

PatBase - Search results 13 March 2017

Search query (9): fn=(59231695:195 or 55715883:95 or 64524430:90 or 60176184:90 or 49083233:90 or 54915611:80 or 54310169:80 or 31450049:80 or 56400378:70 or 54293763:70 or 51774950:70 or 51339449:70 or 50790993:70 or 49693664:70 or 49461398:70 or 48235436:70 or 57944465:65 or 31920893:65 or 65059617:60 or 64975252:60 or 64913586:60 or 64793323:60 or 64706579:60 or 64616916:60 or 64616454:60 or 64559324:60 or 64527131:60 or 64367944:60 or 64342368:60 or 64271741:60 or 64142649:60 or 63984844:60 or 63934286:60 or 63907504:60 or 63845616:60 or 63112524:60 or 62924489:60 or 61593476:60 or 61249524:60 or 60818264:60 or 60597952:60 or 60248953:60 or 59955322:60 or 58335966:60 or 58175410:60 or 57944464:60 or 57944438:60 or 57560128:60 or 57428402:60 or 57118047:60 or 57118042:60 or 57043702:60 or 56913692:60 or 56529930:60 or 55482390:60 or 55296560:60 or 55158037:60 or 54905961:60 or 54789932:60 or 52920165:60 or 51244956:60 or 50121549:60 or 49654424:60 or 49277576:60 or 44926520:60 or 43835237:60 or 40894993:60 or 29321609:60 or 29020034:60 or 28305308:60 or 25333029:60 or 25100875:60 or 23963985:60 or 23045565:60 or 22505456:60 or 22253083:60 or 21444282:60 or 16247934:60 or 14918913:60 or 12462682:60 or 8565791:60 or 8480197:60 or 6322044:60 or 6063702:60 or 5011877:60 or 2859179:60 or 2271043:60 or 2208818:60 or 1126762:60 or 64781897:50 or 63372741:50 or 62999895:50 or 61848000:50 or 61503364:50 or 60548999:50 or 59291262:50 or 58740759:50 or 58696254:50 or 58591525:50 or 58297146:50)

Results: 100

Search history

Search PN=(wo2015066779) (Results 1)

1:

Search [SP]: 1. bioreactor for in vitro cultivation of plants, of the temporary immersion type comprising: i. an upper container with transparent walls
2: for the material to be propagated, said top container being provided with: (a) gas exchange diffuser to the external environment,(b) humidifier, and(c) artificial illumination, preferably of the led typeii. a lower container for the liquid nutrient medium, with transparent walls, having a tray and a water entry point and/or nutrient medium point, located in the bottom of said upper containeriii. points for injection/removal of air/oxygen/carbon dioxide located in the transparent lid that positions and seals the upper containeriv. additional injection point of carbon dioxide with a drip line, near the bottom of said upper containerv. means of connection between the upper and lower containers for supply/drainage of the nutrient medium to and from the upper containervi. screen support for the material to be propagated, with the possibility of exchange with screens of different meshesvii. means of positioning and locking of the lid for hermetic closure of the top containerviii. means of positioning and locking of the upper container for hermetic closure over the lower container andix. means of moving the liquid nutrient medium between said upper container and said lower container. (Results 0)

Search PN=(wo2015066779) (Results 1)

3:

Search fn=(59231695:195 or 55715883:95 or 64524430:90 or 60176184:90 or 49083233:90 or 54915611:80 or 54310169:80 or 31450049:80 or 56400378:70 or 54293763:70 or 51774950:70 or 51339449:70 or 50790993:70 or 49693664:70 or 49461398:70 or 48235436:70 or 57944465:65 or 31920893:65 or 65059617:60 or 64975252:60 or 64913586:60 or 64793323:60 or 64706579:60 or 64616916:60 or 64616454:60 or 64559324:60 or 64527131:60 or 64367944:60 or 64342368:60 or 64271741:60 or 64142649:60 or 63984844:60 or 63934286:60 or 63907504:60 or 63845616:60 or 63112524:60 or 62924489:60 or 61593476:60 or 61249524:60 or 60818264:60 or 60597952:60 or 60248953:60 or 59955322:60 or 58335966:60 or 58175410:60 or 57944464:60 or 57944438:60 or 57560128:60 or 57428402:60 or 57118047:60 or 57118042:60 or 57043702:60 or 56913692:60 or 56529930:60 or 55482390:60 or 55296560:60 or 55158037:60 or 54905961:60 or 54789932:60 or 52920165:60 or 51244956:60 or 50121549:60 or 49654424:60 or 49277576:60 or 44926520:60 or 43835237:60 or 40894993:60 or 29321609:60 or 29020034:60 or 28305308:60 or 25333029:60 or 25100875:60 or 23963985:60 or 23045565:60 or 22505456:60 or 22253083:60 or 21444282:60 or 16247934:60 or 14918913:60 or 12462682:60 or 8565791:60 or 8480197:60 or 6322044:60 or 6063702:60 or 5011877:60 or 2859179:60 or 2271043:60 or 2208818:60 or 1126762:60 or 64781897:50 or 63372741:50 or 62999895:50 or 61848000:50 or 61503364:50 or 60548999:50 or 59291262:50 or 58740759:50 or 58696254:50 or 58591525:50 or 58297146:50) (Results 100)

Search bioreactor and vitro and cultivation and planta (Results 4)

5:

Search bioreactor and vitro and cultivation and plant (Results 17)

6:

Search 6 and immersion (Results 5)

7:

Search 7 and temporary (Results 4)

8:

Search fn=(59231695:195 or 55715883:95 or 64524430:90 or 60176184:90 or 49083233:90 or 54915611:80 or 54310169:80 or 31450049:80 or 56400378:70 or 54293763:70 or 51774950:70 or 51339449:70 or 50790993:70 or 49693664:70 or 49461398:70 or 48235436:70 or 57944465:65 or 31920893:65 or 65059617:60 or 64975252:60 or 64913586:60 or 64793323:60 or 64706579:60 or 64616916:60 or 64616454:60 or 64559324:60 or 64527131:60 or 64367944:60 or 64342368:60 or 64271741:60 or 64142649:60 or 63984844:60 or 63934286:60 or 63907504:60 or 63845616:60 or 63112524:60 or 62924489:60 or 61593476:60 or 61249524:60 or 60818264:60 or 60597952:60 or 60248953:60 or 59955322:60 or 58335966:60 or 58175410:60 or 57944464:60 or 57944438:60 or 57560128:60 or 57428402:60 or 57118047:60 or 57118042:60 or 57043702:60 or 56913692:60 or 56529930:60 or 55482390:60 or 55296560:60 or 55158037:60 or 54905961:60 or 54789932:60 or 52920165:60 or 51244956:60 or 50121549:60 or 49654424:60 or 49277576:60 or 44926520:60 or 43835237:60 or 40894993:60 or 29321609:60 or 29020034:60 or 28305308:60 or 25333029:60 or 25100875:60 or 23963985:60 or 23045565:60 or 22505456:60 or 22253083:60 or 21444282:60 or 16247934:60 or 14918913:60 or 12462682:60 or 8565791:60 or 8480197:60 or 6322044:60 or 6063702:60 or 5011877:60 or 2859179:60 or 2271043:60 or 2208818:60 or 1126762:60 or 64781897:50 or 63372741:50 or 62999895:50 or 61848000:50 or 61503364:50 or 60548999:50 or 59291262:50 or 58740759:50 or 58696254:50 or 58591525:50 or 58297146:50) (Results 100)

Title: BIOREACTOR FOR IN VITRO PLANT CULTURE

Abstract: Source: US2016270312A A bioreactor comprising: an upper container with transparent walls for the material being propagated, the container being provided with gas exchange diffuser to the external environment, humidifier, and artificial illumination; a lower container with transparent walls, having an aluminum tray and a point of water entry and/or nutrient medium, located in the bottom of the container; points of injection/removal of air/oxygen/carbon dioxide located in the lid; point of additional injection of carbon dioxide, close to the bottom of the upper container; hermetic connection device between the upper and lower containers for supply/drainage of the nutrient medium; a screen support for the material to be propagated; locking devices to hermetically close the upper container; and the lower container; and pneumatic drivers of the liquid nutrient medium between the upper container and the lower container.

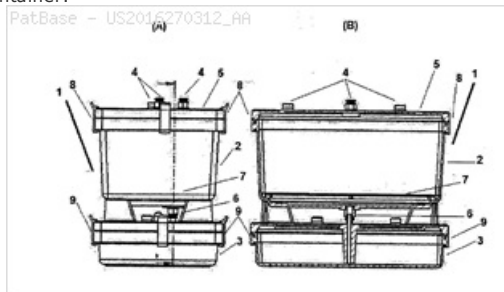
Classifications:

International (IPC 8-9): A01C1/02 A01G17/00 A01G31/06 A01G7/02 A01G7/04 A01H4/00 C12M3/00 (Advanced/Invention)

CPC: A01G31/06 A01G7/02 A01G17/00 A01G7/045 A01H4/005

A01C1/02

US: 47/60



Family:

Publication number	Publication date	Application number	Application date
BR212016010698 U2	20160816	BR20162110698U	20131111
EP3069591 A1	20160921	EP20130897207	20131111
US2016270312 AA	20160922	US20130035990	20131111
UY4540 U	20150529	UY20140004540U	20141111
WO15066779 A1	20150514	WO2013BR00483	20131111

Priority:

WO2013BR00483 20131111

Probable Assignee: FIBRIA CELULOSE SA

Assignee(s): (std): FIBRIA CELULOSE S A ; FIBRIA CELULOSE SA

Inventor(s): (std): OLIVEIRA MILA LIPARIZE DE ; PENCHEL RICARDO MIGUEL ; REIS JOCEMAR PALAURO DOS

Inventor(s): RICARDO MIGUEL PENCHEL ; JOCEMAR PALAURO DOS REIS ; MILA LIPARIZE DE OLIVEIRA

Agent(s): HERZOG FIESSER AND PARTNER PATENTANWALTE PARTG MBB; WEGMANN ANA CRISTINA ALMEIDA MUELLER

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BR212016010698 U2	20160816	LSPB	+	published / reissued	
EP3069591 A1	20160921	LSPB	+	published / reissued	
EP3069591 A1	20160921	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160601
EP3069591 A1	20161005	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : OLIVEIRA, MILA LIPARIZE DE
EP3069591 A1	20161005	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : PENCHEL, RICARDO MIGUEL
EP3069591 A1	20161005	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : REIS, JOCEMAR PALAURO DOS
US2016270312 AA	20160922	LSPB	+	published / reissued	
US2016270312 AA	20160711	LSAS	AS	ASSIGNMENT	OWNER NAME : FIBRIA CELULOSE S.A., BRAZIL DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PENCHEL, RICARDO MIGUEL; REIS, JOCEMAR PALAURO DOS; OLIVEIRA, MILA LIPARIZE DE; SIGNING DATES FROM 20160531 TO 20160617;

UY4540 U	20150529	LSPB	+	published / reissued	
WO15066779 A1	20150514	LSPB	+	published / reissued	
WO15066779 A1	20160511	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15066779 A1	20160511	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15035990 COUNTRY OF REF DOCUMENT : US
WO15066779 A1	20160816	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 212016010698 COUNTRY OF REF DOCUMENT : BR EFFECTIVE DATE : 20160511

Title: AUTOMATIC TOWER WITH MANY NOVEL APPLICATIONS

Abstract: Source: US2016295820A There is provided a vertically stacked multi-layer storage system suitable for the provision of temperature and/or humidity controlled storage of materials. There is particularly provided a vertically stacked multi-layer system having suitable lighting for use with any tray, pot, aeroponic and hydroponic plant growing system and apparatus to combine growing in an integrated growth tray having a suitable lighting source located under the growth tray.

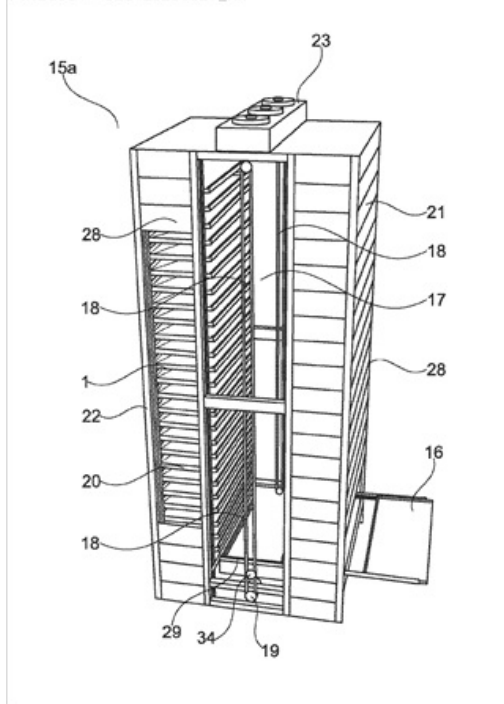
Classifications:

International (IPC 8-9): A01G1/00 A01G31/04 A01G31/06 A01G7/02 A01G7/04 A01G9/02 A01G9/24 F21V23/04 G07F11/16 (Advanced/Invention)

CPC: A01G1/00 G07F11/165 Y02P60/216 A01G7/045 A01G9/24 A01G9/246 A01G7/02 A01G1/001 F21V23/0471 F21Y2115/10 A01G31/06

US: 47/60

PatBase - US2016295820_A0



Family:

Publication number	Publication date	Application number	Application date
CN105873434 A	20160817	CN201480072107	20141204
EP3076782 A1	20161012	EP20140809685	20141204
GB201321389 A0	20140115	GB20130021389	20131204
GB201421533 A0	20150121	GB20140021533	20141204
GB2516515 A1	20150128	GB20130021389	20131204
GB2516515 A8	20161005	GB20130021389	20131204
GB2516515 B2	20150722	GB20130021389	20131204
GB2516515 B8	20161005	GB20130021389	20131204
GB2522756 A1	20150805	GB20140021533	20141204
JP2016539662 T2	20161222	JP20160557200T	20141204
US2016295820 AA	20161013	US20140101016	20141204
WO15082924 A1	20150611	WO2014GB53599	20141204

Priority:

GB20130021389 20131204 WO2014GB53599 20141204

Probable Assignee: INTELLIGENT GROWTH SOLUTIONS LTD

Assignee(s): (std): INTELLIGENT GROWTH SOLUTIONS LTD

Inventor(s): (std): AYKROYD HENRY ; AYKROYD HENRY ROBERT GEORGE ; MARRIOTT LEWIS ; MARRIOTT LEWIS JAMES ; SCOTT DAVID ; SCOTT DAVID ALEXANDER ; TYRELL PETER ; TYRELL PETER MICHAEL ; TYRRELL PETER ; TYRRELL PETER MICHAEL

Inventor(s): PETER MICHAEL TYRELL ; PETER MICHAEL TYRRELL ; DAVID ALEXANDER SCOTT ; HENRY ROBERT GEORGE AYKROYD ; LEWIS JAMES MARRIOTT

Agent(s): EDWARDS FIONA ANNE; HGF GLASGOW LTD

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN105873434 A	20160817	LSPB	+	published / reissued	
CN105873434 A	20160817	LSPB	+C06	PUBLICATION	
EP3076782 A1	20161012	LSPB	+	published / reissued	

EP3076782 A1	20161012	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160628
GB2516515 A1	20150128	LSPB	+	published / reissued	
GB2516515 A1	20161019	LSRE	S117	CORRECTION OF ERRORS IN PATENTS AND APPLICATIONS (SECT. 117/PATENTS ACT 1977)	DESCRIPTION : REQUEST FILED; REQUEST FOR CORRECTION UNDER SECTION 117 FILED ON 05 SEPTEMBER 2016
GB2516515 A1	20161026	LSRE	S117	CORRECTION OF ERRORS IN PATENTS AND APPLICATIONS (SECT. 117/PATENTS ACT 1977)	DESCRIPTION : CORRECTIONS ALLOWED; REQUEST FOR CORRECTION UNDER SECTION 117 FILED ON 05 SEPTEMBER 2016, ALLOWED ON 27 SEPTEMBER 2016.
GB2516515 B2	20150722	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2522756 A1	20150805	LSPB	+	published / reissued	
JP2016539662 T2	20161222	LSPB	+	published / reissued	
JP2016539662 T2	20160920	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160712
JP2016539662 T2	20160920	LSRE	A529	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 34 (PCT)	TEXT : JAPANESE INTERMEDIATE CODE: A529 EFFECTIVE DATE : 20160711
US2016295820 AA	20161013	LSPB	+	published / reissued	
WO15082924 A1	20150611	LSPB	+	published / reissued	
WO15082924 A1	20160602	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15101016 COUNTRY OF REF DOCUMENT : US
WO15082924 A1	20160603	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016557200 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO15082924 A1	20160606	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: METHOD FOR PRODUCING CLONE SEEDLINGS

Abstract: Source: US2012240462A A shoot of a plant is cultivated under the presence of glutathione, so that the shoot is rooted. It is possible to cultivate the shoot under the presence of glutathione by use of a rooting medium including glutathione or by contacting a solution including glutathione with the shoot. Oxidized glutathione is preferably used as glutathione. By promoting rooting of the shoot of the plant, a rooting rate of the shoot of the plant is improved. This improves productivity of a clone seedling.

Classifications:

International (IPC 8-9): A01G1/00 A01G7/00 A01G7/02 A01G7/04 A01H4/00 A01N37/44 A01P21/00

C12N5/00 (Advanced/Invention);

A01H4/00 (Core/Invention);

A01G A01H (Subclass/Invention)

CPC: A01G7/045 A01G7/02 A01G1/001 A01G1/00 A01G7/00 A01H4/005 A01N37/44

European: A01G1/00 A01G7/00 A01H4/00D

US: 435/420 47/58.1 47/58.1LS 47/58.1R 47/58.1SE 504/320

Family:

Publication number	Publication date	Application number	Application date
AU2010329035 AA	20110616	AU20100329035	20101209
AU2010329035 BB	20130620	AU20100329035	20101209
BR112012013907 A2	20150915	BR20121113907	20101209
CL2012001536 A1	20121116	CL20120001536	20120608
CL52686 B	20160628	CL20120001536	20120608
JP5612605 B1	20141022	JP20110545244T	20101209
TH131393 A	20140227	TH20121002696	20101209
US2012240462 AA	20120927	US20100514402	20101209
US2014366440 AA	20141218	US20140473001	20140829
US8927286 BB	20150106	US20100514402	20101209
WO11071114 A1	20110616	WO2010JP72137	20101209
ZA201204337 A	20130227	ZA20120004337	20120613

Priority:

JP20090280017 20091210 JP20090280018 20091210 WO2010JP72137 20101209
US20120514402 20120607 US20140473001 20140829 JP20110545244 20101209

Probable Assignee: OKAYAMA PREFECTURE

Assignee(s): (std): JUJO PAPER CO LTD ; KAWAI HUMIKI ; KAWAOKA AKIYOSHI ; MATSUNAGA ETSUKO ; NEGISHI NAOKI ; OHISHI MASATOSHI ; TANABE TOSHIAKI ; OGAWA KENICHI ; OKAYAMA PREFECTURE

Assignee(s): NIPPON PAPER IND CO ; NIPPON PAPER IND CO LTD ; NIPPON PAPER INDUSTRIES CO LTD ; NIPPON PAPER INDUSTRIES CO

Inventor(s): (std): KAWAI HUMIKI ; KAWAOKA AKIYOSHI ; MATSUNAGA ETSUKO ; NEGISHI NAOKI ; OGAWA KENICHI ; OHISHI MASATOSHI ; TANABE TOSHIAKI

Inventor(s): TOSHIAKI TANABE ; NAOKI NEGISHI ; AKIYOSHI KAWAOKA ; ETSUKO MATSUNAGA ; HUMIKI KAWAI ; KENICHI OGAWA ; MASATOSHI OHISHI

Agent(s): HODGKINSON MCINNES PATENTS; IP SOLVED ANZ PTY LTD; ESTUDIO CLARKE MODET; CASIMIR JONES SC; HARAKENZO WORLD PATENT AND TRADEMARK

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2010329035 AA	20110616	LSPB	+	published / reissued	
AU2010329035 AA	20131017	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2010329035 BB	20130620	LSGT	+	granted / extensions (spc, cpc, pte)	
BR112012013907 A2	20150915	LSPB	+	published / reissued	
CL2012001536 A1	20121116	LSPB	+	published / reissued	
CL52686 B	20160628	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5612605 B1	20141022	LSGT	+	granted / extensions (spc, cpc, pte)	
TH131393 A	20140227	LSPB	+	published / reissued	

US2012240462 AA	20120927	LSPB	+	published / reissued	
US2012240462 AA	20120607	LSAS	AS	ASSIGNMENT	OWNER NAME : OKAYAMA PREFECTURE, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:OGAWA, KENICHI; MATSUNAGA, ETSUKO; NEGISHI, NAOKI; AND OTHERS; SIGNING DATES FROM 20120521 TO 20120528; REEL/FRAME:028336/0028
US2014366440 AA	20141218	LSPB	+	published / reissued	
US2014366440 AA	20141009	LSAS	AS	ASSIGNMENT	OWNER NAME : OKAYAMA PREFECTURE, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:OGAWA, KENICHI; MATSUNAGA, ETSUKO; NEGISHI, NAOKI; AND OTHERS; SIGNING DATES FROM 20120521 TO 20120528; REEL/FRAME:033923/0808
US2014366440 AA	20150114	LSAS	AS	ASSIGNMENT	OWNER NAME : OKAYAMA PREFECTURE, JAPAN DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNEE'S ADDRESS PREVIOUSLY RECORDED AT REEL: 033923 FRAME: 0808. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT; ASSIGNORS:OGAWA, KENICHI; MATSUNAGA, ETSUKO; NEGISHI, NAOKI; AND OTHERS; SIGNING DATES FROM 20120521 TO 20120528; REEL/FRAME:034765/0720
US8927286 BB	20150106	LSGT	+	granted / extensions (spc, cpc, pte)	
WO11071114 A1	20110616	LSPB	+	published / reissued	
WO11071114 A1	20120607	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13514402 COUNTRY OF REF DOCUMENT : US
WO11071114 A1	20120608	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011545244 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11071114 A1	20120608	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2011545244 COUNTRY OF REF DOCUMENT : JP
WO11071114 A1	20120610	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1201002696 COUNTRY OF REF DOCUMENT : TH
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WO11071114 A1	20120712	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010329035 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20101209 KIND CODE OF REF DOCUMENT : A
WO11071114 A1	20130102	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10836034 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO11071114 A1	20150915	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012013907 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20120608

ZA201204337 A	20130227	LSGT	+	granted / extensions (spc, cpc, pte)
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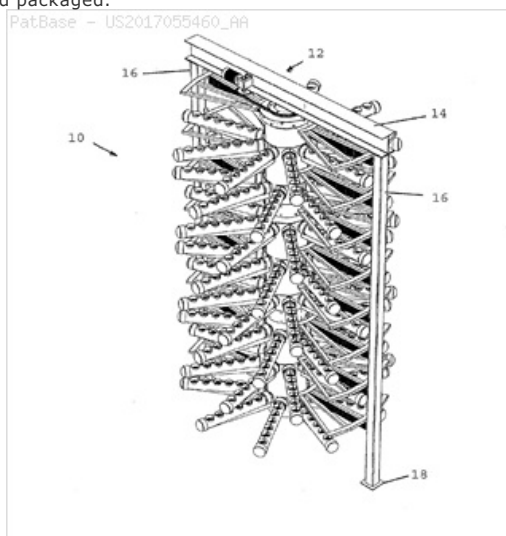
Title: METHOD AND APPARATUS FOR AUTOMATED VERTICAL HORTICULTURE AND AGRICULTURE

Abstract: Source: US2017055460A A method and apparatus for continuous automated growing of plants utilizes a vertical array of plant supporting arms extending radially from a central axis. Each arm has a plurality of pot receptacles which receive the plant seedling and liquid nutrients and water. The potting arms are rotated beneath grow lamps and pollinating arms. The frequency of feeding is increased as the plants grow. CO₂ rich air may also be provided. Once the plants are ready to harvest, they are manually exchanged for new seedlings and packaged.

Classifications:

International (IPC 8-9): A01G1/00 A01G27/00 A01G31/06 A01G7/02 A01G7/04 A01G9/12 A01G9/20 A01H1/02 (Advanced/Invention)

CPC: A01G31/06 A01G31/04 Y02P60/216 A01G9/12 A01G7/045 A01G27/00 A01G7/02 A01G1/001 A01G9/20 A01H1/025



Family:

Publication number	Publication date	Application number	Application date
CA2940062 AA	20160818	CA20152940062	20150219
CN106231892 A	20161214	CN201580020786	20150219
US2017055460 AA	20170302	US20150120011	20150219
WO15123776 A1	20150827	WO2015CA50127	20150219

Priority:

US20140942500P 20140220 US20150120011 20150219 WO2015CA50127 20150219

Probable Assignee: VERTICAL DESIGNS LTD

Assignee(s): (std): AFFINOR GROWERS INC ; VERTICAL DESIGNS LTD

Assignee(s): BRUSATORE NICHOLAS G

Inventor(s): (std): BRUSATORE NICHOLAS G

Agent(s): OYEN WIGGS GREEN AND MUTALA LLP; GREEN BRUCE M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2940062 AA	20160818	LSPB	+	published / reissued	
CN106231892 A	20161214	LSPB	+	published / reissued	
CN106231892 A	20161214	LSPB	+C06	PUBLICATION	
US2017055460 AA	20170302	LSPB	+	published / reissued	
WO15123776 A1	20150827	LSPB	+	published / reissued	
WO15123776 A1	20160818	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2940062 COUNTRY OF REF DOCUMENT : CA
WO15123776 A1	20160822	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

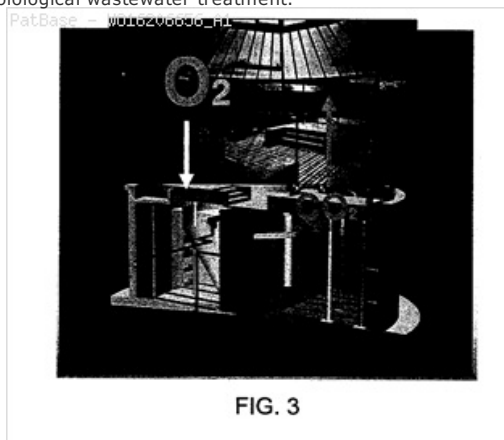
Title: METHOD OF INTENSIVE CULTIVATION OF PLANTS IN A PRODUCTION UNIT

Abstract: Method of intensive cultivation of plants in a production unit where the production unit is for the acceleration of the photosynthesis of plants connected to an integral biotechnological reactor for wastewater treatment with synergistic use of carbon dioxide CO₂ generated during biotechnological degradation of pollutants and a simultaneous use of the oxygen O₂ released by the photosynthesis of plants which is from the inner space of the greenhouse, in which the production unit is situated, blown in the form of compressed air with a higher oxygen O₂ content, back to the aeration reactor space, thus increasing the biological activity of micro-organisms involved in the biological wastewater treatment.

Classifications:

International (IPC 8-9): A01G1/00 A01G31/00 A01G31/06 A01G7/02 A01G7/04 A01G9/18 (Advanced/Invention)

CPC: A01G1/001 A01G7/02 A01G7/045 A01G9/18 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
CZ20150414 A3	20170125	CZ20150000414	20150622
WO16206656 A1	20161229	WO2016CZ00064	20160607

Priority:

CZ20150000414 20150622

Probable Assignee: ENV COMMERCE CZ S R O

Assignee(s): (std): ENV COMMERCE CZ S R O ; ENV COMMERCE S R O

Assignee(s): ENVIRONMENT COMMERCE SRO ; ENVIRONMENT COMMERCE CZ SRO

Inventor(s): (std): BIDENKO IVAN

Agent(s): REICHEL PAVEL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CZ20150414 A3	20170125	LSPB	+	published / reissued	
WO16206656 A1	20161229	LSPB	+	published / reissued	

Title: APPARATUS FOR PRODUCING SEEDLINGS AND METHOD OF PRODUCING SEEDLINGS

Abstract: Source: US2007089359A It is intended to provide an apparatus for producing seedlings and a method therefor whereby, in producing grafted seedlings of fruit vegetables, a process from the culture of their stocks (rootstocks and scions) to welding after the grafting can be accomplished in a consistent process at low cost. Rootstocks and scions are nursed on multi-staged seedling culture shelves 3 installed in a closed-type structure surrounded by light-interceptive thermally insulating walls, and then these rootstocks and scions are joined to each other to produce grafted seedlings 8. Then, these grafted seedlings 8 are placed on shelf boards 3 a of the seedling culture shelves and covered with a light-transmitting shield 9 provided with vent holes 15, and light of a predetermined luminous intensity is projected onto these grafted seedlings from fluorescent lamps 5 through the light-transmitting shield to weld the grafted seedlings 8. The relative humidity in the light-transmitting shield immediately after the grafting is raised by the evaporation of moisture from the rootstocks and the scions, and the rooting of the rootstocks and the scions is thereby facilitated. When the photosynthesis is stimulated, gas exchange between the carbon dioxide gas-containing atmosphere within the closed type structure and the atmosphere within the light-transmitting shield are accomplished to replenish the inner space of the light-transmitting shield with carbon dioxide gas.

Classifications:

International (IPC 8-9): A01G1/06 A01G31/02 A01G7/00 A01G7/02 A01G7/04 A01G9/00 A01G9/10 A01G9/16 A01G9/18 A01G9/24 A47G7/00 (Advanced/Invention);

A01G1/06 A01G9/00 (Advanced/Non-invention);

A01G1/06 A01G7/00 A01G7/02 A01G7/04 A01G9/00 A01G9/18

A01G9/24 A47G7/00 (Core/Invention);

A01G (Subclass/Invention)

International (IPC 1-7): A01G1/06 A01G7/00 A01G9/10 A01G9/24

CPC: A01G1/06 Y02P60/146 A01G9/16 A01G7/02 A01G7/045

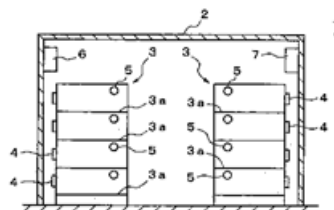
A01G31/06

European: A01G7/02 A01G7/04B A01G9/16

US: 47/17 47/39 47/61

PatBase - US2007089359_AA

Patent Application Publication Apr. 26, 2007 Sheet 1 of 5 US 2007/089359 A1

FIG. 1**Family:**

Publication number	Publication date	Application number	Application date
CA2529096 AA	20051212	CA20042529096	20040614
CA2529096 C	20110920	CA20042529096	20040614
CN100471382 C	20090325	CN200480018212	20040614
CN1812708 A	20060802	CN200480018212	20040614
EP1639884 A1	20060329	EP20040736806	20040614
EP1639884 A4	20081231	EP20040736806	20040614
EP1639884 B1	20121024	EP20040736806	20040614
ES2398107 T3	20130313	ES20040736806T	20040614
HK1095703 A1	20091113	HK20070101021	20070129
HK1095703 A3	20070518	HK20070101021	20070129
JP4378550 B1	20091209	JP20050511005	20040614
JP4378550 B2	20091209	JP20050511005T	20040614
KR100738296 B1	20070712	KR20057025024	20040614
KR20060037278 A	20060503	KR20057025024	20051226
TW200505330 A	20050216	TW20040118158	20040623
TWI248335 B	20060201	TW20040118158	20040623
US2007089359 AA	20070426	US20040560051	20040614
US7975429 BB	20110712	US20040560051	20040614
WO05000005 A1	20050106	WO2004JP08649	20040614

Priority:

JP20030184745 20030627 WO2004JP08649 20040614 WO2004JP08649 20051226

Probable Assignee: MKV DREAM CO LTD

Assignee(s): (std): MKV DREAM CO LTD ; NAKAMINAMI AKIO ; OKABE KATSUYOSHI ; TAIYO KOGYO CO LTD ; WU DE ; TSUCHIYA KAZUO ; FUSE JUNYA ; KAMINAMI AKIO

Assignee(s): MKV DREAM CO ; TAIYO KOGYO CORP ; TAIYO KOGYO CO

Inventor(s): (std): AKIO NAKAMINAMI ; DE WU ; FUSE JUNYA ; JUNYA FUSE ; KAMINAMI AKIO ; KATSUYOSHI OKABE ; KAZUO TSUCHIYA ; NAKAMINAMI AKIO ; OKABE KATSUYOSHI ; TSUCHIYA KAZUO ; WU DE

Inventor(s): WU DE C O TAIYO KOGYO CO LTD ; OKABE KATSUYOSHI TSUCHIYA KAZUO NAKAMINAMI AKIO WU DE FUSE JUNYA ; FUSE JUNYA C O TAIYO KOGYO CO LTD

Agent(s): MARKS AND CLERK; CHARLTON PETER JOHN; AZNAREZ PABLO; WENDEROTH LIND AND PONACK LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
CA2529096 AA	20051212	LSPB	+	published / reissued	
CA2529096 AA	20051212	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2529096 AA	20090421	LSES	+EEER	EXAMINATION REQUEST	
CA2529096 C	20110920	LSGT	+	granted / extensions (spc, cpc, pte)	
CN100471382 C	20090325	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1812708 A	20060802	LSPB	+	published / reissued	
CN1812708 A	20060802	LSPB	+C06	PUBLICATION	
CN1812708 A	20090325	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1812708 A	20091113	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : GR REF DOCUMENT NUMBER : 1095703 COUNTRY OF REF DOCUMENT : HK
CN1812708 A	20091223	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	OWNER NAME : MKV DREAM CO., LTD. DESCRIPTION : FORMER OWNER: TAIYO INDUSTRIAL CO., LTD. EFFECTIVE DATE : 20091113
CN1812708 A	20091223	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
CN1812708 A	20140402	LSAS	C56	CHANGE IN THE NAME OR ADDRESS OF THE PATENTEE	
CN1812708 A	20140402	LSAS	C56	CHANGE IN THE NAME OR ADDRESS OF THE PATENTEE	OWNER NAME : MITSUBISHI PLASTICS AGRICULTURAL DREAM CO., LTD DESCRIPTION : FORMER NAME: MKV DREAM CO., LTD.
EP1639884 A1	20060329	LSPB	+	published / reissued	
EP1639884 A1	20060329	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20051221
EP1639884 A1	20081231	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20081203
EP1639884 A1	20081231	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 1/06 20060101AFI20050113BHEP
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EP1639884 A1	20110316	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20110209
EP1639884 A1	20120404	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G

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EP1639884 A1	20131002	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20130725
EP1639884 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20140627 YEAR OF FEE PAYMENT : 11
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ES2398107 T3	20130313	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1095703 A1	20091113	LSGT	+	granted / extensions (spc, cpc, pte)	
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HK1095703 A3	20070518	LSPB	+	published / reissued	
JP4378550 B1	20091209	LSGT	+	granted / extensions (spc, cpc, pte)	

JP4378550 B2	20091209	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4378550 B2	20060510	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20060509
JP4378550 B2	20061013	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20061012
JP4378550 B2	20090527	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090526
JP4378550 B2	20090722	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090721
JP4378550 B2	20090811	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20090810
JP4378550 B2	20090811	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4378550 B2	20090819	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20090818
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JP4378550 B2	20090827	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090826
JP4378550 B2	20090917	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20090831
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JP4378550 B2	20130228	LSAS	S533	WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF NAME	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R313533
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KR100738296 B1	20070705	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100738296 B1	20130628	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20130628 YEAR OF FEE PAYMENT : 7

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KR100738296 B1	20150626	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20150626 YEAR OF FEE PAYMENT : 9
KR100738296 B1	20160628	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160628 YEAR OF FEE PAYMENT : 10
KR20060037278 A	20060503	LSPB	+	published / reissued	
TW200505330 A	20050216	LSPB	+	published / reissued	
TWI248335 B	20060201	LSGT	+	granted / extensions (spc, cpc, pte)	
US2007089359 AA	20070426	LSPB	+	published / reissued	
US2007089359 AA	20051208	LSAS	AS	ASSIGNMENT	OWNER NAME : TAIYO KOGYO CO., LTD., JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:OKABE, KATSUYOSHI; TSUCHIYA, KAZUO; NAKAMINAMI, AKIO; AND OTHERS; REEL/FRAME:017364/0349 EFFECTIVE DATE : 20051129
US2007089359 AA	20090916	LSAS	AS	ASSIGNMENT	OWNER NAME : MKV DREAM CO., LTD., JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TAIYO KOGYO CO., LTD.; REEL/FRAME:023238/0871 EFFECTIVE DATE : 20090801
US7975429 BB	20110712	LSGT	+	granted / extensions (spc, cpc, pte)	
US7975429 BB	20051208	LSAS	AS	ASSIGNMENT	OWNER NAME : TAIYO KOGYO CO., LTD., JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:OKABE, KATSUYOSHI; TSUCHIYA, KAZUO; NAKAMINAMI, AKIO; AND OTHERS; REEL/FRAME:017364/0349 EFFECTIVE DATE : 20051129
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US7975429 BB	20150108	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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WO05000005 A1	20060503	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1020057025024 COUNTRY OF REF DOCUMENT : KR
WO05000005 A1	20070426	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 10560051 COUNTRY OF REF DOCUMENT : US

Title: APPARATUS FOR CULTIVATING BULKY FEED PROVIDING ENVIRONMENT FOR GERMINATION AND GROWTH OF CROPS

Abstract: The present invention relates to an apparatus for cultivating bulky feed providing an environment for germination and growth of crops. One embodiment according to the present invention relates to the apparatus for cultivating the bulky feed providing the environment for germination and growth of the crops to be used as animal feed, and more specifically, to the apparatus for cultivating bulky feed, comprising: a power management portion for controlling reserve power stored inside the apparatus and external power provided from the outside, so as to provide power for cultivating the crops; a controller portion for controlling the temperature and/or the humidity for the germination and growth of the crops; a cultivation tray structure portion comprising a plurality of rows and columns for supporting trays on which the crops are cultivated; and a lighting portion comprising at least one light source for controlling the brightness and/or the color of an artificial light source to provide the light required by the crops, wherein a housing installed around the periphery of the cultivation tray structure is provided for protecting against the outside environment.

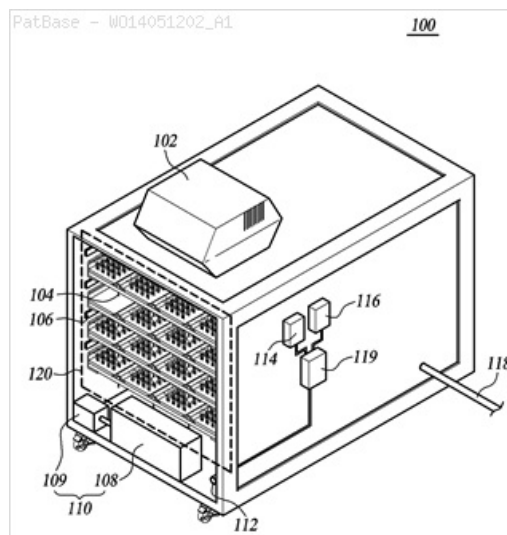
Classifications:

International (IPC 8-9): A01C1/02 A01G7/00 A01G7/04

A01G7/06 (Advanced/Invention)

CPC: A01C1/02 A01G7/045 A01G31/06 Y02P60/216 Y02P60/146

A01G9/16 A01G9/246 A01G9/247



Family:

Publication number	Publication date	Application number	Application date
CN104703462 A	20150610	CN201280075951	20121126
KR101283915 B1	20130716	KR20120106751	20120925
WO14051202 A1	20140403	WO2012KR10052	20121126

Priority:

KR20120106751 20120925 WO2012KR10052 20121126

Probable Assignee: YUYANG D AND U CO LTD

Assignee(s): (std): YUYANG D AND U CO LTD ; YUYANG DNU CO LTD

Assignee(s): YUYANG D AND U CO ; YUYANG DNU CO

Inventor(s): (std): HWANG YOUNGJO ; KIM SANG OK ; KIM DONG SIK ; KIM BYUNG OH ; HWANG YOUNG JO

Agent(s): LEE CHULHEE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN104703462 A	20150610	LSPB	+	published / reissued	
CN104703462 A	20150610	LSPB	+C06	PUBLICATION	
KR101283915 B1	20130716	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101283915 B1	20120925	LSES	A201	REQUEST FOR EXAMINATION	
KR101283915 B1	20121011	LSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR101283915 B1	20130207	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101283915 B1	20130529	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101283915 B1	20130703	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101283915 B1	20160701	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160701 YEAR OF FEE PAYMENT : 4

WO14051202 A1	20140403	LSPB	+	published / reissued	
WO14051202 A1	20150325	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14051202 A1	20151021	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12885340 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

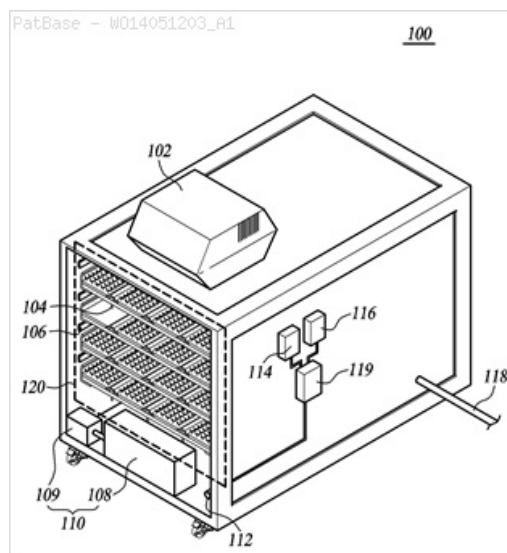
Title: APPARATUS FOR GERMINATING AND CULTIVATING PROVIDING OPTIMAL ENVIRONMENT FOR CROP GERMINATION, AND SYSTEM FOR CULTIVATING PLANTS BY USING SAME

Abstract: One embodiment of the present invention relates to an apparatus for germinating and cultivating providing an optimal germination environment for crops to be used as food, and more specifically, to an apparatus for germinating and cultivating and a system for cultivating plants by using same, comprising: a power management portion for controlling reserve power generated by using new and renewable energy and external power provided from the outside, so as to provide power for cultivating the crops; a controller portion for controlling the temperature and/or the humidity for creating the optimal germination environment, and for controlling so that a predetermined amount of water is provided at a predetermined time for the germination of the crops; a cultivation seedling tray structure portion comprising a plurality of rows and columns for supporting seedling trays on which seeds of the crops germinate; and a lighting portion comprising at least one light source for controlling the brightness and/or the color of an artificial light source to provide the optimal light for crop germination, wherein a housing installed around the periphery of the cultivation seedling tray structure is provided for protecting against the outside environment.

Classifications:

International (IPC 8-9): A01C1/02 A01G7/00 A01G7/04
A01G7/06 (Advanced/Invention)

CPC: A01G31/06 A01C1/02 A01G7/045 Y02P60/12 Y02P60/216
Y02P60/146



Family:

Publication number	Publication date	Application number	Application date
KR101314521 B1	20131004	KR20120106756	20120925
WO14051203 A1	20140403	WO2012KR10054	20121126

Priority:

KR20120106756 20120925

Probable Assignee: YUYANG D AND U CO LTD

Assignee(s): (std): YUYANG D AND U CO LTD ; YUYANG DNU CO LTD

Assignee(s): YUYANG D AND U CO ; YUYANG DNU CO

Inventor(s): (std): HWANG YOUNG JO ; HWANG YOUNGJO ; KIM BYUNG OH ; KIM DONG SIK ; KIM SANG OK

Agent(s): LEE CHULHEE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101314521 B1	20131004	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101314521 B1	20120925	LSES	A201	REQUEST FOR EXAMINATION	
KR101314521 B1	20121011	LSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR101314521 B1	20130621	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101314521 B1	20130829	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101314521 B1	20130927	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101314521 B1	20160906	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160906 YEAR OF FEE PAYMENT : 4
WO14051203 A1	20140403	LSPB	+	published / reissued	

WO14051203 A1	20150325	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14051203 A1	20151021	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12885267 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: PLANT FACTORY SYSTEM

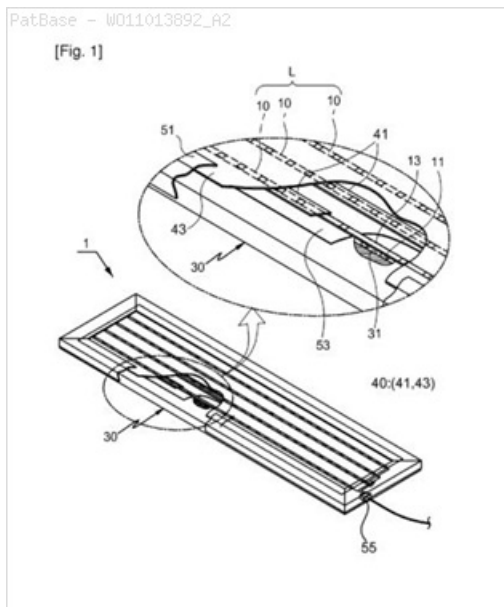
Abstract: The present invention relates to a plant factory system in which a plurality of LED modules are inserted and installed in a light-transmitting panel into a slim panel configuration, in order to minimize occupied space and increase plant-cultivating space, provide a simple configuration to significantly increase the convenience of installation, use and maintenance, and reduce expenses. To achieve the above, the plant factory system of the present invention comprises: a bed installed in a cultivation room sealed off from the external environment, said bed having a nutrient solution circulated therein; a multi-tray-type structure provided with a multi-level tray-type floor for supporting the bed; and a lighting implement installed in an upper region of each floor, wherein the lighting implement is configured as a flat panel-type LED lighting implement, comprising: a light source unit including at least one light-emitting diode (LED) module having a plurality of LEDs arranged and mounted on a printed circuit board (PCB); a light-transmitting panel linearly defining at least one LED module installing recess for inserting and installing the LED module; and a heat-dissipating member installed in contact with the PCB of the LED module.

