PatBase - Search results 01 October 2019
Search query (5): FT=(WAVE~ GENERATOR~ AND ARTIFICIAL~ AND POOL)
Results: 154

Search history

Search 1: FT=(WAVE~ GENERATOR~ AND BARRIER~ AND ARTIFICIAL~ WAVE~ AND AQUATIC~ PARKS~) (Results 0)

Search 2: FT=(WAVE~ GENERATOR~ AND BARRIER~ AND ARTIFICIAL~ AND AQUATIC~ PARKS~) (Results 0)

Search 3: FT=(WAVE~ GENERATOR~ AND ARTIFICIAL~ AND AQUATIC~ PARKS~) (Results 2)

Search 4: FT=(WAVE~ GENERATOR~ AND ARTIFICIAL) (Results 1133)

Search 5: FT=(WAVE~ GENERATOR~ AND ARTIFICIAL~ AND POOL) (Results 154)

1) Family number: 34395005 (US2009230038A)

Title: APPARATUS FOR PRODUCING PHOTOCATALYTIC REACTION WATER

Abstract: The present invention provides an apparatus for producing photocatalytic reaction water through a photocatalytic reaction, which can produce water containing a satisfactory amount of active oxygen species, can eliminate microorganisms, parasites or protozoa, shows high oxidizing ability for a prolonged period of time, can reduce the power requirements, is small in size, and is applicable to various devices. A photocatalyst is radiated with light emitted from a light source to produce active oxygen species, and the active oxygen species is diffused in water, whereby the water is provided with functions of the active oxygen species. An oxidation reaction with the water is utilized to perform at least one selected from the elimination of microorganisms, the elimination of parasites, and the elimination of protozoa.

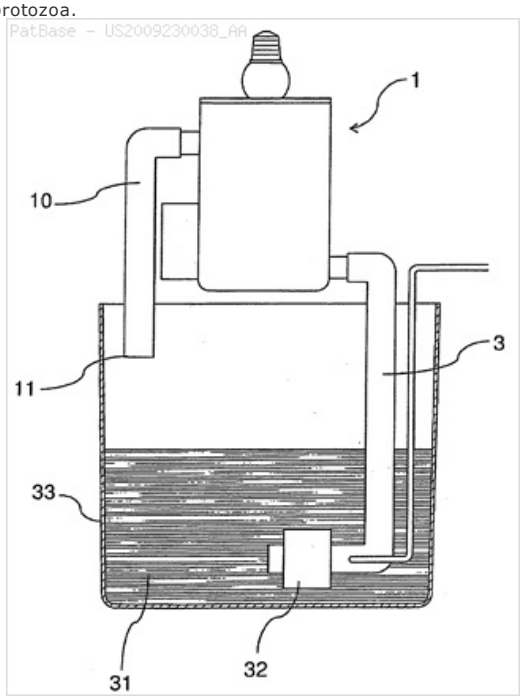
Classifications:

International (IPC 8-9): A01N59/00 A01N59/16 A61L2/18 B01J35/02 C02F1/30 C02F1/32 C02F1/36 C02F1/50 C02F1/72 C02F1/74 C02F1/78 G01N21/01 (Advanced/Invention);
A01N59/00 A01N59/16 B01J35/02 C02F1/36 (Advanced/Non-invention);
A01N59/00 A01N59/16 A61L2/18 B01J35/00 C02F1/32 C02F1/34 C02F1/72 (Core/Invention)

CPC: Y02W10/37 A61L2/186 A01N25/00 A61L2/088 A61L2/208 A61L2202/24 A61L2202/26 B01J21/063 B01J35/004 C02F1/001 C02F1/32 C02F1/725 C02F1/727 C02F1/74 C02F1/78 C02F2101/30 C02F2103/20 C02F2201/3224 C02F2201/3228 C02F2303/04 C02F2305/023 C02F2305/10 C02F1/36

European: A01N25/00 A61L2/08L A61L2/18P A61L2/20H C02F1/72K K61L202/240 K61L202/260 L01J21/06T L01J35/00D6 M02F1/00D M02F1/32 M02F1/36 M02F1/72S M02F1/74 M02F1/78 M02F101/30 M02F103/20 M02F201/322G M02F201/322R M02F303/04 M02F305/02B M02F305/10

US: 210/150 210/192 210/205 210/748.11 210/758 210/763 210/764 250/436 250/438



Family:

Publication number	Publication date	Application number	Application date
CN101326126 A	20081217	CN200680046489	20061011
CN101326126 B	20111109	CN200680046489	20061011
DE602006026288 D1	20120209	DE200660026288T	20061011
EP1950179 A1	20080730	EP20060821843	20061011
EP1950179 A4	20090318	EP20060821843	20061011
EP1950179 B1	20111207	EP20060821843	20061011
JP2007043592 A1	20090416	JP20070539972T	20061011
JP4195499 B1	20081210	JP20070539972T	20061011
JP4195499 B2	20081210	JP20070539972T	20061011
KR101191809 B1	20121016	KR20087011195	20061011
KR20080067340 A	20080718	KR20087011195	20061011
US2009230038 AA	20090917	US20060083435	20061011
US8552399 BB	20131008	US20060083435	20061011
WO07043592 A1	20070419	WO2006JP320346	20061011

