordt als niet inventief beschouwd ten opzichte van de combinatie van deze literatuur met andere geciteerde literatuur van dezelfde categorie, waarbij de combinatie voor de vakman voor de hand liggend wordt geacht
E eerdere octrooi(aanvraag), gepubliceerd op of na de indieningsdatum, waarin dezelfde uitvinding wordt beschreven		*&* lid van dezelfde octrooifamilie of overeenkomstige octrooipublicatie
L om andere redenen vermelde literatuur		
O niet-schriftelijke stand van de techniek		
P tussen de voorrangsdatum en de indieningsdatum gepubliceerde literatuur		
Datum waarop het onderzoek naar de stand van de techniek van internationaal type werd voltooid	Verzenddatum van het rapport van het onderzoek naar de stand van de techniek van internationaal type	
25 maart 2010		
Naam en adres van de instantie	De bevoegde ambtenaar	
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Bunn, David	

**ONDERZOEKSRAPPORT BETREFFENDE HET
 RESULTAAT VAN HET ONDERZOEK NAAR DE STAND
 VAN DE TECHNIEK VAN HET INTERNATIONALE TYPE**

Nummer van het verzoek om een onderzoek naar
 de stand van de techniek
NL 2003277

C.(Vervolg). VAN BELANG GEACHTE DOCUMENTEN		
Categorie °	Geciteerde documenten, eventueel met aanduiding van speciaal van belang zijnde passages	Van belang voor conclusie nr.
A	US 4 328 640 A (REVELLE WILLIAM F) 11 mei 1982 (1982-05-11) * kolom 1, regel 52 - regel 56; figuren 1,2 * -----	3
A	GB 1 292 802 A (INTERIOR GARDENS LTD [GB]) 11 oktober 1972 (1972-10-11) * bladzijde 3, regel 26 - regel 76; figuren 3,4 * -----	1,8

**ONDERZOEKSRAPPORT BETREFFENDE HET
RESULTAAT VAN HET ONDERZOEK NAAR DE STAND
VAN DE TECHNIEK VAN HET INTERNATIONALE TYPE**

Informatie over leden van dezelfde octrooifamilie

Nummer van het verzoek om een onderzoek naar
de stand van de techniek

NL 2003277

In het rapport genoemd octrooigeschrift	Datum van publicatie	Overeenkomend(e) geschrift(en)	Datum van publicatie
EP 0893054	A1	27-01-1999 JP 11089454 A US 6023886 A	06-04-1999 15-02-2000
DE 2437141	A1	19-02-1976 GEEN	
US 5375371	A	27-12-1994 GEEN	
US 4328640	A	11-05-1982 AU 7200581 A	13-05-1982
GB 1292802	A	11-10-1972 BE 739116 A DE 1947661 A1 ES 371670 A1 FR 2018539 A5	02-03-1970 03-09-1970 16-11-1971 29-05-1970



File No. SN53409	Filing date (day/month/year) 24.07.2009	Priority date (day/month/year)	Application No. NL2003277
International Patent Classification (IPC) INV. A01G25/00 A01G27/00 A01G27/04 A01G27/06			
Applicant P.M.M. Hoff Holding B.V. te Steenbergen			

This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the application
- Box No. VIII Certain observations on the application

	Examiner Bunn, David
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WRITTEN OPINION

Application number

NL2003277

Box No. I Basis of this opinion

1. This opinion has been established on the basis of the latest set of claims filed before the start of the search.
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material:
 - on paper
 - in electronic form
 - c. time of filing/furnishing:
 - contained in the application as filed.
 - filed together with the application in electronic form.
 - furnished subsequently for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty	Yes: Claims	3, 8
	No: Claims	1-2, 4-7, 9-15
Inventive step	Yes: Claims	
	No: Claims	1-15
Industrial applicability	Yes: Claims	1-15
	No: Claims	

2. Citations and explanations

see separate sheet

WRITTEN OPINION

Application number
NL2003277

Box No. VII Certain defects in the application

see separate sheet

V. Reasoned statement

- 1 EP-A-0-893 054 (D1) discloses a water irrigation system for irrigating water into the soil, comprising a container 3 having a wall defining an inner room for containing water, further comprising a capillary cord 7 having a capillary end extending outside the container and arranged to be in fluid communication with water in the container's inner room, wherein the cord comprises a kernel 7a and an enveloping layer 8 surrounding the kernel, wherein the kernel is provided with filaments that are substantially aligned with a longitudinal axis of the cord (col.12, l.51-54).

It follows that the subject matter of claim 1 fails to meet the requirements of novelty.

Moreover, the subject matter of claim 1 is also derivable from DE-A1-24 37 141 (D2: container 16, capillary cord 12, enveloping layer 22, filaments 13).

Regarding the additional subject matter of the dependent claims:

- claims 2,4,7 & 10-15 are each known from D1;
- claim 3 relates to an obvious alternative (cf. US-A-4 328 640, col.1, l.52-56);
- claims 2,4-6,9 & 10 are each known from D2;
- claim 8 relates to an obvious modification (cf. US-A-1 292 802, p.3, l.74-76).

Consequently, the subject matter of claims 2,4-7 & 9-15 lacks novelty, while that of claims 3 & 8 fails to involve an inventive activity.

VII. Certain defects in the application

- 1 The features of the claims are not provided with reference signs placed in parentheses.
- 2 The relevant background art disclosed in D1 is not mentioned in the description, nor is this document identified therein.