Classifications:

International (IPC 8-9): A01G31/02 A01G31/06 A01G7/00 A01G9/00 A01G9/18 F21V15/00 (Advanced/Invention)

CPC: Y02P60/216 A01G9/26 A01G31/02 A01G7/04 A01G7/045 F21S13/00 A01G31/06 A01G7/02 A01G9/20

European: A01G31/02 A01G9/26



Family:

Publication number	Publication date	Application number	Application date
JP2013500042 T2	20130107	JP20120522741T	20100429
KR101024193 B1	20110322	KR20100002266	20100111
KR101053146 B1	20110802	KR20100020675	20100309
KR20110013164 A	20110209	KR20100002266	20100111
KR20110096618 A	20110831	KR20100015946	20100223
WO11013892 A2	20110203	WO2010KR02703	20100429
WO11013892 A3	20110324	WO2010KR02703	20100429

Priority:

KR20090070013 20090730 KR20100002266 20100111 KR20100015946 20100223
KR20100020675 20100309 WO2010KR02703 20100429

Probable Assignee: FAWOO TECHNOLOGI

Assignee(s): (std): DONGBU LIGHTEC CO LTD ; FAWOO TECHNOLOGI ; FAWOO TECHNOLOGY ; YOO YOUNG HO

Assignee(s): DONGBU LIGHTEC CO LTD ; DONGBU LIGHTEC CO

Inventor(s): (std): YOO YOUNG HO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
JP2013500042 T2	20130107	LSPB	+	published / reissued	
JP2013500042 T2	20131015	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20131015
JP2013500042 T2	20140225	LSWD	-A045	WRITTEN MEASURE OF DISMISSAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A045 EFFECTIVE DATE : 20140225

KR101024193 B1	20110322	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101024193 B1	20100111	LSES	A201	REQUEST FOR EXAMINATION	
KR101024193 B1	20101126	LSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR101024193 B1	20110201	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101024193 B1	20110315	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101024193 B1	20110315	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101024193 B1	20140317	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20140317 YEAR OF FEE PAYMENT : 4
KR101024193 B1	20150316	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20150316 YEAR OF FEE PAYMENT : 5
KR101024193 B1	20160316	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
KR101053146 B1	20110802	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101053146 B1	20100309	LSES	A201	REQUEST FOR EXAMINATION	
KR101053146 B1	20110120	LSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR101053146 B1	20110303	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101053146 B1	20110511	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101053146 B1	20110726	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101053146 B1	20140626	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20140626 YEAR OF FEE PAYMENT : 4
KR101053146 B1	20150727	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20150727 YEAR OF FEE PAYMENT : 5
KR20110013164 A	20110209	LSPB	+	published / reissued	
KR20110096618 A	20110831	LSPB	+	published / reissued	
KR20110096618 A	20150324	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
WO11013892 A2	20110203	LSPB	+	published / reissued	
WO11013892 A2	20120130	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012522741 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11013892 A3	20120130	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012522741 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11013892 A3	20120130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11013892 A3	20120130	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2012522741 COUNTRY OF REF DOCUMENT : JP
WO11013892 A3	20120829	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10804605 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2

Title: CULTURING METHOD OF SALICORNIA HERBACEA USING SEA WATER AND THE SALICORNIA HERBACEA PRODUCED THEREBY

Abstract: Source: KR101036423B PURPOSE: A cultivation method of salicornia herbacea using seawater, and the salicornia herbacea are provided to cultivate salicornia herbacea containing useful minerals with the environment-friendly method. CONSTITUTION: A cultivation method of salicornia herbacea using seawater comprises the following steps: supplying the seawater to salicornia herbacea for the hydroponic cultivation; maintaining the temperature of a cultivation chamber at 20~25deg C. The humidity of the cultivation chamber is 60~70 percent. The concentration of CO₂ inside the cultivation chamber is 300~500ppm. The pH of culture fluid for cultivating the salicornia herbacea is 7~8.

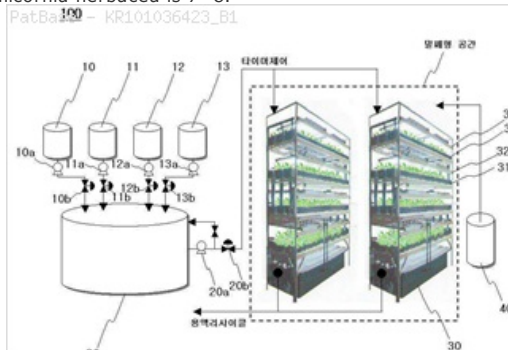
Classifications:

International (IPC 8-9): A01C1/02 A01G31/02 A01G33/00

A01G7/00 (Advanced/Invention)

CPC: Y02P60/216 A01G31/02 A01C1/02 A01G7/00 A01G7/02

A01G7/045 A01G33/00



Family:

Publication number	Publication date	Application number	Application date
KR101036423 B1	20110523	KR20100122022	20101202

Priority:

KR20100122022 20101202

Probable Assignee:

KIM HYUN CHEL

Assignee(s): (std):

KIM HYUN CHEL

Inventor(s): (std):

KIM HYUN CHEL

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101036423 B1	20110523	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101036423 B1	20101202	LSES	A201	REQUEST FOR EXAMINATION	
KR101036423 B1	20110210	LSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR101036423 B1	20110304	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101036423 B1	20110427	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101036423 B1	20110516	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101036423 B1	20140515	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20140515 YEAR OF FEE PAYMENT : 4
KR101036423 B1	20150517	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	

Title: DEVICE FOR PLANT CULTIVATOR USING CONTAINER

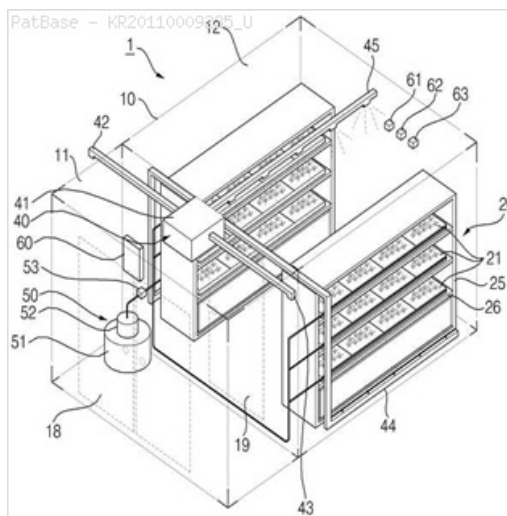
Abstract: Source: KR200462981Y Intended relates to a plant cultivation apparatus using the container, it is grown inside the insulated container and the external thread is divided compartments, insulating the inside of cultivation room Sikkim as well as the amount of light required for the growth of the plant, temperature, humidity, CO₂, which has the effect of nutrient supply by artificial light sources, so it is automatically adjusted through the air conditioning unit and nutrient supply, etc. extreme local and oversea vessel, such as the Antarctic also to effectively grow plants of vegetables.

Classifications:

International (IPC 8-9): A01G31/02 A01G31/06

A01G7/00 (Advanced/Invention)

CPC: Y02P60/216 A01G27/005 A01G7/02 A01G7/045 A01G9/24
A01G27/003 A01G27/006 A01G27/008 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
KR200462981 Y1	20121018	KR20100002980U	20100323
KR20110009235 U	20110929	KR20100002980U	20100323

Priority:

KR20100002980U 20100323

Probable Assignee:

REPUBLIC OF KOREA

Assignee(s): (std):

REPUBLIC OF KOREA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR200462981 Y1	20121018	LSGT	+	granted / extensions (spc, cpc, pte)	
KR200462981 Y1	20100323	LSSES	A201	REQUEST FOR EXAMINATION	
KR200462981 Y1	20120824	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR20110009235 U	20110929	LSPB	+	published / reissued	

Title: PLANT CULTIVATING DEVICE AND PLANT CULTIVATING SYSTEM USING THEREOF

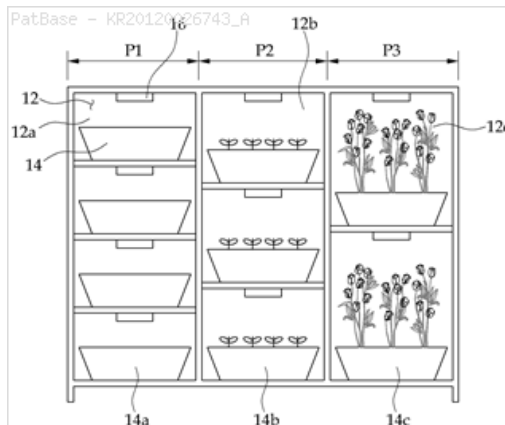
Abstract: Source: KR20120026743A PURPOSE: A plant cultivating apparatus capable of maximizing productivity, and plant cultivating system using thereof are provided to enable users to control the environment condition of the apparatus by the growth of plants. CONSTITUTION: A plant cultivating apparatus comprises the following: plural storing units(12) with different sizes by the growth of plants, including a first storing unit(12a) for a first growth stage(P1) of the plants, a second storing unit(12b) for a second growth stage(P2) of the plants, and a third storing unit(12c) for a third growth stage(P3) of the plants; a cultivation box(14) located among the storing units; a piping unit supplying a nutrient solution or soil into the cultivation box; a lighting unit(16) supplying light to the plants by being installed on the upper side of the storing units; a temperature controller controlling the temperature inside the cultivating apparatus; and a gas supplier controlling the CO2 condition inside the cultivation apparatus.

Classifications:**International (IPC 8-9):** A01G31/06 A01G7/00

A01G9/00 (Advanced/Invention)

CPC: Y02P60/216 A01G9/143 A01G7/00 A01G7/02 A01G7/045

A01G9/1423 A01G31/06

**Family:**

Publication number	Publication date	Application number	Application date
KR101263552 B1	20130513	KR20100088826	20100910
KR20120026743 A	20120320	KR20100088826	20100910

Priority:

KR20100088826 20100910

Probable Assignee: LG CNS CO LTD**Assignee(s):** (std): LG CNS CO LTD**Assignee(s):** LG CNS CO**Inventor(s):** (std): CHO DONG GYU ; KIM JANG WOO ; KIM MIN UK ; SONG JONG SEOK ; YANG SEUNG GIRL**Legal status (INPADOC)**[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
KR101263552 B1	20130513	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101263552 B1	20160308	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160308 YEAR OF FEE PAYMENT : 4
KR20120026743 A	20120320	LSPB	+	published / reissued	
KR20120026743 A	20100910	LSSES	A201	REQUEST FOR EXAMINATION	
KR20120026743 A	20120522	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20120026743 A	20130226	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20120026743 A	20130325	LSRE	AMND	AMENDMENT	
KR20120026743 A	20130501	LSGT	+X701	DECISION TO GRANT (AFTER RE-EXAMINATION)	
KR20120026743 A	20130506	LSGT	+GRNT	WRITTEN DECISION TO GRANT	

Title: CONTAINER PLANT FARM

Abstract: Source: KR20120004548U

Machine translation: Present invention relates to a container plant factory, to solve the problem inside the container and the environment using LED jaebaegi dadanhyeong hydroponic technology, automatic control system is characterized by: Right off the container plants that grow well with a strong pick up in that environment can produce a large quantity of vegetables and field cultivation more than tripled in the same area can produce. In addition, the hydroponic nutrient solution jaebaegi and by adjusting the growth rate can quickly produce high-quality vegetables throughout the year to do so consists of functional, environmentally friendly, pesticide-free vegetables to improve the characteristics of the effect.

Classifications:

International (IPC 8-9): A01G31/02 A01G31/06

A01G7/00 (Advanced/Invention)

CPC: Y02P60/216 A01G31/02 A01G7/00 A01G7/02 A01G7/045

A01G9/20 A01G9/24 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
KR20120004548 U	20120626	KR20100013008U	20101216

Priority:

KR20100013008U 20101216

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20120004548 U	20120626	LSPB	+	published / reissued	
KR20120004548 U	20101216	LSSES	A201	REQUEST FOR EXAMINATION	
KR20120004548 U	20121030	LSRV	-E601	DECISION TO REFUSE APPLICATION	

Title: CULTURING METHOD OF ICE PLANT USING WASTED SEA WATER AND THE ICE PLANT PRODUCED THEREBY

Abstract: Source: KR101155721B PURPOSE: A cultivation method of ice plants using waste sea water, and the ice plants obtained therefrom are provided to remove a process of removing salt, and to offer minerals and various effective components inside the waste sea water to the ice plants. CONSTITUTION: A cultivation method of ice plants using waste sea water comprises a step of supplying the waste sea water to the ice plants planted inside a cultivation room for hydroponic-cultivating the plants. The cultivation room has the CO₂ concentration of 400-600ppm, the O₂ concentration of 25-30 percent, the temperature of 20-25 deg C, and the humidity of 60-70 percent. A culturing solution inside the cultivation room has the pH of 6.5-8, and the temperature of 25-27 deg C. The waste sea water is diluted with tap water to be supplied to the ice plants from a sowing step to a permanent planting step, and supplied to the ice plants without diluting from 60-65 after the sowing step until harvesting.

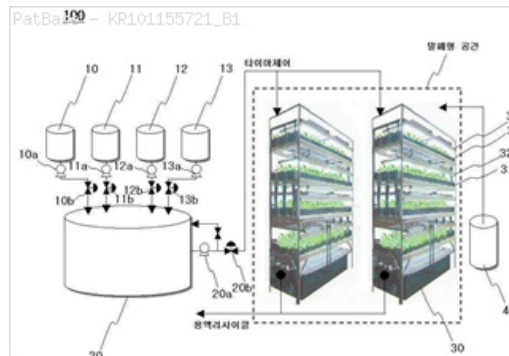
Classifications:

International (IPC 8-9): A01C1/02 A01G31/02

A01G7/00 (Advanced/Invention)

CPC: Y02P60/216 A01G31/02 A01C1/02 A01G7/00 A01G7/02

A01G7/045 A01G9/1026 A01G9/18 Y10S47/06



Family:

Publication number	Publication date	Application number	Application date
KR101155721 B1	20120612	KR20100122030	20101202

Priority:

KR20100122030 20101202

Probable Assignee:

KIM HYUN CHEL

Assignee(s):

KIM HYUN CHEL

Inventor(s):

KIM HYUN CHEL

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101155721 B1	20120612	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101155721 B1	20101202	LSES	A201	REQUEST FOR EXAMINATION	
KR101155721 B1	20120521	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101155721 B1	20120605	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101155721 B1	20150606	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	

Title: PLANTS CULTIVATION DEVICE AND PLANTS CULTIVATION SYSTEM HAVING THE SAME

Abstract: Source: KR20130078394A PURPOSE: A cultivation equipment for plant and a cultivation system including the same are provided to offer a plant by cultivating for people who leaves the land and stays for a long time. CONSTITUTION: An adjusting unit (250) adjusts at least one of light quantity of an accommodation space, air temperature, air humidity, concentration of the carbon dioxide of the air, and supply moisture with the plant of rack. A sensing unit (230) senses at least one of air temperature of the accommodation space, air humidity, concentration of the carbon dioxide of the air. A control unit (200) receives the sensing information of the sensing unit and controls the adjusting unit. The sensing unit comprises a temperature sensor (110), a air humidity sensor (112), and a carbon dioxide sensor (114). The adjusting unit comprises a LED (252), a temperature controller (258), a humidifier (254), and the water supplying apparatus, and the carbon dioxide generator (256). [Reference numerals] (110) Temperature sensor; (112) Humidity sensor; (114) CO2 sensor; (116) Door open sensor; (254) Humidification device; (256) CO2 generator; (258) Temperature controller

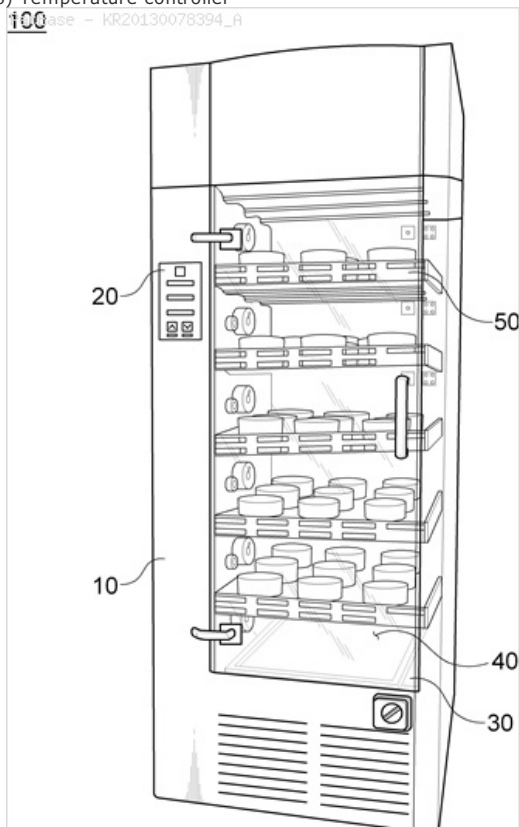
Classifications:

International (IPC 8-9): A01G31/00 A01G31/02

A01G7/04 (Advanced/Invention)

CPC: Y02P60/149 Y02P60/216 A01G31/02 A01G7/02 A01G7/045

A01G9/24 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
KR101348486 B1	20140110	KR20110147314	20111230
KR20130078394 A	20130710	KR20110147314	20111230

Priority:

KR20110147314 20111230

Probable Assignee:

CITL CO LTD

Assignee(s): (std):

CITL CO LTD

Assignee(s):

CITL CO

Inventor(s): (std):

YOO JUN HA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101348486 B1	20140110	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101348486 B1	20111230	LSSES	A201	REQUEST FOR EXAMINATION	
KR101348486 B1	20130522	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101348486 B1	20131129	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101348486 B1	20131230	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR20130078394 A	20130710	LSPB	+	published / reissued	

Title: IMITATION STONE OF ARTIFICIAL FALL MANUFACTURE METHOD AND IMITATION STONE

Abstract: Source: KR20140057055A The present invention relates to a combination type apparatus for germinating, cultivating, and drying sprouts, wherein the apparatus is classified into a germinating room (1), a cultivating room (2), and a drying room (3) installed at one side of the cultivating room (2). The germinating room (1) includes: a germinating room door (11) installed at one side; an LED ultraviolet light (101) installed inside the germinating room (1); and a bath-shaped germinator (100) installed in the germinating room (2) and having a cylindrical shape. The cultivating room (2) includes: a cultivator (200) having a plurality of seeding growing plates (90) embedded in the center inside; a heating line buried base (25) formed at the bottom; an exhaust port (23) installed at one side of an upper part; an LED ultraviolet light (201) and a dehumidifier (202) installed at the other side of the upper part; a carbon dioxide supplying pipe (531) connected to a carbon dioxide storage tank (530) installed at the outside and supplying carbon dioxide; and a spraying pipe (521) installed at the center of the upper part and connected with a nutrient solution tank (520) installed at the outside. The drying room (3) includes: a carrier (300) embedded at the center inside; an LED ultraviolet light (301) and a dehumidifier (302) installed at one side of an upper part inside; an automatic control panel (31) installed at one side of the front surface; and a heater (511) connected to a heating device (510) installed at the outside.

Classifications:

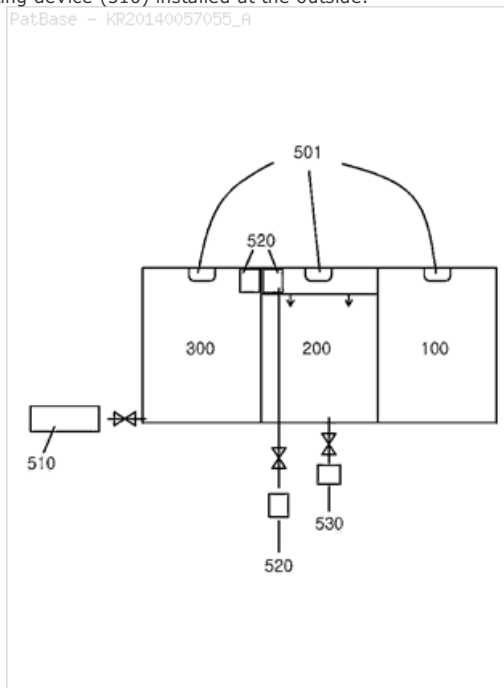
International (IPC 8-9): A01C1/02 A01G7/00 A01G7/02

A01G7/04 (Advanced/Invention)

CPC: Y02P60/149 A01G7/04 A01G7/02 A01G7/045 A01G9/24

A01G9/245 A01G9/247

PatBase - KR20140057055_H



Family:

Publication number	Publication date	Application number	Application date
KR101446293 B1	20141006	KR20120123694	20121102
KR20140057055 A	20140512	KR20120123694	20121102

Priority:

KR20120123694 20121102

Probable Assignee:

LEE MIN SU

Assignee(s): (std):

LEE MIN SU

Inventor(s): (std):

LEE MIN SU

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101446293 B1	20141006	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101446293 B1	20140924	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR20140057055 A	20140512	LSPB	+	published / reissued	
KR20140057055 A	20121102	LSSES	A201	REQUEST FOR EXAMINATION	
KR20140057055 A	20131031	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20140057055 A	20140424	LSRV	-E90F	NOTIFICATION OF REASON FOR FINAL REFUSAL	
KR20140057055 A	20140717	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	

Title: SOIL-LESS SEED SUPPORT MEDIUM AND METHOD FOR GERMINATING A SEED

Abstract: Source: US2005102895A A soil-less seed support medium comprising a seed-bearing substrate superposed upon a cellular substrate contained within a rigid, porous cup-shaped modular receptacle is disclosed. Alternatively, a seed support medium comprising a seed-bearing cellular substrate contained within a rigid, porous cup-shaped modular receptacle is disclosed. Both embodiments are modular in design for ease in packaging, shipping, implanting and transplanting. A method for germinating a seed utilizing the seed support medium is also disclosed.

Classifications:

International (IPC 8-9): A01C1/02 A01C1/04 A01C1/06 A01G27/00 A01G31/00 A01G31/02 A01G9/02 A01H4/00 (Advanced/Invention); A01C1/04 A01C1/06 A01G27/00 A01G31/00 A01G31/02 A01G9/02 A01H4/00 (Core/Invention)

International (IPC 1-7): A01C1/06 A01G31/00 A01G31/02

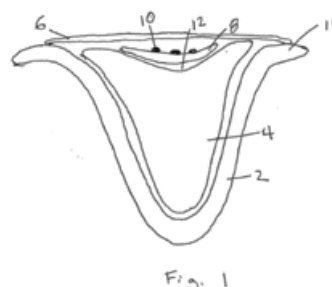
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European: A01C1/02 A01C1/04 A01G27/00D A01G31/02 A01G7/04B A01G9/02 A01G9/10E A01H4/00B K01G9/00A

US: 47/57.6 47/59R 47/60 47/60P 47/61 47/61P 47/61S 47/62.00A 47/62.00AP 47/62.00NS 47/62.00R 47/62.00RP 47/62A 47/62E 47/62N 47/62R 47/63 47/63P 47/64 47/64P 47/65.5 47/65.500S 47/69 47/69P 47/79 47/79S 47/82

PatBase - US2005102895_AA

Patent Application Publication May 19, 2005 Sheet 1 of 2 US 2005/0102895 A1



Family:

Publication number	Publication date	Application number	Application date
US2005102895 AA	20050519	US20030714786	20031117
US2005246954 AA	20051110	US20050098176	20050404
US2005246955 AA	20051110	US20050111553	20050421
US2005257424 AA	20051124	US20050112269	20050422
US2006179711 AA	20060817	US20040528110	20040915
US2006272210 AA	20061207	US20060455364	20060619
US2007271841 AA	20071129	US20070653121	20070112
US2007271842 AA	20071129	US20070654164	20070116
US2008078118 AA	20080403	US20070895972	20070828
US2008155894 AA	20080703	US20080073987	20080312
US2008222949 AA	20080918	US20080073985	20080312
US2008282610 AA	20081120	US20080073984	20080312
US8261486 BB	20120911	US20070654164	20070116
WO05055700 A2	20050623	WO2004US30168	20040915
WO05055700 A3	20050929	WO2004US30168	20040915

Priority:

US20030714786	20031117	US20040528110	20040915	US20040553620P	20040316
US20050111553	20050421	US20050528110	20050715	US20050112269	20050422
US20050098176	20050404	US20040563951P	20040421	US20050691372P	20050617
US20070653121	20070112	US20070654164	20070116	US20070895972	20070828
US20080073987	20080312	US20080073985	20080312	US20080073984	20080312
WO2004US30168	20040915	US20060455364	20060619		

Probable Assignee: AEROGROW INT INC

Assignee(s): (std): BISSONNETTE W MICHAEL ; THOMPSON JOHN ; WAINWRIGHT ROBERT E ; PAYNE CARSON ; SHOWALTER ROBERT ; BROMLEY ROBERT ; MORGAN CURT ; BRIDGEMAN ANDREW R ; FORSTHOEFEL ANN ; WEIDEMANN FREDERIC ; CONLEY LAURA L ; AEROGROW INT INC ; AEROGROW INTERNATIONAL INC ; BERNSTEIN SYLVIA L

Assignee(s): BISSONNETTE W ; AEROGROW INT ; FIRST CAPITAL ; OMS INVESTMENTS INC

Inventor(s): (std): PAYNE CARSON ; BROMLEY ROBERT ; MORGAN CURT ; BRIDGEMAN ANDREW R ; FORSTHOEFEL ANN ; CONLEY LAURA L ; CONLEY LAURA ; MORGAN GURT ; THOMPSON JOHN ; WAINWRIGHT ROBERT E ; SHOWALTER ROBERT ; WEIDEMANN FREDERIC ; WIEDEMANN FREDERIC ; SHOWALLER ROBERT ; ROBERTSON TERRY ; BERNSTEIN SYLVIA ; BERNSTEIN SYLVIA L ; BISSONNETTE W MICHAEL ; BISSONNETTE W M

Inventor(s): BRIDGEMAN ANDREW ; BISSONNETTE W ; WAINWRIGHT ROBERT

Agent(s): LAURA L CONLEY; AEROGROW INT INC SUITE 201; AEROGROW INTERNATIONAL INC; AEROGROW INT INC; AEROGROW INT INC SUITE 200; LAURA L CONLEY SUITE 200; VENABLE LLP; HAMILTON DESANCTIS AND CHA LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG

Legal status (INPADOC)[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
US2005102895 AA	20050519	LSPB	+	published / reissued	
US2005102895 AA	20031117	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BISSONNETTE, W. MICHAEL; THOMPSON, JOHN; REEL/FRAME:014712/0552 EFFECTIVE DATE : 20031117
US2005102895 AA	20080407	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : CHANGE OF ADDRESS; ASSIGNOR:AEROGROW INTERNATIONAL, INC.; REEL/FRAME:020788/0442 EFFECTIVE DATE : 20061201
US2005246954 AA	20051110	LSPB	+	published / reissued	
US2005246954 AA	20050622	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BISSONNETTE, W. MICHAEL; CONLEY, LAURA; WAINWRIGHT, ROBERTE.; AND OTHERS; REEL/FRAME:016710/0711; SIGNING DATES FROM 20050607 TO 20050613
US2005246955 AA	20051110	LSPB	+	published / reissued	
US2005246955 AA	20050622	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BISSONNETTE, W. MICHAEL; CONLEY, LAURA; WAINWRIGHT, ROBERTE.; AND OTHERS; REEL/FRAME:016710/0844; SIGNING DATES FROM 20050607 TO 20050613
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US2005257424 AA	20090305	LSAS	AS	ASSIGNMENT	OWNER NAME : FIRST CAPITAL, GEORGIA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:AEROGROW INTERNATIONAL, INC.; REEL/FRAME:022350/0384 EFFECTIVE DATE : 20090219
US2005257424 AA	20130422	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:FIRST CAPITAL; REEL/FRAME:030258/0696 EFFECTIVE DATE : 20130422
US2006179711 AA	20060817	LSPB	+	published / reissued	
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					INTERNATIONAL, INC., COLORADO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BISSONNETTE, W. MICHAEL; CONLEY, LAURA L.; WAINWRIGHT, ROBERT E.; AND OTHERS; REEL/FRAME:017253/0478; SIGNING DATES FROM 20050607 TO 20050613
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US2006179711 AA	20130422	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:FIRST CAPITAL; REEL/FRAME:030258/0696 EFFECTIVE DATE : 20130422
US2006179711 AA	20141215	LSAS	AS	ASSIGNMENT	OWNER NAME : OMS INVESTMENTS, INC., CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AEROGROW INTERNATIONAL, INC.; REEL/FRAME:034506/0858 EFFECTIVE DATE : 20130419
US2006272210 AA	20061207	LSPB	+	published / reissued	
US2006272210 AA	20081027	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BISSONNETTE, W. MICHAEL; THOMPSON, JOHN; BERNSTEIN, SYLVIA; AND OTHERS; REEL/FRAME:021879/0935; SIGNING DATES FROM 20080918 TO 20081003
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US2007271841 AA	20090305	LSAS	AS	ASSIGNMENT	OWNER NAME : FIRST CAPITAL, GEORGIA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:AEROGROW INTERNATIONAL, INC.; REEL/FRAME:022350/0384 EFFECTIVE DATE : 20090219
US2007271841 AA	20130422	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:FIRST CAPITAL; REEL/FRAME:030258/0696 EFFECTIVE DATE : 20130422

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US2007271842 AA	20090305	LSAS	AS	ASSIGNMENT	OWNER NAME : FIRST CAPITAL, GEORGIA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:AEROGROW INTERNATIONAL, INC.; REEL/FRAME:022350/0384 EFFECTIVE DATE : 20090219
US2008078118 AA	20080403	LSPB	+	published / reissued	
US2008155894 AA	20080703	LSPB	+	published / reissued	
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US2008155894 AA	20080312	LSAS	AS	ASSIGNMENT	OWNER NAME : AEROGROW INTERNATIONAL, INC., COLORADO DESCRIPTION : CHANGE OF ADDRESS; ASSIGNOR:AEROGROW INTERNATIONAL, INC.; REEL/FRAME:020702/0865 EFFECTIVE DATE : 20080312
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US8261486 BB	20090305	LSAS	AS	ASSIGNMENT	OWNER NAME : FIRST CAPITAL, GEORGIA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:AEROGROW INTERNATIONAL, INC.; REEL/FRAME:022350/0384 EFFECTIVE DATE : 20090219
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WO05055700 A2	20050715	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2006179711 COUNTRY OF REF DOCUMENT : US KIND CODE OF REF DOCUMENT : A1
WO05055700 A3	20050316	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2005528110 COUNTRY OF REF DOCUMENT : US KIND CODE OF REF DOCUMENT : A
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WO05055700 A3	20050421	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 11111553 COUNTRY OF REF DOCUMENT : US
WO05055700 A3	20050422	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 11112269 COUNTRY OF REF DOCUMENT : US
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WO05055700 A3	20060518	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO05055700 A3	20060518	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE

Title: VEGETABLE PRESERVATION AND GROWING CASE AND PIPE CONNECTION CONTROL METHOD FOR VEGETABLE PRESERVATION AND GROWING CASE

Abstract: Source: US2016113221A A vegetable preservation and growing case includes a thermally-insulated case body. The thermally-insulated case is provided therein with at least one vegetable carrying box for use in vegetable growing or preservation. The vegetable carrying box bearing case (1) and the thermally-insulated case body have a pluggable electrical connection and a pluggable water-path connection and allow for disassembly, thus effectively increasing the degree of use convenience.

Classifications:

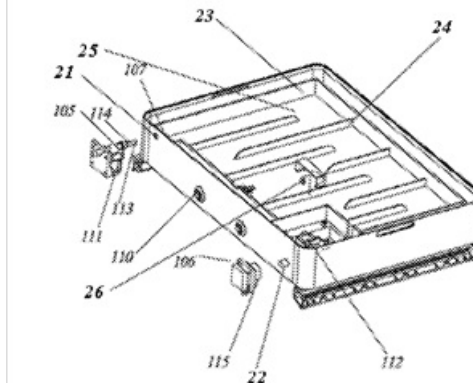
International (IPC 8-9): A01G31/00 A01G31/02 A01G31/06
A01G7/00 A01G7/04 A01G9/20 A23B7/00

F25D25/00 (Advanced/Invention)

CPC: A01G31/02 A01G7/045 A01G2031/006 A01G31/06 Y02P60/216

US: 47/60

PatBase - US2016113221_AA



Family:

Publication number	Publication date	Application number	Application date
CN104206212 A	20141217	CN201310209292	20130530
CN104206253 A	20141217	CN201310209916	20130530
EP3005861 A1	20160413	EP20140804819	20140331
EP3005861 A4	20160601	EP20140804819	20140331
JP2016528877 T2	20160923	JP20160515613T	20140331
US2016113221 AA	20160428	US20140894882	20140331
WO14190798 A1	20141204	WO2014CN074367	20140331

Priority:

CN201310209292 20130530 CN201310209916 20130530 WO2014CN074367 20140331

Probable Assignee: HAIER GROUP CORP

Assignee(s): (std): HAIER GROUP CORP ; QINGDAO HAIGAO DESIGN AND MFG CO LTD ; QINGDAO HAIGAO DESIGN MANUFACTURE CO LTD

Assignee(s): QINGDAO HAIGAO DESIGN MANUFACTURE CO ; QINGDAO HAIGAO DESIGN AND MFG COLTD ; QINGDAO HIGH DESIGN MFG CO LTD ; QINGDAO HAIGAO DESIGN AND MFG CO

Inventor(s): (std): FEI ZHAOJUN ; HU ZHONGLIN ; LIU HAIBO ; WU JIAN ; ZHOU SHU

Agent(s): ZIEBIG MARLENE; KAJI SUHARA AND ASSOCIATES; SUZHOU WISPRO INTELLECTUAL PROPERTY AGENCY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN104206212 A	20141217	LSPB	+	published / reissued	
CN104206212 A	20141217	LSPB	+C06	PUBLICATION	
CN104206253 A	20141217	LSPB	+	published / reissued	
CN104206253 A	20141217	LSPB	+C06	PUBLICATION	
EP3005861 A1	20160413	LSPB	+	published / reissued	
EP3005861 A1	20160413	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20151218
EP3005861 A1	20160601	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160502
EP3005861 A1	20160601	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 9/20 20060101ALI20160425BHEP

EP3005861 A1	20160601	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 31/00 20060101ALI20160425BHEP
EP3005861 A1	20160601	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 31/06 20060101AFI20160425BHEP
JP2016528877 T2	20160923	LSPB	+	published / reissued	
JP2016528877 T2	20170104	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20170104
US2016113221 AA	20160428	LSPB	+	published / reissued	
US2016113221 AA	20151130	LSAS	AS	ASSIGNMENT	OWNER NAME : HAIER GROUP CORPORATION, CHINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WU, JIAN; ZHOU, SHU; FEI, ZHAOJUN; AND OTHERS; REEL/FRAME:037172/0230 EFFECTIVE DATE : 20151123
US2016113221 AA	20151130	LSAS	AS	ASSIGNMENT	OWNER NAME : QINGDAO HAIGAO DESIGN AND MANUFACTURING CO.,LTD, CHI DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WU, JIAN; ZHOU, SHU; FEI, ZHAOJUN; AND OTHERS; REEL/FRAME:037172/0230 EFFECTIVE DATE : 20151123
WO14190798 A1	20141204	LSPB	+	published / reissued	
WO14190798 A1	20151127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016515613 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO14190798 A1	20151130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: ENVIRONMENTAL GROWTH CONTROL APPARATUS

Abstract: Source: US3869605A The disclosure is directed to a growth chamber apparatus and method of operating the same. The method is concerned with operating a growth chamber of the type having a plurality of electric lamps and at least one cooling coil through which a cooling fluid is circulated to maintain a desired temperature or humidity level within the chamber. The disclosed method comprises the steps of providing an absorption type refrigeration unit and utilizing at least a portion of the cooled process fluid output to supply the cooling fluid for the coil; and, conducting the heat generated by the lamps to the absorption type refrigeration unit to supply at least a portion of the energy required to operate the unit. The disclosed apparatus is particularly arranged for carrying out the noted method.

Classifications:

International (IPC 8-9): A01C1/02 A01G7/04 F21V29/00 F21V29/02 (Advanced/Invention);

A01C1/00 A01G7/04 F21V29/00 (Core/Invention)

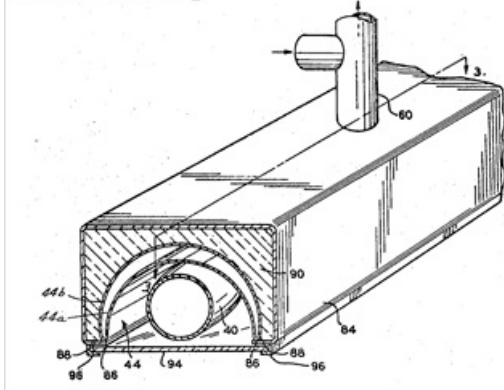
International (IPC 1-7): F21S1/00 F21V29/00

CPC: F21V29/59 F21V29/15 A01C1/02 A01G7/045 F21V29/00 F21V29/30 Y02P60/146

European: A01C1/02 A01G7/04B F21V29/00 F21V29/30

US: 240/47 362/264

PatBase - US3869605_A



Family:

Publication number	Publication date	Application number	Application date
CA931128 A1	19730731	CA19710106472	19710301
US3869605 A	19750304	US19700049218	19700624

Priority:

US19700049218 19700624

Probable Assignee: INTEGRATED DEV AND MFG

Assignee(s): (std): INTEGRATED DEV AND MANUFACTURING ; INTEGRATED DEV AND MFG

Assignee(s): INTEGRATED DEVELOPMENT AND MANUFACTURING CO ; INTEGRATED DEVELOPMENT AND MANUFACTURING COMPANY ; INTEGRATED DEVELOPMENT AND MFG CO ; NOEL DAVIS

Inventor(s): (std): DAVIS NOEL ; DAVIS N

Inventor(s): NOEL DAVIS

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA931128 A1	19730731	LSPB	+	published / reissued	
US3869605 A	19750304	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: DISPOSITIF DE CULTURE DE VEGETAUX A MOUVEMENT HORIZONTAL.

Abstract: The invention relates to a device for growing vegetables, of the type comprising at least one horizontal support on which vegetable growing units can be arranged and which is intended to be installed in a chamber having at least one light source. This device is characterised in that it consists of one or more horizontal plates (9) connected to means making it possible to impart to them a movement having at least one horizontal component, so as to homogeneously distribute the light flow received by the growing units arranged on at least one part of the said horizontal plate or plates (9).

Classifications:

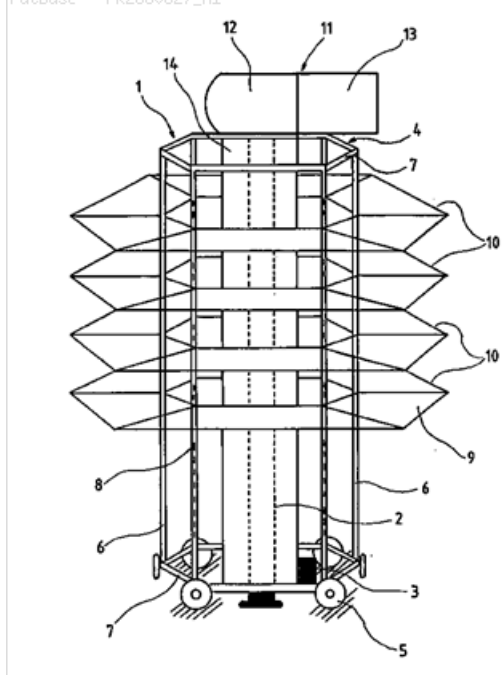
International (IPC 8-9): A01G31/06 A01G7/04 (Advanced/Invention); A01G31/02 A01G7/04 (Core/Invention)

International (IPC 1-7): A01G31/02 A01G31/02000 A01G31/02000 A01G9/20 A01G9/20000 A01G9/20000 A01G9/24 A01G9/24000 A01G9/24000

CPC: A01G7/045 A01G31/06 Y02P60/216 Y02P60/146

European: A01G31/06 A01G7/04B

PatBase - FR2680627_A1



Family:

Publication number	Publication date	Application number	Application date
FR2680627 A1	19930305	FR19910010215	19910807
FR2680627 B1	19940415	FR19910010215	19910807

Priority:

FR19910010215 19910807

Probable Assignee:

LENORMAND BENATEAU SERGE

Assignee(s): (std):

LENORMAND BENATEAU SERGE

Inventor(s): (std):

SERGE LE NORMAND BENATEAU

Inventor(s):

LE NORMAND BENATEAU SERGE

Agent(s):

CABINET AVODIRE

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Patent	Date recorded	Event group	Code	Event	Details
FR2680627 A1	19930305	LSPB	+	published / reissued	
FR2680627 A1	19930604	LSLI	CL	CONCESSION TO GRANT LICENCES	
FR2680627 A1	20130222	LSAS	TP	TRANSMISSION OF PROPERTY	OWNER NAME : STRADER, FR EFFECTIVE DATE : 20130124
FR2680627 B1	19940415	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: Enhancing germination of plant somatic embryos by priming

Abstract: Source: US6689609B A process of nutrimpriming plant somatic embryos prior to sowing, comprising contacting an imbibed plant somatic embryo with a solution containing one or more dissolved nutrients, preferably including sucrose as one of the nutrients. The invention includes germinated embryos produced by the process, and a method of producing seedlings or full-grown plants incorporating the nutrimpriming step. The method preferably makes use of a growth medium containing the nutrient or nutrients used in the nutrimpriming step.

Classifications:

International (IPC 8-9): A01C1/00 A01C1/02 A01H4/00 A01H5/00 C12N5/04 (Advanced/Invention);

A01C1/00 A01H4/00 A01H5/00 C12N5/04 (Core/Invention)

International (IPC 1-7): A01C1/00 A01H4/00 C12N5/00

CPC: A01C1/02 A01H4/005

European: A01C1/00 A01C1/02 A01H4/00D

US: 435/422 47/57.6 47/576 504/116.1

END

Family:

Publication number	Publication date	Application number	Application date
AT275330 E	20040915	AT20000918629T	20000414
AU200039519 A5	20001102	AU20000039519	20000414
AU776443 B2	20040909	AU20000039519	20000414
BRPI0009784 A	20020108	BR2000PI09784	20000414
BRPI0009784 B1	20130402	BR2000PI09784	20000414
CA2369751 AA	20011011	CA20002369751	20000414
CA2369751 C	20070814	CA20002369751	20000414
DE60013580 D1	20041014	DE20006013580	20000414
DE60013580 T2	20051013	DE20006013580T	20000414
DK1170986 T3	20041115	DK20000918629T	20000414
EP1170986 A1	20020116	EP20000918629	20000414
EP1170986 B1	20040908	EP20000918629	20000414
NZ514743 A	20031031	NZ20000514743	20000414
US6689609 BA	20040210	US20000550110	20000414
WO0062599 A1	20001026	WO2000CA00411	20000414

Priority:

EP20000918629 20000414 US19990129492P 19990415 US20000550110 20000414
WO2000CA00411 20000414

Probable Assignee: ARBORGEN INC

Assignee(s): (std): CELLFOR INC ; FAN SHIHE ; JANIC VESNA

Assignee(s): NBSC A DIVISION OF SYNOVUS BANK ; NBSC A DIVISION ON SYNOVUS BANK ; CELLFOR INC
VANCOUVER ; 7273126 CANADA INC ; ARBORGEN INC

Inventor(s): (std): JANIC VESNA ; FAN SHIHE

Inventor(s): SHIHE FAN ; VESNA JANIC

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; FPA PATENT
ATTORNEYS PTY LTD; KIRBY EADES GALE BAKER

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ
EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR
LS LT LU LV MA MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ
TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT275330 E	20040915	LSGT	+	granted / extensions (spc, cpc, pte)	

AT275330 E	20050315	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU200039519 A5	20001102	LSPB	+	published / reissued	
AU776443 B2	20040909	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0009784 A	20020108	LSPB	+	published / reissued	
BRPI0009784 A	20110201	LSAS	B25G	REQUESTED CHANGE OF HEADQUARTER APPROVED	PARTYTYPE : OWNER OWNER : CELLFOR INC. (CA) OLDPARTY : SEDE ALTERADA CONFORME SOLICITADO NA PETICAO NO 020100039536/RJ DE 05/05/2010.
BRPI0009784 A	20110215	LSAS	B25A	REQUESTED TRANSFER OF RIGHTS APPROVED	PARTYTYPE : OWNER OWNER : 7273126 CANADA INC. (CA) OLDPARTY : TRANSFERIDO DE: CELLFOR INC.
BRPI0009784 A	20110301	LSAS	B25D	REQUESTED CHANGE OF NAME OF APPLICANT APPROVED	PARTYTYPE : OWNER OWNER : CELLFOR, INC. (CA) OLDPARTY : ALTERADO DE: 7273126 CANADA INC.
BRPI0009784 A	20111213	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0009784 A	20130108	LSGT	B09A	DECISION: INTENTION TO GRANT	
BRPI0009784 A	20130402	LSGT	+B16A	PATENT OR CERTIFICATE OF ADDITION OF INVENTION GRANTED	TEXT : PRAZO DE VALIDADE: 10 (DEZ) ANOS CONTADOS A PARTIR DE 02/04/2013, OBSERVADAS AS CONDICOES LEGAIS.
BRPI0009784 A	20130917	LSAS	B25A	REQUESTED TRANSFER OF RIGHTS APPROVED	
BRPI0009784 A	20170221	LSLE	-B21F	LAPSE ACC. ART. 78, ITEM IV - ON NON- PAYMENT OF THE ANNUAL FEES IN TIME	
BRPI0009784 B1	20130402	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2369751 AA	20011011	LSPB	+	published / reissued	
CA2369751 AA	20011011	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2369751 AA	20011011	LSES	+EEER	EXAMINATION REQUEST	
CA2369751 C	20070814	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60013580 D1	20051006	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60013580 D1	20100812	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : 7213126 CANADA INC.,, SAANICHTON, BRITISH COLU, CA
DE60013580 D1	20101125	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : CELLFOR INC., SAANICHTON, BRITISH COLUMBIA, CA
DE60013580 D1	20130110	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	REF DOCUMENT NUMBER : 1170986 COUNTRY OF REF DOCUMENT : EP OWNER NAME : ARBORGEN INC., US DESCRIPTION : FORMER OWNER: CELLFOR INC., SAANICHTON, CA EFFECTIVE DATE : 20121115
DE60013580 T2	20051013	LSGT	+	granted / extensions (spc, cpc, pte)	
DK1170986 T3	20041115	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1170986 A1	20020116	LSPB	+	published / reissued	
EP1170986 A1	20020116	LSES	+17P	REQUEST FOR	EFFECTIVE DATE : 20011105

EXAMINATION FILED					
EP1170986 A1	20030115	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20021203
EP1170986 A1	20040908	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20040908
EP1170986 A1	20040908	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20040908
EP1170986 A1	20040908	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20040908
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EP1170986 A1	20040908	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20040908
EP1170986 A1	20040908	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1170986 A1	20040915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1170986 A1	20041006	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1170986 A1	20041208	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20041208
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EP1170986 A1	20050225	LSRV	-LTIE	LT: INVALIDATION OF EUROPEAN PATENT OR PATENT EXTENSION	EFFECTIVE DATE : 20040908
EP1170986 A1	20050301	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF	

				THE PATENTS ACT	
EP1170986 A1	20050315	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1170986 A1	20050414	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050414
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EP1170986 A1	20080102	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20050208
EP1170986 A1	20090430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20090211 YEAR OF FEE PAYMENT : 10
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EP1170986 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20090424 YEAR OF FEE PAYMENT : 10
EP1170986 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FI PAYMENT DATE : 20090420 YEAR OF FEE PAYMENT : 10
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EP1170986 A1	20100730	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : CD
EP1170986 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100611 YEAR OF FEE PAYMENT : 11
EP1170986 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL	REF COUNTRY CODE : SE

				FEES PAID TO NATIONAL OFFICE	PAYMENT DATE : 20100423 YEAR OF FEE PAYMENT : 11
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EP1170986 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20110420 YEAR OF FEE PAYMENT : 12
EP1170986 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110512 YEAR OF FEE PAYMENT : 12
EP1170986 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FI PAYMENT DATE : 20110419 YEAR OF FEE PAYMENT : 12
EP1170986 A1	20111130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110611 YEAR OF FEE PAYMENT : 12
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EP1170986 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20120627 YEAR OF FEE PAYMENT : 13
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EP1170986 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FI PAYMENT DATE : 20120627 YEAR OF FEE PAYMENT : 13
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EP1170986 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20130429 YEAR OF FEE PAYMENT : 14
EP1170986 A1	20131209	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP EFFECTIVE DATE : 20130430
EP1170986 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131101
EP1170986 A1	20140131	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20131231
EP1170986 A1	20140206	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60013580 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20131101
EP1170986 A1	20140228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130430

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EP1170986 A1	20140430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130430
EP1170986 A1	20140829	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20140429 YEAR OF FEE PAYMENT : 15
EP1170986 A1	20151215	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP1170986 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20150415
EP1170986 B1	20040908	LSGT	+	granted / extensions (spc, cpc, pte)	
NZ514743 A	20031031	LSPB	+	published / reissued	
NZ514743 A	20040227	LSGT	+PSEA	PATENT SEALED	
NZ514743 A	20070427	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	
NZ514743 A	20100326	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	
NZ514743 A	20100528	LSAS	ASS	CHANGE OF OWNERSHIP	OWNER NAME : CELLFOR INC., CA DESCRIPTION : OLD OWNER(S): CANADA INC. 7273126
NZ514743 A	20100528	LSAS	ASS	CHANGE OF OWNERSHIP	OWNER NAME : CELLFOR INC., CA DESCRIPTION : OLD OWNER(S): CELLFOR INC.; CELLFOR, INC.
NZ514743 A	20121221	LSAS	ASS	CHANGE OF OWNERSHIP	OWNER NAME : ARBORGEN INC., US DESCRIPTION : OLD OWNER(S): CELLFOR INC.
NZ514743 A	20130531	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 7 YEARS UNTIL 14 APR 2020 BY COMPUTER PACKAGES INC. EFFECTIVE DATE : 20130426
US6689609 BA	20040210	LSGT	+	granted / extensions (spc, cpc, pte)	
US6689609 BA	20000830	LSAS	AS	ASSIGNMENT	OWNER NAME : CELLFOR INC., CANADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FAN, SHIHE; JANIC, VESNA; REEL/FRAME:011065/0084 EFFECTIVE DATE : 20000427
US6689609 BA	20070803	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6689609 BA	20100310	LSAS	AS	ASSIGNMENT	OWNER NAME : CELLFOR INC., BRITISH COLUMBIA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:7273126 CANADA INC.; REEL/FRAME:024055/0397 EFFECTIVE DATE : 20100126
US6689609 BA	20100310	LSAS	AS	ASSIGNMENT	OWNER NAME : CELLFOR INC.,BRITISH COLUMBIA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:7273126 CANADA INC.; REEL/FRAME:024055/0397 EFFECTIVE DATE : 20100126
US6689609 BA	20100310	LSAS	AS	ASSIGNMENT	OWNER NAME : CELLFOR INC.,BRITISH COLUMBIA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:7273126 CANADA INC.; US-

					ASSIGNMENT DATABASE UPDATED:20100310; REEL/FRAME:24055/397 EFFECTIVE DATE : 20100126
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US6689609 BA	20100310	LSAS	AS	ASSIGNMENT	OWNER NAME : 7273126 CANADA INC.,BRITISH COLUMBIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CELLFOR INC.; REEL/FRAME:024055/0243 EFFECTIVE DATE : 20100101
US6689609 BA	20100310	LSAS	AS	ASSIGNMENT	OWNER NAME : 7273126 CANADA INC.,BRITISH COLUMBIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CELLFOR INC.; US- ASSIGNMENT DATABASE UPDATED:20100310; REEL/FRAME:24055/243 EFFECTIVE DATE : 20100101
US6689609 BA	20110418	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6689609 BA	20121108	LSAS	AS	ASSIGNMENT	OWNER NAME : ARBORGEN INC., SOUTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CELLFOR INC.; REEL/FRAME:029264/0910 EFFECTIVE DATE : 20120618
US6689609 BA	20130826	LSAS	AS	ASSIGNMENT	OWNER NAME : NBSC, A DIVISION OF SYNOVUS BANK, SOUTH CAROLINA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:ARBORGEN INC.; REEL/FRAME:031085/0871 EFFECTIVE DATE : 20130822
US6689609 BA	20130828	LSAS	AS	ASSIGNMENT	OWNER NAME : NBSC, A DIVISION ON SYNOVUS BANK, SOUTH CAROLINA DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNOR'S NAME PREVIOUSLY RECORDED ON REEL 031085 FRAME 0871. ASSIGNOR(S) HEREBY CONFIRMS THE SECURITY AGREEMENT AND THE ASSIGNOR'S CORRECT NAME SHOULD BE ARBORGEN INC. INSTEAD OF ARBORGEN INC.; ASSIGNOR:ARBORGEN INC.; REEL/FRAME:031098/0188 EFFECTIVE DATE : 20130822
US6689609 BA	20150331	LSAS	AS	ASSIGNMENT	OWNER NAME : NBSC, A DIVISION ON SYNOVUS BANK, SOUTH CAROLINA DESCRIPTION : SECURITY INTEREST; ASSIGNOR:ARBORGEN INC.; REEL/FRAME:035348/0921 EFFECTIVE DATE : 20150331
US6689609 BA	20150810	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO0062599 A1	20001026	LSPB	+	published / reissued	
WO0062599 A1	20011009	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 39519/00 COUNTRY OF REF DOCUMENT : AU
WO0062599 A1	20011010	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 514743 COUNTRY OF REF DOCUMENT : NZ
WO0062599 A1	20011011	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2369751

WO0062599 A1	20011011	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	COUNTRY OF REF DOCUMENT : CA REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2369751 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO0062599 A1	20011105	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2000918629 COUNTRY OF REF DOCUMENT : EP
WO0062599 A1	20020116	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2000918629 COUNTRY OF REF DOCUMENT : EP
WO0062599 A1	20020221	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0062599 A1	20040119	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO0062599 A1	20040908	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2000918629 COUNTRY OF REF DOCUMENT : EP
WO0062599 A1	20041223	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 39519/00 COUNTRY OF REF DOCUMENT : AU

Title: AUTOMATIC SPRINKLING DEVICE FOR A BEAN SPROUT CULTURE BOX ASSEMBLY

Abstract: Source: US6067750A An automatic sprinkling device for a bean sprout culture box assembly including a base box and a stacked culture boxes. The device includes a pump mounted on the base box which pumps water from the base box to the top culture box. The device includes a pump actuating circuit that actuates the pump, a transistor having a base and a collector, and a relay having a first end connected to the collector of the transistor and a second end connected to the pump. A microprocessor having an output is connected to the base of the transistor. A data setting unit is connected to an input of the microprocessor and arranged to input data into the microprocessor. A display unit is connected to the output of the microprocessor and displays data generated by the data setting unit. A memory device is connected to the microprocessor and is arranged to store data set by the data setting unit.

Classifications:

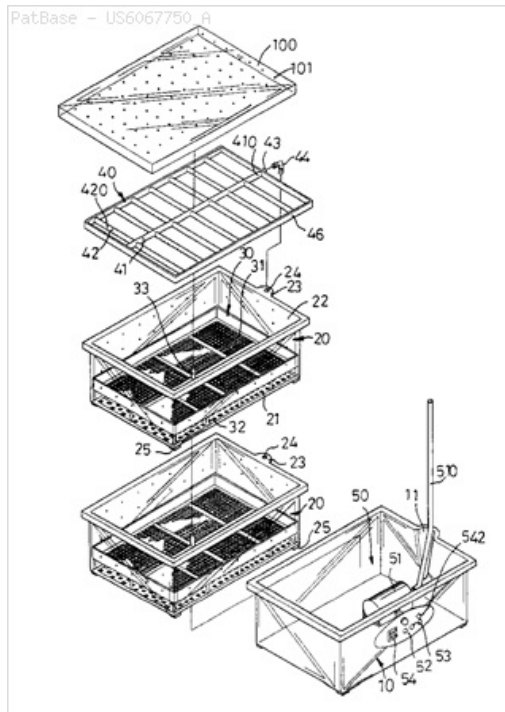
International (IPC 8-9): A01C1/02 A01G31/06 (Advanced/Invention);
A01C1/00 A01G31/02 (Core/Invention);
A01G31/06 (Core/Non-invention)

International (IPC 1-7): A01C1/02 A01G31/06

CPC: Y02P60/216 A01C1/02 A01G31/06

European: A01C1/02 A01G31/06

US: 47/14 47/61 47/62 47/620 47/62R



Family:

Publication number	Publication date	Application number	Application date
TW331069 Y	19980501	TW19970212728U	19970728
TW471253 Y	20020101	TW19970212728U	20001222
TW471253 Y	20020101	TW19970212728U	19970728
US6067750 A	20000530	US19980073850	19980507

Priority:

TW19860212728 19970728 TW19970212728U 19970728 TW19970212728U 20001222

Probable Assignee:

LAI WEN QITW

Assignee(s): (std):

LAI WEN CHI ; LAI WEN QI

Assignee(s):

LAI WEN QITW

Inventor(s): (std):

LAI WEN CHI ; LAI WEN QI

Legal status (INPADOC)

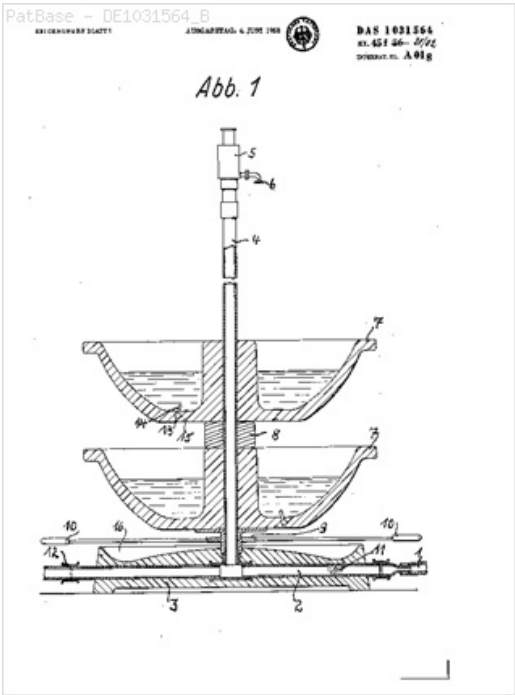
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Patent	Date recorded	Event group	Code	Event	Details
TW331069 Y	19980501	LSGT	+	granted / extensions (spc, cpc, pte)	
TW471253 Y	20020101	LSGT	+	granted / extensions (spc, cpc, pte)	
TW471253 Y	20020101	LSGT	+	granted / extensions (spc, cpc, pte)	
TW471253 Y	20080321	LSLE	-MM4K	ANNULMENT OR LAPSE OF A UTILITY MODEL DUE TO NON-PAYMENT OF FEES	
TW471253 Y	20080321	LSLE	-MM4K	ANNULMENT OR LAPSE OF A UTILITY MODEL DUE TO NON-PAYMENT OF FEES	
TW471253 Y	20080321	LSLE	-MM4K	ANNULMENT OR LAPSE OF A UTILITY MODEL DUE TO NON-PAYMENT OF FEES	
TW471253 Y	20080321	LSLE	-MM4K	ANNULMENT OR LAPSE OF A UTILITY MODEL DUE TO NON-PAYMENT OF FEES	
TW471253 Y	20080321	LSLE	-MM4K	ANNULMENT OR LAPSE OF A UTILITY MODEL DUE TO NON-PAYMENT OF FEES	
TW471253 Y	20080321	LSLE	-MM4K	ANNULMENT OR LAPSE OF A UTILITY MODEL DUE TO NON-PAYMENT OF FEES	
US6067750 A	20000530	LSGT	+	granted / extensions (spc, cpc, pte)	

US6067750 A	20030729	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6067750 A	20080530	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6067750 A	20080722	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20080530

Title: VORRICHTUNG ZUR AUFGZUCHT VON PFLANZEN NACH DEM HYDRO-KULTURVERFAHREN NACH DEM HYDRO-KULTURVERFAHREN IN BEHAELTERN MIT PFLANZENNAEHRSAZLZLOESUNGEN DEVICE FOR RAISING PLANTS AFTER THE HYDRO CULTURE PROCEDURE AFTER THE HYDRO METHOD in containers PFLANZENNAEHRSAZLZLOESUNGEN (Machine translation)

Classifications:
International (IPC 8-9): A01C1/02 A01G31/06 (Advanced/Invention);
A01C1/00 A01G31/02 (Core/Invention)
International (IPC 1-7): A01G31/02
CPC: A01C1/02 A01G31/06 Y02P60/216
European: A01C1/02 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
DE1031564 B	19580604	DE1955SC18042	19550527

Priority:
DE1955SC18042 19550527

Probable Assignee: WOLFGANG SCHWARZE

Assignee(s): (std): WOLFGANG SCHWARZE

Inventor(s): (std): SCHWARZE WOLFGANG

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
DE1031564 B	19580604	LSPB	+	published / reissued	

Title: NURTURING DEVICE FOR LIVING ORGANISMS

Abstract: Source: US4969288A A nurturing device for effectively nurturing living organisms such as plants, fish, etc. in desert areas of tropical regions by use of unused second-hand containers and a solar ray collecting device. The device comprises a plurality of containers and a solar ray collecting device. The solar rays collected by use of the solar ray collecting device are guided into the containers respectively through optical conductor cables for the purpose of nurturing living organisms therein.

Classifications:

International (IPC 8-9): A01G1/04 A01G7/02 A01G7/04 A01G9/00 A01K61/00 A01K63/00 (Advanced/Invention);

A01G9/00 (Advanced/Non-invention);

A01G1/04 A01G7/02 A01G7/04 A01G9/00 A01K61/00

A01K63/00 (Core/Invention)

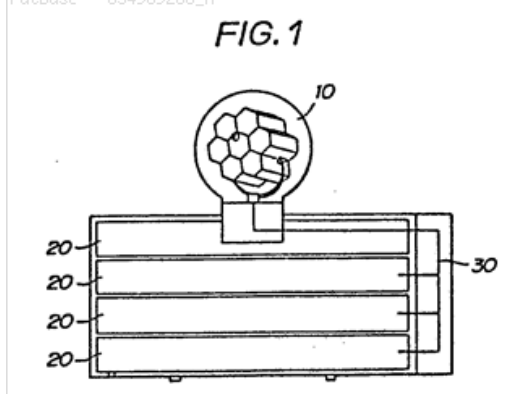
International (IPC 1-7): A01G7/00 A01G9/00 A01G9/18 A01G9/20 A01K61/00 A01K63/00 A01K63/06 A01K67/00 A01K69/00 A61N5/00 F24J2/00

CPC: Y10S47/06 A01G7/02 A01G1/04 A01G7/045 A01K61/00 Y02P60/64 Y02P60/146

European: A01G1/04 A01G7/02 A01G7/04B A01K61/00

US: 47/1.1 47/17 47/DIG.6

PatBase - US4969288_A



Family:

Publication number	Publication date	Application number	Application date
AU198654693 A1	19860925	AU19860054693	19860313
AU592550 B2	19900118	AU19860054693	19860313
EP0195431 A2	19860924	EP19860103709	19860319
EP0195431 A3	19870729	EP19860103709	19860319
JP61216620 A2	19860926	JP19850055244	19850319
KR890000998 B1	19890418	KR19860002046	19860319
NZ215437 A	19881028	NZ19860215437	19860311
US4969288 A	19901113	US19860837454	19860307

Priority:

JP19850055244 19850319

Probable Assignee: MORI K

Assignee(s): (std): KEI MORI ; MORI K ; MORI KEI ; MORI KEY ; MORI TAKASHI

Inventor(s): (std): MORI KEI ; MORI KEY ; MORI TAKASHI

Inventor(s): KEI MORI

Agent(s): FB RICE

Designated states: CH DE FR GB IT LI NL SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU198654693 A1	19860925	LSPB	+	published / reissued	
AU592550 B2	19900118	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0195431 A2	19860924	LSPB	+	published / reissued	
EP0195431 A2	19870722	LSRE	RHK1	MAIN CLASSIFICATION (CORRECTION)	IPC : A01G 7/00
EP0195431 A2	19880330	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19880127
EP0195431 A2	19890906	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19890721
EP0195431 A2	19900801	LSWD	-18W	WITHDRAWN	WITHDRAWAL DATE : 19900531
EP0195431 A2	19900808	LSRE	-R18W	WITHDRAWAL (CORRECTION)	EFFECTIVE DATE : 19900531
JP61216620 A2	19860926	LSPB	+	published / reissued	
KR890000998 B1	19890418	LSGT	+	granted / extensions (spc, cpc, pte)	
KR890000998 B1	19860319	LSES	A201	REQUEST FOR EXAMINATION	
KR890000998 B1	19890222	LSPB	G160	DECISION TO PUBLISH PATENT APPLICATION	

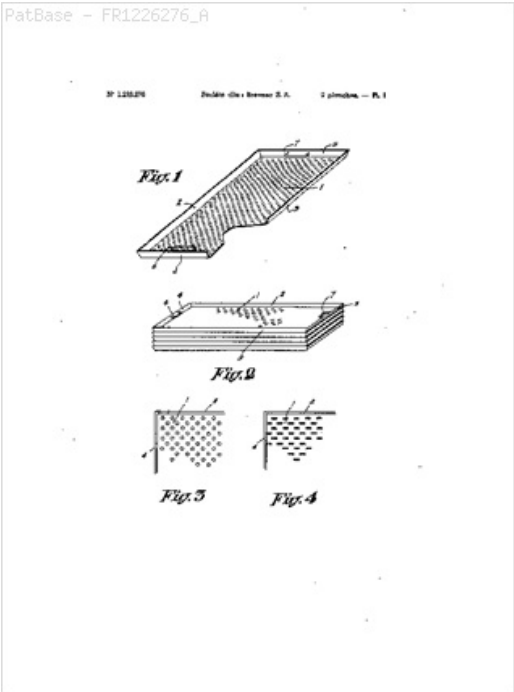
KR890000998 B1	19890628	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR890000998 B1	19890704	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR890000998 B1	19920419	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
NZ215437 A	19881028	LSPB	+	published / reissued	
US4969288 A	19901113	LSGT	+	granted / extensions (spc, cpc, pte)	
US4969288 A	19941113	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4969288 A	19950124	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19941116

Title: CLAIES POUR GRAINES ET PLANTES DANS LES APPAREILS D'HYDROCULTURE ET APPAREILS CONDITIONNES POUR APPLIQUER CES SUPPORTS CLAIES FOR SEEDS AND PLANTS IN MACHINES AND APPLIANCES HYDROCULTURE PACKED TO APPLY THESE MATERIALS (Machine translation)

Abstract: Source: FR1226276A (Claim 1) RESUME L'invention a pour objet un support ou claie consistant specialement en une plaque ajouree presentant un rebord continu de faible hauteur dirige vers le haut, cette claie prenant appui a faible distance du fond plein d'un bac generalement commun a une pluralite de telles claies.

Machine translation: (Claim 1) SUMMARY The invention relates to a support or trellis consisting in a specially perforated plate presenting a continuous rim of low-rise heads up, this hurdle has supported a short distance from the bottom of a full tank usually has a plurality of common such racks.

Classifications:
International (ipc 8-9): A01C1/02 A01G31/06 (Advanced/Invention); A01C1/00 A01G31/02 (Core/Invention)
International (ipc 1-7): A01C1/02
CPC: A01C1/02 A01G31/06 Y02P60/216
European: A01C1/02 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
FR1226276 A	19600711	FR19595917426	19590604

Priority:

FR19595917426 19590604

Probable Assignee: BREVESA S A
Assignee(s): (std): BREVESA S A

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FR1226276 A	19600711	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: DISPOSITIF SIMPLIFIE POUR LE CONTROLE DE L'ECOULEMENT PERIODIQUE D'UN LIQUIDE SIMPLIFIED DEVICE FOR CONTROLLING THE FLOW CHART OF A LIQUID (Machine translation)

Abstract: Source: FR1227049A (Claim 1) **ATTENTION** debut du champ CLMS peut contenir fin de DESC **. Lors du remplissage du bac 29 correspondant, le liquide, par le conduit 3, (fig.

Machine translation: (Claim 1) CAUTION ** ** start of CLMS field may contain end of DESC **. When filling the tank 29 corresponding, the liquid through line 3, (fig.

Classifications:

International (IPC 8-9): A01C1/02 A01G27/00 A01G31/02

A01G31/06 G05D7/01 G05D9/02 (Advanced/Invention)

International (IPC 1-7): A01G G05D9/04

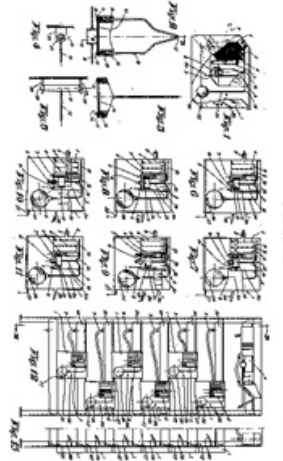
CPC: Y02P60/216 A01G31/02 G05D7/0173 G05D9/02 A01C1/02

A01G27/001 A01G31/06 G05D7/0166

European: A01C1/02 A01G27/00C A01G31/02 A01G31/06

G05D7/01E G05D7/01G G05D9/02

PatBase - FR1227049_R



Family:

Publication number	Publication date	Application number	Application date
BE576907 A1	19590716	BE19590576907	19590320
ES250079 A1	19591001	ES19590250079	19590611
ES250080 A1	19591001	ES19590250080	19590611
FR1227049 A	19600818	FR19595917430	19590612

Priority:

BE19590576905 19590320 BE19590576907 19590320

Probable Assignee:

BREVESA S A

Assignee(s): (std):

BREVESA S A

Assignee(s):

BREVESA SA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BE576907 A1	19590716	LSPB	+	published / reissued	
FR1227049 A	19600818	LSGT	+	granted / extensions (spc, cpc, pte)	
FR1227050 A	19600818	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: APPARATUS FOR AND METHOD OF GROWING PLANTS FROM SEEDS

Abstract: Source: GB2209452A Apparatus for use in growing plants from seeds comprises a frame (12) supporting trays (20) raisable one step at a time. The trays are supported on pawls 18 on an outer framework 12, and are moved upwardly by means of handle 26 which when pulled downwardly moves an inner framework 14 upwardly to push the trays above the next-upwardly pawls 18. U.V. lamps 40 and water spray means 42-48 is provided. The tray may contain a plastics sheet covered with layers of peat or sand, seed soil and open-weave cloth on which seed mixed with peat/soil is spread. The cloth may be soaked in or coated with gel-type rooting medium.

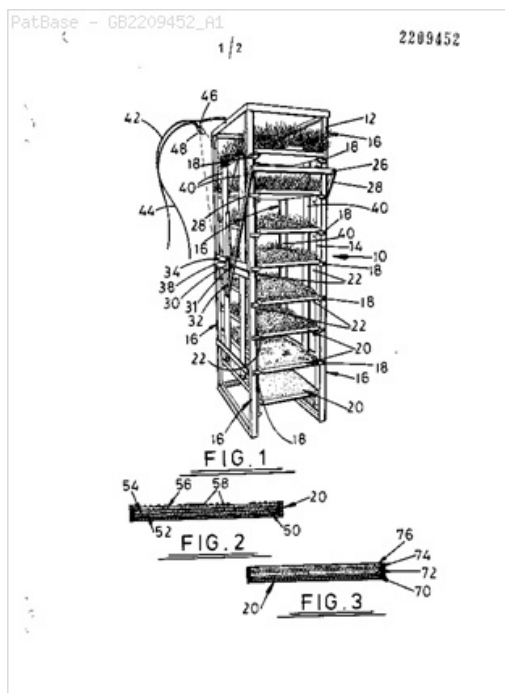
Classifications:

International (IPC 8-9): A01C1/02 A01G31/06 (Advanced/Invention);
A01C1/00 A01G31/02 (Core/Invention)

International (IPC 1-7): A01C1/02 A01G9/00

CPC: Y02P60/216 A01C1/02 A01G31/06

European: A01C1/02 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
GB2209452 A1	19890517	GB19880020868	19880905
GB8720858 A0	19871014	GB19870020858	19870904
GB8820868 A0	19881005	GB19880020868	19880905

Priority:

GB19870020858 19870904 GB19880020868 19880905

Probable Assignee: BARCLAY C W

Assignee(s): (std): BARCLAY C W ; BARCLAY CHARLES WILLIAMSON ; RHODES M ; RHODES MARK

Assignee(s): MARK RHODES ; CHARLES WILLIAMSON BARCLAY

Inventor(s): (std): BARCLAY CHARLES WILLIAMSON ; RHODES MARK

Inventor(s): CHARLES WILLIAMSON BARCLAY ; MARK RHODES

Legal status (INPADOC)

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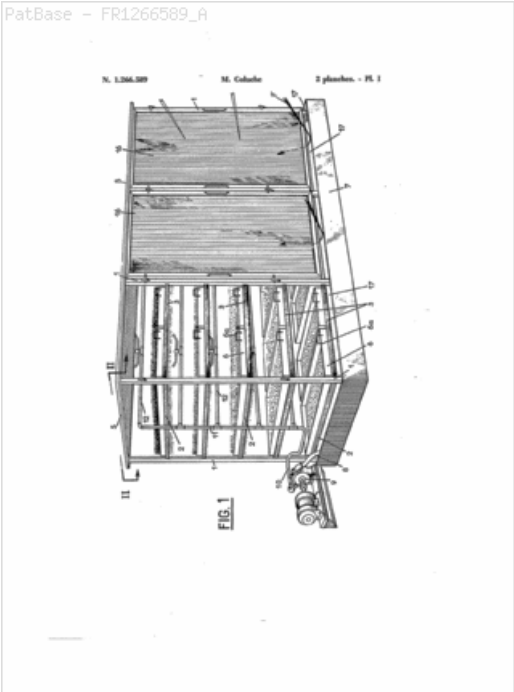
Patent	Date recorded	Event group	Code	Event	Details
GB2209452 A1	19890517	LSPB	+	published / reissued	
GB2209452 A1	19900425	LSWD	-WAP	APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	

Title: INSTALLATION POUR LA PRODUCTION INTENSIVE, SANS TERRE, D'HERBAGES A HAUTE VALEUR ENERGETIQUE
INSTALLATION FOR INTENSIVE PRODUCTION WITHOUT LAND, GRASS HIGH ENERGY VALUE (Machine translation)

Abstract: Source: FR1266589A (Claim 1) ****ATTENTION**** debut du champ CLMS peut contenir fin de DESC **. tout en permettant le passage de l'eau et des racines. L'ensemble ainsi constitue est surmonte d'un toit 5, fixe ou amovible indifferemment en matiere opaque, transparente ou translucide, et repose sur le fond d'un bac 7. Dans ce bac plonge le tuyau d'aspiration 8 d'une pompe 9 dont le tuyau de refoulement 10 est relie a une canalisation 11 sur laquelle sont branchees des tubulures 12 disposees a mi-hauteur entre les rayons porte-plateaux susmentionnes, ces tubulures 12 etant munies, a leur extremite d'un arroseur rotatif ou tourniquet 13. Comme on le voit sur la figure 4, le jet 13a des tourniquets 13 presente la particularite de comporter un deflecteur 14, de preference amovible, permettant d'obtenir une fine pulverisation de l'eau a sa sortie de la lumiere 15 du jet. Les cotes du bati sont fermes au moyen de panneaux amovibles 16, en matiere transparente ou translucide permettant d'avoir, a l'interieur, un eclaireage naturel, ou artificiel favorisant le developpement des plants. Un espace libre 17 est menage tout autour de la partie inferieure de l'installation de maniere a permettre l'admission, entre les plateaux, d'un courant d'air indique par les fleches F (fig. 1). L'installation ci-dessus decrite est placee dans un local dans lequel est maintenue une temperature predeterminee.

Machine translation: (Claim 1) **** WARNING **** start of CLMS field may contain end of DESC **. While allowing ie Transition water and roots. All is well is surmounted by a roof 5, fixed or removable matter indifferently in opaque, transparent or translucent, and rests on the bottom of a tank 7. In this tray dips the suction of a pump 8 9 including the discharge pipe 10 is connected to a pipe 11 which are connected to tubing 12 located mid-height between the shelves tray holders referred to above, these tubes 12 being provided at their end of a rotary sprinkler or turnstile 13. As shown in Figure 4, the jet 13a turnstiles 13 presents the particularity to include a deflector 14, preferably removable, to obtain a fine spray Water has its output 15 of the light jet. The ratings of farms are built using removable panels 16, in transparent or translucent material allowing to have, inside, a lighting natural or artificial favoring developpement plants. A space 17 is formed all around the lower part of the installation so as to allow the admission between the plates, an air flow indicated by the arrows F (Fig. 1). The installation described above is placed in a room in which temperature is maintained a predetermined .

Classifications:
International (IPC 8-9): A01C1/02 A01G31/06 (Advanced/Invention);
A01G31/00 (Advanced/Non-invention);
A01C1/00 A01G31/02 (Core/Invention);
A01G31/00 (Core/Non-invention)
International (IPC 1-7): A01G31/02
CPC: A01C1/02 A01G31/06 A01G2031/006 Y02P60/216
European: A01C1/02 A01G31/06 K01G31/00R



Family:

Publication number	Publication date	Application number	Application date
FR1266589 A	19610717	FR19600828834	19600601

Priority:

FR19600828834 19600601

Inventor(s): (std): COLUCHE BERNARD

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FR1266589 A	19610717	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: METHOD OF PROMOTING GERMINATION

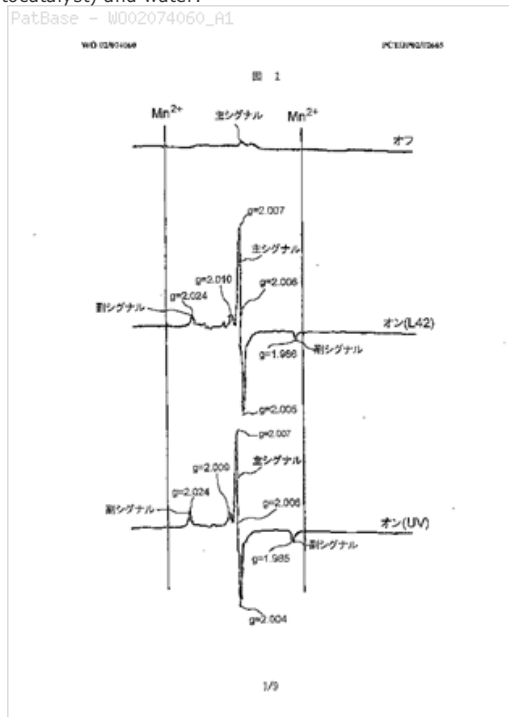
Abstract: A method of promoting the germination of seeds characterized by continuously or intermittently irradiating the seeds with light involving visible light in the coexistence of a photocatalyst exerting its activity under the action of light having a wavelength of 420 nm or longer (i.e., a visible light-responsive photocatalyst) and water.

Classifications:

International (IPC 8-9): A01C1/00 A01C1/02 A01G7/00 A01G7/04 B01J21/06 B01J35/02 (Advanced/Invention); A01C1/00 A01G7/00 A01G7/04 B01J21/00 B01J35/00 (Core/Invention)

International (IPC 1-7): A01C1/00 A01G7/00 B01J21/06 B01J35/02
CPC: Y02P60/146 A01C1/02 A01G7/045

European: A01C1/00 A01C1/02 A01G7/04B



Family:

Publication number	Publication date	Application number	Application date
AU2002238995 AA	20021003	AU20020238995	20020320
JP2004357501 A2	20041224	JP20010081512	20010321
WO02074060 A1	20020926	WO2002JP02665	20020320

Priority:

JP20010081512 20010321 WO2002JP02665 20020320

Probable Assignee: KANKYO DEVICE KENKYUSHO KK

Assignee(s): (std): ECODEVICE LAB CO LTD ; IHARA TATSUHIKO ; KANKYO DEVICE KENKYUSHO KK ; SUGIHARA SHINICHI

Assignee(s): ECODEVICE LABORATORY CO ; ECODEVICE LABORATORY CO LTD

Inventor(s): (std): IHARA TATSUHIKO ; SUGIHARA SHINICHI

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KR KZ LC LI LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MY NZ NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2002238995 AA	20021003	LSPB	+	published / reissued	
JP2004357501 A2	20041224	LSPB	+	published / reissued	
WO02074060 A1	20020926	LSPB	+	published / reissued	
WO02074060 A1	20040205	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO02074060 A1	20041019	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP

Title: PERFECTIONNEMENTS AUX GERMOIRS A GRAINS Improvements to hotbeds GRAIN (Machine translation)

Classifications:

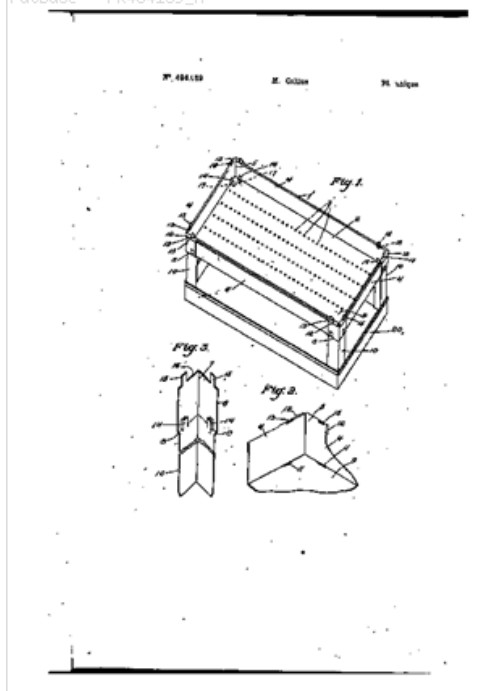
International (IPC 8-9): A01C1/02 A01G31/06 (Advanced/Invention);
A01C1/00 A01G31/02 (Core/Invention)

International (IPC 1-7): A01K39/00

CPC: A01C1/02 A01G31/06 Y02P60/216

European: A01C1/02 A01G31/06

PatBase - FR484159_A

**Family:**

Publication number	Publication date	Application number	Application date
FR484159 A	19170912		00000000

Probable Assignee: WALTER HARPER COLLINS

Assignee(s): (std): WALTER HARPER COLLINS

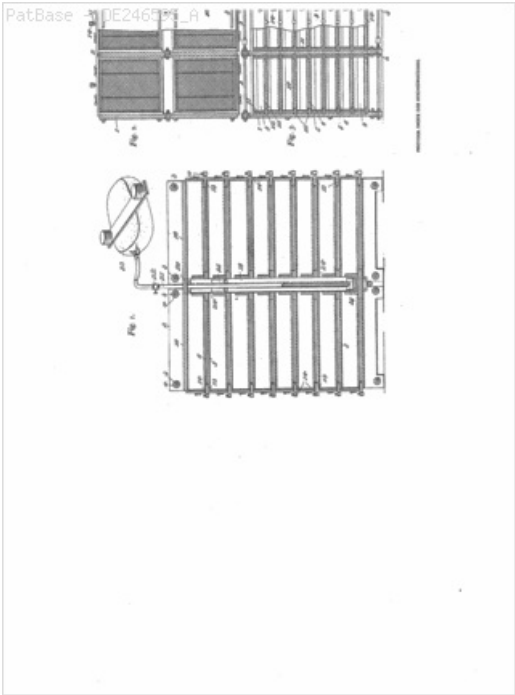
Inventor(s): (std): COLLINS WALTER HARPER

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FR484159 A	19170912	LSGT	+	granted / extensions (spc, cpc, pte)	

Classifications:
International (IPC 8-9): A01C1/02 A01G31/06 (Advanced/Invention);
A01C1/00 A01G31/02 (Core/Invention)
International (IPC 1-7): A23K1/14
CPC: A01C1/02 A01G31/06 Y02P60/216
European: A01C1/02 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
DE246595 A	00000000		00000000

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE246595 A	00000000	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: METHOD FOR INDUCING IMPROVED SEED GERMINATION IN PODOPHYLLUM HEXANDRUM ROYLE

Abstract: Source: US2002124465A The present invention describes a method for inducing improved seed germination in a high altitude medicinal plant, Podophyllum hexandrum Royle through hot water treatment at 40 Degrees Centigrade -100 Degrees Centigrade for 30-120 seconds.

Classifications:

International (IPC 8-9): A01C1/00 A01C1/02

A01H4/00 (Advanced/Invention);

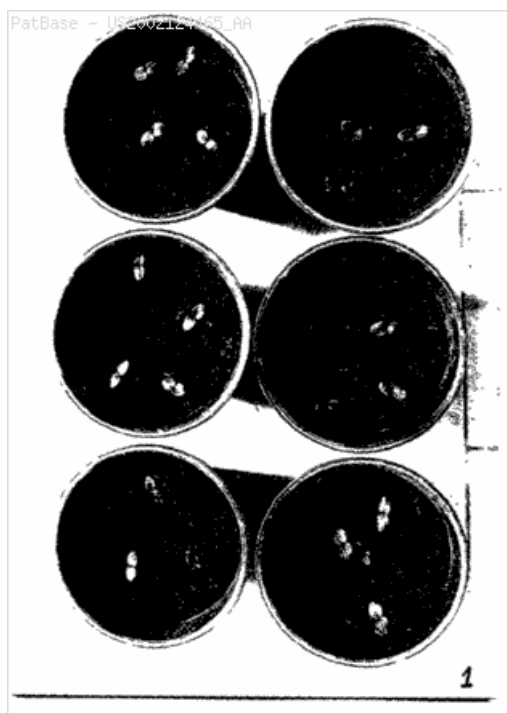
A01C1/00 A01H4/00 (Core/Invention)

International (IPC 1-7): A01B79/02 A01C1/00 A01G1/00 A01H3/00

CPC: A01C1/02 A01H4/005

European: A01C1/00 A01C1/02 A01H4/00D

US: 47/58.1FV 47/58.1SE 47/581FV 47/581SE



Family:

Publication number	Publication date	Application number	Application date
US2002124465 AA	20020912	US20010800672	20010308
US6449899 BA	20020917	US20010800672	20010308

Priority:

US20010800672 20010308

Probable Assignee: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

Assignee(s): (std): COUNCIL SCIENT IND RES ; KHARKWAL AMIT CHANDRA ; NAGAR PRAMOD KUMAR ; PRAKASH OM ; AHUJA PARAMVIR SINGH ; BHATTACHARYA AMITA

Assignee(s): COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

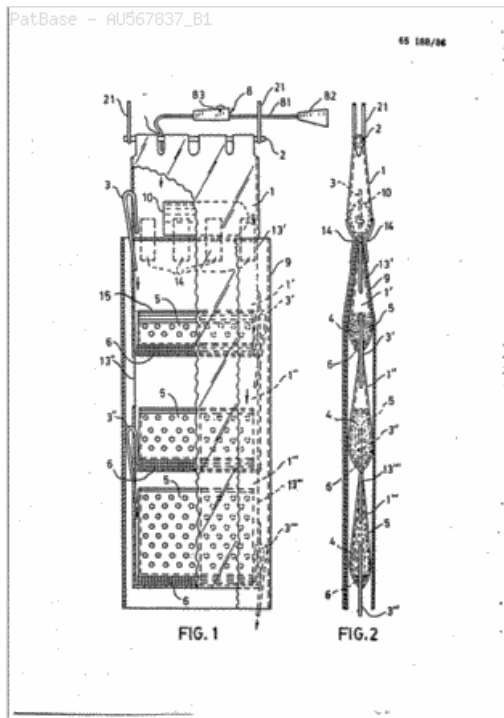
Inventor(s): (std): AHUJA PARAMVIR SINGH ; BHATTACHARYA AMITA ; KHARKWAL AMIT CHANDRA ; NAGAR PRAMOD KUMAR ; PRAKASH OM

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2002124465 AA	20020912	LSPB	+	published / reissued	
US6449899 BA	20020917	LSGT	+	granted / extensions (spc, cpc, pte)	
US6449899 BA	20010907	LSAS	AS	ASSIGNMENT	OWNER NAME : COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, IND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KHARKWAL, AMIT CHANDRA; PRAKASH, OM; BHATTACHARYA, AMITA; AND OTHERS; REEL/FRAME:012151/0274 EFFECTIVE DATE : 20010830
US6449899 BA	20060316	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6449899 BA	20100414	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6449899 BA	20140917	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	

US6449899 BA	20141104	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20140917
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Title: AUTOMATIC SPROUTS CULTURE BAG**Classifications:****International (IPC 8-9):** A01C1/02 A01G31/06 (Advanced/Invention);
A01C1/00 A01G31/02 (Core/Invention)**International (IPC 1-7):** A01C1/02 A01G31/02**CPC:** A01C1/02 A01G31/06 Y02P60/216**European:** A01C1/02 A01G31/06**Family:**

Publication number	Publication date	Application number	Application date
AU567837 B1	19871203	AU19860065188	19861114

Priority:

AU19860065188 19861114

Probable Assignee:

CHENG M

Assignee(s): (std):

CHENG M

Assignee(s):

CHENG MING KWEI

Inventor(s): (std):

CHENG MING KWEI

Inventor(s):

MING KWEI CHENG

Agent(s):

COLLISON AND CO

Legal status (INPADOC)[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
AU567837 B1	19871203	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: LED ARRAY FOR ILLUMINATING CELL WELL PLATES AND AUTOMATED RACK SYSTEM FOR HANDLING THE SAME

Abstract: Source: US2003162288A An assembly for promoting the growth of plant tissues that includes a plurality of plates each defining an array of wells wherein each of the wells contains a tissue sample. Support for the plates is provided by a rack having a plurality of vertically stacked shelves that may include one or more register depressions that urge the plates into predetermined positions. Light for the tissue samples is provided by a plurality of light-emitting diode arrays each mounted on a circuit board. Each circuit board is supported by a respective card edge connector of the rack so that the light-emitting diodes are in proximity to the plates supported on one of the shelves therebelow. Preferably, the light-emitting diode array corresponds to the well array supported in the registered position on the shelf therebelow so that each light-emitting diode is centered above a respective one of the wells.

Classifications:

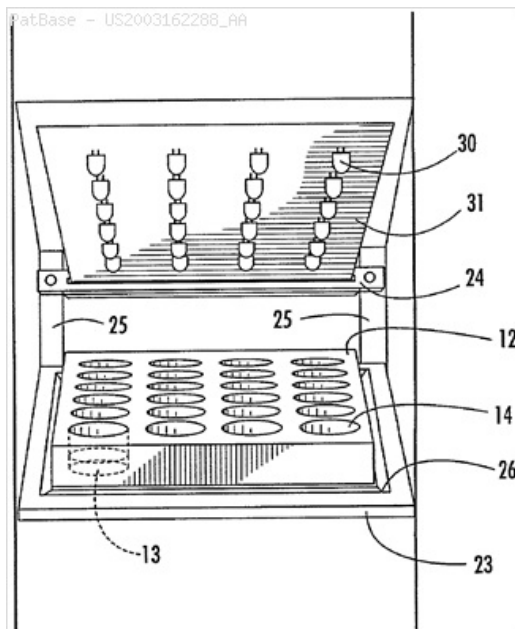
International (IPC 8-9): A01C1/00 A01G31/06 A01G7/04 A01H4/00 A01N1/00 B01L9/00 C10H21/00 C12M1/00 C12M1/20 C12M1/22 C12M1/34 C12M1/36 C12M1/42 C12M3/00 C12N1/12 C12P21/04 F21S2/00 F21V19/00 H05B33/02 (Advanced/Invention); F21W131/40 F21Y101/02 (Advanced/Non-invention); A01C1/00 A01G31/02 A01G7/04 A01H4/00 A01N1/00 B01L9/00 C10H21/00 C12M1/00 C12M1/16 C12M1/22 C12M1/34 C12M1/36 C12M1/42 C12M3/00 C12N1/12 C12P21/04 F21S2/00 F21V19/00 (Core/Invention); C12M (Subclass/Invention); A01C (Subclass/Non-invention)

International (IPC 1-7): A01H4/00 A01N1/00 C10H21/00 C12M1/22 C12M1/34 C12M1/36 C12M3/00 C12N5/00 F21S2/00 F21V19/00 H05B33/02

CPC: Y10S47/08 A01G7/04 A01G31/06 B01L9/523 B01L2300/0829 C12M21/02 C12M23/12 C12M23/48 C12M31/10 Y02P60/216

European: A01G31/06 A01G7/04 B01L9/523 C12M21/02 C12M23/12 C12M23/48 C12M31/10 L01L300/08B12

US: 435/284.1 435/286.2 435/286.200S 435/288.4 435/288.400S 435/289.1 435/292.1 435/292.100P 435/305.2 435/305.3 435/305.300S 435/42 435/420 435/420S 435/809 435/809S 47/58.1LS 47/58.1SE 47/DIG.8



Family:

Publication number	Publication date	Application number	Application date
AU2003215281 AA	20030909	AU20030215281	20030218
AU2003215281 BB	20080619	AU20030215281	20030218
CA2477034 AA	20040820	CA20032477034	20030218
CN1313593 C	20070502	CN20038004414	20030218
CN1639305 A	20050713	CN20038004414	20030218
EP1476525 A1	20041117	EP20030711099	20030218
EP1476525 A4	20080521	EP20030711099	20030218
HK1076125 A1	20071123	HK20050108102	20050915
HK1076125 A3	20060106	HK20050108102	20050915
IL163569 A0	20051218	IL20030163569	20030218
IL163569 A1	20090211	IL20030163569	20030218
IN02453DN2004 A	20091002	IN2004DN02453	20040823
JP2005520502 T2	20050714	JP20030571375T	20030218
MXPA04008174 A1	20050408	MX2004PA08174	20030218
NZ534917 A	20070330	NZ20030534917	20030218
RU2004128242 A	20051027	RU20040128242	20030218
RU2315093 C2	20080120	RU20040128242	20030218
US2003162288 AA	20030828	US20020080918	20020222
US2004110279 AA	20040610	US20030725044	20031201
US6680200 BB	20040120	US20020080918	20020222
US7160717 BB	20070109	US20030725044	20031201
WO03072685 A1	20030904	WO2003US04780	20030218

Priority:

US20020080918 20020222 US20030725044 20031201 WO2003US04780 20030218

Probable Assignee: BIOLEX THERAPEUTICS INC

Assignee(s): (std): BIOLEX INC ; BIOLEX THERAPEUTICS INC ; EVERETT KEITH

Assignee(s): INTERSOUTH PARTNERS IV LP AS ATTORNEY IN FACT FOR ; INTERSOUTH PARTNERS IV LP ATTORNEY IN FACT FOR SEC ; MIDCAP FINANCIAL SBIC LP ; SYNTHON BIOPHARMACEUTICALS BV ; INTERSOUTH PARTNERS IV LP ATTORNEY IN FACT FOR SECURED PARTIES PURSUANT TO SECURITY AGREEMENTS AS

Inventor(s): (std): EVERETT KEITH ; KEITH EVERETT

Inventor(s): EHVETTT KIT

Agent(s): SPRUSON AND FERGUSON; RIDOUT AND MAYBEE LLP; LUZZATTO AND LUZZATTO; ALSTON AND BIRD LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
AU2003215281 AA	20030909	LSPB	+	published / reissued	
AU2003215281 AA	20081016	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2003215281 AA	20120913	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2003215281 BB	20080619	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2477034 AA	20040820	LSPB	+	published / reissued	
CA2477034 AA	20040820	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2477034 AA	20080206	LSSES	+EEER	EXAMINATION REQUEST	
CA2477034 AA	20110916	LSLE	-FZDE	DEAD	
CA2477034 AA	20111211	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20110916
CN1313593 C	20070502	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1313593 C	20050713	LSPB	+C06	PUBLICATION	
CN1313593 C	20070502	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1313593 C	20130410	LSLE	-C17	CESSATION OF PATENT RIGHT	
CN1639305 A	20050713	LSPB	+	published / reissued	
EP1476525 A1	20041117	LSPB	+	published / reissued	
EP1476525 A1	20041117	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20040902
EP1476525 A1	20080521	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20080417
EP1476525 A1	20080521	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C12M 1/22 20060101ALI20080411BHEP
EP1476525 A1	20080521	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C10H 21/00 20060101AFI20030906BHEP
EP1476525 A1	20080521	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01N 1/00 20060101ALI20080411BHEP
EP1476525 A1	20080521	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C12M 1/34 20060101ALI20080411BHEP
EP1476525 A1	20080521	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 7/04 20060101ALI20080411BHEP
EP1476525 A1	20080521	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 31/06 20060101ALI20080411BHEP
EP1476525 A1	20080924	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : BIOLEX THERAPEUTICS, INC.
EP1476525 A1	20090311	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090205
EP1476525 A1	20120307	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20110901
HK1076125 A1	20071123	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1076125 A1	20120928	LSLE	-PC	PATENT CEASED	EFFECTIVE DATE : 20120218

					(I.E. PATENT HAS LAPSED DUE TO THE FAILURE TO PAY THE RENEWAL FEE)	
HK1076125 A3	20060106	LSPB	+	published / reissued		
IL163569 A0	20091224	LSGT	+FF	PATENT GRANTED		
IL163569 A0	20091224	LSGT	+FF	PATENT GRANTED		
IL163569 A0	20100214	LSFE	+KB	PATENT RENEWED		
IL163569 A1	20090211	LSPB	+	published / reissued		
IL163569 A1	20130930	LSLE	-MM9K	PATENT NOT IN FORCE DUE TO NON-PAYMENT OF RENEWAL FEES		
IN02453DN2004 A	20091002	LSPB	+	published / reissued		
JP2005520502 T2	20050714	LSPB	+	published / reissued		
JP2005520502 T2	20060218	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20060217	
JP2005520502 T2	20060218	LSER	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060217	
JP2005520502 T2	20090212	LSER	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090210	
JP2005520502 T2	20090811	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090810	
JP2005520502 T2	20100811	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100810	
JP2005520502 T2	20100811	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100810	
JP2005520502 T2	20101220	LSWD	-A045	WRITTEN MEASURE OF DISMISSAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A045 EFFECTIVE DATE : 20101217	
JP2005520502 T2	20101220	LSWD	-A045	WRITTEN MEASURE OF DISMISSAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A045 EFFECTIVE DATE : 20101217	
MXPA04008174 A1	20050408	LSPB	+	published / reissued		
MXPA04008174 A1	20071207	LSGT	+FG	GRANT OR REGISTRATION		
NZ534917 A	20070330	LSPB	+	published / reissued		
NZ534917 A	20070330	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)		
NZ534917 A	20070727	LSGT	+PSEA	PATENT SEALED		
NZ534917 A	20100226	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)		
NZ534917 A	20130328	LSAS	ASS	CHANGE OF OWNERSHIP	OWNER NAME : SYNTHON BIOPHARMACEUTICALS B.V., NL EFFECTIVE DATE : 20130314	
NZ534917 A	20130830	LSLE	-LAPS	PATENT LAPSED		
RU2004128242 A	20051027	LSPB	+	published / reissued		
RU2315093 C2	20080120	LSGT	+	granted /		

				extensions (spc, cpc, pte)	
RU2315093 C2	20121210	LSLE	-MM4A	THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES	EFFECTIVE DATE : 20120219
US2003162288 AA	20030828	LSPB	+	published / reissued	
US2004110279 AA	20040610	LSPB	+	published / reissued	
US6680200 BB	20040120	LSGT	+	granted / extensions (spc, cpc, pte)	
US6680200 BB	20021216	LSAS	AS	ASSIGNMENT	OWNER NAME : INTERSOUTH PARTNERS IV, L.P. AS ATTORNEY- IN-FACT F DESCRIPTION : SECURITY INTEREST; ASSIGNOR:BIOLEX, INC.; REEL/FRAME:013570/0981 EFFECTIVE DATE : 20021203
US6680200 BB	20021216	LSAS	AS	ASSIGNMENT	OWNER NAME : INTERSOUTH PARTNERS IV, L.P. AS ATTORNEY- IN-FACT F DESCRIPTION : SECURITY INTEREST; ASSIGNOR:BIOLEX, INC.; US-ASSIGNMENT DATABASE UPDATED:20100504; REEL/FRAME:13570/981 EFFECTIVE DATE : 20021203
US6680200 BB	20030303	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX, INC., NORTH CAROLINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:EVERETT, KEITH; REEL/FRAME:013801/0411 EFFECTIVE DATE : 20030220
US6680200 BB	20031117	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX, INC., NORTH CAROLINA DESCRIPTION : TERMINATION OF SECURITY INTEREST; ASSIGNOR:INTER SOUTH PARTNERS IV, L.P., AS ATTORNEY-IN-FACT FOR THESECURED PARTIES PURSUANT TO THE SECURITY AGREEMENTS; REEL/FRAME:014692/0879 EFFECTIVE DATE : 20030806
US6680200 BB	20031117	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX, INC.,NORTH CAROLINA DESCRIPTION : TERMINATION OF SECURITY INTEREST; ASSIGNOR:INTER SOUTH PARTNERS IV, L.P., AS ATTORNEY-IN-FACT FOR THESECURED PARTIES PURSUANT TO THE SECURITY AGREEMENTS; US-ASSIGNMENT DATABASE UPDATED:20100504; REEL/FRAME:14692/879 EFFECTIVE DATE : 20030806
US6680200 BB	20031117	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX, INC.,NORTH CAROLINA DESCRIPTION : TERMINATION OF SECURITY INTEREST; ASSIGNOR:INTER SOUTH PARTNERS IV, L.P., AS ATTORNEY-IN-FACT FOR THESECURED PARTIES PURSUANT TO THE SECURITY AGREEMENTS; REEL/FRAME:014692/0879 EFFECTIVE DATE : 20030806
US6680200 BB	20070713	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6680200 BB	20080212	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC.,NORTH CAROLINA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:BIOLEX, INC.; REEL/FRAME:020487/0980 EFFECTIVE DATE : 20071011
US6680200 BB	20080212	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC.,NORTH CAROLINA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:BIOLEX, INC.; US- ASSIGNMENT DATABASE UPDATED:20100504; REEL/FRAME:20487/980 EFFECTIVE DATE : 20071011

US6680200 BB	20080212	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC., NORTH CAROLINA DESCRIPTION : CHANGE OF NAME; ASSIGNOR: BIOLEX, INC.; REEL/FRAME: 020487/0980 EFFECTIVE DATE : 20071011
US6680200 BB	20080212	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC., NORTH CAROLINA DESCRIPTION : CHANGE OF NAME; ASSIGNOR: BIOLEX, INC.; US- ASSIGNMENT DATABASE UPDATED: 20100209; REEL/FRAME: 20487/980 EFFECTIVE DATE : 20071011
US6680200 BB	20101109	LSAS	AS	ASSIGNMENT	OWNER NAME : MIDCAP FINANCIAL SBIC, LP, MARYLAND DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR: BIOLEX THERAPEUTICS, INC.; REEL/FRAME: 025333/0026 EFFECTIVE DATE : 20101001
US6680200 BB	20110622	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6680200 BB	20120521	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC., NORTH CAROLINA DESCRIPTION : RELEASE OF SECURITY INTEREST; ASSIGNOR: MIDCAP FINANCIAL SBIC, LP; REEL/FRAME: 028276/0548 EFFECTIVE DATE : 20120419
US6680200 BB	20120522	LSAS	AS	ASSIGNMENT	OWNER NAME : SYNTHON BIOPHARMACEUTICALS B.V., NETHERLANDS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR: BIOLEX THERAPEUTICS, INC.; REEL/FRAME: 028278/0729 EFFECTIVE DATE : 20120419
US6680200 BB	20160120	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6680200 BB	20160308	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160120
US7160717 BB	20070109	LSGT	+	granted / extensions (spc, cpc, pte)	
US7160717 BB	20080212	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC., NORTH CAROLINA DESCRIPTION : CHANGE OF NAME; ASSIGNOR: BIOLEX, INC.; REEL/FRAME: 020487/0980 EFFECTIVE DATE : 20071011
US7160717 BB	20080212	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC., NORTH CAROLINA DESCRIPTION : CHANGE OF NAME; ASSIGNOR: BIOLEX, INC.; REEL/FRAME: 020487/0980 EFFECTIVE DATE : 20071011
US7160717 BB	20080212	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC., NORTH CAROLINA DESCRIPTION : CHANGE OF NAME; ASSIGNOR: BIOLEX, INC.; US- ASSIGNMENT DATABASE UPDATED: 20100209; REEL/FRAME: 20487/980 EFFECTIVE DATE : 20071011
US7160717 BB	20080212	LSAS	AS	ASSIGNMENT	OWNER NAME : BIOLEX THERAPEUTICS, INC., NORTH CAROLINA DESCRIPTION : CHANGE OF NAME; ASSIGNOR: BIOLEX, INC.; US- ASSIGNMENT DATABASE UPDATED: 20100504; REEL/FRAME: 20487/980 EFFECTIVE DATE : 20071011
US7160717 BB	20110109	LSLE	-LAPS	LAPSE FOR	

US7160717 BB	20110301	LSLE	-FP	FAILURE TO PAY MAINTENANCE FEES	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20110109
WO03072685 A1	20030904	LSPB	+	published / reissued		
WO03072685 A1	20040816	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 163569 COUNTRY OF REF DOCUMENT : IL	
WO03072685 A1	20040820	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2477034 COUNTRY OF REF DOCUMENT : CA	
WO03072685 A1	20040823	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 20038044145 COUNTRY OF REF DOCUMENT : CN	
WO03072685 A1	20040823	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003571375 COUNTRY OF REF DOCUMENT : JP	
WO03072685 A1	20040823	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2004/008174 COUNTRY OF REF DOCUMENT : MX	
WO03072685 A1	20040826	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 534917 COUNTRY OF REF DOCUMENT : NZ	
WO03072685 A1	20040902	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003711099 COUNTRY OF REF DOCUMENT : EP	
WO03072685 A1	20040903	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003215281 COUNTRY OF REF DOCUMENT : AU	
WO03072685 A1	20040922	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004128242 COUNTRY OF REF DOCUMENT : RU	
WO03072685 A1	20041117	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003711099 COUNTRY OF REF DOCUMENT : EP	

Title: METHOD OF ENHANCING PLANT GROWTH AND APPARATUS FOR PERFORMING THE SAME

Abstract: Source: US4817332A A method of plant cultivation and growth acceleration includes enclosing the plants within a reflective chamber, controlling the CO₂ concentration within said chamber so as to be at least 200 ppm, and irradiating the plants substantially omnidirectionally with a light intensity of approximately 3000 lux, while stably regulating the ambient temperature, relative humidity and nutrient supply.

Classifications:

International (IPC 8-9): A01G7/00 A01G7/02 A01G7/04

A01G9/00 (Advanced/Invention);

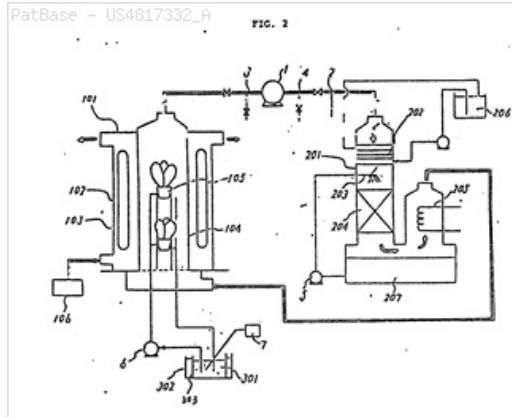
A01G7/02 A01G7/04 (Core/Invention)

International (IPC 1-7): A01G7/00 A01G7/02 A01G9/00 A01G9/14 A01G9/18 A01G9/20

CPC: Y10S47/06 A01G7/02 A01G7/045 Y02P60/146

European: A01G7/02 A01G7/04B

US: 47/17 47/58 47/58.1R 47/580 47/DIG.6



Family:

Publication number	Publication date	Application number	Application date
AT67642 E	19911015	AT19840113019T	19841029
CA1269538 A1	19900529	CA19840466401	19841026
DE3485108 D1	19911031	DE19843485108	19841029
EP0140361 A2	19850508	EP19840113019	19841029
EP0140361 A3	19861008	EP19840113019	19841029
EP0140361 B1	19910925	EP19840113019	19841029
JP1675647 C3	19920626	JP19830203309	19831028
JP3025123 B4	19910405	JP19830203309	19831028
JP60094024 A2	19850527	JP19830203308	19831028
JP60094025 A2	19850527	JP19830203309	19831028
US4817332 A	19890404	US19840665212	19841026
US5174793 A	19921229	US19880266610	19881223

Priority:

CA19840466401 19841026	EP19840113019 19841029	EP19840113019 19841029
US19880266610 19881223	US19840665212 19841026	JP19830203308 19831028
JP19830203309 19831028		

Probable Assignee: MITSUBISHI ELECTRIC CORP

Assignee(s): (std): MITSUBISHI ELECTRIC CORP ; MITSUBISHI DENKI KK

Assignee(s): NAKAYAMA SHIGEKI ; MITSUBISHI DENKI NO2 3 MARUNOUCHI 2 CHOME CHIYODA KU TOKYO JAPAN KK ; MITSUBISHI DENKI KABUSHIKI KAISHA ; EZAKI KENJI ; IKEDA AKIRA ; ISHII TOSHITSUGU ; ITAKURA ISAO ; MITSUBISHI DENKI K K ; MITSUBISHI DENKI K K TOKIO TOKYO JP

Inventor(s): (std): EZAKI KENJI ; EZAKI KENJI C O MITSUBISHI DEN ; IKEDA AKIRA ; IKEDA AKIRA C O MITSUBISHI DEN ; ISHII TOSHIJI ; ISHII TOSHITSUGU ; ISHII TOSHITSUGU C O MITSUBISH ; ITAKURA ISAO ; ITAKURA ISAO C O MITSUBISHI DE ; NAKAYAMA SHIGEKI ; NAKAYAMA SHIGEKI C O MITSUBISH

Inventor(s): NAKAYAMA SHIGEKI C O MITSUBISHI DENKI ; NAKAYAMA SHIGEKI C O MITSUBISHI DENKI K K ; NAKAYAMA SHIGEKI C O MITSUBISHI DENKI KK ; DEVELOPMENT LAB 1 1 TSUKAGUCHIHON ; ITAKURA ISAO C O MITSUBISHI DENKI K K ; ITAKURA ISAO C O MITSUBISHI DENKI K K AKO SHI HYOG ; ITAKURA ISAO C O MITSUBISHI DENKI KK ; LAB 1 1 TSUKAGUCHIHON ; ISHII TOSHITSUGU C O MITSUBISHI DENKI ; ISHII TOSHITSUGU C O MITSUBISHI DENKI K K ; ISHII TOSHITSUGU C O MITSUBISHI DENKI KK ; IKEDA AKIRA C O MITSUBISHI DENKI K K ; IKEDA AKIRA C O MITSUBISHI DENKI KK ; EZAKI KENJI C O MITSUBISHI DENKI K K ; EZAKI KENJI C O MITSUBISHI DENKI K K MACHI 8 CHOME ; EZAKI KENJI C O MITSUBISHI DENKI KK

Agent(s): RICHES MCKENZIE AND HERBERT LLP

Designated states: AT DE FR

Legal status (INPADOC)

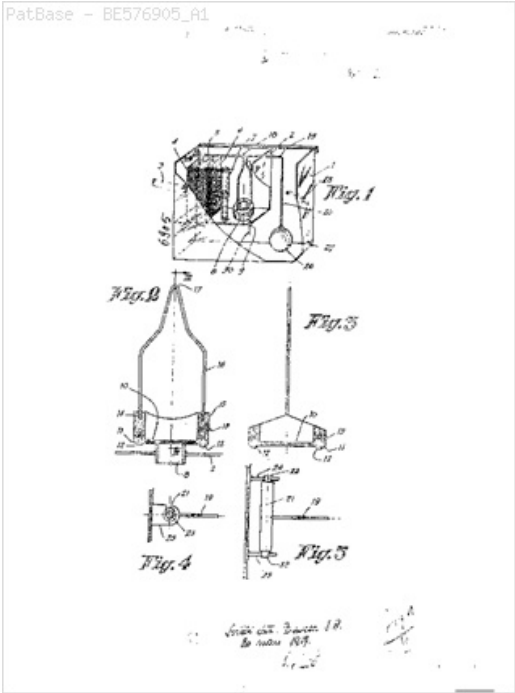
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Patent	Date recorded	Event group	Code	Event	Details
AT67642 E	19911015	LSGT	+	granted / extensions (spc, cpc, pte)	
AT67642 E	19920615	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	
AT67642 E	19940715	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
CA1269538 A1	19900529	LSPB	+	published / reissued	
CA1269538 A1	20070529	LSLE	-MKEX	EXPIRY	

DE3485108 D1	19921022	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE3485108 D1	19960905	LSLI	8320	WILLINGNESS TO GRANT LICENCES DECLARED (PARAGRAPH 23)	
EP0140361 A2	19850508	LSPB	+	published / reissued	
EP0140361 A2	19870304	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19861222
EP0140361 A2	19880831	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19880719
EP0140361 A2	19920910	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 19920910 YEAR OF FEE PAYMENT : 09
EP0140361 A2	19920916	LSGT	+26N	NO OPPOSITION FILED	
EP0140361 A2	19921027	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 19921027 YEAR OF FEE PAYMENT : 09
EP0140361 A2	19931029	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT EFFECTIVE DATE : 19931029
EP0140361 A2	19940630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR EFFECTIVE DATE : 19940630
EP0140361 A2	19940826	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST
EP0140361 A2	20031103	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20031103 YEAR OF FEE PAYMENT : 20
EP0140361 B1	19910925	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1675647 C3	19920626	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3025123 B4	19910405	LSPB	+	published / reissued	
JP60094024 A2	19850527	LSPB	+	published / reissued	
JP60094025 A2	19850527	LSPB	+	published / reissued	
US4817332 A	19890404	LSGT	+	granted / extensions (spc, cpc, pte)	
US4817332 A	19881117	LSAS	AS	ASSIGNMENT	OWNER NAME : MITSUBISHI DENKI KABUSHIKI KAISHA, NO.2-3, MARUNOU DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNORS:IKEDA, AKIRA; NAKAYAMA, SHIGEKI; EZAKI, KENJI; AND OTHERS; REEL/FRAME:004976/0834 EFFECTIVE DATE : 19841022
US4817332 A	19920923	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4817332 A	19960920	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4817332 A	20000921	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5174793 A	19921229	LSGT	+	granted / extensions (spc, cpc, pte)	
US5174793 A	19960618	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5174793 A	20000619	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5174793 A	20040526	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

Title: DISPOSITIF SIMPLIFIE POUR LE CONTROLE DE L'ECOULEMENT PERIODIQUE D'UN LIQUIDE. SIMPLIFIE DEVICE FOR CONTROLLING THE FLOW CHART OF A LIQUID. (Machine translation)

Classifications:
International (IPC 8-9): A01C1/02 A01G27/00 A01G31/06 G05D7/01 (Advanced/Invention)
CPC: A01C1/02 A01G27/001 A01G31/06 G05D7/0166 Y02P60/216
European: A01C1/02 A01G27/00C A01G31/06 G05D7/01E



Family:

Publication number	Publication date	Application number	Application date
BE576905 A1	19590716	BE19590576905	19590320

Priority:
BE19590576905 19590320

Probable Assignee: BREVESA S A
Assignee(s): (std): BREVESA S A
Assignee(s): BREVESA SA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BE576905 A1	19590716	LSPB	+	published / reissued	

Title: DEVICE AND METHOD FOR GROWTH ACCELERATION AND REGENERATION OF LAWN AREAS

Abstract: Source: US2011099895A The device according to the invention is designed for growth acceleration and regeneration of lawn areas (2). It comprises a housing (3) which is open towards the bottom and can be placed on a lawn area (2) and delimits a space (6) above the lawn area (2), the housing (3) being formed so as to be transparent and/or comprising an illumination device (32) for illuminating the lawn area (2). The housing (3) is realized with a moving equipment (17) for automatically moving the housing (3) over the lawn area (2).

Classifications:

International (IPC 8-9): A01B45/00 A01G1/12 A01G7/00 A01G7/02 A01G7/04 A01G9/00 A01G9/16 A01G9/18 A01G9/24

F21S8/00 (Advanced/Invention);

A01G7/04 (Advanced/Non-invention);

A01B45/00 A01G7/00 A01G7/04 A01G9/16

A01G9/24 (Core/Invention);

A01G (Subclass/Invention)

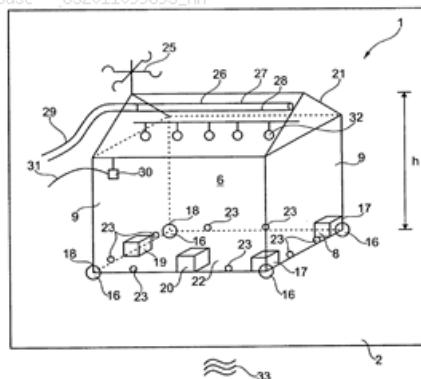
CPC: A01G7/045 A01G9/16 A01G7/04 A01G1/12 A01G7/02

A01G1/002

European: A01G7/04 A01G9/16

US: 1/1 362/228 362/228S 47/17 47/17P

PatBase - US2011099895_AA



Family:

Publication number	Publication date	Application number	Application date
AU2008354613 AA	20091015	AU20080354613	20081217
AU2008354613 BB	20140626	AU20080354613	20081217
BRPI0822524 A2	20141014	BR2008PI22524	20081217
CA2721142 AA	20091015	CA20082721142	20081217
CA2721142 C	20140909	CA20082721142	20081217
DE102008018459 A1	20091015	DE200810018459	20080411
EP2268125 A1	20110105	EP20080873845	20081217
RU2010143137 A	20120520	RU20100143137	20081217
RU2508624 C2	20140310	RU20100143137	20081217
UA104139 C2	20140110	UA20100103432	20081217
US2011099895 AA	20110505	US20080937075	20081217
US9307703 BB	20160412	US20080937075	20081217
WO09124577 A1	20091015	WO2008EP10780	20081217
ZA201007293 A	20111228	ZA20100007293	20101012

Priority:

DE200810018459 20080411 WO2008EP10780 20081217

Probable Assignee: LINDE AG

Assignee(s): (std): BERGHOFF RUDOLF ERWIN ; KRABBENDAM PETER ; LINDE AG

Assignee(s): LINDE AGKLOSTERHOFSTRASSE 180331MUENCHENDE

Inventor(s): (std): BERGKHOF RUDOL F EHRVIN ; KRABBENDAM PETER ; BERGHOFF RUDOLF ERWIN

Inventor(s): BERGHOFF RUDOLF ERWINDE ; KRABBENDAM PETERNL ; PETER KRABBENDAM ; RUDOLF ERWIN BERGHOFF

Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; BORDEN LADNER GERVAIS LLP; SCHUESSLER ANDREA; PORZIO BROMBERG AND NEWMAN PC; HUBER AND SCHUESSLER

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2008354613 AA	20091015	LSPB	+	published / reissued	
AU2008354613 AA	20141023	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2008354613 BB	20140626	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0822524 A2	20141014	LSPB	+	published / reissued	
CA2721142 AA	20091015	LSPB	+	published / reissued	

CA2721142 AA	20131005	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20130920
CA2721142 C	20140909	LSGT	+	granted / extensions (spc, cpc, pte)	
DE102008018459 A1	20091015	LSPB	+	published / reissued	
DE102008018459 A1	20110217	LSLE	-8139	DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE	
EP2268125 A1	20110105	LSPB	+	published / reissued	
EP2268125 A1	20110105	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20101110
EP2268125 A1	20130410	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130315
EP2268125 A1	20170301	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 9/16 20060101ALI20170124BHEP
EP2268125 A1	20170301	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 1/12 20060101ALI20170124BHEP
EP2268125 A1	20170301	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 7/02 20060101AFI20170124BHEP
EP2268125 A1	20170301	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 7/04 20060101ALI20170124BHEP
RU2010143137 A	20120520	LSPB	+	published / reissued	
RU2508624 C2	20140310	LSGT	+	granted / extensions (spc, cpc, pte)	
UA104139 C2	20140110	LSGT	+	granted / extensions (spc, cpc, pte)	
US2011099895 AA	20110505	LSPB	+	published / reissued	
US2011099895 AA	20101221	LSAS	AS	ASSIGNMENT	OWNER NAME : LINDE AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BERGHOFF, RUDOLF ERWIN; KRABBENDAM, PETER; SIGNING DATES FROM 20101206 TO 20101213; REEL/FRAME:025541/0603
US9307703 BB	20160412	LSGT	+	granted / extensions (spc, cpc, pte)	
WO09124577 A1	20091015	LSPB	+	published / reissued	
WO09124577 A1	20101012	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2721142 COUNTRY OF REF DOCUMENT : CA
WO09124577 A1	20101012	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09124577 A1	20101012	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2721142 COUNTRY OF REF DOCUMENT : CA
WO09124577 A1	20101013	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008354613 COUNTRY OF REF DOCUMENT : AU
WO09124577 A1	20101111	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2008354613 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20081217 KIND CODE OF REF DOCUMENT : A

WO09124577 A1	20101111	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010143137 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
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WO09124577 A1	20101221	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12937075 COUNTRY OF REF DOCUMENT : US
WO09124577 A1	20141014	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0822524 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20101008
ZA201007293 A	20111228	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: SYSTEM AND METHOD FOR GROWING A PLANT IN AN AT LEAST PARTLY CONDITIONED ENVIRONMENT

Abstract: Source: US2011252705A A system for growing a plant (1) in an at least partly conditioned environment includes a cultivation base (11) for receiving a culture substrate (3) with a root system (4) of the plant therein. Root temperature control elements (12) are provided which are able and adapted to impose a predetermined root temperature on the root system, and lighting elements (20,21,22) which are able and adapted to expose leaves of the plant to actinic artificial light. Leaf heating elements are also provided, which are able and adapted to impose on the leaf of the plant a leaf temperature varying from an ambient temperature. In a method for growing the plant a carbon dioxide assimilation management of a leaf system of the plant is thus influenced, and a supply of actinic light, the root temperature and the carbon dioxide assimilation management are adapted to each other.

Classifications:

International (IPC 8-9): A01G A01G1/00 A01G7/00 A01G7/02 A01G7/04 A01G9/00 A01G9/02 A01G9/24

F21V9/00 (Advanced/Invention);

A01G7/00 A01G7/04 A01G9/00 (Advanced/Non-invention);

A01G7/00 A01G7/02 A01G7/04 (Core/Invention);

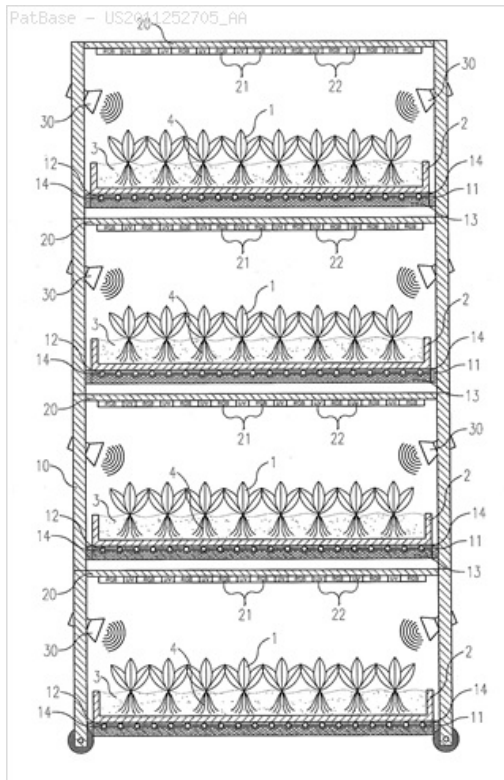
A01G (Subclass/Invention)

CPC: A01G9/02 A01G9/24 A01G1/001 A01G7/02 A01G7/045

A01G7/04 H05B33/0845 Y10S47/06 Y02P60/146

European: A01G7/02 A01G7/04B

US: 362/231 362/231S 47/66.6 47/66.600S 47/66.7 47/66.700P



Family:

Publication number	Publication date	Application number	Application date
AP201105705 A0	20110630	AP20110005705	20091013
AP3562 A	20160127	AP20110005705	20091013
AU2009304045 AA	20100422	AU2009304045	20091013
AU2009304045 BB	20150409	AU2009304045	20091013
CA2740345 AA	20100422	CA20092740345	20091013
CN102245012 A	20111116	CN200980149945	20091013
CN102245012 B	20161214	CN200980149945	20091013
DE602009030344 D1	20150513	DE200960030344T	20091013
DK2348814 T3	20150713	DK20090744494T	20091013
EA020928 B1	20150227	EA20110070562	20091013
EA201170562 A1	20111230	EA20110070562	20091013
EG26608 A	20140330	EG20110040575	20110413
EP2348814 A1	20110803	EP20090744494	20091013
EP2348814 B1	20150401	EP20090744494	20091013
EP2893800 A2	20150715	EP20150154199	20091013
EP2893800 A3	20151111	EP20150154199	20091013
ES2540739 T3	20150713	ES20090744494T	20091013
HR20150630 T1	20150731	HR20150000630	20150611
IL212747 A0	20110731	IL20090212747	20091013
IL212747 A1	20160630	IL20090212747	20091013
IN00964MN2011 A	20111014	IN2011MN00964	20110513
JP2012504973 T2	20120301	JP20110532034T	20091013
JP6073551 B2	20170201	JP20110532034T	20091013
KR20110094280 A	20110823	KR20117010925	20091013
MX2011003918 A1	20111118	MX20110003918	20091013
NL2002091 C	20100414	NL20082002091	20081013
PT2348814 T	20150731	PT20090744494T	20091013
SI2348814 T1	20150831	SI20090031211T	20091013
SMT201500153 B	20150907	SM20150000153T	20150629
US2011252705 AA	20111020	US20090123942	20091013
US2015237810 AA	20150827	US20150707134	20150508
WO10044662 A1	20100422	WO2009NL50617	20091013

Priority:

EP20090744494 20091013

NL20082002091 20081013

WO2009NL50617 20091013

Probable Assignee: PLANTLAB GROEP BV**Assignee(s):** (std): CROPPINGS GROEP B V ; CROPPINGS GROEP BV ; CROPPINGS HOLDING B V ; CROPPINGS HOLDING BV ; KERS MARTINUS ; MEEUWS GERARDUS JOHANNES JOZEF ; VAN GEMERT JOHN ; PLANTLAB GROEP B V ; PLANTLAB GROEP BV**Assignee(s):** MEEUWS GERARDUS JOHANNES JOZEF MARIA**Inventor(s):** (std): GEMERT JOHN ; GEMERT JOHN VAN ; KERS MARTINUS ; MARIA GERARDUS JOHANNES JOZEF ; MARIA MEEUWS GERARDUS JOHANNES JOZEF ; MARTINUS KERS ; MEEUWS GERARDUS JOHANNES JOZEF MARIA ; VAN GEMERT JOHN ; JOHN GEMERT VAN**Inventor(s):** JOHN VAN GEMERT ; GERARDUS JOHANNES JOZEF MARIA ; GERARDUS JOHANNES JOZEF MARIA MEEUWS**Agent(s):** SPRUSON AND FERGUSON; GOWLING LAFLEUR HENDERSON LLP; PATENT U RECHTSANWAELTE DIEHL AND PARTNER GBR; JILDERDA ANNE AYOLT; DE ELZABURU ALBERTO; SANFORD TCOLB AND CO**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**Legal status (INPADOC)**[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
AP3562 A	20160127	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2009304045 AA	20100422	LSPB	+	published / reissued	
AU2009304045 AA	20150806	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2009304045 BB	20150409	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2740345 AA	20100422	LSPB	+	published / reissued	
CA2740345 AA	20141016	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20141007
CN102245012 A	20111116	LSPB	+	published / reissued	
CN102245012 A	20111116	LSPB	+C06	PUBLICATION	
CN102245012 A	20161214	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102245012 B	20161214	LSGT	+	granted / extensions (spc, cpc, pte)	
DK2348814 T3	20150713	LSGT	+	granted / extensions (spc, cpc, pte)	
EA020928 B1	20150227	LSGT	+	granted / extensions (spc, cpc, pte)	
EA201170562 A1	20111230	LSPB	+	published / reissued	
EG26608 A	20140330	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2348814 A1	20110803	LSPB	+	published / reissued	
EP2348814 A1	20110803	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20110511
EP2348814 A1	20140903	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20140806
EP2348814 A1	20150401	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : PLANTLAB GROEP B.V.
EP2348814 A1	20150401	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2348814 A1	20150415	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2348814 A1	20150422	LSGT	REG	REFERENCE TO A	REF COUNTRY CODE : IE

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EP2348814 A1	20150708	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
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EP2348814 A1	20151230	LSOP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R026 REF DOCUMENT NUMBER : 602009030344 COUNTRY OF REF DOCUMENT : DE
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EP2348814 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : HR PAYMENT DATE : 20151007 YEAR OF FEE PAYMENT : 7
EP2348814 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20151027 YEAR OF FEE PAYMENT : 7
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EP2893800 A2	20150715	LSPB	+	published / reissued	
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EP2893800 A2	20151111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 7/02 20060101AFI20151007BHEP
EP2893800 A2	20151111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 7/04 20060101ALI20151007BHEP
EP2893800 A2	20160629	LSES	+R17P	REQUEST FOR EXAMINATION FILED (CORRECTION)	EFFECTIVE DATE : 20160511
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JP2012504973 T2	20120301	LSPB	+	published / reissued	
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JP2012504973 T2	20130729	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130726
JP2012504973 T2	20131123	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20131122
JP2012504973 T2	20140602	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20140530
JP2012504973 T2	20141129	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20141128

JP2012504973 T2	20150729	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20150728
JP2012504973 T2	20151127	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20151127
JP2012504973 T2	20151216	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20151130
JP2012504973 T2	20160115	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160115
JP2012504973 T2	20160121	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20160120
JP2012504973 T2	20160404	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20160401
JP2012504973 T2	20170112	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20170105
JP2012504973 T2	20170113	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150 REF DOCUMENT NUMBER : 6073551 COUNTRY OF REF DOCUMENT : JP
JP6073551 B2	20170201	LSGT	+	granted / extensions (spc, cpc, pte)	
KR20110094280 A	20110823	LSPB	+	published / reissued	
KR20110094280 A	20160620	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20110094280 A	20161230	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20110094280 A	20170126	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
MX2011003918 A1	20111118	LSPB	+	published / reissued	
MX2011003918 A1	20121213	LSGT	+FG	GRANT OR REGISTRATION	
NL2002091 C	20100414	LSGT	+	granted / extensions (spc, cpc, pte)	
PT2348814 T	20150731	LSGT	+	granted / extensions (spc, cpc, pte)	
SI2348814 T1	20150831	LSGT	+	granted / extensions (spc, cpc, pte)	
SMT201500153 B	20150907	LSGT	+	granted / extensions (spc, cpc, pte)	
US2011252705 AA	20111020	LSPB	+	published / reissued	
US2011252705 AA	20110707	LSAS	AS	ASSIGNMENT	OWNER NAME : PLANTLAB GROEP B.V., NETHERLANDS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:VAN GEMERT, JOHN; KERS, MARTINUS; MEEUWS, GERARDUS JOHANNES JOZEF MARIA; REEL/FRAME:026553/0765 EFFECTIVE DATE : 20110426
US2015237810 AA	20150827	LSPB	+	published / reissued	
US2015237810 AA	20150508	LSAS	AS	ASSIGNMENT	OWNER NAME : PLANTLAB GROEP B.V., NETHERLANDS DESCRIPTION : ASSIGNMENT OF

ASSIGNORS INTEREST;
 ASSIGNORS:VAN GEMERT, JOHN;
 KERS, MARTINUS; MEEUWS,
 GERARDUS JOHANNES JOZEF
 MARIA;
 REEL/FRAME:035593/0964
 EFFECTIVE DATE : 20110426

WO10044662 A1	20100422	LSPB	+	published / reissued	
WO10044662 A1	20110412	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2740345 COUNTRY OF REF DOCUMENT : CA
WO10044662 A1	20110412	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2740345 COUNTRY OF REF DOCUMENT : CA
WO10044662 A1	20110413	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011532034 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO10044662 A1	20110413	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10044662 A1	20110413	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2011532034 COUNTRY OF REF DOCUMENT : JP
WO10044662 A1	20110505	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 212747 COUNTRY OF REF DOCUMENT : IL
WO10044662 A1	20110512	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009304045 COUNTRY OF REF DOCUMENT : AU
WO10044662 A1	20110513	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20117010925 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO10044662 A1	20110602	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009304045 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20091013 KIND CODE OF REF DOCUMENT : A
WO10044662 A1	20110707	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13123942 COUNTRY OF REF DOCUMENT : US

Title: APPARATUS FOR INFLUENCING THE GROWTH OF A PLANT

Abstract: Source: US2012279121A Disclosed is a multistage thermal convection apparatus such as a two-stage thermal convection apparatus and uses thereof. In one embodiment, the two-stage thermal convection apparatus includes a temperature shaping element that assists a thermal convection mediated Polymerase Chain Reaction (PCR). The invention has a wide variety of applications including amplifying nucleic acid without cumbersome and expensive hardware associated with many prior devices. In a typical embodiment, the apparatus can fit in the palm of a user's hand for use as a portable, simple to operate, and low cost PCR amplification device.

Classifications:

International (IPC 8-9): A01G1/12 A01G13/02 A01G7/00 A01G7/02

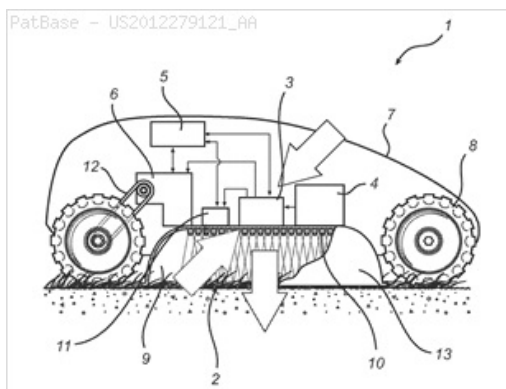
A01G7/04 A01G9/16 A01G9/20 (Advanced/Invention);

A01G1/12 A01G13/02 A01G9/16 (Core/Non-invention)

CPC: A01G1/002 A01G7/02 A01G7/045 Y02P60/146

European: A01G7/02 A01G7/04B A01G9/20

US: 47/58.1LS



Family:

Publication number	Publication date	Application number	Application date
CN102711440 A	20121003	CN201180006179	20110111
EP2523542 A1	20121121	EP20110702512	20110111
RU2012134649 A	20140220	RU20120134649	20110111
TW201143600 A	20111216	TW20110100987	20110111
US2012279121 AA	20121108	US20110520360	20110111
WO11086499 A1	20110721	WO2011B50106	20110111

Priority:

EP20100150701 20100114 EP20110702512 20110111 WO2011B50106 20110111

Probable Assignee: PHILIPS ELECTRONICS N V KONINKLL

Assignee(s): (std): PEETERS HENRICUS MARIE ; VAN ELMPT ROB FRANCISCUS MARIA ; TANASE CRISTINA ; KONINKL PHILIPS ELECTRONICS NV ; PHILIPS ELECTRONICS KONINKLL NV ; ROYAL DUTCH PHILIPS ELECTRONICS LTD

Assignee(s): KONINKLIJKE PHILIPS ELECTRONICS N V ; KONINKLIJKE PHILLIPS ELECTRONICS N V ; PHILLIPS ELECTRONICS KONINKLL NV ; PHILIPS ELECTRONICS N V KONINKLL ; KONINKL PHILIPS ELECTRONICS N V

Inventor(s): (std): CRISTINA TANASE ; MARIA ELMPT ROB FRANCISCUS VAN ; MARIE PEETERS HENRICUS ; PEETERS HENRICUS MARIE ; TANASE CRISTINA ; VAN ELMPT ROB FRANCISCUS MARIA

Agent(s): VAN EEUWIJK ALEXANDER HENRICUS WALTHERUS; BEKKERS JOOST J J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN102711440 A	20121003	LSPB	+	published / reissued	
CN102711440 A	20121003	LSPB	+C06	PUBLICATION	
CN102711440 A	20150107	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
EP2523542 A1	20121121	LSPB	+	published / reissued	
EP2523542 A1	20121121	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120814
EP2523542 A1	20130925	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : KONINKLIJKE PHILIPS N.V.
EP2523542 A1	20140416	LSWD	-18W	WITHDRAWN	EFFECTIVE DATE : 20140310

RU2012134649 A	20140220	LSPB	+	published / reissued	
RU2012134649 A	20160120	LSWD	-FA94	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NON- PAYMENT OF FEES)	EFFECTIVE DATE : 20151113
TW201143600 A	20111216	LSPB	+	published / reissued	
US2012279121 AA	20121108	LSPB	+	published / reissued	
US2012279121 AA	20120703	LSAS	AS	ASSIGNMENT	OWNER NAME : KONINKLIJKE PHILIPS ELECTRONICS N V, NETHERLANDS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:VAN ELMPT, ROB FRANCISCUS MARIA; TANASE, CRISTINA; PEETERS, HENRICUS MARIE; SIGNING DATES FROM 20110110 TO 20110207; REEL/FRA:028481/0538
WO11086499 A1	20110721	LSPB	+	published / reissued	
WO11086499 A1	20120703	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13520360 COUNTRY OF REF DOCUMENT : US
WO11086499 A1	20120716	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11086499 A1	20120814	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012134649 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO11086499 A1	20120814	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2012134649 COUNTRY OF REF DOCUMENT : RU

Title: LIGHTING SYSTEM WITH COOLING ARRANGEMENT

Abstract: Source: US2013000185A The invention provides a lighting system (100, 200, 300) for controlling the growth of plants, the system comprising; an array of solid state/semiconductor light sources (101, 201, 301) adapted to emit light of a predetermined wavelength or wavelength range; and a cooling arrangement (102, 202, 302) comprising a pipe (103, 203, 303) having at least one inlet opening for receiving a gaseous cooling medium and a plurality of outlet openings (105, 205, 305) for releasing said gaseous cooling medium from said cooling arrangement, the cooling arrangement being in mechanical and thermal contact with said light sources. The invention also provides a method for controlling the growth of a plant in a greenhouse or growth chamber. The invention allows promoting the photosynthesis of a plant by modifying the conditions (light intensity, temperature, CO₂ concentration) locally around the plant.

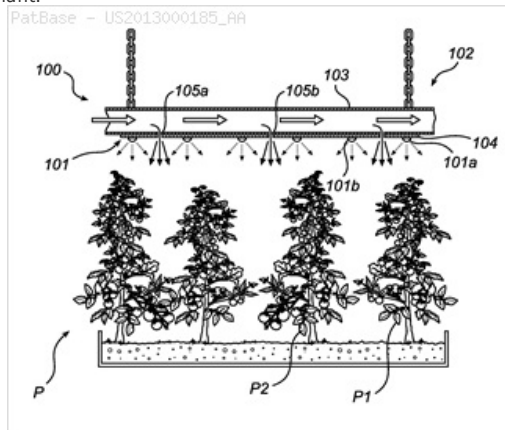
Classifications:

International (IPC 8-9): A01G7/00 A01G7/02 A01G7/04 A01G9/18 A01G9/20 A01G9/24 F21V15/01 F21V29/00 F21V29/02 F21V29/503 F21V29/57 F21Y101/02 F21Y103/00 (Advanced/Invention); F21Y101/02 F21Y103/00 (Advanced/Non-invention); A01G9/20 F21V29/00 (Core/Non-invention)

CPC: F21V29/00 F21Y2103/10 F21Y2115/10 F21Y2101/02 A01G7/02 A01G7/045 F21V29/02 F21V29/60 A01G9/18 F21Y2101/00 Y02P60/146 F21V29/004

European: A01G7/04B F21V29/02 R21V29/00C2 R21Y101/02 R21Y103/00D

US: 362/249.02 47/17

**Family:**

Publication number	Publication date	Application number	Application date
CN102811606 A	20121205	CN201180015391	20110316
CN102811606 B	20150624	CN201180015391	20110316
DE602011005285 D1	20140417	DE201160005285T	20110316
EP2549855 A1	20130130	EP20110713090	20110316
EP2549855 B1	20140305	EP20110713090	20110316
JP2013521824 T2	20130613	JP20130500625T	20110316
JP5850534 B2	20160203	JP20130500625T	20110316
RU2012144642 A	20140427	RU20120144642	20110316
RU2555820 C2	20150710	RU20120144642	20110316
TW201200010 A	20120101	TW20110109592	20110321
US2013000185 AA	20130103	US20110634968	20110316
US9480207 BB	20161101	US20110634968	20110316
WO11117778 A1	20110929	WO20111B51095	20110316

Priority:

EP20100157177 20100322 EP20110713090 20110316 WO2011B51095 20110316

Probable Assignee: PHILIPS KONINKLL NV

Assignee(s): (std): KONINKL PHILIPS ELECTRONICS NV ; KONINKL PHILIPS NV ; VAN ELMPT ROB FRANCISCUS MARIA ; TANASE CRISTINA ; ROYAL DUTCH PHILIPS ELECTRONICS LTD ; VAN ELMPT ROB FRANCISCUS ; PHILIPS KONINKLL NV

Assignee(s): PHILIPS LIGHTING HOLDING BV ; PHILIPS ELECTRONICS KONINKLL NV ; PHILIPS ELECTRONICS N V KONINKLL ; KONINKLEJKE FILIPS EHELEKTRONIKS NV ; KONINKLIJKE PHILIPS ELECTRONICS N V ; KONINKLIJKE PHILIPS ELECTRONICS N.V.

Inventor(s): (std): TANASE CRISTINA ; TANASE KRISTINA ; VAN ELMPT ROB FRANCISCUS MARIA ; VAN ELMPT ROB FRANCISCUS ; VAN EHLMP T ROB FRANSISKUS MARIJA

Agent(s): MEISSNER BOLTE AND PARTNER GBR; VAN EEUWIJK ALEXANDER HENRICUS WALTHERUS; BEKKERS JOOST J J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN102811606 A	20121205	LSPB	+	published / reissued	
CN102811606 A	20121205	LSPB	+C06	PUBLICATION	
CN102811606 A	20150624	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102811606 B	20150624	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2549855 A1	20130130	LSPB	+	published /	

				reissued		
EP2549855 A1	20130130	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20121022	
EP2549855 A1	20130911	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 7/04 20060101ALI20130808BHEP	
EP2549855 A1	20130911	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F21Y 101/02 20060101ALI20130808BHEP	
EP2549855 A1	20130911	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F21Y 103/00 20060101ALI20130808BHEP	
EP2549855 A1	20130911	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F21V 29/00 20060101AFI20130808BHEP	
EP2549855 A1	20130911	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F21V 29/02 20060101ALI20130808BHEP	
EP2549855 A1	20130925	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : KONINKLIJKE PHILIPS N.V.	
EP2549855 A1	20131023	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20130924	
EP2549855 A1	20140305	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D	
EP2549855 A1	20140314	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP	
EP2549855 A1	20140315	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 655145 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20140315	
EP2549855 A1	20140409	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D	
EP2549855 A1	20140417	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602011005285 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20140417	
EP2549855 A1	20140507	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3	
EP2549855 A1	20140715	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 655145 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20140305	
EP2549855 A1	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20140305	
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EP2549855 A1	20140829	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT : AT	

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EP2549855 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20140305
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EP2549855 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140605
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EP2549855 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140305
EP2549855 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140305
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EP2549855 A1	20141208	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602011005285 COUNTRY OF REF DOCUMENT : DE
EP2549855 A1	20141231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140707
EP2549855 A1	20141231	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2549855 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20140331
EP2549855 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT	COUNTRY OF REF DOCUMENT : LI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20140331

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EP2549855 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140305
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EP2549855 A1	20150211	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20141208
EP2549855 A1	20150319	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602011005285 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20141208
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EP2549855 A1	20160331	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 6
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EP2549855 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160324 YEAR OF FEE PAYMENT : 6
EP2549855 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160331 YEAR OF FEE PAYMENT : 6
EP2549855 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160331 YEAR OF FEE PAYMENT : 6
EP2549855 A1	20160630	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT : GR

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EP2549855 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20140316
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EP2549855 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160531 YEAR OF FEE PAYMENT : 6
EP2549855 B1	20140305	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2013521824 T2	20130613	LSPB	+	published / reissued	
JP2013521824 T2	20140314	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20140313
JP2013521824 T2	20150128	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150127
JP2013521824 T2	20150423	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150423
JP2013521824 T2	20151016	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2013521824 T2	20151030	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20151029
JP2013521824 T2	20151127	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20151127
JP2013521824 T2	20151203	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20151127
JP5850534 B2	20160203	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5850534 B2	20161014	LSAS	S111	REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R313113
JP5850534 B2	20161024	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R350
RU2012144642 A	20140427	LSPB	+	published / reissued	
RU2012144642 A	20150610	LSAS	HC9A	CHANGING	

					INFORMATION ABOUT AUTHOR(S)
RU2555820 C2	20150710	LSGT	+		granted / extensions (spc, cpc, pte)
RU2555820 C2	20161127	LSAS	PD4A		CORRECTION OF NAME OF PATENT OWNER
TW201200010 A	20120101	LSPB	+		published / reissued
US2013000185 AA	20130103	LSPB	+		published / reissued
US2013000185 AA	20120914	LSAS	AS	ASSIGNMENT	OWNER NAME : KONINKLIJKE PHILIPS ELECTRONICS N V, NETHERLANDS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TANASE, CRISTINA; VAN ELMPT, ROB FRANCISCUS MARIA; SIGNINGDATES FROM 20110317 TO 20110321; REEL/FRAME:028963/0302
US2013000185 AA	20160722	LSAS	AS	ASSIGNMENT	OWNER NAME : KONINKLIJKE PHILIPS N.V., NETHERLANDS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:KONINKLIJKE PHILIPS ELECTRONICS N.V.; REEL/FRAME:039428/0606 EFFECTIVE DATE : 20130515
US2013000185 AA	20160913	LSAS	AS	ASSIGNMENT	OWNER NAME : PHILIPS LIGHTING HOLDING B.V., NETHERLANDS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:KONINKLIJKE PHILIPS N.V.; REEL/FRAME:040060/0009 EFFECTIVE DATE : 20160607
US9480207 BB	20161101	LSGT	+		granted / extensions (spc, cpc, pte)
WO11117778 A1	20110929	LSPB	+		published / reissued
WO11117778 A1	20120823	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013500625 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO11117778 A1	20120823	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2013500625 COUNTRY OF REF DOCUMENT : JP
WO11117778 A1	20120914	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13634968 COUNTRY OF REF DOCUMENT : US
WO11117778 A1	20120924	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11117778 A1	20121022	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012144642 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO11117778 A1	20121022	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2012144642 COUNTRY OF REF DOCUMENT : RU

Title: CONTROL OF PLANT GROWING ENVIRONMENT

Abstract: Source: GB2037554A In order to provide a versatile system capable of optimum plant cultivation in a variety of situations for a variety of plants, an enclosure (1) in which plants or seeds are grown either has no ventilation to external atmosphere or has only ventilation via filtering means (2) to external atmosphere. The apparatus also includes carbon dioxide supply (3, 4), temperature and humidity control (10, 11, 12, 7) and lighting means (16, 17) controllable in respect of duration, intensity and colour.

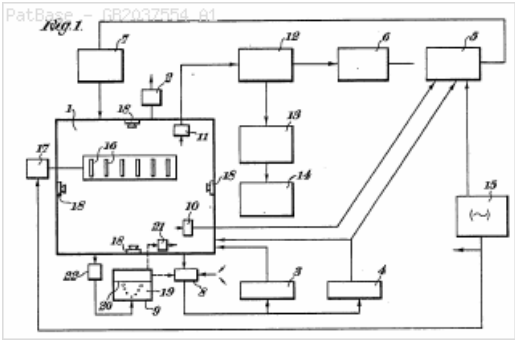
Classifications:

International (IPC 8-9): A01G7/02 A01G7/04 (Advanced/Invention); A01G7/02 A01G7/04 (Core/Invention)

International (IPC 1-7): A01G7/00 A01G7/02

CPC: A01G7/02 A01G7/045 Y02P60/146

European: A01G7/02 A01G7/04B



Family:

Publication number	Publication date	Application number	Application date
GB2037554 A1	19800716	GB19780049595	19781221

Priority:

GB19780049595 19781221

Probable Assignee: CHARNOE H Z
Assignee(s): (std): CHARNOE H Z ; CHARNOE Z P

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
GB2037554 A1	19800716	LSPB	+	published / reissued	
GB2037554 A1	19810429	LSWD	-WAP	APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	

Title: HOME ELECTRONIC APPLIANCE-TYPE VEGETABLE-GROWING MACHINE

Abstract: The present device relates to a home electronic appliance-type vegetable-growing machine which can be cleanly installed in an interior living room or a kitchen in the form of an independent home electronic appliance using an LED light source and a hydroponic technique. The home electronic appliance-type vegetable-growing machine comprises: a frame; a plurality of culture trays and culture solution supplying-tanks slidably coupled to a guide rail of the frame; an LED light source; a culture solution pump; pipes for supplying the culture solution; a pipe connection port; and a casing for receiving the culture solution pump, the pipes, and the pipe connection port. The present device provides the home electronic appliance-type vegetable-growing machine which can be cleanly installed in an interior living room or kitchen in the form of an independent home electronic appliance using the LED light source and the hydroponic technique. The vegetable-growing machine may be disposed near the kitchen or the living room so as to provide decorative effects, by means of the LED light source, and fresh chemical-free foods on the spot.

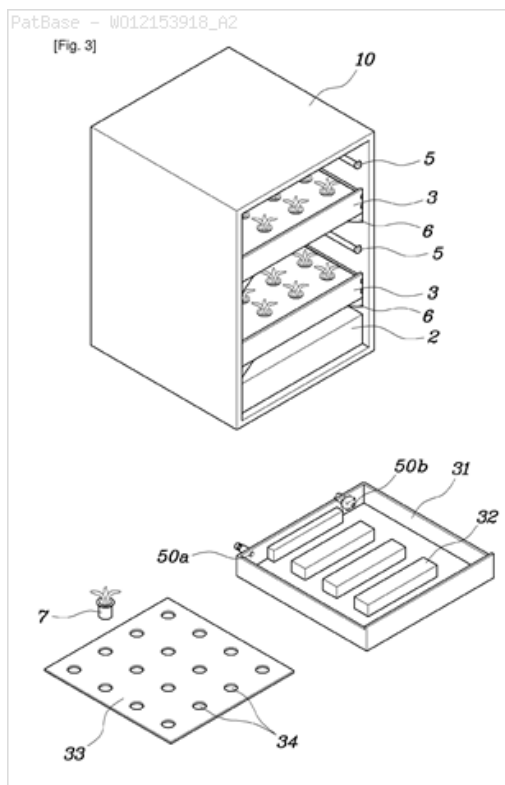
Classifications:

International (IPC 8-9): A01G31/02 A01G31/06 A01G7/00 A01G7/04 A01G9/00 A01G9/16 (Advanced/Invention);

A01G31/02 A01G31/06 A01G7/00 (Advanced/Non-invention)

CPC: Y02P60/216 A01G9/16 A01G31/02 A01G31/06 A01G7/045 A01G27/005 A01G27/02 F21W2131/10

European: A01G31/02 A01G9/16

**Family:**

Publication number	Publication date	Application number	Application date
CN102771374 A	20121114	CN201210118742	20120420
JP3176525 U	20120621	JP20120002200U	20120413
KR200455827 Y1	20110927	KR20110003944U	20110509
WO12153918 A2	20121115	WO2012KR02614	20120406
WO12153918 A3	20130314	WO2012KR02614	20120406

Priority:

KR20110003944U 20110509

Probable Assignee: HONG KUG YEUNG

Assignee(s): (std): HONG KUG YEUNG ; KUG YEUNG HONG

Inventor(s): (std): HONG KUG YEUNG ; KUG YEUNG HONG

Agent(s): SKIP LAW FIRM; JO CHI HOON

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN102771374 A	20121114	LSPB	+	published / reissued	
CN102771374 A	20121114	LSPB	+C06	PUBLICATION	
CN102771374 A	20151118	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
JP3176525 U	20120621	LSGT	+	granted / extensions (spc, cpc, pte)	
KR200455827 Y1	20110927	LSGT	+	granted / extensions (spc, cpc, pte)	

KR200455827 Y1	20110509	LSSES	A201	REQUEST FOR EXAMINATION	
KR200455827 Y1	20110509	LSSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR200455827 Y1	20110707	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR200455827 Y1	20110908	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR200455827 Y1	20140919	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20140919 YEAR OF FEE PAYMENT : 4
KR200455827 Y1	20150922	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
WO12153918 A2	20121115	LSPB	+	published / reissued	
WO12153918 A3	20131111	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12153918 A3	20140528	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12781901 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2

Title: PLANT FACTORY SYSTEM

Abstract: Provided is a plant factory system. The present invention comprises: a cell unit which has polygonal upper and lower sides, and a lateral side that connects said upper side and said lower side; an outer cover unit, which is a lateral side of said cell unit; a building unit with which said cell unit is connected horizontally or vertically; a lighting unit which is disposed in an internal space of said cell unit, and irradiates light while rotating; a crop planting unit which is disposed in the internal space of said cell unit by two or more layers, and in which crops are planted and cultivated and on which the light from said lighting unit is irradiated; and a nutrient solution supply unit which is disposed in the internal space of said cell unit, and supplies a nutrient solution to a nutrient solution flow path equipped in said crop planting unit, wherein said outer cover unit has a plurality of members and air is circulated between said plurality of the members.

Classifications:

International (IPC 8-9): A01G31/02 A01G31/06 A01G7/00 A01G7/04 A01G9/00 (Advanced/Invention)

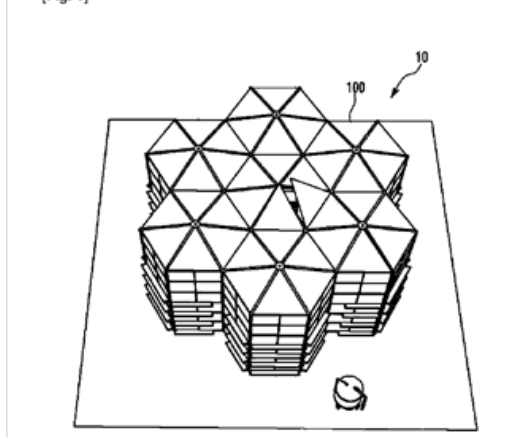
CPC: A01G31/02 A01G7/045 Y02P60/216 A01G9/00 A01G9/24

A01G9/247 E04B2001/0076 E04B2001/0084 E04B2001/0092

F21S10/063 Y10S47/06 A01G9/20 A01G9/246 A01G31/06 E04H5/08

E04B2/88 F21S10/06 F21V29/67 A01G9/143 Y02P60/146

PatBase - WO13012289_A2
[Fig. 1]



Family:

Publication number	Publication date	Application number	Application date
KR101136032 B1	20120418	KR20110071811	20110720
KR101226031 B1	20130124	KR20110077300	20110803
KR101261965 B1	20130508	KR20110071813	20110720
KR101272532 B1	20130610	KR20110071812	20110720
KR101293944 B1	20130807	KR20110075594	20110729
KR20130010971 A	20130130	KR20110071812	20110720
KR20130010972 A	20130130	KR20110071813	20110720
KR20130013790 A	20130206	KR20110075594	20110729
WO13012289 A2	20130124	WO2012KR05823	20120720
WO13012289 A3	20130314	WO2012KR05823	20120720

Priority:

KR20110071811 20110720 KR20110071812 20110720 KR20110071813 20110720
KR20110075594 20110729 KR20110077300 20110803

Probable Assignee: NAT UNIV KONGJU IND ACAD COOP

Assignee(s): (std): KIM KILL HEE ; KIM SUNG GAUN ; LEE KEE SUN ; NAT UNIV KONGJU IND ACAD COOP

Assignee(s): KONGJU NATIONAL UNIV IND UNIV COOPERATION FOUNDATION ; KONGJU NATIONAL UNIVERSITY INDUSTRY UNIVERSITY COOPERATION FOUNDATION

Inventor(s): (std): KIM KIL HEE ; KIM KILL HEE ; KIM SUNG GAUN ; LEE KEE SUN

Agent(s): LEEON INTELLECTUAL PROPERTY LAW FIRM

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KZ LA LC LR LK LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101136032 B1	20120418	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101136032 B1	20110720	LSSES	A201	REQUEST FOR EXAMINATION	
KR101136032 B1	20111024	LSSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR101136032 B1	20111212	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101136032 B1	20120330	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101136032 B1	20120405	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101136032 B1	20160225	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160225 YEAR OF FEE

						PAYMENT : 5
KR101226031 B1	20130124	LSGT	+	granted / extensions (spc, cpc, pte)		
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KR101226031 B1	20130117	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT		
KR101226031 B1	20130118	LSGT	+GRNT	WRITTEN DECISION TO GRANT		
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KR101226031 B1	20170111	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20170111 YEAR OF FEE PAYMENT : 5	
KR101261965 B1	20130508	LSGT	+	granted / extensions (spc, cpc, pte)		
KR101261965 B1	20160225	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160225 YEAR OF FEE PAYMENT : 4	
KR101272532 B1	20130610	LSGT	+	granted / extensions (spc, cpc, pte)		
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KR101272532 B1	20121122	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL		
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KR101272532 B1	20130603	LSGT	+GRNT	WRITTEN DECISION TO GRANT		
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KR101293944 B1	20130807	LSGT	+	granted / extensions (spc, cpc, pte)		
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KR20130010971 A	20130130	LSPB	+	published / reissued		
KR20130010972 A	20130130	LSPB	+	published / reissued		
KR20130010972 A	20110720	LSES	A201	REQUEST FOR EXAMINATION		
KR20130010972 A	20121123	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL		
KR20130010972 A	20130429	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT		
KR20130010972 A	20130502	LSGT	+GRNT	WRITTEN DECISION TO GRANT		
KR20130013790 A	20130206	LSPB	+	published / reissued		
WO13012289 A2	20130124	LSPB	+	published / reissued		
WO13012289 A3	20140120	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE	
WO13012289 A3	20140813	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12814949 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2	

Title: THERAPEUTIC DEVICE FOR PLANT

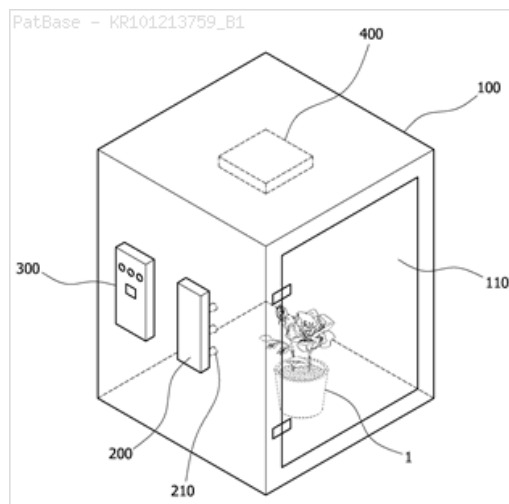
Abstract: Source: KR101213759B PURPOSE: A plant therapeutic machine is provided to increase the autogenesis power of a leaf or stem of damaged plants by maintaining an appropriate temperature and supplying carbon dioxide and light within a chamber where the damaged plants are placed. CONSTITUTION: A chamber(100) is equipped with a space for a plant(1). A nozzle(210) injects carbon dioxide within the chamber. An implantation part(200) is connected to the nozzle and injects carbon dioxide. A temperature controller(300) arranged in one side of the chamber controls the temperature of the space. A control unit controls the carbon dioxide implantation part and the temperature controller. A camera part(600) takes pictures of the plant placed in the space. A memory unit stores images taken by the camera part. An optical source section connected to the control unit is arranged in the space. The optical source section is an LED lamp. The control unit is connected to a monitor. The control unit takes pictures of the plant according to a time interval input by a user and displays the images so that the user is able to check the condition of the plant. The control unit displays the photographed images with overlapping or in turn.

Classifications:**International (IPC 8-9):** A01G7/02 A01G7/04

G06Q50/02 (Advanced/Invention)

CPC: Y02P60/149 A01G7/02 A01G7/04 A01G7/045 A01G9/18

A01G9/24 A01G9/26 G06Q50/02

**Family:**

Publication number	Publication date	Application number	Application date
KR101213759 B1	20130201	KR20120013478	20120209

Priority:

KR20120013478 20120209

Probable Assignee:

SEO JI WAN

Assignee(s): (std):

SEO JI WAN

Inventor(s): (std):

SEO JI WAN

Legal status (INPADOC)[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
KR101213759 B1	20130201	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101213759 B1	20120209	LSES	A201	REQUEST FOR EXAMINATION	
KR101213759 B1	20120302	LSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR101213759 B1	20120514	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101213759 B1	20120912	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101213759 B1	20121212	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101213759 B1	20151213	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	

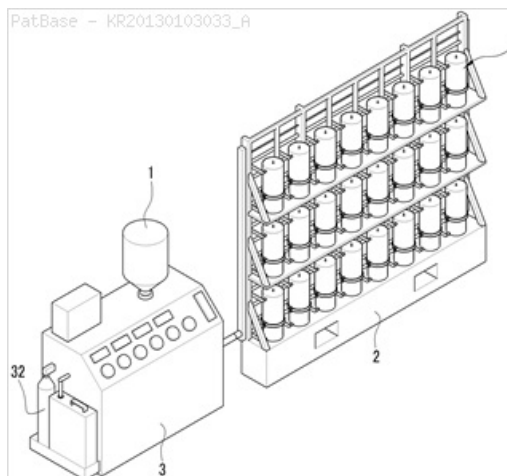
Title: THE PLANT CULTIVATION EQUIPMENT USING A SEALED POTS

Abstract: Source: KR20130103033A PURPOSE: A plant cultivation apparatus is provided to grow plants in a small way in an independent environment instead of growing the plants in bulk. CONSTITUTION: Plural sealed pots (1) include LED lights on the inner top, and a space for growing plants, and the four sides of the sealed pots are sealed. A mounting shelf (2) is for mounting the sealed pots. A supply control device (3) includes a water tank and a carbon dioxide tank (32), and supplies power, water containing a nutrient solution, and carbon dioxide to the sealed pots. A growing pot includes the plants on the upper side, and through-holes on the side surface. A lower pot includes a nutrient solution inlet, and a nutrient solution outlet. An upper pot includes an air inlet and an air outlet.

Classifications:

International (IPC 8-9): A01G31/02 A01G7/00 (Advanced/Invention)

CPC: Y02P60/216 A01G7/045 A01G7/02 A01G9/02 A01G9/023 A01G27/005 A01G27/006 A01G31/02 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
KR101346805 B1	20140103	KR20120024339	20120309
KR20130103033 A	20130923	KR20120024339	20120309

Priority:

KR20120024339 20120309

Probable Assignee:

CELLMO COREA CO LTD

Assignee(s): (std):

CELLMO COREA CO LTD

Assignee(s):

CELLMO COREA CO

Inventor(s): (std):

IN JUN GYO ; OH BEOM RYONG

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101346805 B1	20140103	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101346805 B1	20120309	LSSES	A201	REQUEST FOR EXAMINATION	
KR101346805 B1	20130619	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101346805 B1	20131121	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101346805 B1	20131224	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101346805 B1	20161012	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20161012 YEAR OF FEE PAYMENT : 4
KR20130103033 A	20130923	LSPB	+	published / reissued	

Title: INDOOR FARMING DEVICE AND METHOD

Abstract: Source: US2013255146A A shell with a controllable indoor climate. The shell may house plants, such as produce, for farming purposes. The shell may be made of scalable structurally insulated panels. Within the shell may be trays for facilitating the growth of the plants. Lighting, climate, and nutrients may be controlled for the proper growth of the plants.

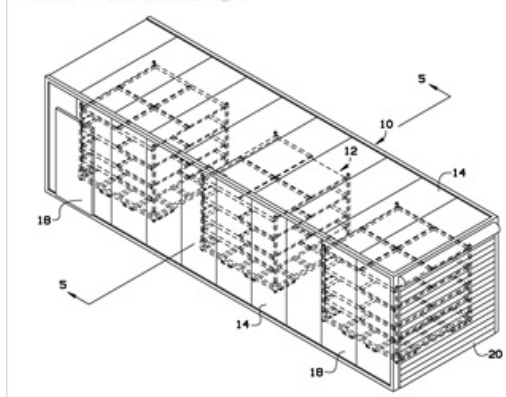
Classifications:

International (IPC 8-9): A01G31/00 A01G31/06 A01G7/04 A01G9/20 A01G9/24 (Advanced/Invention)

CPC: A01G9/24 A01G31/00 A01G31/06 A01G7/045 A01G9/20

US: 1/1 47/17

PatBase - US2013255146_AA



Family:

Publication number	Publication date	Application number	Application date
US2013255146 AA	20131003	US20130854650	20130401
US9357718 BA	20160607	US20150851279	20150911

Priority:

US20120619206P 20120402 US20130854650 20130401 US20150851279 20150911

Probable Assignee: LEHMAN FILOMENA LORI

Assignee(s): (std): FALCONER FRANKLIN R ; LEHMAN FILENE LORI ; LEHMAN FILOMENA LORI ; ROSATO AMERICO J ; STAMBAUGH ESTELLE Y

Inventor(s): (std): FALCONER FRANKLIN R ; LEHMAN FILENE LORI ; STAMBAUGH ESTELLE Y ; ROSATO AMERICO J ; LEHMAN FILOMENA LORI

Agent(s): MARK D; MALIN HALEY DIMAGGIO AND BOWEN PA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2013255146 AA	20131003	LSPB	+	published / reissued	
US9357718 BA	20160607	LSGT	+	granted / extensions (spc, cpc, pte)	

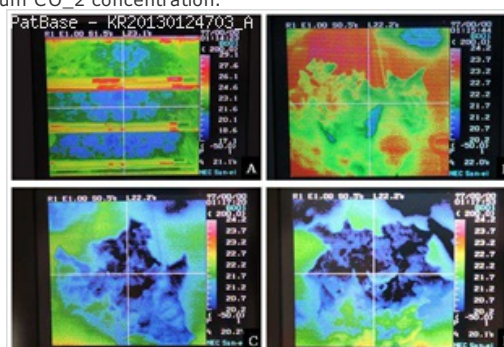
Title: METHOD FOR GROWING LETTUCE USING ARTIFICIAL LIGHT SOURCE AND CO₂ IN CLOSED-TYPE PLANT PRODUCTION SYSTEM

Abstract: Source: KR20130124703A The present invention relates to a cultivation method of lettuce using CO₂ and an artificial light source in a closed-type plant production system. The cultivation method of the lettuce is capable of being used in the large scale closed-type plant production system by improving the lettuce cultivation efficiency through providing the optimum wavelength range of the artificial light source and the optimum CO₂ concentration.

Classifications:

International (IPC 8-9): A01G7/00 A01G7/02
A01G7/04 (Advanced/Invention)

CPC: Y02P60/149 A01G7/045 A01G7/02 A01G9/20



Family:

Publication number	Publication date	Application number	Application date
KR101386928 B1	20140421	KR20120048024	20120507
KR20130124703 A	20131115	KR20120048024	20120507

Priority:

KR20120048024 20120507

Probable Assignee: NAT UNIV GYEONGSANG IACF

Assignee(s): (std): NAT UNIV GYEONGSANG IACF

Assignee(s): ACADEMIC COOPERATION FOUNDATION GYEONGSANG NATIONAL UNIV IND ; INDUSTRY ACADEMIC COOPERATION FOUNDATION GYEONGSANG NATIONAL UNIVERSITY

Inventor(s): (std): HWANG SEUNG JAE ; JEONG BYOUNG RYONG ; PARK JI EUN ; PARK YOO GYEONG

Legal status (INPADOC)

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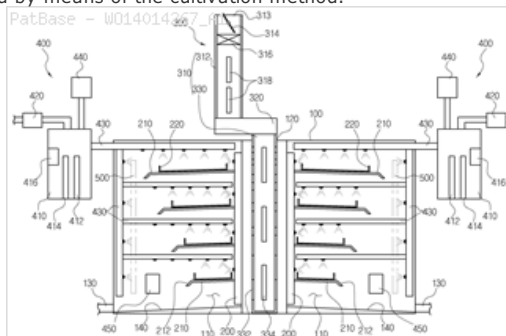
Patent	Date recorded	Event group	Code	Event	Details
KR101386928 B1	20140421	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101386928 B1	20120507	LSSES	A201	REQUEST FOR EXAMINATION	
KR101386928 B1	20130806	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101386928 B1	20140326	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101386928 B1	20140414	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR20130124703 A	20131115	LSPB	+	published / reissued	

Title: BROWN RICE SHOOT CULTIVATING DEVICE, AND CULTIVATION METHOD AND MEAL PREPARATION METHOD USING SAME

Abstract: The present invention relates to a brown rice shoot cultivating device which is adapted to artificially germinate brown rice and grow the shoots and is adapted to have a function whereby air and water are autonomously cleaned, and wherein an appropriate environment including the light irradiation time and water supply time is selected such that not only is the shoot growth rate improved but also it is possible to obtain a high content of active components such as arabinoxylan, melatonin and GABA. Also, the invention concerns a technique relating to a cultivation method allowing the cultivation of brown rice shoots for food, without rotting of the germinated brown rice. Again, the present invention relates to a food produced by using the brown rice shoots cultivated by means of the cultivation method. Also, the present invention relates to a method for producing food by using the brown rice shoots cultivated by means of the cultivation method.

Classifications:

International (IPC 8-9): A01C1/02 A01G16/00 A01G31/00
A01G31/02 A01G7/00 A01G7/04 A01G7/06 A01G9/00 A01G9/02
A23L1/10 A23L1/172 A23L7/10 A23L7/152 (Advanced/Invention)
CPC: A01G31/06 Y02P60/216 A01G7/06 A01G7/045 A01G9/246
A01G9/247 A01G31/02 Y02P60/146 A01G31/00



Family:

Publication number	Publication date	Application number	Application date
CN104486939 A	20150401	CN201380038163	20130717
JP2015530871 T2	20151029	JP20150523007T	20130717
KR101336295 B1	20131202	KR20120077664	20120717
KR101441746 B1	20140922	KR20120095625	20120830
KR20140028706 A	20140310	KR20120095625	20120830
WO14014267 A1	20140123	WO2013KR06386	20130717

Priority:

KR20120077664 20120717 KR20120095625 20120830 WO2013KR06386 20130717

Probable Assignee: KIM JONG SUN

Assignee(s): (std): KIM JONG SUN ; KO SUNG NYEON

Inventor(s): (std): KIM JONG SUN ; KO SUNG NYEON

Agent(s): CHEON JEE INT PATENT AND LAW FIRM

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN104486939 A	20150401	LSPB	+	published / reissued	
CN104486939 A	20150401	LSPB	+C06	PUBLICATION	
CN104486939 A	20161130	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
JP2015530871 T2	20151029	LSPB	+	published / reissued	
JP2015530871 T2	20160322	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20160322
JP2015530871 T2	20161025	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20161025
KR101336295 B1	20131202	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101336295 B1	20120717	LSSES	A201	REQUEST FOR EXAMINATION	
KR101336295 B1	20131024	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	

KR101336295 B1	20131125	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101336295 B1	20161117	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20161117 YEAR OF FEE PAYMENT : 4
KR101441746 B1	20140922	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101441746 B1	20140911	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR20140028706 A	20140310	LSPB	+	published / reissued	
KR20140028706 A	20120830	LSES	A201	REQUEST FOR EXAMINATION	
KR20140028706 A	20140513	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
WO14014267 A1	20140123	LSPB	+	published / reissued	
WO14014267 A1	20150114	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015523007 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO14014267 A1	20150119	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14014267 A1	20160309	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13819241 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: INSULATED SHIPPING CONTAINERS MODIFIED FOR HIGH-YIELD PLANT PRODUCTION CAPABLE IN ANY ENVIRONMENT

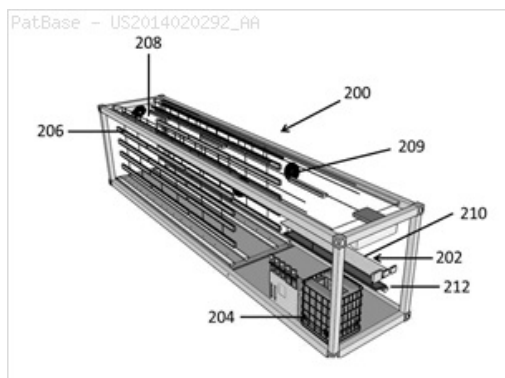
Abstract: Source: US2014020292A A system and method for generating high-yield plant production is disclosed. The system includes a container, a growing station, and a monitoring system. The growing station includes vertical racks, a lighting system, an irrigation system, a climate control system, and a ventilation system. The monitoring system monitors all of the systems in the growing station, as well as the environment within the container, to provide real-time data and alerts to a user.

Classifications:

International (IPC 8-9): A01G31/00 A01G31/06 A01G7/00 A01G7/04 A01G9/16 A01G9/18 A01G9/24 (Advanced/Invention)

CPC: A01G9/246 A01G9/16 A01G31/06 A01G7/045 A01G9/24

US: 1/1 47/61 47/66.6 47/66.7



Family:

Publication number	Publication date	Application number	Application date
AU2013282270 AA	20140103	AU20130282270	20130701
CA2878003 AA	20141224	CA20132878003	20130701
EP2866551 A2	20150506	EP20130737945	20130701
JP2015521851 T2	20150803	JP20150520633T	20130701
KR20150053895 A	20150519	KR20157001765	20130701
US2014020292 AA	20140123	US20130932984	20130701
US2016198656 AA	20160714	US20160077086	20160322
US9288948 BB	20160322	US20130932984	20130701
WO14005156 A2	20140103	WO2013US48984	20130701
WO14005156 A3	20140327	WO2013US48984	20130701

Priority:

US20120666354P 20120629 US20130932984 20130701 WO2013US48984 20130701
US20160077086 20160322

Probable Assignee: FREIGHT FARMS INC

Assignee(s): (std): FREIGHT FARMS ; FREIGHT FARMS INC

Assignee(s): FRIEDMAN JON ; MCNAMARA BRAD ; WESTERN ALLIANCE BANK

Inventor(s): (std): FRIEDMAN JON ; MCNAMARA BRAD

Agent(s): SPRUSON AND FERGUSON; SMART AND BIGGAR; LUNT MARK GEORGE FRANCIS; HIROE AND ASSOCIATES PATENT PROFESSIONAL CORP; POSTERNAK BLANKSTEIN AND LUND LLP; STEINBERG DONALD R ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2013282270 AA	20140103	LSPB	+	published / reissued	
CA2878003 AA	20141224	LSPB	+	published / reissued	
EP2866551 A2	20150506	LSPB	+	published / reissued	
EP2866551 A2	20150506	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150120
EP2866551 A2	20150701	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : FRIEDMAN, JON
EP2866551 A2	20150701	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : MCNAMARA, BRAD
JP2015521851 T2	20150803	LSPB	+	published / reissued	
JP2015521851 T2	20160701	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160701

JP2015521851 T2	20160701	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20160701
KR20150053895 A	20150519	LSPB	+	published / reissued	
US2014020292 AA	20140123	LSPB	+	published / reissued	
US2014020292 AA	20140306	LSAS	AS	ASSIGNMENT	OWNER NAME : FREIGHT FARMS, MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MCNAMARA, BRAD; FRIEDMAN, JON; REEL/FRAME:032371/0957 EFFECTIVE DATE : 20120723
US2014020292 AA	20151125	LSAS	AS	ASSIGNMENT	OWNER NAME : FREIGHT FARMS, INC., MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MCNAMARA, BRAD; FRIEDMAN, JON; REEL/FRAME:037139/0528 EFFECTIVE DATE : 20151124
US2014020292 AA	20160128	LSAS	AS	ASSIGNMENT	OWNER NAME : WESTERN ALLIANCE BANK, CALIFORNIA DESCRIPTION : SECURITY INTEREST; ASSIGNOR:FREIGHT FARMS, INC.; REEL/FRAME:037613/0916 EFFECTIVE DATE : 20160125
US2016198656 AA	20160714	LSPB	+	published / reissued	
US9288948 BB	20160322	LSGT	+	granted / extensions (spc, cpc, pte)	
WO14005156 A2	20140103	LSPB	+	published / reissued	
WO14005156 A3	20141224	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2878003 COUNTRY OF REF DOCUMENT : CA
WO14005156 A3	20141225	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015520633 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO14005156 A3	20150122	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20157001765 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO14005156 A3	20150129	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013282270 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130701 KIND CODE OF REF DOCUMENT : A

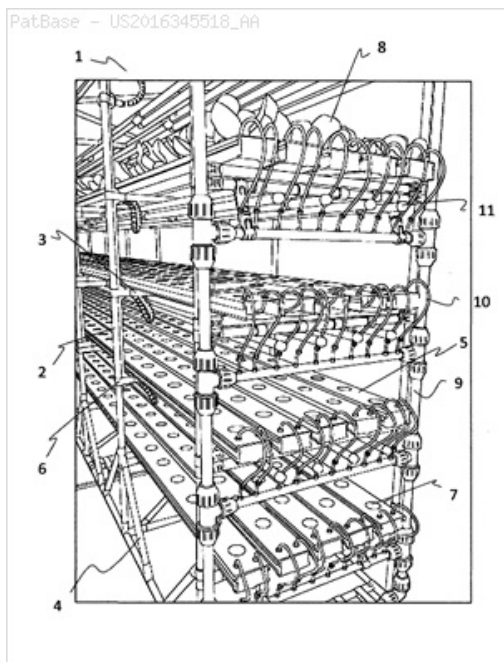
Title: VERTICAL TIERED GROWING SYSTEMS

Abstract: Source: US2016345518A A vertical tier growing system for growing plants (8). The system includes at least one vertically tiered shelf section (1) secured to and movable along a floor track. Each section (1) has its own means to direct nutrient fluid and light to plants (8) growing on said section (1).

Classifications:

International (IPC 8-9): A01G31/02 A01G31/06 A01G7/04 A01G9/02 A01G9/14 A01G9/20 (Advanced/Invention)

CPC: Y02P60/216 A01G7/045 A01G9/20 A01G2031/006 A01G31/06 A01G9/143



Family:

Publication number	Publication date	Application number	Application date
CN105873433 A	20160817	CN201580003591	20150323
EP3119184 A1	20170125	EP20150718073	20150323
GB201405099 A0	20140507	GB20140005099	20140321
GB201504835 A0	20150506	GB20150004835	20150323
GB2525497 A1	20151028	GB20150004835	20150323
US2016345518 AA	20161201	US20150112839	20150323
WO15140493 A1	20150924	WO2015GB00098	20150323

Priority:

GB20140005099 20140321 WO2015GB00098 20150323

Probable Assignee: HYDROGARDEN WHOLESAL SUPPLIES LTD

Assignee(s): (std): COLLIER IAN ; HYDROGARDEN HK LTD ; HYDROGARDEN WHOLESAL SUPPLIES LTD ; TEAM GREEN LTD

Inventor(s): (std): COLLIER IAN ; REYNOLDS IAIN

Inventor(s): IAIN REYNOLDS ; IAN COLLIER

Agent(s): SAYER ROBERT DAVID; FRY DAVID JOHN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN105873433 A	20160817	LSPB	+	published / reissued	
CN105873433 A	20160817	LSPB	+C06	PUBLICATION	
EP3119184 A1	20170125	LSPB	+	published / reissued	
EP3119184 A1	20170125	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160808
GB201405099 A0	20150916	LSWD	-AT	APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)	
GB2525497 A1	20151028	LSPB	+	published / reissued	
US2016345518 AA	20161201	LSPB	+	published / reissued	
WO15140493 A1	20150924	LSPB	+	published / reissued	

WO15140493 A1	20160720	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15112839 COUNTRY OF REF DOCUMENT : US
WO15140493 A1	20160921	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: PLANT CULTIVATION APPARATUS

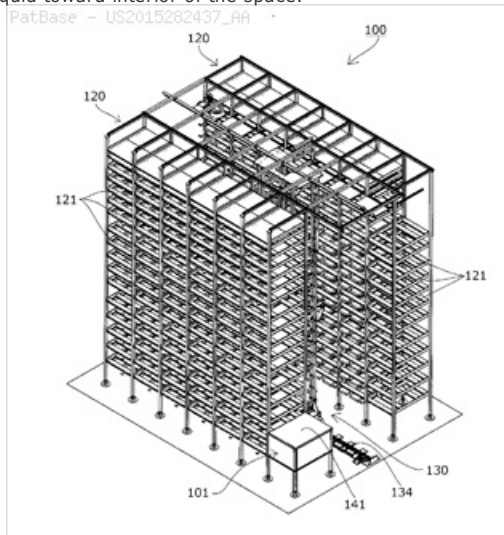
Abstract: Source: US2015282437A A plant cultivation apparatus is provided, which can implement automatic spraying on leaf surfaces at any time and any number of times to improve production efficiency while preventing a facility equipped with the apparatus from having complex configuration and causing adverse effects on constituent parts. The apparatus includes a plurality of cultivation shelves 121 that store cultivation trays 110, transport means 130 for transferring the cultivation trays 110, and spraying means 140 for spraying a spray liquid on leaf surfaces of the plants. The spraying means 140 is arranged on a transfer path or at a transfer destination of each of the cultivation trays 110, and includes a separator 141 that forms a partitioned-off space, and a spray nozzle 143 that sprays the spray liquid toward interior of the space.

Classifications:

International (IPC 8-9): A01G27/00 A01G31/06 A01G7/00 A01G7/04 A01G7/06 A01G9/00 A01G9/02 A01G9/14 A01G9/24 (Advanced/Invention)

CPC: A01G7/06 A01G9/02 A01G27/00 A01G7/045 A01G9/143 A01G9/247 A01G7/00 A01G31/06 Y02P60/216

US: 47/66.6

**Family:**

Publication number	Publication date	Application number	Application date
CN104853588 A	20150819	CN201380065552	20131204
EP2944187 A1	20151118	EP20130871002	20131204
EP2944187 A4	20160831	EP20130871002	20131204
JP2014132847 A2	20140724	JP20130001495	20130109
US2015282437 AA	20151008	US20150741844	20150617
WO14109147 A1	20140717	WO2013JP82610	20131204

Priority:

JP20130001495 20130109 WO2013JP82610 20131204

Probable Assignee: TSUBAKIMOTO CHAIN CO

Assignee(s): (std): TSUBAKIMOTO CHAIN CO

Inventor(s): (std): OHARA HITOSHI ; ITO TAKESHI ; ITO GO

Agent(s): VON KREISLER SELTING WERNER PARTNERSCHAFT VON PATENTANWAELTEN U RECHTSANWAELTEN MBB; FUJIMOTO NOBUO ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN104853588 A	20150819	LSPB	+	published / reissued	
EP2944187 A1	20151118	LSPB	+	published / reissued	
EP2944187 A1	20151118	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150625
EP2944187 A1	20160831	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160729
EP2944187 A1	20160831	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 9/14 20060101ALI20160725BHEP
EP2944187 A1	20160831	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 31/06 20060101ALI20160725BHEP
EP2944187 A1	20160831	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 9/24 20060101ALI20160725BHEP

EP2944187 A1	20160831	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 9/00 20060101AFI20160725BHEP
EP2944187 A1	20160831	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 7/06 20060101ALI20160725BHEP
JP2014132847 A2	20140724	LSPB	+	published / reissued	
US2015282437 AA	20151008	LSPB	+	published / reissued	
US2015282437 AA	20150617	LSAS	AS	ASSIGNMENT	OWNER NAME : TSUBAKIMOTO CHAIN CO., JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:OHARA, HITOSHI; ITO, GO; REEL/FRAME:035853/0872 EFFECTIVE DATE : 20150522
WO14109147 A1	20140717	LSPB	+	published / reissued	
WO14109147 A1	20150709	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: PLANT HYDROPONIC DEVICE

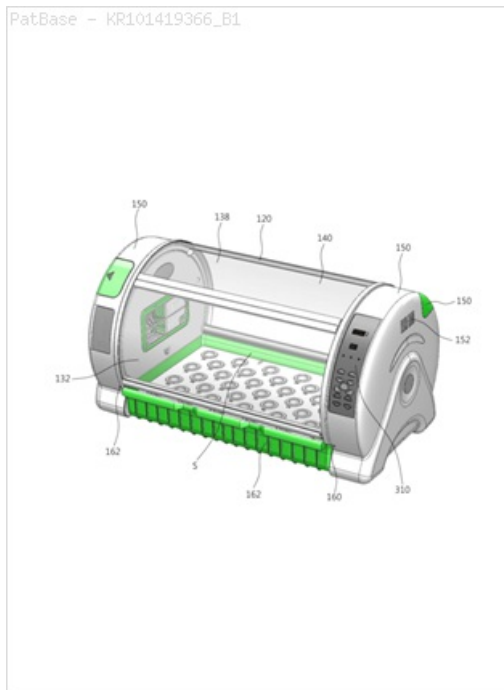
Abstract: Source: KR101419366B The present invention relates to a hydroponics device. The hydroponics device includes: a housing (100) in which a plurality of parts are accommodated; a water tank (162) in which water and culture solution are stored; a cultivation plate (170) which is installed on top of the water tank (162) and on which a plurality of seeds or nursery plants are planted; a circulation passage through which the water stored in the water tank (162) is supplied and which guides water to circulate outside the water tank (162); a water circulation means (180) which is installed inside the water tank (162) and circulates the water stored in the water tank (162) through the circulation passage (210); a nutrient solution storage tank (240) which is placed on the circulation passage (210) between the water circulation means (180) and the water tank (162) and supplies nutrient solution to the water circulating through the circulation passage (210); and a light radiation member (300) which is installed in the upper part of the housing (100) and radiates light to promote the growth of plants. According to the present invention, by including the water circulation means inside the water tank to automatically circulate water and including a heating member to control the temperature of water depending on the kind of plants, it is possible to prevent the water from being spoiled or decomposed. Also, by preventing the water from being decomposed, it is not necessary to place an additional drainage installation inside the water tank. Furthermore, by sensing the level and temperature of the water automatically to maintain the appropriate environment for the growth of plants, the present invention improves user convenience in using the device. As the water and the temperature are controlled automatically, operation efficiency can be also improved.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04

A01G9/02 (Advanced/Invention)

CPC: Y02P60/216 A01G31/02 A01G7/045 A01G27/003 A01G27/008
A01G31/06 A01G2031/006 Y02P60/146



Family:

Publication number	Publication date	Application number	Application date
KR101419366 B1	20140723	KR20130028760	20130318

Priority:

KR20130028760 20130318

Probable Assignee: AUTO ELEX CO LTD

Assignee(s): (std): AUTO ELEX CO LTD ; RFARM CO LTD

Assignee(s): RFARM CO

Inventor(s): (std): BAE JONG YOON

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101419366 B1	20140723	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101419366 B1	20140529	LSRV	-E90F	NOTIFICATION OF REASON FOR FINAL REFUSAL	
KR101419366 B1	20140627	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101419366 B1	20140708	LSGT	+GRNT	WRITTEN DECISION TO GRANT	

Title: METHOD FOR CULTIVATING PLANT

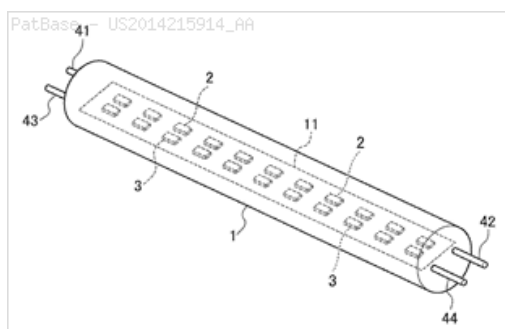
Abstract: Source: US2014215914A A plant-cultivating method is provided which comprises a red light irradiation step (A) and a blue light irradiation step (B), wherein the step (A) and the step (B) are independently carried out for a predetermined period of time under cultivation conditions such that the concentration of carbon dioxide in a cultivation atmosphere at the step (B) is higher than that at the step (A). Preferably the concentrations of carbon dioxide at the step (B) and the step (A) are 1000-2500 ppm and 700-1500 ppm, respectively. The concentration of carbon dioxide at the step (B) is preferably at least 200 ppm higher than that at the step (A).

Classifications:

International (IPC 8-9): A01G1/00 A01G31/00 A01G33/00 A01G7/00
A01G7/02 A01G7/04 A01H3/02 (Advanced/Invention)

CPC: A01H3/02 A01G7/02 A01G7/045 Y02P60/146

US: 47/58.1LS



Family:

Publication number	Publication date	Application number	Application date
DE602014000705 D1	20160225	DE201460000705T	20140203
EP2761986 A1	20140806	EP20140153578	20140203
EP2761986 B1	20160113	EP20140153578	20140203
JP2014147371 A2	20140821	JP20130019707	20130204
JP5723900 B2	20150527	JP20130019707	20130204
US2014215914 AA	20140807	US20140171069	20140203

Priority:

EP20140153578 20140203 JP20130019707 20130204

Probable Assignee: SHOWA DENKO KK

Assignee(s): (std): SHOWA DENKO KK

Inventor(s): (std): TAKEUCHI RYOICHI ; TAKEUCHI RYOUICHI

Inventor(s): TAKEUCHI RYOUICHI TOKYO

Agent(s): PATENTANWALTE STREHL SCHUEBEL HOPF AND PARTNER; STREHL SCHUEBEL HOPF AND PARTNER

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO
PL PT RO RS SE SI SK SM TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2761986 A1	20140806	LSPB	+	published / reissued	
EP2761986 A1	20140806	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140203
EP2761986 A1	20150318	LSSES	+R17P	REQUEST FOR EXAMINATION FILED (CORRECTION)	EFFECTIVE DATE : 20150206
EP2761986 A1	20150722	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 1/00 20060101AFI20150616BHEP
EP2761986 A1	20150722	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 7/02 20060101ALI20150616BHEP
EP2761986 A1	20150722	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 7/04 20060101ALI20150616BHEP
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EP2761986 A1	20150722	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 33/00 20060101ALI20150616BHEP

EP2761986 A1	20150729	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150703
EP2761986 A1	20150729	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : SHOWA DENKO K.K.
EP2761986 A1	20160113	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2761986 A1	20160115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2761986 A1	20160210	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2761986 A1	20160215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 769855 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160215
EP2761986 A1	20160225	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602014000705 COUNTRY OF REF DOCUMENT : DE
EP2761986 A1	20160226	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 3
EP2761986 A1	20160510	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2761986 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160229
EP2761986 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160226 YEAR OF FEE PAYMENT : 3
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EP2761986 A1	20160615	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 769855 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160113
EP2761986 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160113
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EP2761986 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160413
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EP2761986 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160113
EP2761986 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160113
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EP2761986 A1	20161130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
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EP2761986 A1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160113

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EP2761986 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160413
EP2761986 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160113
EP2761986 B1	20160113	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2014147371 A2	20140821	LSPB	+	published / reissued	
JP2014147371 A2	20141008	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20141007
JP2014147371 A2	20141121	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20141120
JP2014147371 A2	20150225	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014147371 A2	20150304	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20150303
JP2014147371 A2	20150402	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20150330
JP5723900 B2	20150527	LSGT	+	granted / extensions (spc, cpc, pte)	
US2014215914 AA	20140807	LSPB	+	published / reissued	
US2014215914 AA	20140204	LSAS	AS	ASSIGNMENT	OWNER NAME : SHOWA DENKO K.K., JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR: TAKEUCHI, RYOICHI; REEL/FRA: 032129/0901 EFFECTIVE DATE : 20140120

Title: METHOD FOR CULTIVATING PLANT

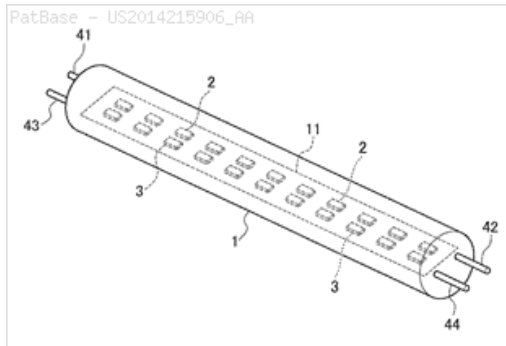
Abstract: Source: US2014215906A A plant-cultivating method is provided which comprises a step (A) of irradiating a plant with a red light and a step (B) of irradiating a plant with a blue light, wherein the step (A) and the step (B) are independently carried out for a predetermined period of time under cultivation conditions such that a fertilizer is used for each of the step (A) and the step (B), of which at least the fertilizer used for the step (A) is applied in the form of a nutritious liquid containing fertilizer ingredients and further carbon dioxide added therein. Preferably, a nutritious liquid is applied at each of the step (A) and the step (B), and the nutritious liquid applied at the step (A) contains carbon dioxide at a concentration higher than that in the nutritious liquid applied at the step (B).

Classifications:

International (IPC 8-9): A01G1/00 A01G31/00 A01G33/00 A01G7/00 A01G7/02 A01G7/04 A01H3/02 C05G5/00 (Advanced/Invention)

CPC: A01G7/02 A01G33/00 A01G7/045 A01G1/001 Y02P60/146

US: 1/1 47/1.4 47/58.1LS

**Family:**

Publication number	Publication date	Application number	Application date
DE602014004523 D1	20161215	DE201460004523T	20140203
EP2761989 A1	20140806	EP20140153594	20140203
EP2761989 B1	20161102	EP20140153594	20140203
JP2014147377 A2	20140821	JP20130019724	20130204
JP5723904 B2	20150527	JP20130019724	20130204
US2014215906 AA	20140807	US20140170806	20140203
US9445549 BB	20160920	US20140170806	20140203

Priority:

EP20140153594 20140203 JP20130019724 20130204

Probable Assignee: SHOWA DENKO KK

Assignee(s): (std): SHOWA DENKO KK

Inventor(s): (std): ARA HIRONORI ; TAKEUCHI RYOICHI ; TAKEUCHI RYOUICHI

Inventor(s): TAKEUCHI RYOUICHI TOKYO ; ARA HIRONORI TOKYO

Agent(s): STREHL SCHUEBEL HOPF AND PARTNER; SUGHRUE MION PLLC

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
EP2761989 A1	20140806	LSPB	+	published / reissued	
EP2761989 A1	20140806	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140203
EP2761989 A1	20150318	LSSES	+R17P	REQUEST FOR EXAMINATION FILED (CORRECTION)	EFFECTIVE DATE : 20150206
EP2761989 A1	20150722	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20150622
EP2761989 A1	20160615	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160519
EP2761989 A1	20161102	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2761989 A1	20161115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2761989 A1	20161115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 840825 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20161115

EP2761989 A1	20161130	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2761989 A1	20161215	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602014004523 COUNTRY OF REF DOCUMENT : DE
EP2761989 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20161102
EP2761989 B1	20161102	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2014147377 A2	20140821	LSPB	+	published / reissued	
JP2014147377 A2	20141008	LSSE	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20141007
JP2014147377 A2	20141121	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20141120
JP2014147377 A2	20150225	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014147377 A2	20150304	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20150303
JP2014147377 A2	20150402	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20150330
JP5723904 B2	20150527	LSGT	+	granted / extensions (spc, cpc, pte)	
US2014215906 AA	20140807	LSPB	+	published / reissued	
US2014215906 AA	20140203	LSAS	AS	ASSIGNMENT	OWNER NAME : SHOWA DENKO K.K., JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: TAKEUCHI, RYUICHI; ARA, HIRONORI; SIGNING DATES FROM 20140120 TO 20140122; REEL/FRAME: 032117/0445
US9445549 BB	20160920	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: LED LIGHT TIMING IN A HIGH GROWTH, HIGH DENSITY, CLOSED ENVIRONMENT SYSTEM

Abstract: Source: US2014259920A Disclosed herein is a high growth, high density, closed environment growing system and methods thereof. A method of accelerating plant cell growth in a growing system may include adjusting the lighting in accordance with an identified plant growth stage.

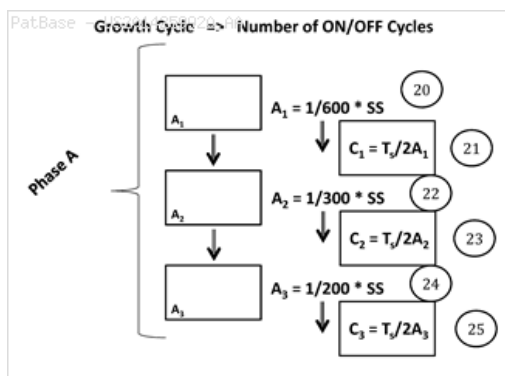
Classifications:

International (IPC 8-9): A01C1/00 A01C1/02 A01G1/00 A01G31/00

A01G31/02 A01G7/04 A01G9/10 A01G9/20 (Advanced/Invention)

CPC: A01G31/02 A01C1/00 A01C1/02 A01G7/045 Y02P60/149 Y02P60/216

US: 47/59R 47/62R



Family:

Publication number	Publication date	Application number	Application date
CN105578870 A	20160511	CN201480014575	20140307
EP2966978 A1	20160120	EP20140775123	20140307
EP2966978 A4	20161019	EP20140775123	20140307
TW201509294 A	20150316	TW20140109168	20140313
US2014259920 AA	20140918	US20140200210	20140307
US9565812 BB	20170214	US20140200210	20140307
WO14159091 A1	20141002	WO2014US21917	20140307

Priority:

US20130784837P 20130314 US20140200210 20140307 WO2014US21917 20140307

Probable Assignee: CROP ONE HOLDINGS INC

Assignee(s): (std): AQUAHARVEST TECH INC ; AQUAHARVEST TECHNOLOGIES INC ; CROP ONE HOLDINGS INC ; CROP ONE HOLDINGS INC

Inventor(s): (std): WILSON JAMES G

Agent(s): FINDLAY ALICE ROSEMARY; GTC LAW GROUP PC AND AFFILIATES; ZALE LAWRENCE P

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN105578870 A	20160511	LSPB	+	published / reissued	
CN105578870 A	20160511	LSPB	+C06	PUBLICATION	
EP2966978 A1	20160120	LSPB	+	published / reissued	
EP2966978 A1	20160120	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150818
EP2966978 A1	20161019	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160919
EP2966978 A1	20161019	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 9/10 20060101AFI20160913BHEP
EP2966978 A1	20161019	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 7/04 20060101ALI20160913BHEP
EP2966978 A1	20161019	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 31/02 20060101ALI20160913BHEP
TW201509294 A	20150316	LSPB	+	published / reissued	
US2014259920 AA	20140918	LSPB	+	published / reissued	
US2014259920 AA	20151006	LSAS	AS	ASSIGNMENT	OWNER NAME : AQUAHARVEST TECHNOLOGIES, INC.,

					MASSACHUSETTS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:WILSON, JAMES G.; REEL/FRAME:036741/0454 EFFECTIVE DATE : 20150924
US2014259920 AA	20160531	LSAS	AS	ASSIGNMENT	OWNER NAME : CROP ONE HOLDINGS, INC., MASSACHUSETTS DESCRIPTION : CHANGE OF NAME; ASSIGNOR:AQUAHARVEST TECHNOLOGIES, INC.; REEL/FRAME:038850/0933 EFFECTIVE DATE : 20141024
US9565812 BB	20170214	LSGT	+	granted / extensions (spc, cpc, pte)	
WO14159091 A1	20141002	LSPB	+	published / reissued	
WO14159091 A1	20150914	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: AIR EMISSION DEVICE FOR GROWING PLANTS

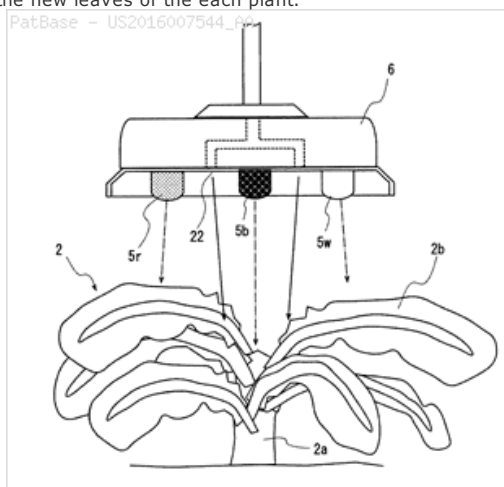
Abstract: Source: US2016007544A The air emission device for growing plants includes a plurality of air emission units for respectively emitting an air flow onto the new leaves growing on a tip of a stem of each plant that has one stem. The transpiration effect on the leaves and suctioning of water and nutrition from the roots of the plants can be promoted. Thus, wilting of leaves can be prevented and the tip burn due to insufficient calcium can be avoided. Provision of the air emission units are effectively arranged to evenly or uniformly supply air onto the new leaves of the each plant.

Classifications:

International (IPC 8-9): A01G7/00 A01G7/02 A01G7/04 A01G7/06 A01G9/18 A01G9/20 A01G9/24 (Advanced/Invention)

CPC: A01G7/06 A01G7/02 A01G7/045 A01G9/18 Y02P60/146

US: 47/1.01R



Family:

Publication number	Publication date	Application number	Application date
AU2014247730 AA	20141009	AU20140247730	20140314
CN105072887 A	20151118	CN201480019432	20140314
EP2982238 A1	20160210	EP20140779648	20140314
EP2982238 A4	20160330	EP20140779648	20140314
IN08436DN2015 A	20160715	IN2015DN08436	20150915
JP2014162848 A1	20170216	JP20150509982T	20140314
US2016007544 AA	20160114	US20140772545	20140314
WO14162848 A1	20141009	WO2014JP56878	20140314

Priority:

JP20130077341 20130403 WO2014JP56878 20140314

Probable Assignee: FUJI SEIKO CO LTD

Assignee(s): (std): FUJI SEIKO CO LTD ; FUJI SHOJI CO LTD

Assignee(s): FUJI SEIKO CO ; FUJI SHOJI CO

Inventor(s): (std): TAKASHIMA KATSUNORI ; YOSHIDA MASASHI

Agent(s): SPRUSON AND FERGUSON; WINTER BRANDL FUERNISS HUEBNER ROESS KAISER POLTE PARTNERSCHAFT MBB; KOBAYASHI OSAMU

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2014247730 AA	20141009	LSPB	+	published / reissued	
CN105072887 A	20151118	LSPB	+	published / reissued	
CN105072887 A	20151118	LSPB	+C06	PUBLICATION	
EP2982238 A1	20160210	LSPB	+	published / reissued	
EP2982238 A1	20160210	LSER	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150915
EP2982238 A1	20160330	LSER	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160225
EP2982238 A1	20160330	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 7/04 20060101ALI20160219BHEP
EP2982238 A1	20160330	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 7/00 20060101AFI20160219BHEP

EP2982238 A1	20160330	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 9/18 20060101ALI20160219BHEP
EP2982238 A1	20160330	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 9/20 20060101ALI20160219BHEP
EP2982238 A1	20160330	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 7/02 20060101ALI20160219BHEP
IN08436DN2015 A	20160715	LSPB	+	published / reissued	
JP2014162848 A1	20170216	LSPB	+	published / reissued	
US2016007544 AA	20160114	LSPB	+	published / reissued	
US2016007544 AA	20150903	LSAS	AS	ASSIGNMENT	OWNER NAME : FUJI SEIKO CO., LTD, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TAKASHIMA, KATSUNORI; YOSHIDA, MASASHI; REEL/FRAME:036488/0157 EFFECTIVE DATE : 20150804
US2016007544 AA	20150903	LSAS	AS	ASSIGNMENT	OWNER NAME : FUJI SHOJI CO., LTD, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TAKASHIMA, KATSUNORI; YOSHIDA, MASASHI; REEL/FRAME:036488/0157 EFFECTIVE DATE : 20150804
WO14162848 A1	20141009	LSPB	+	published / reissued	
WO14162848 A1	20150903	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14772545 COUNTRY OF REF DOCUMENT : US
WO14162848 A1	20150917	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015509982 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO14162848 A1	20150924	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014247730 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140314 KIND CODE OF REF DOCUMENT : A
WO14162848 A1	20151001	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : P1347/2015 COUNTRY OF REF DOCUMENT : AE
WO14162848 A1	20151005	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14162848 A1	20151103	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015146069 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A

Title: VEGETABLE PRESERVATION AND GROWING CASE AND VEGETABLE PRESERVATION METHOD

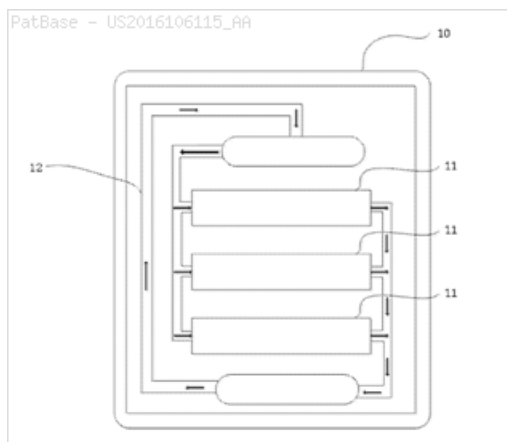
Abstract: Source: US2016106115A A ecological vegetable preservation method and an ecological vegetable preservation and growing case. The method includes circularly supplying a nutrient solution to a vegetable in a thermal insulation case body, and regulating temperature, humidity and/or illumination in the thermal insulation case body, so that the vegetable in the thermal insulation case body stays in a growth-retarded state or a slow growth state. Application of the present method and ecological vegetable preservation and growing case allows the growth state of the vegetable to be controlled, thus ensuring to the greatest extent the freshness of the vegetable.

Classifications:

International (IPC 8-9): A01G1/00 A01G31/00 A01G31/02
A01G31/06 A01G7/04 A01G9/02 A01G9/20 A01G9/26 A23B7/00
A23B7/01 A23B7/153 (Advanced/Invention)

CPC: A23B7/158 A23B7/012 A01G7/045 A01G31/02 A01G1/001
A01G2031/006 A01G31/06 Y02P60/216

US: 47/59R 47/62N



Family:

Publication number	Publication date	Application number	Application date
CN104206254 A	20141217	CN201310209918	20130530
CN104206516 A	20141217	CN201310209591	20130530
EP3005877 A1	20160413	EP20140805073	20140331
EP3005877 A4	20160615	EP20140805073	20140331
JP2016525887 T2	20160901	JP20160515615T	20140331
US2016106115 AA	20160421	US20140894781	20140331
WO14190800 A1	20141204	WO2014CN74379	20140331

Priority:

CN201310209591 20130530 CN201310209918 20130530 WO2014CN74379 20140331
WO2014CN074379 20140331

Probable Assignee: HAIER GROUP CORP

Assignee(s): (std): HAIER GROUP CORP ; QINGDAO HAIGAO DESIGN AND MFG CO LTD ; QINGDAO HAIGAO DESIGN MANUFACTURE CO LTD

Assignee(s): QINGDAO HAIGAO DESIGN MANUFACTURE CO ; QINGDAO HIGH DESIGN MFG CO LTD ; QINGDAO HAIGAO DESIGN AND MFG CO

Inventor(s): (std): ZHOU SHU ; WU JIAN ; HU ZHONGLIN ; FEI ZHAOJUN ; LIU HAIBO

Agent(s): ZIEBIG MARLENE; KAJI SUHARA AND ASSOCIATES; SUZHOU WISPRO INTELLECTUAL PROPERTY AGENCY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
CN104206254 A	20141217	LSPB	+	published / reissued	
CN104206254 A	20141217	LSPB	+C06	PUBLICATION	
CN104206516 A	20141217	LSPB	+	published / reissued	
CN104206516 A	20141217	LSPB	+C06	PUBLICATION	
EP3005877 A1	20160413	LSPB	+	published / reissued	
EP3005877 A1	20160413	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20151218
EP3005877 A1	20160615	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160518
EP3005877 A1	20160615	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A23B 7/00 20060101AFI20160511BHEP

EP3005877 A1	20160615	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 31/06 20060101ALI20160511BHEP
JP2016525887 T2	20160901	LSPB	+	published / reissued	
JP2016525887 T2	20161025	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20161025
JP2016525887 T2	20161118	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20161118
US2016106115 AA	20160421	LSPB	+	published / reissued	
US2016106115 AA	20151130	LSAS	AS	ASSIGNMENT	OWNER NAME : HAIER GROUP CORPORATION, CHINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WU, JIAN; ZHOU, SHU; FEI, ZHAOJUN; AND OTHERS; REEL/FRAME:037168/0575 EFFECTIVE DATE : 20151123
US2016106115 AA	20151130	LSAS	AS	ASSIGNMENT	OWNER NAME : QINGDAO HAIGAO DESIGN AND MANUFACTURING CO.,LTD, CHI DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WU, JIAN; ZHOU, SHU; FEI, ZHAOJUN; AND OTHERS; REEL/FRAME:037168/0575 EFFECTIVE DATE : 20151123
WO14190800 A1	20141204	LSPB	+	published / reissued	
WO14190800 A1	20151127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016515615 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO14190800 A1	20151130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14190800 A1	20151130	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14894781 COUNTRY OF REF DOCUMENT : US

Title: VEGETABLE CARRYING BOX

Abstract: Source: US2016100536A A vegetable carrying box includes a solution carrying box provided with a high-level liquid inlet and a low-level liquid outlet that are opposite to each other, where an area between the liquid inlet and the liquid outlet in the solution carrying box is provided with protruding diversion partitions to form a zigzag flow passage, and an atomizer is disposed in the flow passage.

Classifications:

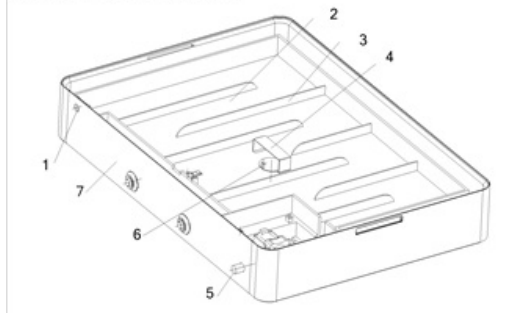
International (IPC 8-9): A01G31/00 A01G31/02 A01G31/06

A01G7/04 B65D25/04 (Advanced/Invention)

CPC: A01G31/02 B65D25/04 A01G7/045 A01G31/06 Y02P60/216

US: 47/62N 47/64

PatBase - US2016100536_AA



Family:

Publication number	Publication date	Application number	Application date
CN104206244 A	20141217	CN201310209291	20130530
CN104206245 A	20141217	CN201310209841	20130530
CN104206246 A	20141217	CN201310209842	20130530
CN104206252 A	20141217	CN201310209594	20130530
EP3005859 A1	20160413	EP20140804526	20140331
EP3005859 A4	20160615	EP20140804526	20140331
JP3205266 U	20160721	JP20160600031U	20140331
US2016100536 AA	20160414	US20140894855	20140331
WO14190797 A1	20141204	WO2014CN74366	20140331

Priority:

CN201310209291 20130530 CN201310209594 20130530 CN201310209842 20130530
CN201310209841 20130530 WO2014CN74366 20140331 WO2014CN074366 20140331

Probable Assignee: HAIER GROUP CORP

Assignee(s): (std): HAIER GROUP CORP ; QINGDAO HAIGAO DESIGN AND MFG CO LTD ; QINGDAO HAIGAO DESIGN MANUFACTURE CO LTD

Assignee(s): QINGDAO HAIGAO DESIGN MANUFACTURE CO ; QINGDAO HIGH DESIGN MFG CO LTD ; QINGDAO HAIGAO DESIGN AND MFG CO

Inventor(s): (std): FEI ZHAOJUN ; HU ZHONGLIN ; LIU HAIBO ; WU JIAN ; ZHOU SHU

Agent(s): ZIEBIG MARLENE; KAJI SUHARA AND ASSOCIATES; SUZHOU WISPRO INTELLECTUAL PROPERTY AGENCY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
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CN104206244 A	20141217	LSPB	+C06	PUBLICATION	
CN104206245 A	20141217	LSPB	+	published / reissued	
CN104206245 A	20141217	LSPB	+C06	PUBLICATION	
CN104206246 A	20141217	LSPB	+	published / reissued	
CN104206246 A	20141217	LSPB	+C06	PUBLICATION	
CN104206252 A	20141217	LSPB	+	published / reissued	
CN104206252 A	20141217	LSPB	+C06	PUBLICATION	
EP3005859 A1	20160413	LSPB	+	published / reissued	
EP3005859 A1	20160413	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20151218
EP3005859 A1	20160615	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH	EFFECTIVE DATE : 20160519

REPORT					
EP3005859 A1	20160615	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 31/06 20060101ALI20160512BHEP
EP3005859 A1	20160615	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : A01G 31/02 20060101AFI20160512BHEP
JP3205266 U	20160721	LSGT	+	granted / extensions (spc, cpc, pte)	
US2016100536 AA	20160414	LSPB	+	published / reissued	
US2016100536 AA	20151130	LSAS	AS	ASSIGNMENT	OWNER NAME : HAIER GROUP CORPORATION, CHINA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WU, JIAN; ZHOU, SHU; FEI, ZHAOJUN; AND OTHERS; REEL/FRAME:037172/0189 EFFECTIVE DATE : 20151123
US2016100536 AA	20151130	LSAS	AS	ASSIGNMENT	OWNER NAME : QINGDAO HAIGAO DESIGN AND MANUFACTURING CO.,LTD, CHI DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WU, JIAN; ZHOU, SHU; FEI, ZHAOJUN; AND OTHERS; REEL/FRAME:037172/0189 EFFECTIVE DATE : 20151123
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WO14190797 A1	20151127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016600031 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO14190797 A1	20151130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14190797 A1	20151130	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14894855 COUNTRY OF REF DOCUMENT : US

Title: FACILITY FOR TREATING AND RECYCLING ANIMAL WASTE COMPRISING METHANISATION, CULTIVATION OF MICROALGAE AND MACROPHYTES, AND VERMICULTURE

Abstract: Source: US2016264484A A facility for treating and recycling animal waste (2), including a unit (6) for methanizing the waste including treatment of the obtained biogases, a cogeneration unit (8) delivering electricity and heat (32) from the biogases, and a unit for hydroponically cultivating microalgae (14) in photo-bioreactors supplied by the liquid phase (12) of the organic residues from the methanization. The facility further includes a unit for cultivating macrophytes (22) supplied with water (20) leaving the unit for cultivating microalgae, and a vermiculture unit (24) fed by harvesting the macrophytes (22) and by the sludge (36) coming from the raw digestate from the methanization.

Classifications:

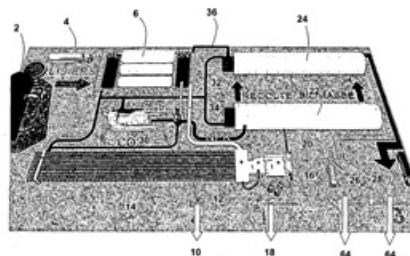
International (IPC 8-9): A01G1/00 A01G17/00 A01G31/02
A01G33/00 A01G7/02 A01G9/14 C02F103/20 C02F11/04 C02F3/28
C02F3/30 C02F3/32 C02F9/14 C05F17/00 C05F17/02 C05F3/06
C12M1/00 C12M1/107 (Advanced/Invention);
C02F103/20 (Advanced/Non-invention)

CPC: C02F3/28 C02F3/32 C02F3/322 C02F3/327 C05F17/0027
Y02W10/18 Y02W10/30 Y02W30/43 Y02W30/47 Y02P20/145
Y02E50/343 C05F3/06 A01G31/02 A01G9/14 A01G7/02 A01G1/001
A01G33/00 A01G17/00 C12M43/06 C02F9/00 C02F11/04
C02F2103/20 C02F2303/10 C05F17/0009 C05F17/0288 C12M21/02
C12M21/04 C12M43/08 Y02W10/23 Y02W10/37

US: 47/62R

PatBase - US2016264484_AA

Fig. 1



Family:

Publication number	Publication date	Application number	Application date
CA2917087 AA	20151229	CA20142917087	20140630
CN105517962 A	20160420	CN201480047504	20140630
EP3013758 A1	20160504	EP20140759256	20140630
FR3007756 A1	20150102	FR20130001538	20130628
FR3007756 B1	20161007	FR20130001538	20130628
US2016264484 AA	20160915	US20140900908	20140630
WO14207547 A1	20141231	WO20141B01234	20140630

Priority:

FR20130001538 20130628 WO20141B01234 20140630

Probable Assignee: SKYWORLD INT OVERSEAS LTD

Assignee(s): (std): GUILLARD RENE JEAN ; SKYWORLD INT OVERSEAS LTD

Inventor(s): (std): GUILLARD RENE JEAN

Inventor(s): RENE JEAN GUILLARD

Agent(s): GOUDREAU GAGE DUBUC ; DEGRET JACQUES; DEGRET

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2917087 AA	20151229	LSPB	+	published / reissued	
CN105517962 A	20160420	LSPB	+	published / reissued	
CN105517962 A	20160420	LSPB	+C06	PUBLICATION	
EP3013758 A1	20160504	LSPB	+	published / reissued	
EP3013758 A1	20160504	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160128
EP3013758 A1	20161019	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : GUILLARD, RENE-JEAN
EP3013758 A1	20161116	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : SKYWORLD INTERNATIONAL OVERSEAS LIMITED
EP3013758 A1	20161116	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : GUILLARD, RENE-JEAN
FR3007756 A1	20150102	LSPB	+	published / reissued	
FR3007756 A1	20160628	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

FR3007756 B1	20161007	LSGT	+	granted / extensions (spc, cpc, pte)	
US2016264484 AA	20160915	LSPB	+	published / reissued	
WO14207547 A1	20141231	LSPB	+	published / reissued	
WO14207547 A1	20151229	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2917087 COUNTRY OF REF DOCUMENT : CA
WO14207547 A1	20160128	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016102824 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO14207547 A1	20160602	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14900908 COUNTRY OF REF DOCUMENT : US

Title: PLANT FACTORY USING LED

Abstract: Source: KR101485159B The present invention relates to a plant cultivation apparatus capable of supplying light of an LED into a cultivation facility, purifying polluted air to supply the purified air into the cultivation facility, and uniformly maintaining the internal air pressure of the cultivation facility. The present invention comprises: a cultivation facility (10) having an inner space isolated from the outside; an LED lighting (20) provide in the inner space of the cultivation facility (10) to emit light; an air supply member (30) for supplying purified air to the inner space of the cultivation facility (10); a plant cultivation member (40) provided in the inner space of the cultivation room (10), wherein plants cultivated by the light emitted from the LED lighting (20) and the air supplied from the air supply member (30) are planted in the plant cultivation member (40); an air exhaust member (50) installed in the cultivation facility (10) to exhaust the air, which charges the inner space of the cultivation room (10), to the outside; a pressure sensor (60) provided in the inner space of the cultivation facility (10) to sense the pressure of the air, which is supplied from the air supply member (30) to charge the inner space of the cultivation room (10); and a controller (70) for controlling the air exhaust member (50) according to the sensing by the pressure sensor (60) to appropriately maintain the air pressure of the inner space of the cultivation facility (10).

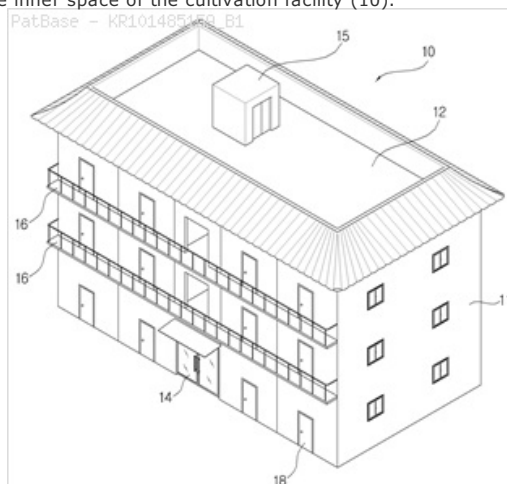
Classifications:

International (IPC 8-9): A01G7/02 A01G7/04 A01G9/18

A01G9/24 (Advanced/Invention)

CPC: Y02P60/149 A01G9/24 A01G7/02 A01G7/045 A01G9/20

A01G9/241 A01G9/246 A01G9/26 E04H5/08



Family:

Publication number	Publication date	Application number	Application date
KR101485159 B1	20150120	KR20130106419	20130905

Priority:

KR20130106419 20130905

Probable Assignee: INJI ELECTRIC IND CO LTD

Assignee(s): (std): INJI ELECTRIC IND CO LTD

Assignee(s): INJI ELECTRIC INDUSTRIAL CO ; INJI ELECTRIC INDUSTRIAL CO LTD

Inventor(s): (std): HUR EUI SOK

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
KR101485159 B1	20150120	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101485159 B1	20141209	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101485159 B1	20150109	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101485159 B1	20150114	LSGT	+GRNT	WRITTEN DECISION TO GRANT	

Title: HYDROPONIC CULTIVATION SYSTEM, HYDROPONIC CULTIVATION METHOD, PLANT CULTIVATION SYSTEM, AND PLANT CULTIVATION APPARATUS

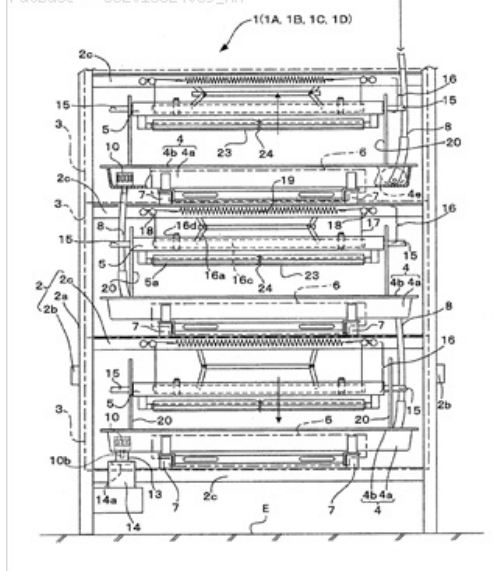
Abstract: Source: US2016324089A A hydroponic cultivation system for plants includes a first plant cultivation apparatus to hydroponically cultivate plants using a first liquid fertilizer, a first supply path to supply the first liquid fertilizer, a second plant cultivation apparatus to hydroponically cultivate plants using a second liquid fertilizer having a component differing from a component of the first liquid fertilizer, a second supply path to supply the second liquid fertilizer, and a tray carrier device to carry cultivation trays with the plants thereon between the first plant cultivation apparatus and the second plant cultivation apparatus. The cultivation trays are arranged in stages and mutually connected in series to the first supply path via a removable hose in the first plant cultivation apparatus, and the cultivation trays are arranged in stages and mutually connected in series to the second supply path via a removable hose in the second plant cultivation apparatus.

Classifications:

International (IPC 8-9): A01G31/00 A01G31/04 A01G31/06
A01G7/00 A01G7/04 A01G9/02 A01G9/24
F24F7/06 (Advanced/Invention)

CPC: Y02P60/216 A01G7/045 A01G31/06

PatBase - US2016324089_AA



Family:

Publication number	Publication date	Application number	Application date
CN106413385 A	20170215	CN201580005160	20150115
EP3097774 A1	20161130	EP20150740272	20150115
JP2015136356 A2	20150730	JP20140011885	20140124
JP2015136357 A2	20150730	JP20140011886	20140124
JP2015136359 A2	20150730	JP20140011888	20140124
JP2015136367 A2	20150730	JP20140174916	20140829
JP5880901 B2	20160309	JP20140174916	20140829
KR20160102029 A	20160826	KR20167019771	20150115
US2016324089 AA	20161110	US20160215092	20160720
US2016324090 AA	20161110	US20160215100	20160720
WO15111487 A1	20150730	WO2015JP50863	20150115

Priority:

JP20140011885 20140124 JP20140011886 20140124 JP20140011888 20140124
JP20140174916 20140829 WO2015JP50863 20150115

Probable Assignee: FUJITSU LTD

Assignee(s): (std): FUJITSU LTD

Inventor(s): (std): MIYABE HARUYASU ; MURAOKA TATSUO ; SATO AKIHIKO ; SATOH AKIHIKO

Agent(s): HOFFMANN EITL; KAWAKAMI KOJI

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
CN106413385 A	20170215	LSPB	+	published / reissued	
CN106413385 A	20170215	LSPB	+C06	PUBLICATION	
EP3097774 A1	20161130	LSPB	+	published / reissued	
EP3097774 A1	20161130	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160707
EP3097774 A1	20170111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G

						31/04 20060101ALI20161207BHEP
EP3097774 A1	20170111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 9/02 20060101ALI20161207BHEP	
EP3097774 A1	20170111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 31/06 20060101ALI20161207BHEP	
EP3097774 A1	20170111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 7/00 20060101ALI20161207BHEP	
EP3097774 A1	20170111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 7/04 20060101ALI20161207BHEP	
EP3097774 A1	20170111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 31/00 20060101AFI20161207BHEP	
EP3097774 A1	20170111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : A01G 9/24 20060101ALI20161207BHEP	
EP3097774 A1	20170111	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : F24F 7/06 20060101ALI20161207BHEP	
JP2015136356 A2	20150730	LSPB	+	published / reissued		
JP2015136356 A2	20161004	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20161004	
JP2015136357 A2	20150730	LSPB	+	published / reissued		
JP2015136359 A2	20150730	LSPB	+	published / reissued		
JP2015136359 A2	20161004	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20161004	
JP2015136367 A2	20150730	LSPB	+	published / reissued		
JP2015136367 A2	20151211	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20151211	
JP2015136367 A2	20151225	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN		
JP2015136367 A2	20160107	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20160106	
JP2015136367 A2	20160212	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20160119	
JP5880901 B2	20160309	LSGT	+	granted / extensions (spc, cpc, pte)		
KR20160102029 A	20160826	LSPB	+	published / reissued		
US2016324089 AA	20161110	LSPB	+	published / reissued		
US2016324089 AA	20160808	LSAS	AS	ASSIGNMENT	OWNER NAME : FUJITSU LIMITED, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MIYABE, HARUYASU; MURAOKA, TATSUO; SATOH, AKIHIKO; SIGNING DATES FROM 20160629 TO 20160706; REEL/FRAME:039610/0568	
US2016324090 AA	20161110	LSPB	+	published / reissued		
US2016324090 AA	20160808	LSAS	AS	ASSIGNMENT	OWNER NAME : FUJITSU LIMITED, JAPAN	

DESCRIPTION : ASSIGNMENT OF
 ASSIGNORS INTEREST;
 ASSIGNORS:MIYABE, HARUYASU;
 MURAOKA, TATSUO; SATOH,
 AKIHIKO; SIGNING DATES FROM
 20160629 TO 20160706;
 REEL/FRAME:039610/0687

WO15111487 A1	20150730	LSPB	+	published / reissued	
WO15111487 A1	20160720	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20167019771 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO15111487 A1	20160725	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

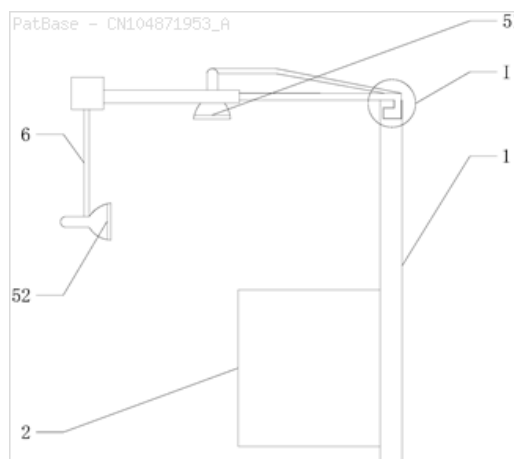
Title: THREE-DIMENSIONAL FLOWER RACK WITH ILLUMINATION STRUCTURES

Abstract: Source: CN104871953A The invention discloses a three-dimensional flower rack with illumination structures. The three-dimensional flower rack is suitable for being applied to the technical field of flower racks. The three-dimensional flower rack comprises installation plates arranged on a wall, flower pots for containing plants, communication pipes for changing water for the plants, and water storage boxes for storing water. Partition boards perpendicular to the installation plates are arranged on the installation plates, supporting blocks are arranged below the partition boards, installation sliding grooves are formed in the upper surfaces of the supporting blocks, and the flower pots are placed above the supporting blocks. The three-dimensional flower rack with illumination structures is provided according to the property of the water-culture plants, and the flower pots capable of separated in a sliding mode are adopted so that a user can easily take off the flower pots and conveniently take care of the plants. Meanwhile, the appearance attractiveness of the three-dimensional flower rack is increased through transverse arrangement of the flower pots, and the size of the three-dimensional flower rack is reduced. Furthermore, a control system is adopted to control the water in the flower pots, automatic water changing is achieved, the user can conveniently use the flower pots, and therefore the comprehensive performance and market competitiveness of the three-dimensional flower rack are increased.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04 (Advanced/Invention)

CPC: Y02P60/216 Y02P60/146 A01G31/06 A01G7/045

**Family:**

Publication number	Publication date	Application number	Application date
CN104871953 A	20150902	CN201510359192	20150625

Priority:

CN201510359192 20150625

Probable Assignee:

ZHOU QIN

Assignee(s): (std):

ZHOU QIN

Inventor(s): (std):

ZHOU QIN

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
CN104871953 A	20150902	LSPB	+	published / reissued	
CN104871953 A	20150902	LSPB	+C06	PUBLICATION	

Title: APPARATUS OF CULTIVATING BEAN SPROUTS

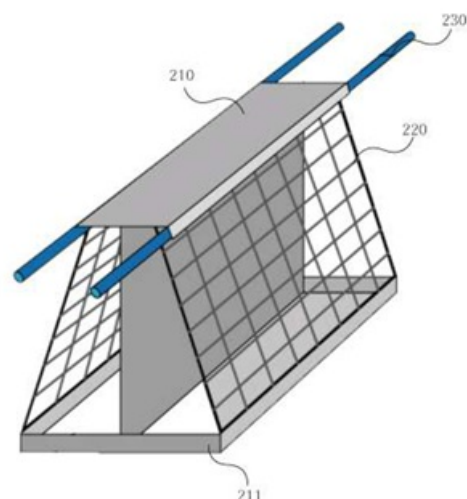
Abstract: Source: KR101561658B The present invention relates to an apparatus for cultivating sprouts including green beans such as bean sprouts, mungbean sprouts, sprouts of bean sprouts, radish sprouts, barley sprouts, buck wheat sprouts, etc., and more specifically to an apparatus for cultivating sprouts including green beans which automates the cultivating facilities for cultivating a better quality of bean sprouts by building environments necessary for green bean cultivation. The apparatus for cultivating sprouts including green beans according to an embodiment of the present invention may include: a cultivating vessel for cultivating the green bean sprouts; a slope type cultivating bed which includes a slope piling plate, a net bed, and a cultivation water supplying unit, wherein the slope piling plate has an empty inside by the side shaped in a trapezoid where the cultivating vessel settling side is sloped, the net bed is arranged on the slope side of the slope piling plate and comprises a net-shaped elastic body for the cultivating vessel to be installed, and the cultivation water supplying unit supplies cultivation water from the inside of the slope piling plate towards the net bed; and a lamp which is provided inside or outside of the slope piling plate and provides artificial light necessary for the growth and the germination of the green bean sprouts.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04 (Advanced/Invention)

CPC: A01G31/06 A01G7/045 Y02P60/216 Y02P60/146

PatBase - KR101561658_B1

**Family:**

Publication number	Publication date	Application number	Application date
KR101561658 B1	20151020	KR20150071994	20150522

Priority:

KR20150071994 20150522

Probable Assignee: AGRONICS CO LTD

Assignee(s): (std): AGRONICS CO LTD ; JU JONG MOON

Assignee(s): LTD KE THEREBY KNICKS ; PREDOMINANTLY DOOR ; AGRONICS CO

Inventor(s): (std): JOO SEONG YONG ; JU JONG MOON

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101561658 B1	20151020	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: GERMOIR A GRAINES

Abstract: Seed germinator comprising germination compartments 1 arranged stacked on top of one another above a saucer of water 2 and surmounted by a cover 3, characterised in that it has a reserve of water at its top part.

Classifications:

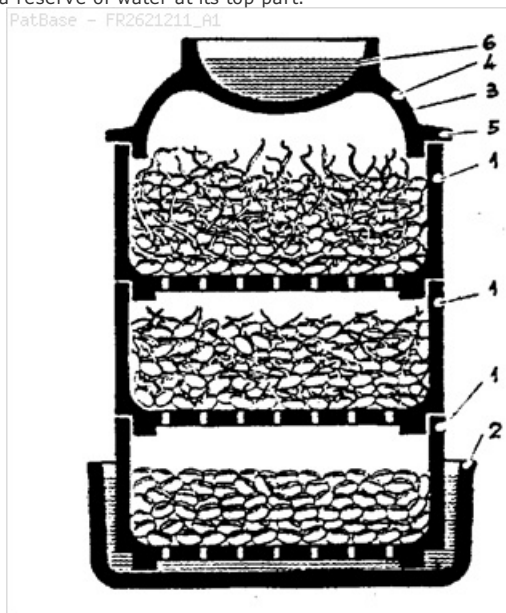
International (IPC 8-9): A01C1/02 A01G31/06 (Advanced/Invention);
A01C1/00 A01G31/02 (Core/Invention)

International (IPC 1-7): A01C1/02

CPC: A01C1/02 A01G31/06 Y02P60/216

European: A01C1/02 A01G31/06

PatBase - FR2621211_A1



Family:

Publication number	Publication date	Application number	Application date
FR2621211 A1	19890407	FR19870013763	19871006
FR2621211 B1	19900209	FR19870013763	19871006

Priority:

FR19870013763 19871006

Probable Assignee:

LABBE MAX

Assignee(s): (std):

LABBE MAX

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
FR2621211 A1	19890407	LSPB	+	published / reissued	
FR2621211 A1	20030815	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2621211 B1	19900209	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: MODULAR HYDROPONIC RACK SYSTEM FOR CROP CULTIVATION AND TRANSPORT

Abstract: Source: US2017055474A A modular hydroponic cultivation and transport system for the cultivation and transport of organisms, including but not limited to, various forms of plants and fungi in hydroponic towers, is provided. Further, apparatuses for the cultivation and transport of organisms grown in hydroponic towers, are provided. Methods for the cultivation and transport of organisms using the transport system and apparatuses described herein are also provided herein.

Classifications:

International (IPC 8-9): A01G1/00 A01G1/04 A01G25/02 A01G31/06 A01G7/04 (Advanced/Invention)

CPC: A01G31/02 Y02P60/216 A01G31/06 A01G1/042 A01G25/023 A01G7/045 A01G1/001



Family:

Publication number	Publication date	Application number	Application date
CA2947608 AA	20161031	CA20152947608	20150511
US2017055474 AA	20170302	US20150308090	20150511
WO15175415 A1	20151119	WO2015US30170	20150511

Priority:

US20140000138P 20140519 US20140991593P 20140511 WO2015US30170 20150511
US20150308090 20150511

Probable Assignee: UNIV WYOMING

Assignee(s): (std): UNIV OF WYOMING ; UNIV WYOMING

Assignee(s): OF WYOMING UNIV ; STOREY NATHANIEL R

Inventor(s): (std): STOREY NATHANIEL R

Agent(s): OSLER HOSKIN AND HARCOURT LLP; WEATHERLY JAMES M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
CA2947608 AA	20161031	LSPB	+	published / reissued	
US2017055474 AA	20170302	LSPB	+	published / reissued	
WO15175415 A1	20151119	LSPB	+	published / reissued	
WO15175415 A1	20161031	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2947608 COUNTRY OF REF DOCUMENT : CA
WO15175415 A1	20161111	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: A SPROUT GROWING APPARATUS

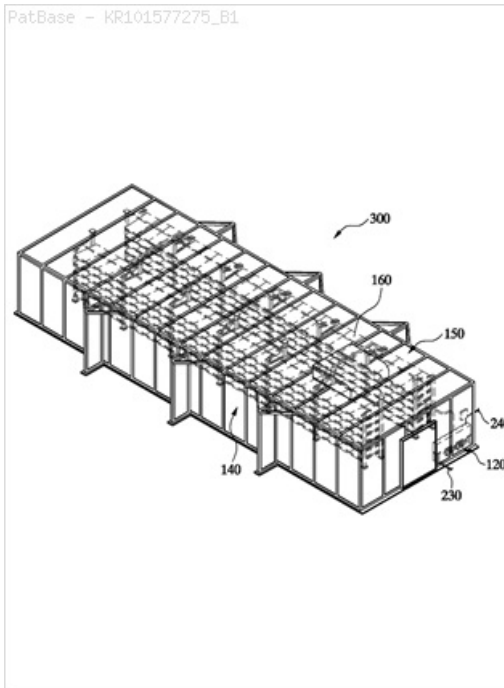
Abstract: Source: KR101577275B The present invention relates to an eco-friendly apparatus for growing sprout feed which can grow sprouts of a plant which produces feed for livestock all year round and improve productivity. The eco-friendly apparatus for growing sprout feed in a large quantity comprises: a layered sprout rack having a heating and cooling unit formed on an upper portion thereof and a plurality of shelves formed therein; and a main body unit having an irrigation unit formed therein to supply water and a lighting unit to maintain brightness. The layered sprout rack in the main body unit comprises left and right layered sprout racks. Each of the left and right layered sprout racks comprises: a skeletal base frame on which a plurality of sprout shelves are arranged upwards; an LED disposed on an upper portion of each sprout shelf; and a spray head for spraying in a mist form. The left and right layered sprout racks are formed in a structure which can accommodate the plurality of sprout shelves in layers, form a drain passage to drain water to one side or an inclined surface, use a material resistant to water to prevent secondary contamination by corrosion, improve efficiency since the large amount of energy is not required to maintain a specific temperature, allow a worker to easily perform work, and prevent cold-weather damage to a plant in the process of harvesting. Also, plants of the identical qualities can be stably produced all year round to maintain constant supply and demand.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04 A01G9/24 A23K1/14 A23N17/00 (Advanced/Invention)

CPC: A01G31/06 A01G7/045 A01G9/24 A23K1/14 A23N17/00 Y02P60/149 Y02P60/216

PatBase - KR101577275_B1



Family:

Publication number	Publication date	Application number	Application date
KR101577275 B1	20151228	KR20150057682	20150424

Priority:

KR20150057682 20150424

Probable Assignee: FODDER SYSTEM CO ITD
Assignee(s): (std): FODDER SYSTEM CO ITD
Assignee(s): FORD SYSTEMS CO LTD ; FODDER SYSTEM CO
Inventor(s): (std): AHN SANG CHUN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101577275 B1	20151228	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: GROWING SYSTEM

Abstract: Source: US2016029582A A growing system and/or plant support structure may include one or more feet supporting at least one or more uprights, on which a plurality of plants and/or grow boards for growing plants may be positioned. A nutrient delivery system may be positioned between opposing uprights to provide nutrient supply to a root zone of plants, which nutrient delivery system may be positioned adjacent each opposing upright in an interior chamber of the plant support structure. A light system may be positioned between two adjacent plant support structures such that it simultaneously provides light to the exterior surface of the two plant support structures.

Classifications:

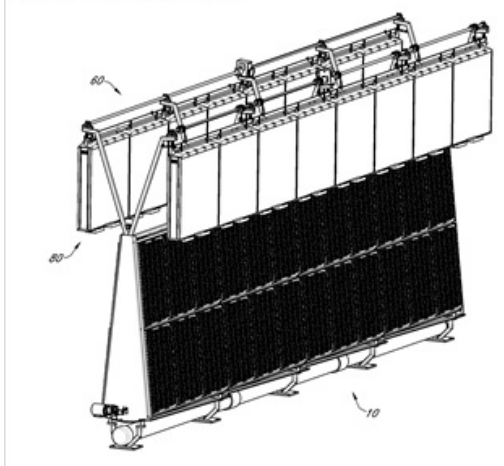
International (IPC 8-9): A01G1/00 A01G29/00 A01G31/00
A01G31/02 A01G31/06 A01G7/04 A01G9/20 A01G9/24

F21V33/00 (Advanced/Invention)

CPC: A01G31/06 A01G7/045 Y02P60/216 Y02P60/146

US: 211/13.1 362/96 47/59R 47/62R

PatBase - US2016029582_AA

**Family:**

Publication number	Publication date	Application number	Application date
CA2956952 AA	20170131	CA20152956952	20150731
TW201620376 A	20160616	TW20150124832	20150731
US2016029582 AA	20160204	US20150815472	20150731
WO16019330 A1	20160204	WO2015US43277	20150731

Priority:

US20140031668P 20140731	US20140032452P 20140801	US20150815472 20150731
US20150174940P 20150612	US20140050075P 20140912	WO2015US43277 20150731

Probable Assignee: LIVING GREENS FARM IP LLC

Assignee(s): (std): LIVING GREENS FARM INC

Assignee(s): LIVING GREENS FARM IP LLC ; ANDERSON DANA ; CARRIERE RAYMOND ; LAGRO DANIEL

Inventor(s): (std): ANDERSON DANA ; CARRIERE RAYMOND ; CARRIERE RAYMOND L ; DANA ANDERSON ; DANIEL LAGRO ; LAGRO DANIEL ; RAYMOND CARRIERE

Agent(s): AIRD AND MCBURNEY LP; HAMILTON IP LAW PC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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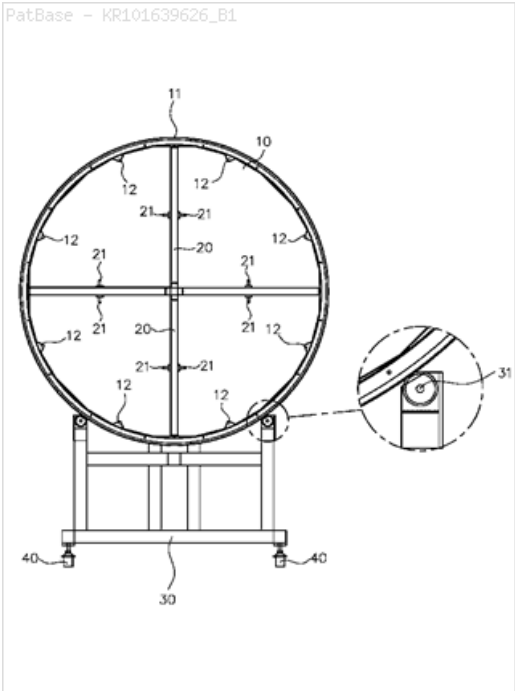
Patent	Date recorded	Event group	Code	Event	Details
CA2956952 AA	20170131	LSPB	+	published / reissued	
TW201620376 A	20160616	LSPB	+	published / reissued	
US2016029582 AA	20160204	LSPB	+	published / reissued	
US2016029582 AA	20160426	LSAS	AS	ASSIGNMENT	OWNER NAME : LIVING GREENS FARM, INC., MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LAGRO, DANIEL, MR; ANDERSON, DANA, MR; CARRIERE, RAYMOND L., MR; SIGNING DATES FROM 20150923 TO 20160101; REEL/FRAME:038385/0280
US2016029582 AA	20160624	LSAS	AS	ASSIGNMENT	OWNER NAME : LIVING GREENS FARM IP LLC, MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:LIVING GREENS FARM, INC.; REEL/FRAME:039009/0042 EFFECTIVE DATE : 20160616

WO16019330 A1	20160204	LSPB	+	published / reissued	
WO16019330 A1	20170131	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2956952 COUNTRY OF REF DOCUMENT : CA
WO16019330 A1	20170131	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: SEED GERMINATOR

Abstract: Source: KR101639626B The present invention relates to a sprout germinating device, wherein the sprout germinating device is used for growing sprout vegetables and comprises: a cultivating drum whose inside space is partitioned into four chambers and which is made of stainless steel material and has an embossed inner surface; a separator member which is disposed inside the cultivating drum to prevent sprout seedlings growing inside the cultivating drum from getting tangled; a spray nozzle which is installed inside the cultivating drum to supply water to seeds introduced into the cultivating drum; a sterilizer lamp which is installed inside the cultivating drum to sterilize the sprout seedlings; a rotating guide member which is formed along the outer circumference of the cultivating drum to guide the rotation of the cultivating drum; a support member which is located at a lower end of the cultivating drum to provide support for the cultivating drum; a transport member which is mounted at each lower end of the support frame so that the cultivating drum can be moved; and a roller member which is mounted at an upper end of the support frame to rotate in contact with the outer surface of the rail member. According to the present invention, the sprout germinating device allows the water and temperature provided inside the cultivating drum to be controlled through a control box so that the growth of sprout vegetables growing inside the cultivating drum can be expedited.

Classifications:
International (ipc 8-9): A01C1/00 A01C1/02 A01G31/04 A01G7/04 (Advanced/Invention)
CPC: A01C1/02 A01C1/00 A01G31/047 A01G7/045 Y02P60/146 Y02P60/216



Family:

Publication number	Publication date	Application number	Application date
KR101639626 B1	20160715	KR20150173384	20151207

Priority:
KR20150173384 20151207

Probable Assignee: NAMIL ENGINEERING CO LTD BY SHARES
Assignee(s): (std): NAMIL ENGINEERING CO LTD BY SHARES
Assignee(s): NAMIL ENGINEERING COMPANY LIMITED BY SHARES ; NAMIL ENGINEERING CO BY SHARES LTD ; NAMIL ENGINEERING CO LTD
Inventor(s): (std): KOO YEON HO

Legal status (INPADOC)
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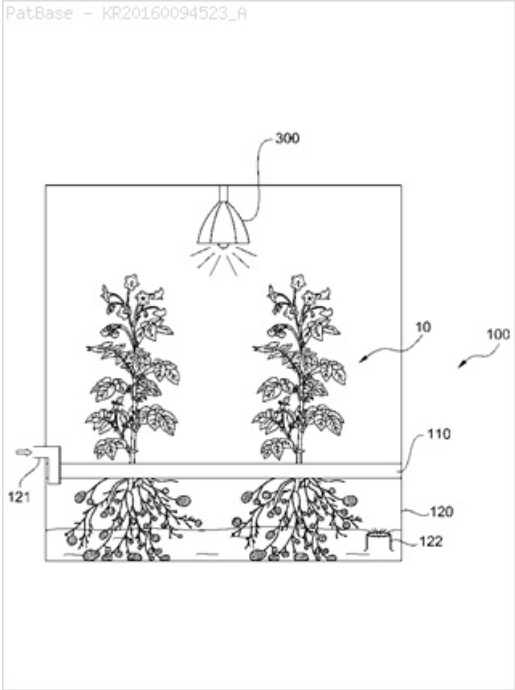
Patent	Date recorded	Event group	Code	Event	Details
KR101639626 B1	20160715	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: CIRCULATION TYPE DEEP FLOW TECHNIQUE APPARATUS FOR PRODUCING SEED POTATOES AND CULTIVATION METHOD USING THE SAME

Abstract: Source: KR20160094523A Provided are a circulating deep flow hydroponic apparatus for producing seed potatoes and a cultivation method using the same. The circulating deep flow hydroponic apparatus comprises: a transplantation panel having at least one seed potato plantlet transplanting hole therein; a bed having a space where the transplantation panel is placed and storing a culture solution necessary for growth of the seed potato plantlet transplanted in the transplantation panel; a supply tube connected to a circulating pump for circulating the culture solution into the bed to supply the culture solution to the bed; and a discharge tube collecting the culture solution circulating through the bed and then discharged, wherein the discharge tube includes water discharge holes separated by a predetermined distance from a bottom part of the bed so that the level of the culture solution in the bed can be kept at a constant level, so a predetermined portion of the transplanted seed potato plantlet is immersed in the culture solution.

Classifications:

International (IPC 8-9): A01G31/00 A01G31/06 A01G7/04 A01G7/06 (Advanced/Invention)
CPC: A01G31/06 A01G7/045 A01G7/06 A01G2031/006 Y02P60/216 Y02P60/146



Family:

Publication number	Publication date	Application number	Application date
KR20160094523 A	20160810	KR20150015154	20150130

Priority:

KR20150015154 20150130

Probable Assignee: REPUBLIC KOREA MAN RURAL DEV

Assignee(s): (std): REPUBLIC KOREA MAN RURAL DEV ; REPUBLIC OF KOREA ; REPUBLIC OF KOREA MANAGEMENT RURAL DEVELOPMENT ADMINISTRATION

Inventor(s): (std): CHANG DONG CHIL ; CHEON CHUNG GI ; CHO JI HONG ; CHO KWANG SOO ; DO GYEONG RAN ; IM JU SUNG ; JIN YONG IK ; KIM JEOM SOON ; KIM SU JEONG ; LEE KI JIN ; YU HONG SEOB

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20160094523 A	20160810	LSPB	+	published / reissued	

Title: ILLUMINATING SHELF UNIT WITH WATER-TYPE COOLING SYSTEM FOR ENVIRONMENTALLY-CONTROLLED ROOM

Abstract: A shelf unit (2) comprising a rigid section (10) is cooled by the circulation of cold water through hairpin-shaped (15) pipes (14). This heat-conducting section carries a row of fluorescent tubes (3) separated from each other by a short interval and connected in parallel: these illuminate the shelf from beneath. This section (10) and its row of fluorescent tubes (3) is placed inside a film sheath (11) which protects them from the sprinkler water and the environmental humidity. The shelf unit is mounted, along with others, between two fluorescent tubes, perpendicularly on horizontal supports and is connected by a thermostatic valve to the cold water circuit and to the electrical cabinet. Use: for lighting and controlling the temperature of an environmentally-controlled room or a plant display stand.

Classifications:

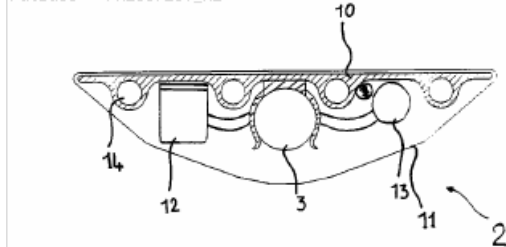
International (IPC 8-9): A01G31/06 A01G7/04 (Advanced/Invention);
A01G31/02 A01G7/04 (Core/Invention)

International (IPC 1-7): A47F3/04

CPC: A01G31/06 A01G7/045 Y02P60/216 Y02P60/146

European: A01G31/06 A01G7/04B

PatBase - FR2667230_R1



Family:

Publication number	Publication date	Application number	Application date
FR2667230 A1	19920403	FR19900012153	19901001

Priority:

FR19900012153 19901001

Probable Assignee: TOUTENKAMION SA

Assignee(s): (std): TOUTENKAMION SA

Inventor(s): (std): MARC GIRERD

Inventor(s): GIRERD MARC

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FR2667230 A1	19920403	LSPB	+	published / reissued	
FR2667230 A1	19940826	LSLE	-ST	NOTIFICATION OF LAPSE	

Title: BROCCOLI SPROUT TEA AND MANUFACTURING METHOD THEREOF

Abstract: Source: KR101666021B The present invention relates to functional tea using broccoli sprouts and a method for producing the same and, more specifically, to functional tea using broccoli sprouts which contains enhanced nutritive components by soaking broccoli sprouts, which are produced by using a rotary sprout cultivation apparatus, in a sulforaphane solution and then roasting the sprouts in an infrared roaster, and to a method for producing the same. The method for producing the functional tea using broccoli sprouts according to the present invention comprises: a broccoli sprout collecting step (S100) of germinating broccoli seeds and harvesting the broccoli sprouts; a soaking step (S200) of soaking the harvested broccoli sprouts in a sulforaphane solution; a drying step (S300) of drying the soaked broccoli sprouts at 30-50 degrees centigrade for 24-48 hours; and a roasting step (S400) of roasting the dried broccoli sprouts in an infrared roaster pre-heated to 70-150 degrees centigrade for 5-15 minutes.

Classifications:

International (IPC 8-9): A01C1/02 A01C1/08 A01G7/04 A01G9/20

A23F3/06 A23F3/20 (Advanced/Invention)

CPC: A23F3/06 A01C1/02 A01C1/08 A01G7/045 A01G9/20 A23F3/20

A23V2200/302 A23V2200/308 A23V2200/318 A23V2200/32

A23V2250/214

PatBase - KR101666021_B1

**Family:**

Publication number	Publication date	Application number	Application date
KR101666021 B1	20161024	KR20160021212	20160223

Priority:

KR20160021212 20160223

Probable Assignee:

WEEK OF TAE YOUNG

Assignee(s): (std):

JEONG WON PAL ; JOO TAE YUNG

Assignee(s):

WEEK OF TAE YOUNG ; GARDEN ARMS

Inventor(s): (std):

JEONG WON PAL ; JOO TAE YUNG

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101666021 B1	20161024	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: SYSTEM FOR INDOOR PLANT CULTIVATION

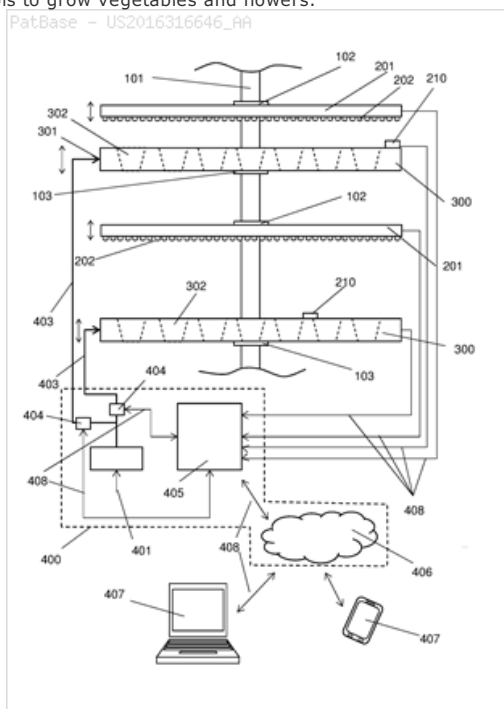
Abstract: Source: US2016316646A A system for indoor plant cultivation is disclosed. The system is low cost, simple system that may be used for example at homes, in restaurants, and in schools to grow vegetables and flowers.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04

A01G9/24 (Advanced/Invention)

CPC: A01G7/045 A01G9/247 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
EP3087831 A1	20161102	EP20160167962	20160502
US2016316646 AA	20161103	US20160143642	20160502

Priority:

US20150154752P 20150430 US20160143642 20160502

Probable Assignee: OUE CLICK AND GROW

Assignee(s): (std): OUE CLICK AND GROW

Inventor(s): (std): LEPP MATTIAS ; PEDASTSAAR PRIIT

Agent(s): SARAP MARGUS

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP3087831 A1	20161102	LSPB	+	published / reissued	
US2016316646 AA	20161103	LSPB	+	published / reissued	
US2016316646 AA	20160711	LSAS	AS	ASSIGNMENT	OWNER NAME : OUE CLICK AND GROW, ESTONIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LEPP, MATTIAS, MR.; PEDASTSAAR, PRIIT, MR.; REEL/FRAME:039299/0058 EFFECTIVE DATE : 20160305

Title: TUBE-IN-TUBE BUBBLE COLUMN PHOTOBIOREACTOR

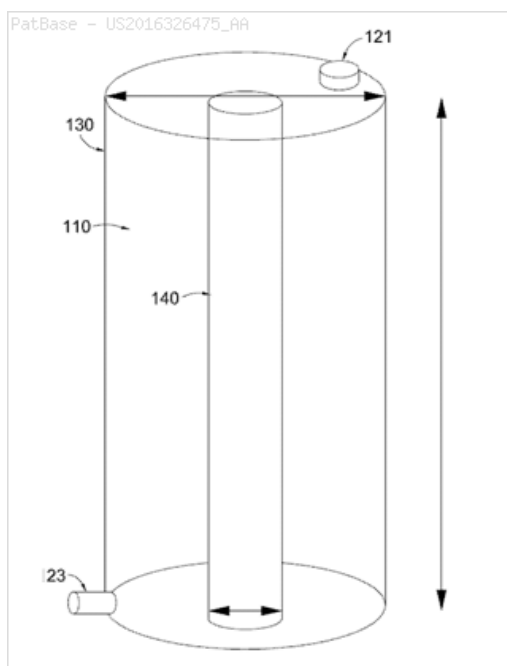
Abstract: Source: US2016326475A Systems and methods are provided for growing algae and/or other microorganisms in a controlled environment while reducing or minimizing the amount of energy required for maintaining desired conditions in the growth medium. The systems can be based on a photobioreactor having a "tube-in-tube structure", where an outer cylindrical tube contains a heat regulation fluid that surrounds one or more inner cylinders that contain microorganisms in growth media. The heat regulation fluid in the outer cylinder, as well as the outer cylinder itself, can assist with regulating the temperature of the growth media in the inner cylinder(s).

Classifications:

International (IPC 8-9): A01G31/00 A01G33/00 A01G7/02 A01G7/04
C12M1/00 C12M1/02 C12M1/12 C12M1/34

C12N1/12 (Advanced/Invention)

CPC: C12M31/08 C12M23/22 C12N1/12 C12M25/00 A01G31/00
A01G33/00 A01G7/045 A01G7/02 C12M31/02 C12M41/10
C12M21/02 C12M23/06 C12M23/20 C12M23/34 C12M41/22

**Family:**

Publication number	Publication date	Application number	Application date
US2016326475 AA	20161110	US20160138447	20160426
WO16178855 A1	20161110	WO2016US29322	20160426

Priority:

US20150156393P 20150504 US20160138447 20160426

Probable Assignee: EXXONMOBIL RESEARCH AND ENGINEERING CO

Assignee(s): (std): EXXONMOBIL RES AND ENG CO

Assignee(s): EXXONMOBIL RESEARCH AND ENGINEERING CO

Inventor(s): (std): PODSIADLO PAUL

Agent(s): WEISBERG DAVID M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR
CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID
IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN
MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2016326475 AA	20161110	LSPB	+	published / reissued	
US2016326475 AA	20160426	LSAS	AS	ASSIGNMENT	OWNER NAME : EXXONMOBIL RESEARCH AND ENGINEERING COMPANY, NEW J DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PODSIADLO, PAUL; REEL/FRAME:038384/0080 EFFECTIVE DATE : 20160419
WO16178855 A1	20161110	LSPB	+	published / reissued	

Title: APPARATUS FOR GROWING PLANTS

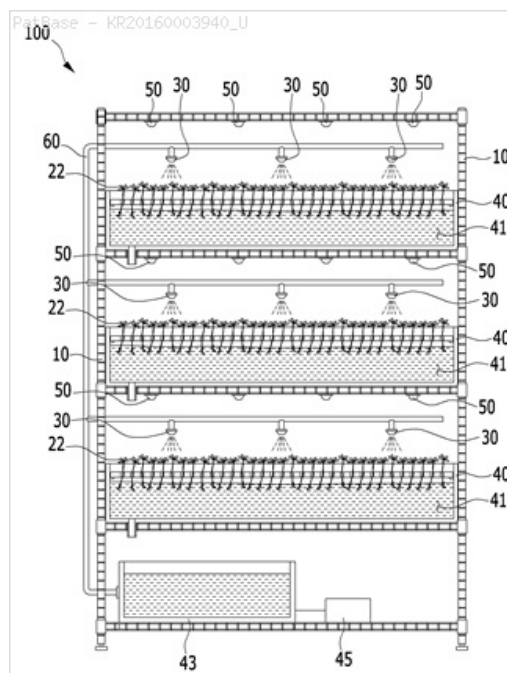
Abstract: Source: KR20160003940U Crops cultivation, the device is initiated. growing of crops grown in space, the device will be installed, place the formation of multi-stage base installed on the cultivation of the body and the frame, the frame body is installed in the space-grown crops are grown multiple insertion hole formed growing of crops grown in the direction of the bed, bed with (? ?) spraying nozzles to supply, cultivation of space frame body installed in the direction of the light-emitting light crops cultivation bed riches, water pump can grow storage tank installed and connected to the jet nozzle can be grown on the cultivation to supply water supply line.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04

A01G9/24 (Advanced/Invention)

CPC: A01G9/24 A01G31/06 A01G7/045 A01G9/247

**Family:**

Publication number	Publication date	Application number	Application date
KR20160003940 U	20161116	KR20150002951U	20150508

Priority:

KR20150002951U 20150508

Probable Assignee:

IMYONGTAE

Assignee(s):

IMYONGTAE ; YIMYEONGGIL

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20160003940 U	20161116	LSPB	+	published / reissued	
KR20160003940 U	20150508	LSSES	A201	REQUEST FOR EXAMINATION	
KR20160003940 U	20150511	LSSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR20160003940 U	20150630	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20160003940 U	20150828	LSRE	AMND	AMENDMENT	
KR20160003940 U	20151030	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20160003940 U	20151202	LSRE	AMND	AMENDMENT	
KR20160003940 U	20151231	LSRV	-X601	DECISION OF REJECTION AFTER RE-EXAMINATION	

Title: THE MOVABLE HYDROPONICS SYSTEMS FOR GROWING GREEN FODDER AND PLANTS

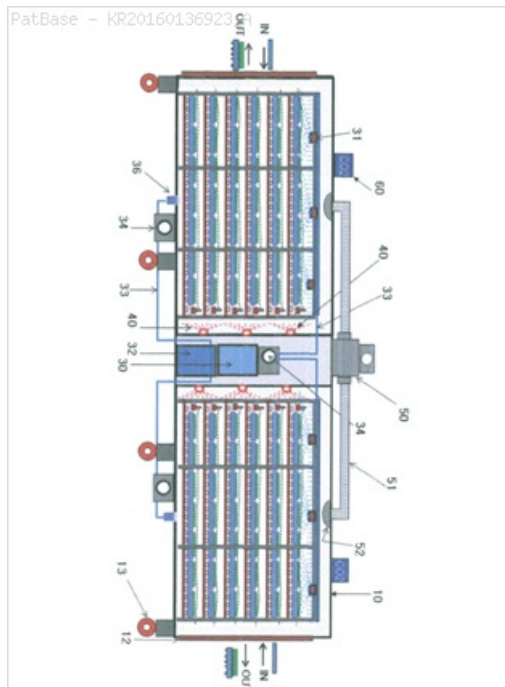
Abstract: Source: KR20160136923A The present invention relates to a movable hydroponics system for green fodder and plants and, more specifically, to a movable hydroponics system for green fodder and plants, comprising: a structure having a container-type appearance; a cultivation case holder in which a collection board is installed; a cultivation case holder coupling body coupled with the cultivation case holder in multiple layers, and having a moving wheel of moving the holder easily; a water storage tank, and a wastewater recovery device capable of recovering water by purifying and sterilizing the same; and a ventilation device in which LED light sources for cultivating plants and a heat recovery device are attached. According to the present invention, the entire processes of hydroponics of green fodder and plants are simply and easily performed without a special power operated device, and costs for building a system can be reduced by lightening a hydroponics facility for plants.

Classifications:

International (IPC 8-9): A01G13/00 A01G31/06

A01G7/04 (Advanced/Invention)

CPC: A01G31/06 A01G7/045 A01G2013/006 Y02P60/216



Family:

Publication number	Publication date	Application number	Application date
KR20160136923 A	20161130	KR20150071171	20150521

Priority:

KR20150071171 20150521

Probable Assignee:

RYU YONG SOO

Assignee(s): (std):

RYU YONG SOO

Assignee(s):

RYU YONG SU

Inventor(s): (std):

RYU YONG SOO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20160136923 A	20161130	LSPB	+	published / reissued	
KR20160136923 A	20150521	LSSES	A201	REQUEST FOR EXAMINATION	
KR20160136923 A	20170104	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20160136923 A	20170126	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	

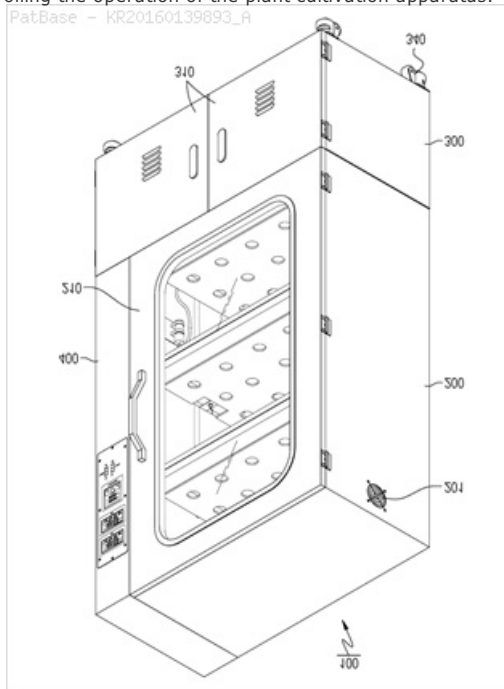
Title: PLANTS CULTIVATION APPARATUS

Abstract: Source: KR20160139893A The present invention relates to an easily assembled and installed modular small plant cultivation apparatus. Provided is a modular small plant cultivation apparatus. The apparatus comprises: a cultivation part having a plurality of culture liquid tanks which are laminated and to which cultivation liquid is supplied, cultivation beds respectively disposed on the culture liquid tanks, and a light source irradiating light to plants on the cultivation beds; a storage part having a storage tank detachably coupled to the cultivation part and storing the cultivation liquid therein, and a pump provided in the storage tank and supplying the cultivation liquid to the cultivation liquid tanks of the cultivation part; and a control unit detachably coupled to the cultivation part and controlling the operation of the plant cultivation apparatus.

Classifications:

International (IPC 8-9): A01G29/00 A01G31/06
A01G7/04 (Advanced/Invention)

CPC: A01G31/06 A01G29/00 A01G7/045



Family:

Publication number	Publication date	Application number	Application date
KR20160139893 A	20161207	KR20150075779	20150529

Priority:

KR20150075779 20150529

Probable Assignee:

HNL CO LTD

Assignee(s):

HI EL YEN CORP ; HNL CO LTD

Inventor(s):

NAH KYU DONG

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20160139893 A	20161207	LSPB	+	published / reissued	
KR20160139893 A	20150529	LSSES	A201	REQUEST FOR EXAMINATION	
KR20160139893 A	20161115	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	

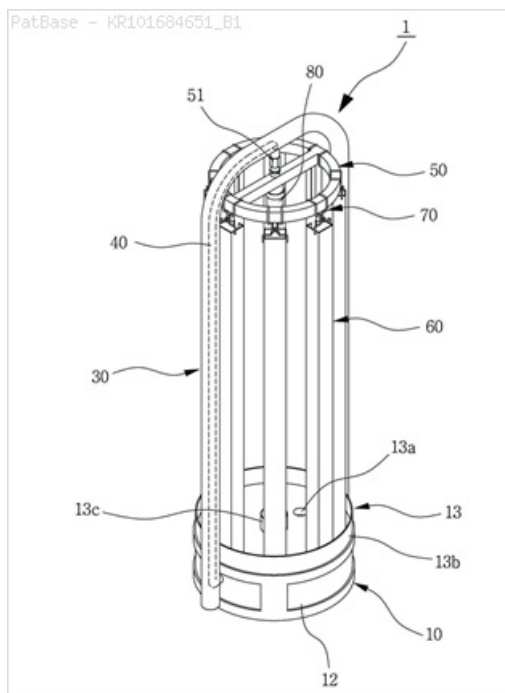
Title: AN APPARATUS FOR HYDROPONICS

Abstract: Source: KR101684651B The present invention relates to a hydroponics apparatus, and more specifically, to a hydroponics apparatus which facilitates oxygen supply to the roots of plants and thus enables the plants to be easily cultivated, is configured as a curtain rotation type and thus optimizes spatial efficiency, and has the effect of regulating humidity indoors and can be easily used by anyone. The hydroponics apparatus of the present invention comprises: a storage tank which stores a culture solution; a pump member which is installed in the storage tank and circulates the culture solution; a support member which is connected to and installed at the storage tank; and a rotating body which is rotatably installed at an upper end part of the support member and on which multiple spray nozzles are installed at predetermined intervals; a transport hose which connects the pump member with the rotating body and transports the culture solution; a cartridge member which is installed at a lower part of the spray nozzle of the rotating body; and a connecting member which connects the rotating body with the cartridge member.

Classifications:

International (IPC 8-9): A01G31/00 A01G31/02 A01G31/06 A01G7/04 (Advanced/Invention)

CPC: A01G31/06 A01G31/02 A01G7/045 A01G2031/007

**Family:**

Publication number	Publication date	Application number	Application date
KR101684651 B1	20161209	KR20160078166	20160622

Priority:

KR20160078166 20160622

Probable Assignee: DONGBANG DAVOA CO LTD

Assignee(s): DONGBANG DAVOA CO LTD ; SEE ALL EAST CO LTD

Inventor(s): LEE JONG SEON

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101684651 B1	20161209	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101684651 B1	20161125	LSAS	N231	NOTIFICATION OF CHANGE OF APPLICANT	
KR101684651 B1	20161202	LSGT	+GRNT	WRITTEN DECISION TO GRANT	

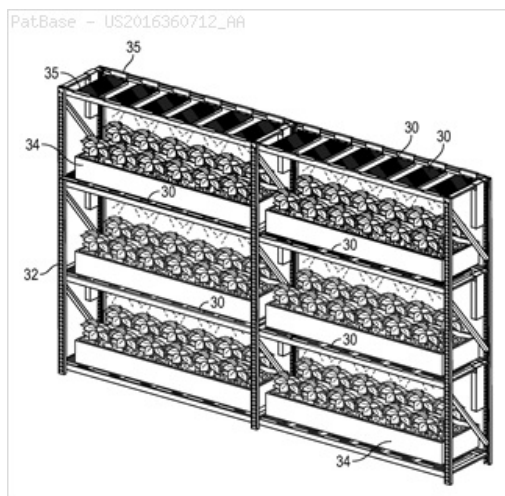
Title: GROW LIGHTING AND AGRICULTURAL SYSTEMS AND METHODS

Abstract: Source: US2016360712A Embodiments of the invention relate generally to systems and methods for improving efficiency and yield in plant grow operations including improvements in LED grow lighting fixtures, components and systems, and their applications to plant grow operations. Improvements for directional control and efficiency in lighting and methods and systems used in plant grow applications and operations including temperature regulation and control, soil and grow media regulation and vertical farming are also disclosed.

Classifications:

International (IPC 8-9): A01G1/00 A01G31/06 A01G7/04 A01G9/02
A01G9/12 A01G9/20 A01G9/24 F21V21/00 F21V29/58
F21V29/83 (Advanced/Invention)

CPC: A01G7/045 A01G31/06 A01G9/24 A01G9/1423



Family:

Publication number	Publication date	Application number	Application date
US2016360712 AA	20161215	US20160181622	20160614

Priority:

US20150175724P 20150615 US20160181622 20160614 US20160323004P 20160415

Probable Assignee: BIOLOGICAL INNOVATION AND OPTIMIZATION SYSTEMS LLC

Assignee(s): (std): BIOLOGICAL INNOVATION AND OPTIMIZATION SYSTEMS LLC

Inventor(s): (std): BALESTRACCI ELIZA ; LECLAIR RICHARD ; SOLER ROBERT ; SULLIVAN SHANE ; SUN WEI ; THOSTESON ERIC ; YORIO NEIL

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2016360712 AA	20161215	LSPB	+	published / reissued	
US2016360712 AA	20160706	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIOLOGICAL INNOVATION & OPTIMIZATION SYSTEMS, LLC, OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:YORIO, NEIL; THOSTESON, ERIC; SOLER, ROBERT; AND OTHERS; SIGNING DATES FROM 20160701 TO 20160705; REEL/FRAME:039265/0155

Title: ASSEMBLED DEVICE FOR PLANT CULTIVATION

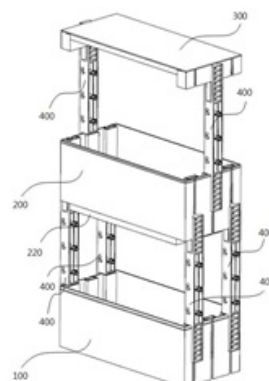
Abstract: Source: KR20160150409A Due to this invention, implementation for the cultivation of the plants inside the prefabricated can be loaded on both sides can vary the direction of the width of the space will be equipped with two mounted home grown formed in the direction of the high Award; and the central in the Middle top and fringe crater across the virtual mounted on the above on the basis of the face of the growing home if the geometry that corresponds to mirror symmetrically formed, such as intervals along the direction of the Central High liquid injection the injection can be installed connecting the connection holding the ball is formed; there are a number of different, including, above there are a number of different icons for the cultivation for the aforementioned holding borne will be assembled in accordance with the direction of the height of the multi-stage featuring prefabricated cultivation.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04 (Advanced/Invention)

CPC: A01G31/06 A01G7/045 Y02P60/216 Y02T70/5245

PatBase - KR20160150409_A



Family:

Publication number	Publication date	Application number	Application date
KR20160150409 A	20161230	KR20150088359	20150622

Priority:

KR20150088359 20150622

Probable Assignee: LEE YOUNG SOOK

Assignee(s): LEE YOUNG SOOK ; YIHYEONHWA

Legal status (INPADOC)

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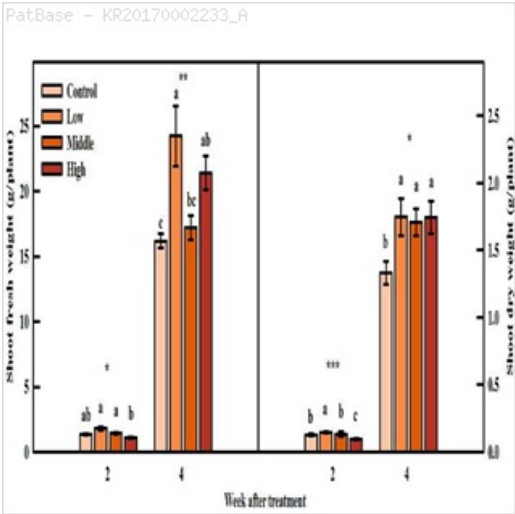
Patent	Date recorded	Event group	Code	Event	Details
KR20160150409 A	20161230	LSPB	+	published / reissued	
KR20160150409 A	20150622	LSSES	A201	REQUEST FOR EXAMINATION	
KR20160150409 A	20161212	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	

Title: METHOD FOR GROWING PLANTS BY CONTROLLING CONCENTRATION OF AIR ANIONS

Abstract: Source: KR20170002233A The invention of air anion-induced this plant is about to grow, existing in a sealed greenhouse, or plant is not being used at the plant, servicing, maintenance, repair, and air anion air anion concentration chicory, and by adjusting the same Icicle plant growth increased plant cultivation method.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04 A01G9/18
A01G9/20 (Advanced/Invention)
CPC: A01G9/18 A01G31/06 A01G7/045 A01G9/20



Family:

Publication number	Publication date	Application number	Application date
KR20170002233 A	20170106	KR20150092500	20150629

Priority:

KR20150092500 20150629

Probable Assignee: CHUNGBUK NATIONAL UNIV IND ACADEMIC COOPERATION FOUNDATION

Assignee(s): (std): CHUNGBUK NATIONAL UNIV IND ACADEMIC COOPERATION FOUNDATION

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
KR20170002233 A	20170106	LSPB	+	published / reissued	
KR20170002233 A	20150629	LSSES	A201	REQUEST FOR EXAMINATION	
KR20170002233 A	20160929	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	

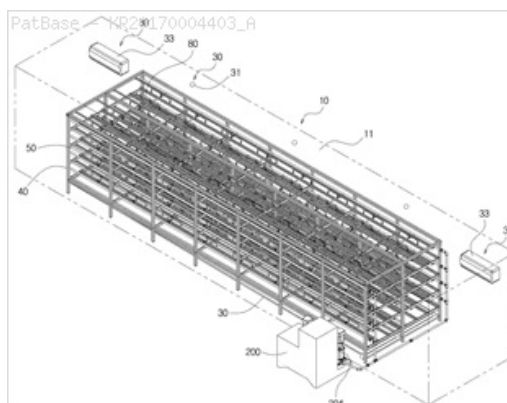
Title: VEGETABLE CULTIVATION APPARATUS USING A CONTAINER

Abstract: Source: KR20170004403A The invention of container-grown plants using this device, external and internal insulation in space being formed, opening and closing doors on the side and other side only part is installed above the container is installed in the upper part of the outer container; container supply fresh air into the interior space of the acceptance of and acceptance of the space inside the container, polluted air that exhausts air conditioning outside and the upper part of the container the container above means; the acceptability of the acceptance of containers are equipped with a space in the Interior of the space in the Interior of the fever or cold wind to supply containers to regulate the internal temperature of the room thermostat in the Sudan the acceptability of space inside the container is above; the number of frames to be installed in the form of a grid, not the length of the inside of the above means; not in the direction "-" form a pair of guests and a large number of additional land Department of both sides of the weld metal deposition, respectively, not "that" preventing additional land in the form length can vary in the direction of the moving rail are formed; Move the rail above the inside of weld metal deposition has been preventing land on the part of space inside the container according to the accepted a large number of the Edition; The above are grown plants in the parent panel light inside the container so that the acceptance of the offer space for high-side and both sides can vary for each installed lighting part; The aforementioned means of support to the upper side of the plates Mo vis-a-vis the lower part on the side of the water supply pipes installed piping associated with the supplied water from fog to the upper side of the driving plate in the form of spraying nozzles; The above jet nozzle is spraying from falling in the direction of the lower part of the number to be saved for supporting Sudan in the lower part and then, left, in the form of a sloping floor, added Wu side side shaped downward in the direction of the Governor to be, Sir, both the inside and outside the Department in the direction of the end vent can be stored for 1 formed part; The above can be stored for 1 part of medial limit of up to the water level the water level sensing to detect among the No. 1, and no. 1 water level sensor signals can be stored for the No. 1 pick of the Department can move to no. 1 for the 1st part of the pump is connected to the outlet of the stored water in the container is installed on both the inside and outside water discharge means; The outer container consists in water above the exhaust is moved by means of water supply and water jet nozzle with water through the plumbing to take supply water supply means; The above means, air conditioning thermostat, lights, water discharge, water supply works of automatic or manual control outside of the container to be in correspondence with you will be including the controls;.

Classifications:

International (IPC 8-9): A01G31/02 A01G31/06 A01G7/00 A01G7/04 A01G9/20 (Advanced/Invention)

CPC: A01G31/02 A01G31/06 A01G7/00 A01G7/045 A01G9/20 A01G2031/006



Family:

Publication number	Publication date	Application number	Application date
KR20170004403 A	20170111	KR20150094705	20150702

Priority:

KR20150094705 20150702

Probable Assignee:

PAK BONG

Assignee(s):

CHOEBYEONGGWON ; PAK BONG

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20170004403 A	20170111	LSPB	+	published / reissued	
KR20170004403 A	20150702	LSSES	A201	REQUEST FOR EXAMINATION	
KR20170004403 A	20170123	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	

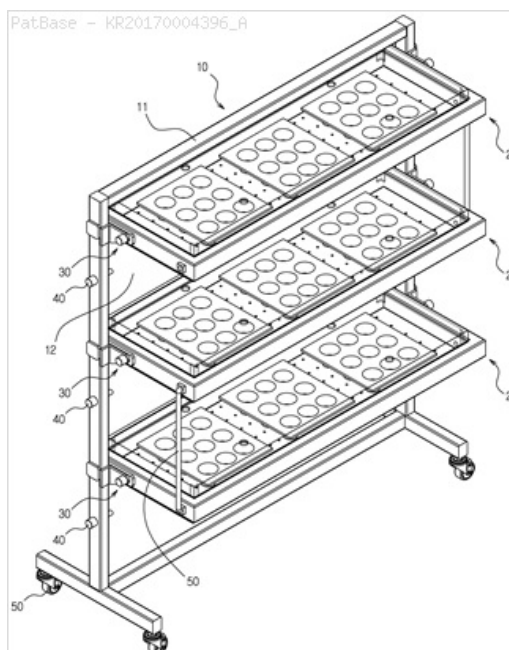
Title: VEGETABLE CULTIVATING EQUIPMENT FOR HOME USE

Abstract: Source: KR20170004396A The invention of a home-grown vegetables, minutes the device, a large number of frames (11) combined to form the ' Klitschko ' on the inside of the acceptance of the space are formed (1) mainframe; the aforementioned mainframes (10) accommodates space volume of medial hinge only both sides combined with the annexation in the vertical direction is rotated the cultivation of a large number of Sudanese; there are a number of each of the two sides and front part of the above on a mainframe is installed, do not rotate the sides means the cultivation of the fixed part of the above fixed to each mainframe means; means both sides in the direction of the lower part of the standoff are among the amenities guests will find a number of growers to be instrumental in the rear side prevents rotation in the vertical direction, preventing rotation; there are a number of cultivated is being installed above the mainframe to be connected with each other in the form of a side part means is installed in the pipe as a means of growing supply part number for the growing emissions as a means to move the pipe to supply by moving; above the mainframe The two sides are fitted with casters to each part; including correspondence with you will be .

Classifications:

International (IPC 8-9): A01G31/02 A01G31/06 A01G7/04
A01G9/20 (Advanced/Invention)

CPC: A01G31/02 A01G31/06 A01G7/045 A01G9/20



Family:

Publication number	Publication date	Application number	Application date
KR20170004396 A	20170111	KR20150094690	20150702

Priority:

KR20150094690 20150702

Probable Assignee:

PAK BONG

Assignee(s):

CHOEBYEONGGWON ; PAK BONG

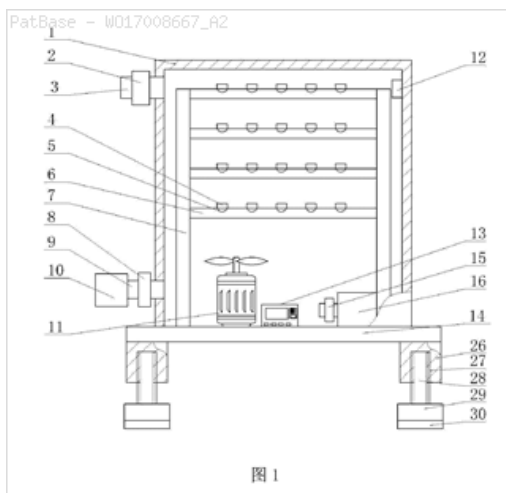
Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20170004396 A	20170111	LSPB	+	published / reissued	
KR20170004396 A	20150702	LSSES	A201	REQUEST FOR EXAMINATION	
KR20170004396 A	20170123	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	

Title: AUTOMATIC CARBON DIOXIDE REPLENISHMENT CULTIVATOR FOR GARDENS

Abstract: An automatic carbon dioxide replenishment cultivator for gardens, comprising a base (14) having a transparent casing (1), a fixed frame (7), a second draught fan (11), an industrial control instrument (13) and a carbon dioxide gas tank (16) respectively mounted on the upper portion thereof, wherein a third electromagnetic valve (15) is mounted on one side of the carbon dioxide gas tank (16); the fixed frame (7), the second draught fan (11) and the industrial control instrument (13) are respectively located in the transparent casing (1); and a number of soilless cultivation tubes (6) arranged in one row are mounted in the upper portion of the fixed frame (7). A carbon dioxide concentration monitoring device (12) can monitor in real time the concentration of carbon dioxide inside the transparent casing (1), convert a carbon dioxide concentration signal into an electrical signal, and transmit the electrical signal to the industrial control instrument (13). The industrial control instrument (13) controls the switching-on and switching-off of the third electromagnetic valve (15) according to the electrical signal sent by the carbon dioxide concentration monitoring device (12) so as to keep the carbon dioxide inside the transparent casing (1) at a concentration suitable for plant growth.

Classifications:**International (IPC 8-9):** A01G31/06 A01G7/02 (Advanced/Invention)**CPC:** A01G7/02 A01G31/06**Family:**

Publication number	Publication date	Application number	Application date
CN106332767 A	20170118	CN201510406418	20150711
WO17008667 A2	20170119	WO2016CN089059	20160707
WO17008667 A3	20170302	WO2016CN089059	20160707

Priority:

CN201510406418 20150711

Probable Assignee: XU GUOLAN**Assignee(s):** (std): XU GUOLAN**Inventor(s):** (std): XU GUOLAN**Agent(s):** GUANGZHOU PANYU RONDA PATENT AGENCY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN106332767 A	20170118	LSPB	+	published / reissued	
CN106332767 A	20170118	LSPB	+C06	PUBLICATION	
WO17008667 A2	20170119	LSPB	+	published / reissued	

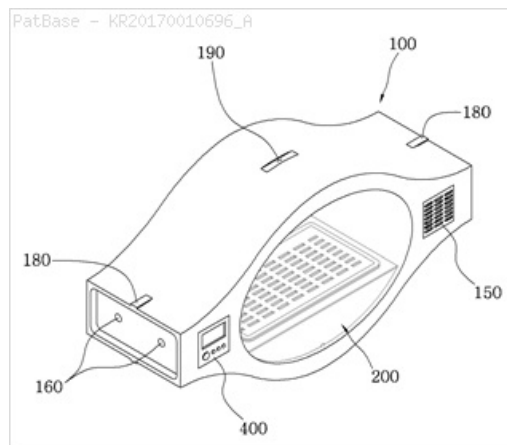
Title: PLANT CULTIVATION APPARATUS USING THE LED LAMP

Abstract: Source: KR20170010696A LED lamp used this invention relates to a device as the cultivation of the plant, the more detail, the LED lamps for the home or Office, such as by using indoor plants from a comfortable indoor environment by planting is easy and LED to the U.S. to grow plants using the lamp unit. The cultivation of plants for vegetation (200), and the Division to provide light to the plants (300) LED lamps that contain ROX plant cultivation device, the above vegetation (200) in the Interior to accommodate (110) is being formed, the aforementioned acceptance (110) on the side of the above Division (300) for mounting the mounting of home (120) with the body (100) and acceptance of the above, the aforementioned body part (110) and (100) the acceptance of the above division between outsourced (100) on the inside of the outside air inlet the air inlet (140) for being fitted with, The aforementioned body (100) of the front and rear in the viewing window (130), with both sides to the side or above the air inlet (140) air air entrainment devices (150) consists of including the above vegetation (200), grown for cultivation of plants plate (230) and the cultivation of the above Edition (230) to supply the amount of aqueous fluid in the supply means (220), and the aforementioned Ms. output supply means (220) the amount to be supplied by the liquid amount of liquid storage containers to store (210) will be organized, including.

Classifications:

International (IPC 8-9): A01G29/00 A01G31/06
A01G7/04 (Advanced/Invention)

CPC: A01G7/045 A01G29/00 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
KR20170010696 A	20170201	KR20150102688	20150720

Priority:

KR20150102688 20150720

Probable Assignee:

CO LTD AMERICAS INC

Assignee(s):

CO LTD AMERICAS INC

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20170010696 A	20170201	LSPB	+	published / reissued	

Title: PLANT GROWING APPARATUS

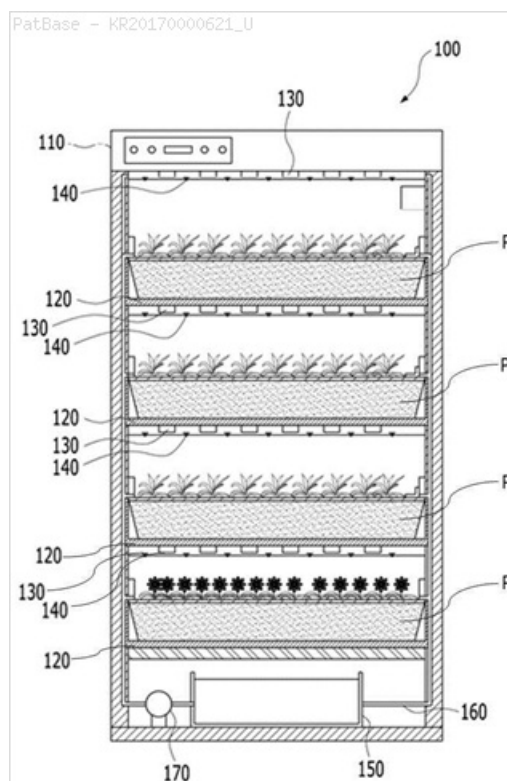
Abstract: Source: KR20170000621U This will be the front of the formation, in space inside the aperture part part of the case from the inside of the case between species; in the direction of the potted plants installed SIM (it and t) have the courage to mount multiple mounted Division; Department of the prefecture the case mounted in each are fitted so that the nut is positioned on the upper part of the plant, LED light for investigating the optical part of the Prefecture of the case mounted in each of the consulting Department; on the upper part of the area are equipped to supply water from the plants outside, sat in the shipping Department of the dispensing part of the mount in the case; the bottom part is located in the lower part of the mount is equipped with mounted to the inflow of water from the water to save the Bay Division; Department of wealth and receive water dispensing reciprocal linking the supply tube supply tube to pour water over the back; that is stored in the water supply to the dispensing pump for a specific length of time information is entered from the; user receives a timer; and Keep, based on the light and the time the pumps that control the behavior of the cultivation of the plant, including device control module. Thus, depending on the plant cultivation device time setting the plants cultivated by performing the specific action required by the user, even in the middle of a busy routine to be effective and can grow plants that facilitate effective.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04

A01G9/20 (Advanced/Invention)

CPC: A01G9/20 A01G31/06 A01G7/045



Family:

Publication number	Publication date	Application number	Application date
KR20170000621 U	20170216	KR20150005247U	20150805

Priority:

KR20150005247U 20150805

Probable Assignee:

BAKSEONGBEOM

Assignee(s):

BAKSEONGBEOM

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR20170000621 U	20170216	LSPB	+	published / reissued	

Title: HIGH DENSITY FARMING APPARATUS, SYSTEM AND METHOD

Abstract: Source: US2017049064A The disclosure is directed to providing a readily scalable hydroponic and vertical farming apparatus, system and method that remedies the foregoing issues, that is available in limited space and at high density, such as in urban areas, that presents low farming costs, and that improves crop yield and health.

Classifications:

International (IPC 8-9): A01G31/06 A01G7/04 (Advanced/Invention)

CPC: A01G31/06 A01G7/045 A01G2031/006



Family:

Publication number	Publication date	Application number	Application date
US2017049064 AA	20170223	US20160088894	20160401

Priority:

US20150128294P 20150304 US20160088894 20160401

Probable Assignee: GRIFFIN JACK

Assignee(s): GRIFFIN JACK

Inventor(s): GRIFFIN JACK

Legal status (INPADOC)

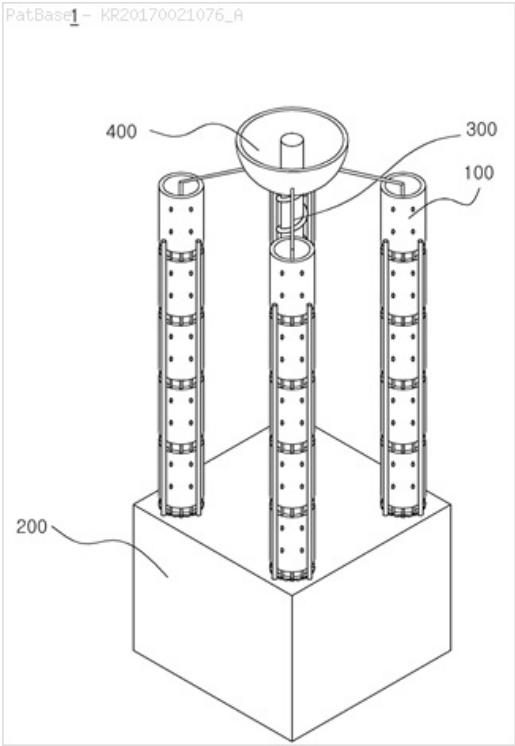
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Patent	Date recorded	Event group	Code	Event	Details
US2017049064 AA	20170223	LSPB	+	published / reissued	

Title: PLANT CULTIVATION APPARATUS AND METHOD FOR CONTROLLING PLANT CLUTIVATION

Abstract: Source: KR20170021076A Plant cultivation device and plant cultivation device provides a means of control. Plants grown in the Interior of the tank, plant cultivation device device perforated cylindrical or polygonal pillars of geometry, and is associated with a water tank above the side, work side to fountain nozzles spraying water that contains fish tank, submersible pump water stored in a water tank above through letting go into the Interior of the tank above the watering pipe, crater went through in the form of a pole, and cultivated plants can grow on at least one side of the hole is formed by including the pipe indoor plants in the least amount of space can grow plants in.

Classifications:
International (IPC 8-9): A01G31/02 A01G31/06
A01G7/04 (Advanced/Invention)
CPC: A01G31/06 A01G31/02 A01G7/045



Family:

Publication number	Publication date	Application number	Application date
KR20170021076 A	20170227	KR20150115426	20150817

Priority:
KR20150115426 20150817
Probable Assignee: KYUNGPOOK NATIONAL UNIV IND ACADEMIC COOPERATION FOUNDATION
Assignee(s): (std): KYUNGPOOK NATIONAL UNIV IND ACADEMIC COOPERATION FOUNDATION

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
KR20170021076 A	20170227	LSPB	+	published / reissued	

Title: METHOD OF PLANT TISSUE CULTURE

Abstract: A method for the culture of plant propagules comprising: incubating at least one plant propagule within a closed culture vessel containing suitable culture media and a headspace, wherein the vessel incorporates or further contains a composition capable, upon irradiation with light of a selected wavelength, of generating and releasing carbon dioxide into the media and/or headspace. Closeable vessels and devices comprising the composition are also described.

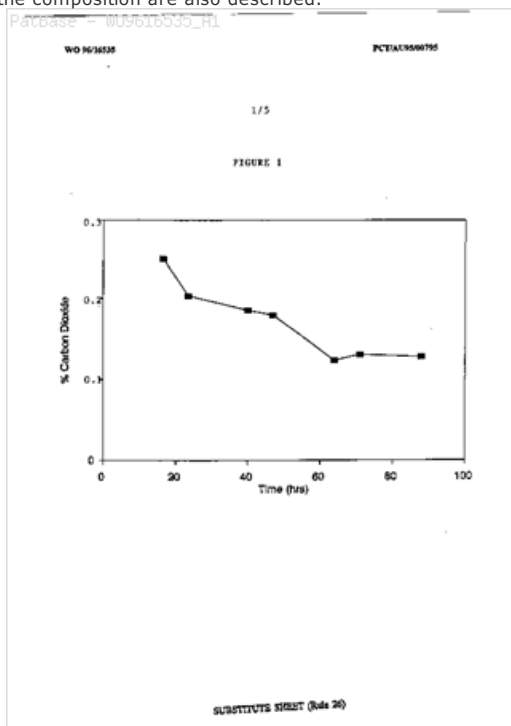
Classifications:

International (IPC 8-9): A01G7/02 A01H4/00 (Advanced/Invention); A01G7/02 A01H4/00 (Core/Invention)

International (IPC 1-7): A01G7/02 A01H4/00

CPC: A01G7/02 A01H4/001 A01H4/005

European: A01G7/02 A01H4/00B A01H4/00D



Family:

Publication number	Publication date	Application number	Application date
AU199539745 A1	19960619	AU19950039745	19951129
AU973494 A0	19941222	AU1994PM09734	19941129
WO9616535 A1	19960606	WO1995AU00795	19951129

Priority:

AU1994PM09734 19941129 AU19950039745 19951129 WO1995AU00795 19951129

Probable Assignee: COMMW SCIENT IND RES ORG

Assignee(s): (std): COMMW SCIENT IND RES ORG ; JOBLING JENNIFER JEAN ; ROONEY MICHAEL LAURENCE ; MICHAEL LAURENCE ROONEY

Assignee(s): COMMW SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION ; COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH OR ; COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION

Inventor(s): (std): JOBLING JENNIFER JEAN ; ROONEY MICHAEL LAURENCE

Inventor(s): JENNIFER JEAN JOBLING ; MICHAEL LAURENCE ROONEY

Designated states: AL AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TM TT UA UG US UZ VN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU199539745 A1	19960619	LSPB	+	published / reissued	
WO9616535 A1	19960606	LSPB	+	published / reissued	
WO9616535 A1	19970902	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 08836491 COUNTRY OF REF DOCUMENT : US
WO9616535 A1	19970925	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO9616535 A1	19980729	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA

Title: GERMINATING APPARATUS FOR CULTIVATING SPROUTS AND SHOOTS

Abstract: The invention concerns a germinating apparatus for cultivating sprouts or shoots which has a housing (1) accommodating germinating trays (61) in a tray-accommodating device (6). To facilitate handling, the tray-accommodating device (6) can be continuously displaced. Preferably, the tray-accommodating device (6) is in the shape of a horizontally rotatable carousel having a plurality of bases for receiving the germinating trays (61) which have the shape of circle segments. The sprouts or shoots are irrigated uniformly and specifically by means of a watering device (8), whereby high quality and a very good yield are obtained.

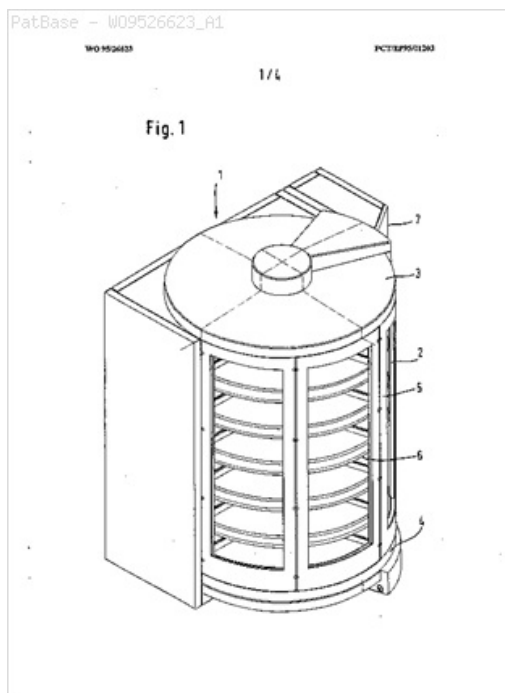
Classifications:

International (IPC 8-9): A01C1/02 A01G31/06 (Advanced/Invention);
A01C1/00 A01G31/02 (Core/Invention)

International (IPC 1-7): A01C1/02 A01G31/06

CPC: Y02P60/216 A01C1/02 A01G31/06

European: A01C1/02 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
AU199522560 A1	19951023	AU19950022560	19950331
DE4411226 C1	19950817	DE19944411226	19940331
WO9526623 A1	19951012	WO1995EP01203	19950331

Priority:

DE19944411226 19940331 WO1995EP01203 19950331

Probable Assignee: FLUEGEL VOLKER

Assignee(s): (std): ALEXANDER STREBELOW ; FLUEGEL VOLKER ; STREBELOW ALEXANDER

Assignee(s): STREBELOW ALEXANDER 73529 SCHWAEBISCH GMUEND DE ; FLUEGEL VOLKER 73529 SCHWAEBISCH GMUEND DE

Inventor(s): (std): FLUEGEL VOLKER ; STREBELOW ALEXANDER

Inventor(s): STREBELOW ALEXANDER 73529 SCHWAEBISCH GMUEND DE ; FLUEGEL VOLKER 73529 SCHWAEBISCH GMUEND DE ; ALEXANDER STREBELOW

Designated states: AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IS IT JP KE KG KP KR KZ LK LR LT LU LV MC MD MG ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TT UA UG US UZ VN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU199522560 A1	19951023	LSPB	+	published / reissued	
DE4411226 C1	19950817	LSGT	+	granted / extensions (spc, cpc, pte)	
DE4411226 C1	19950817	LSPB	+8100	PUBLICATION OF THE EXAMINED APPLICATION WITHOUT PUBLICATION OF UNEXAMINED APPLICATION	
DE4411226 C1	19950817	LSGT	+D1	GRANT (NO UNEXAMINED APPLICATION PUBLISHED) PATENT LAW 81	
DE4411226 C1	19960222	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE4411226 C1	20000511	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
WO9526623 A1	19951012	LSPB	+	published / reissued	
WO9526623 A1	19971130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA

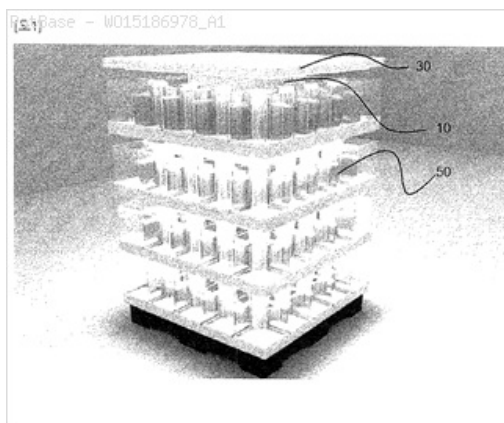
Title: MULTI-LEVEL APARTMENT TYPE THREE-DIMENSIONAL WATER TANK

Abstract: Provided is a glass water tank for a multi-level apartment type three-dimensional water tank, which has an opening formed on the top thereof so as to accommodate the lower part of the glass water tank provided in the water tank comprising at least one level and divided in the longitudinal and lateral directions at each level and to which a water tank sill support, at which the polyhedral water tank can be mounted, is coupled. Therefore, provided is the multi-level apartment type water tank solving a problem in which the glass water tank made from glass or synthetic resin such as acryl can break due to slipping, which is caused by weak frictional force between the glass water tank and a bottom surface on which the glass water tank is provided, facilitating the installation and separation of the three-dimensional water tank and the glass water tank, and recycling, into nutritional contents needed for the growth of plants, organic and inorganic substances present as sources of pollution in breeding water, which are generated when fish is cultured, so as to decompose eutrophic substances hindering the cultivation of fish in a plant cultivation step, thereby absorbing the decomposed substances as nutrients.

Classifications:

International (IPC 8-9): A01G31/00 A01G31/06 A01K61/00 A01K63/00 (Advanced/Invention)

CPC: A01K61/00 Y02P60/216 A01G31/06 A01G7/045 A01G9/023 A01G2031/006 A01K63/04 A01K63/006



Family:

Publication number	Publication date	Application number	Application date
EP3097779 A1	20161130	EP20150802831	20150604
JP2017503524 T2	20170202	JP20160548260T	20150604
KR101483606 B1	20150119	KR20140068229	20140605
KR101483612 B1	20150119	KR20140068237	20140605
KR101483613 B1	20150120	KR20140068260	20140605
WO15186978 A1	20151210	WO2015KR05596	20150604

Priority:

KR20140068229 20140605 KR20140068237 20140605 KR20140068260 20140605
WO2015KR05596 20150604

Probable Assignee: REPUBLIC OF KOREA

Assignee(s): (std): NFRDI ; REPUBLIC OF KOREA ; REPUBLIC OF KOREA NAT FISHERIES RES AND DEV ; REPUBLIC OF KOREA NAT FISHERIES RES AND DEV INST

Assignee(s): REPUBLIC OF KOREA NATIONAL FISHERIES RESEARCH AND DEVELOPMENT INSTITUTE ; REPUBLIC OF KOREA NATIONAL FISHERIES RESEARCH AND DEVELOPMENT INSTITUTE ; REPUBLIC OF KOREA NATIONAL FISHERIES RESEARCH AND DEVELOPMENT

Inventor(s): (std): HAN SEOK JUNG ; JUNG MIN MIN ; KIM JAE WOO ; MOON TAE SEOK ; SONG HONG IN ; KIM JAE U

Agent(s): REGIMBEAU; CHOI SOK JIN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP3097779 A1	20161130	LSPB	+	published / reissued	
EP3097779 A1	20161130	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160824
EP3097779 A1	20170104	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : REPUBLIC OF KOREA(NATIONAL FISHERIES RESEARCH AND D
JP2017503524 T2	20170202	LSPB	+	published / reissued	
JP2017503524 T2	20161109	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20160726

JP2017503524 T2	20170124	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2017503524 T2	20170127	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20170127
JP2017503524 T2	20170209	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20170131
JP2017503524 T2	20170210	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150 REF DOCUMENT NUMBER : 6087031 COUNTRY OF REF DOCUMENT : JP
KR101483606 B1	20150119	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101483606 B1	20141127	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101483606 B1	20150112	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101483612 B1	20150119	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101483612 B1	20141127	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101483612 B1	20150112	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101483613 B1	20150120	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101483613 B1	20141127	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101483613 B1	20150112	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
WO15186978 A1	20151210	LSPB	+	published / reissued	
WO15186978 A1	20160722	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016548260 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15186978 A1	20161205	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

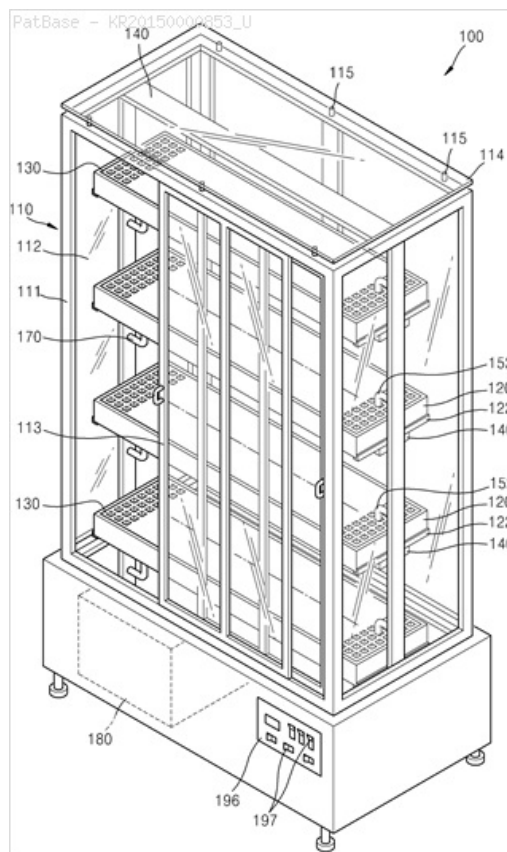
Title: WATER CULTURE APPARATUS

Abstract: Source: KR200476709Y Disclosed hydroponic equipment, cases and vertically disposed at intervals in the interior of the case is the number of water tanks that contained the number of cultures, each mounted on top of a number of water tanks and a number of ingredients that ball insertion plants and grown panel formed with a plurality of water storage tank disposed one on top of the luminaire, the culture can be incubated for storing a plurality of water storage tank to be supplied to the storage passage, the culture water circulating unit, and a control unit for controlling the culture water circulating unit and lighting provided with a. Culture water circulating unit can be contained in each culture to culture a plurality of water storage tank, and a pump for pumping the culture can be stored in the culture reservoir, the supply tube is connected to the pump for supplying the culture with each of the plurality of water tanks, storage barrel comprises a drain pipe for discharging.

Classifications:

International (IPC 8-9): A01G31/02 A01G31/06 (Advanced/Invention)

CPC: Y02P60/216 A01G31/06 A01G7/045 A01G27/02 A01G2031/006

**Family:**

Publication number	Publication date	Application number	Application date
KR200476709 Y1	20150324	KR20130006926U	20130819
KR20150000853 U	20150227	KR20130006926U	20130819

Priority:

KR20130006926U 20130819

Probable Assignee:

JANGJEONGDEOK

Assignee(s):

GIMJEONGJA ; JANGJEONGDEOK

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR200476709 Y1	20150324	LSGT	+	granted / extensions (spc, cpc, pte)	
KR20150000853 U	20150227	LSPB	+	published / reissued	
KR20150000853 U	20150223	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	

Title: MULTILAYER PLANT CULTIVATION SYSTEM USING NATURAL LIGHT AND ARTIFICIAL LIGHT

Abstract: An embodiment of the present invention relates to a plant cultivation system using natural light and artificial light and, more specifically, to a multilayer plant cultivation system having multiple layers of which the upper layer uses natural lighting and the lower layer uses artificial lighting, thereby cultivating plants. According to one embodiment of the present invention, the plant cultivation system has a cultivation zone formed in multiple layers of which the uppermost layer uses natural lighting and the lower layer uses artificial lighting, so as to perform plant cultivation, thereby providing an effect of maximizing the efficiency of a plant cultivation space.

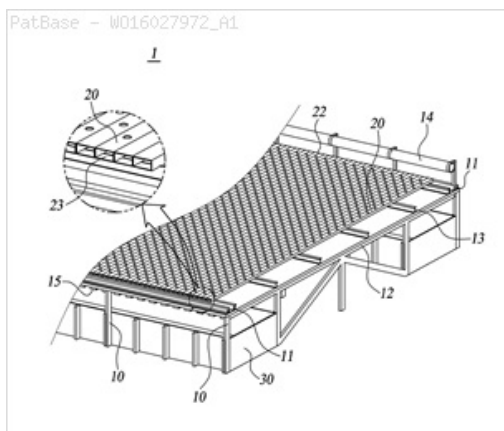
Classifications:

International (IPC 8-9): A01G31/02 A01G31/06

A01G9/20 (Advanced/Invention)

CPC: A01G9/20 A01G31/02 A01G31/06 Y02P60/216 A01G7/045

A01G27/005



Family:

Publication number	Publication date	Application number	Application date
KR101501187 B1	20150312	KR20140108242	20140820
WO16027972 A1	20160225	WO2015KR06096	20150616

Priority:

KR20140108242 20140820

Probable Assignee: MANNA CEA

Assignee(s): (std): AGRICULTURAL CORP MANNA CEA CO LTD ; MANNA CEA

Assignee(s): AGRICULTURAL MANNA CEA CO CORP ; AGRICULTURAL MANNA CEA CO LTD CORP

Inventor(s): (std): LIM JUN GI ; LIM JUNG I ; PARK AA RON ; PARK AARON

Agent(s): PARK BYEONGSUK

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101501187 B1	20150312	LSGT	+	granted / extensions (spc, cpc, pte)	
WO16027972 A1	20160225	LSPB	+	published / reissued	

Title: PLANT FACTORY

Abstract: Source: KR20150030496A The present invention relates to a plant used for culturing plants, which increases photosynthesis of plants by offering light-emitting diode (LED) light to the inside of a plant culturing structure and supplies proper amount of purified air to roots of plants in a nutrient solution of the plant culturing structure, comprising a culturing facility (10) having an inner space; a plant culturing member (40), which is installed in the culturing facility (10), in which plants are planted and are cultured, and a nutrient solution is filled to supply nutrients to the planted plants; an LED lighting (20) which is installed in the culturing facility (10) and accordingly offers lights to the planted plants; and an air supplying member (30) which is mutually connected and installed on the culturing facility (40) and purifies outside air, thereby supplying the purified air to the nutrient solution.

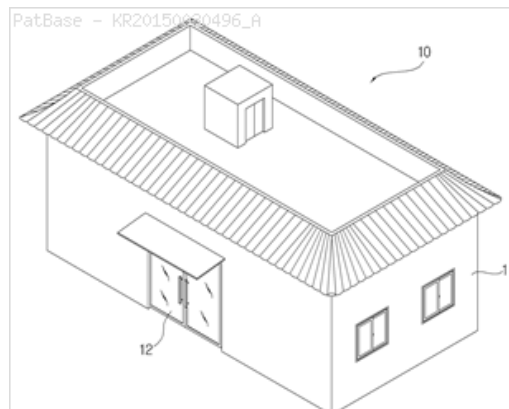
Classifications:

International (IPC 8-9): A01G31/02 A01G7/00 A01G7/04

A01G9/02 (Advanced/Invention)

CPC: Y02P60/149 Y02P60/216 A01G31/02 A01G7/00 A01G7/045

A01G9/247 A01G31/06



Family:

Publication number	Publication date	Application number	Application date
KR101561036 B1	20151016	KR20130109831	20130912
KR20150030496 A	20150320	KR20130109831	20130912

Priority:

KR20130109831 20130912

Probable Assignee:

HUR EUI SOK

Assignee(s): (std):

HUR EUI SOK ; PARK SUK JA

Inventor(s): (std):

HUR EUI SOK ; PARK SUK JA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101561036 B1	20151016	LSGT	+	granted / extensions (spc, cpc, pte)	
KR20150030496 A	20150320	LSPB	+	published / reissued	
KR20150030496 A	20151012	LSGT	+GRNT	WRITTEN DECISION TO GRANT	

Title: PLANT CULTIVATION SYSTEM, PLANT CULTIVATION DEVICE, AND PLANT CULTIVATION METHOD

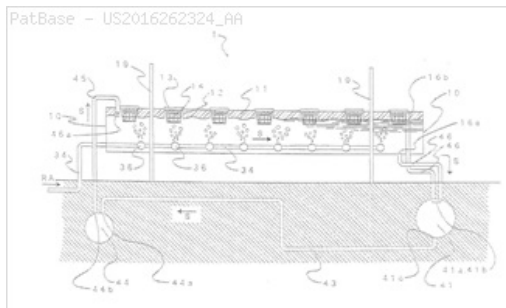
Abstract: Source: US2016262324A Provided are a plant cultivation system, device, and method for simultaneously producing wide variety of plants such as leaf vegetables, fruit vegetables, head-forming vegetables, and legumes year-round without causing continuous cropping injury by circulating a simple nutrient solution. In each of the plant cultivation system, device, and method, a temperature of reformed air, which is obtained by reforming air into a state suitable for setting a dissolved-oxygen concentration of the simple nutrient solution in a cultivation tank for holding a wide variety of plants to a predetermined concentration, is set to a predetermined temperature, and the reformed air is supplied, at a flow rate required for setting the dissolved-oxygen concentration of the simple nutrient solution to the predetermined concentration, from a vicinity of a bacterial colonization portion into the simple nutrient solution flowing at a predetermined speed through the cultivation tank.

Classifications:

International (IPC 8-9): A01G1/00 A01G31/00 A01G31/02 A01G7/00 A01G7/04 B01F3/04 (Advanced/Invention)

CPC: Y02P60/216 A01G31/02 B01F3/04241 A01G1/001 A01G7/04 A01G7/045 B01F2003/0439 A01G31/06

US: 47/62A



Family:

Publication number	Publication date	Application number	Application date
CN105764329 A	20160713	CN201480060041	20141020
EP3064057 A1	20160907	EP20140862124	20141020
JP2015084750 A2	20150507	JP20130228022	20131101
US2016262324 AA	20160915	US20140033329	20141020
WO15072076 A1	20150521	WO2014JP05172	20141020

Priority:

JP20130228022 20131101 WO2014JP05172 20141020

Probable Assignee: TAKAHASHI KOSUKE

Assignee(s): (std): TAKAHASHI HIROSUKE ; TAKAHASHI KOSUKE ; YAMANE MOTOHIRO

Inventor(s): (std): YAMANE MOTOHIRO

Agent(s): 2K PATENTANWALTE BLASBERG KEWITZ AND REICHEL; SHIMIZU SADANOBU

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN105764329 A	20160713	LSPB	+	published / reissued	
CN105764329 A	20160713	LSPB	+C06	PUBLICATION	
EP3064057 A1	20160907	LSPB	+	published / reissued	
EP3064057 A1	20160907	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160601
JP2015084750 A2	20150507	LSPB	+	published / reissued	
JP2015084750 A2	20150128	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20150128
JP2015084750 A2	20151201	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20151130
JP2015084750 A2	20160129	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160129
JP2015084750 A2	20160609	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20160609

JP2015084750 A2	20160907	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160907
JP2015084750 A2	20161118	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20161101
JP2015084750 A2	20161128	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20161125
JP2015084750 A2	20170116	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20170113
US2016262324 AA	20160915	LSPB	+	published / reissued	
WO15072076 A1	20150521	LSPB	+	published / reissued	
WO15072076 A1	20160429	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15033329 COUNTRY OF REF DOCUMENT : US
WO15072076 A1	20160502	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

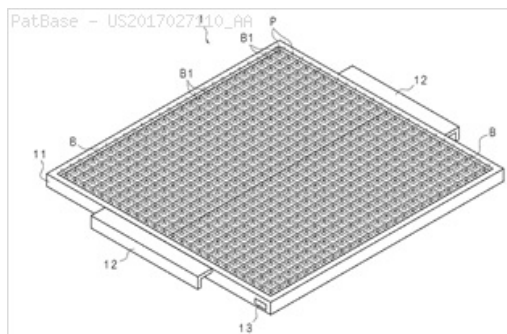
Title: CULTIVATION SYSTEM

Abstract: Source: US2017027110A Provided is a cultivation system comprising: a cultivation container capable of accommodating a plurality of plants and a cultivation medium for growing the plant, and provided with a recording medium for recording identification information that is used for identifying each of the plurality of plant; a cultivation shelf provided with plural stages of shelf boards on which the cultivation container is placed; light sources projecting light individually onto upper faces of the shelf boards; a conveyance machine conveying the cultivation container between the plurality of shelf boards. The cultivation system is additionally provided with: an inspection part which has an accommodation part accommodating the cultivation container, and inspects individually the plurality of plants contained in the cultivation container accommodated in the accommodation part; and a recording processing part recording an inspection result each of plant obtained by the inspection part, into the recording medium.

Classifications:

International (IPC 8-9): A01G7/00 A01G7/04 A01G9/00 A01G9/02 A01G9/10 G06K9/00 H05B37/02 (Advanced/Invention)

CPC: Y02P60/216 A01G9/108 A01G7/045 A01G9/1026 A01G9/1066 A01G9/027 G06K9/00657 H05B37/0281 A01G31/06

**Family:**

Publication number	Publication date	Application number	Application date
CN106163262 A	20161123	CN201580018266	20150331
EP3127420 A1	20170208	EP20150772795	20150331
JP2015195786 A2	20151109	JP20140077212	20140403
US2017027110 AA	20170202	US20150301314	20150331
WO15152206 A1	20151008	WO2015JP60064	20150331

Priority:

JP20140077212 20140403 WO2015JP60064 20150331

Probable Assignee: UNIV OSAKA PREFECTURE

Assignee(s): (std): OSAKA PREFECTURE UNIV ; TSUBAKIMOTO CHAIN CO ; UNIV OSAKA PREFECTURE

Inventor(s): (std): FUKUDA HIROKAZU ; HIRAI TATSUYA ; ITO GO ; MORIYUKI SHOGO ; OHARA HITOSHI ; OKAZAKI YU ; TSUTSUMI KAZUHIRO ; ITO TAKESHI

Agent(s): DOMPATENT VON KREISLER SELTING WERNER PARTNERSCHAFT VON PATENT U RECHTSANWALTEN MBB; KOHNO TAKAO; KOHNO HIDETO ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN106163262 A	20161123	LSPB	+	published / reissued	
CN106163262 A	20161123	LSPB	+C06	PUBLICATION	
EP3127420 A1	20170208	LSPB	+	published / reissued	
EP3127420 A1	20170208	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20161102
JP2015195786 A2	20151109	LSPB	+	published / reissued	
JP2015195786 A2	20160310	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20160310
JP2015195786 A2	20161101	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20161101
JP2015195786 A2	20161222	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20161222
US2017027110 AA	20170202	LSPB	+	published / reissued	
US2017027110 AA	20160930	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER

OWNER : TSUBAKIMOTO CHAIN CO.,
JAPAN
OLDPARTY : ASSIGNMENT OF
ASSIGNORS INTEREST;
ASSIGNORS: ITO, GO; TSUTSUMI,
KAZUHIRO; HIRAI, TATSUYA; AND
OTHERS; SIGNING DATES FROM
20160909 TO 20160916;
REEL/FRA:039915/0280

WO15152206 A1	20151008	LSPB	+	published / reissued	
WO15152206 A1	20160930	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15301314 COUNTRY OF REF DOCUMENT : US
WO15152206 A1	20161004	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: AEROPONIC COMMERCIAL PLANT CULTIVATION SYSTEM UTILIZING A GROW ENCLOSURE

Abstract: Source: US2016029578A A commercial plant cultivation system generates a controlled environment in which plants can be grown. A grow enclosure generate a controlled environment and can be either a mobile or fixed structure. A plurality of growing panels and a plurality of lighting fixtures are slidably mounted on a grow system support structure positioned within the grow enclosure. The plurality of growing panels can be positioned in either a vertical or horizontal configuration depending on the type of plants being grown. A nutrient delivery system is in fluid communication with the plurality of growing panels to deliver a nutrient solution to the plants. The nutrient solution is dispersed to the roots of the plants through a plurality of supply tubes positioned within each of the plurality of growing panels. Excess nutrient solution is collected and passed through a rock box in order to replenish nutrients and minerals.

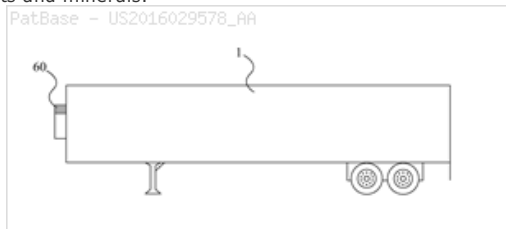
Classifications:

International (IPC 8-9): A01G27/00 A01G31/00 A01G31/02

A01G7/04 A01G9/02 A01G9/04 (Advanced/Invention)

CPC: A01G7/045 A01G27/008 A01G31/06 A01G9/26 Y02P60/216 A01G31/02

US: 1/1 47/62A 47/62R 47/64



Family:

Publication number	Publication date	Application number	Application date
AU2015296234 AA	20160204	AU20150296234	20150730
US2016029578 AA	20160204	US20150712247	20150514
US2016029581 AA	20160204	US20150814103	20150730
US2016270311 AA	20160922	US20160168960	20160531
US9241453 BA	20160126	US20150712247	20150514
US9374953 BB	20160628	US20150814103	20150730
WO16019157 A1	20160204	WO2015US42938	20150730
WO16181372 A1	20161117	WO2016IB53231	20160601

Priority:

US20140030944P 20140730	US20140030950P 20140730	US20150712247 20150514
US20140031177P 20140731	US20140032437P 20140801	US20140032442P 20140801
US20150814103 20150730	WO2015US42938 20150730	US20160168960 20160531

Probable Assignee: INDOOR FARMS OF AMERICA LLC

Assignee(s): (std): EVANS RONALD R ; INDOOR FARMS OF AMERICA LLC ; MARTIN DAVID W

Inventor(s): (std): EVANS RONALD R ; MARTIN DAVID R ; MARTIN DAVID W

Agent(s): APT PATENT AND TRADE MARK ATTORNEYS; CHOW MING

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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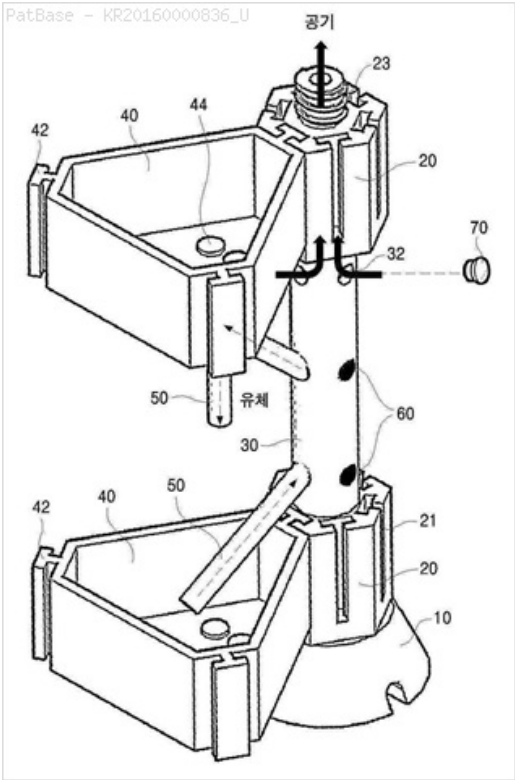
Patent	Date recorded	Event group	Code	Event	Details
AU2015296234 AA	20160204	LSPB	+	published / reissued	
US2016029578 AA	20160204	LSPB	+	published / reissued	
US2016029581 AA	20160204	LSPB	+	published / reissued	
US2016029581 AA	20150730	LSAS	AS	ASSIGNMENT	OWNER NAME : INDOOR FARMS OF AMERICA, LLC, NEVADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MARTIN, DAVID W; EVANS, RONALD R; REEL/FRAME:036220/0778 EFFECTIVE DATE : 20150730
US2016270311 AA	20160922	LSPB	+	published / reissued	
US9241453 BA	20160126	LSGT	+	granted / extensions (spc, cpc, pte)	
US9241453 BA	20150514	LSAS	AS	ASSIGNMENT	OWNER NAME : INDOOR FARMS OF AMERICA, LLC, NEVADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MARTIN, DAVID W.; EVANS, RONALD R.; REEL/FRAME:035640/0638 EFFECTIVE DATE : 20150514
US9374953 BB	20160628	LSGT	+	granted / extensions	

WO16019157 A1	20160204	LSPB	+	(spc, cpc, pte) published / reissued	
WO16019157 A1	20170130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO16181372 A1	20161117	LSPB	+	published / reissued	

Title: PREFABRICATED HYDROPONICS DEVICE

Abstract: Source: KR20160000836U Prefabricated hydroponic apparatus according to the embodiment of the present invention can be stand, combined with the connection portion located in the upper part of the stand comprises a combination are spaced apart at regular intervals in the circumferential number dog designed areas, the connection or separation, provided the number of coupling grooves are spaced apart a predetermined interval on the outer peripheral surface is provided with a space which can be a hollow in a holding, the coupler may be inserted in the respective combined or separated, grown hydroponically grown plants and several insert on the bottom surface plants which groove is provided growth portion, the engaging groove or the insert is coupled to the home is located on the bottom surface of the fluid line and the holding of the outer peripheral surface or the pollen to supply the fluid to the plant growth unit cycling, the hydroponic plant a lighting unit irradiating light to include.

Classifications:
International (IPC 8-9): A01G31/02 A01G31/06 (Advanced/Invention)
CPC: Y02P60/216 A01G31/06 A01G7/00 A01G7/045 A01G9/022 A01G27/005 A01G27/02



Family:

Publication number	Publication date	Application number	Application date
KR20160000836 U	20160310	KR20140006475U	20140902

Priority:
KR20140006475U 20140902

Probable Assignee: BAKHUIEUN
Assignee(s): BAKHUIEUN ; EOMDAEHYEON ; YUNTAESIK

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Patent	Date recorded	Event group	Code	Event	Details
KR20160000836 U	20160310	LSPB	+	published / reissued	

Title: WATER CULTURE METHOD OF GINSENG

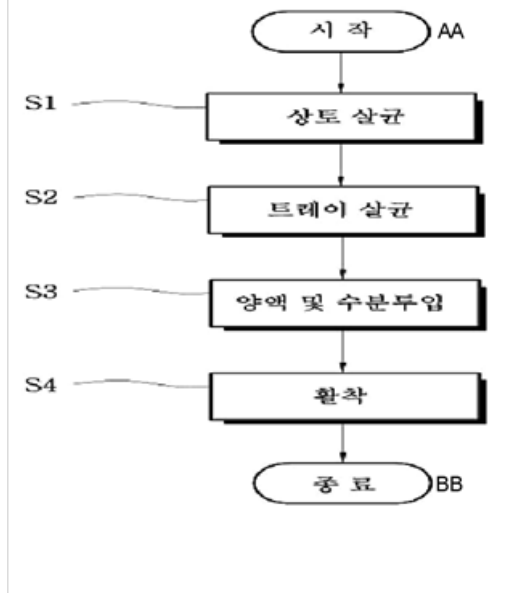
Abstract: Source: KR20160089576A The present invention relates to an aquaculture method of ginseng. The present invention includes: a first step (S1) of heating and freezing bed soil to perform sterilizing in a magnetic field generating device; a second step (S2) of sterilizing a tray containing the bed soil sterilized in the first step with ultraviolet rays for 5-30 minutes; a third step (S3) of transplanting a ginseng seedling kept at a low temperature on the bed soil of the tray sterilized in the second step, and injecting a nutrient solution having an EC value of 0.6-0.8 and water thereto; and a fourth step (S4) of supplying a nutrient solution having an EC value of 0.6-0.8 and water to the tray injected with the nutrient solution and water in the third step for 13-15 days while maintaining humidity of 70 percent at a temperature of 23-28 degrees centigrade and irradiating the tray with light of 8,000-12,000 Lux such that the ginseng seedling takes root.

Classifications:**International (IPC 8-9):** A01G17/00 A01G31/06

A01G7/04 (Advanced/Invention)

CPC: A01G31/06 A01G17/005 A01G7/04 Y02P60/216 Y02P60/146

PatBase - KR20160089576_A

**Family:**

Publication number	Publication date	Application number	Application date
KR20160089576 A	20160728	KR20150008704	20150119

Priority:

KR20150008704 20150119

Probable Assignee: NOT XIUFENG DOWNTOWN**Assignee(s):** (std): GEE BONG GU ; KIM YOUNG TEA ; LEE SEUNG JIN**Assignee(s):** YOUNG TAE KIM ; YISEUNGJIN ; NOT XIUFENG DOWNTOWN**Inventor(s):** (std): GEE BONG GU ; KIM YOUNG TEA ; LEE SEUNG JIN**Legal status (INPADOC)**[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
KR20160089576 A	20160728	LSPB	+	published / reissued	
KR20160089576 A	20160919	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	

Title: METHOD AND SYSTEM FOR HYDROCULTURE

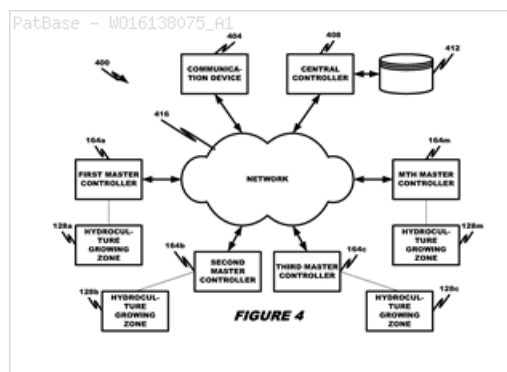
Abstract: The present disclosure is directed, in one embodiment, to a method and system for hydroculture comprising a hydroculture growing zone. Additional features may include a plurality of plants and a nutrient delivery system to deliver a nutrient feed solution to the plurality of plants.

Classifications:

International (IPC 8-9): A01G31/00 A01G31/02

A01G31/06 (Advanced/Invention)

CPC: A01G31/06 A01G7/045 A01G31/02 Y02P60/146 Y02P60/216



Family:

Publication number	Publication date	Application number	Application date
WO16138075 A1	20160901	WO2016US19252	20160224

Priority:

US20150120083P 20150224 US20150158313P 20150507

Probable Assignee: INFINITE HARVEST INC

Assignee(s): (std): INFINITE HARVEST INC

Inventor(s): (std): ROMANO THOMAS CHARLES

Agent(s): SWARTZ DOUGLAS W

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
WO16138075 A1	20160901	LSPB	+	published / reissued	

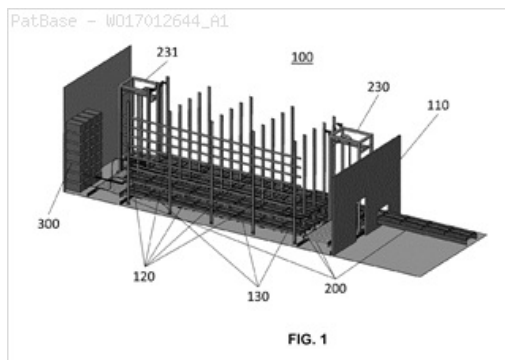
Title: INDUSTRIAL PLANT GROWING FACILITY AND METHODS OF USE

Abstract: The invention is broadly in the agricultural field, more precisely in the field of industrial plant growth facilities. In particular, the invention concerns an industrial plant growing facility (100) for growing a variety of plants using predetermined growth conditions. Also, the invention concerns methods for growing plants in industrial plant growth facilities (100).

Classifications:

International (IPC 8-9): A01G31/06 (Advanced/Invention)

CPC: A01G31/06 A01G7/045



Family:

Publication number	Publication date	Application number	Application date
WO17012644 A1	20170126	WO2015EP66492	20150717

Priority:

WO2015EP66492 20150717

Probable Assignee: URBAN CROPS

Assignee(s): (std): URBAN CROPS

Inventor(s): (std): VANDECRUYS MAARTEN

Agent(s): DE CLERCQ ANN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
WO17012644 A1	20170126	LSPB	+	published / reissued	