Priority:

JP20050297021 20051011 JP20050325271 20051109 EP20060821843 20061011
WO2006JP20346 20061011 WO2006JP320346 20061011

Probable Assignee: K2R CO LTD

Assignee(s): (std): K2R CO LTD ; KAWAKATSU MIZUKI ; TANAKA KENICHIRO ; TANAKA LICCA

Assignee(s): K2R CO LTD KITAKYUSHU SHI ; K2R CO

Inventor(s): (std): MIZUKI KAWAKATSU ; KENICHIRO TANAKA ; LICCA TANAKA ; TANAKA KENICHIRO ; KAWAKATSU MIZUKI ; TANAKA LICCA

Inventor(s): KAWAKATSU MIZUKI FUKUTSU SHI ; TANAKA LICCA KITAKYUSHU SHI ; TANAKA KENICHIRO KITAKYUSHU SHI

Agent(s): HOFFMANN EITLE PATENT U RECHTSANWAELTE PARTMBB; HOFFMANN EITLE; OLIFF AND BERRIDGE PLC

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 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 MG MK ML MN MR 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 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
CN101326126 A	20081217	LSPB	+	published /	

				reissued	
CN101326126 A	20081217	LSPB	+C06	PUBLICATION	
CN101326126 B	20111109	LSGT	+	granted / extensions (spc, cpc, pte)	
CN101326126 B	20111109	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN101326126 B	20261011	PEXP		Calculated Patent Term Expiry	
EP1950179 A1	20080730	LSPB	+	published / reissued	
EP1950179 A1	20080730	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080509
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EP1950179 A4	20090624	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20090527
EP1950179 B1	20111207	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1950179 B1	20120209	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602006026288 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120209
EP1950179 B1	20121114	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20120910
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JP4195499 B1	20080930	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4195499 B1	20081003	LSGT	+R150	特許証 (Patent certificate)	
JP4195499 B1	20110929	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4195499 B1	20111004	LSFE	+R250	年金領収書, 年金領収書 (分納) (Pension receipt, annuity receipt (scheduled))	
JP4195499 B1	20120927	LSFE	R20	特許料納付書 (Patent fee payment form)	
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				cpc, pte)	
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JP4195499 B2	20081003	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
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KR101191809 B1	20160829	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160830 YEAR OF FEE PAYMENT : 5
KR101191809 B1	20170810	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20170810 YEAR OF FEE PAYMENT : 6
KR101191809 B1	20180813	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20180813 YEAR OF FEE PAYMENT : 7
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KR20080067340 A	20080718	LSPB	+	published / reissued	
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KR20080067340 A	20111011	LSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR20080067340 A	20111011	LSRE	AMND	AMENDMENT	
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KR20080067340 A	20120504	LSRE	AMND	AMENDMENT	
KR20080067340 A	20120605	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20080067340 A	20120801	LSRE	AMND	AMENDMENT	
KR20080067340 A	20120816	LSGT	+B701	DECISION TO GRANT	
KR20080067340 A	20121010	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
US2009230038 AA	20090917	LSPB	+	published / reissued	
US2009230038 AA	20130918	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US8552399 BB	20131008	LSGT	+	granted / extensions (spc, cpc, pte)	
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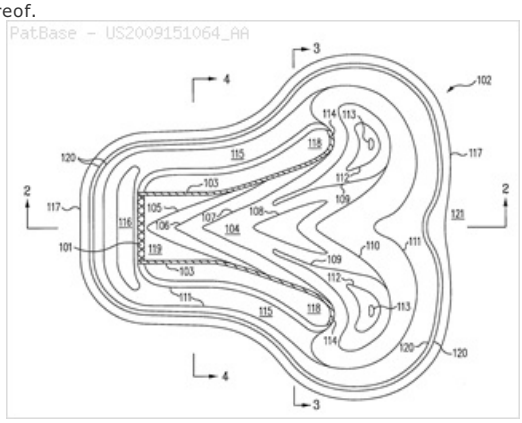
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US8552399 BB	20161122	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8552399 BB	20270411	PEXP		Calculated Patent Term Expiry (PTA 182 days)	
WO07043592 A1	20070419	LSPB	+	published / reissued	
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WO07043592 A1	20070620	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007539972 COUNTRY OF REF DOCUMENT : JP
WO07043592 A1	20080412	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO07043592 A1	20080509	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020087011195 COUNTRY OF REF DOCUMENT : KR
WO07043592 A1	20080509	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006821843 COUNTRY OF REF DOCUMENT : EP
WO07043592 A1	20080612	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12083435 COUNTRY OF REF DOCUMENT : US

2) Family number: 43382026 (US2009151064A)

Title: APPARATUS AND METHOD FOR WAVE **POOL** WITH DOUBLE V-SHAPED REEF

Abstract: Aspects of the invention provide a wave **pool** including at least one double V-shaped reef. The double V-shaped reef can include an inclined slope traversing the reef from the tip of the V-shape to the open end of the V-shape. In a round wave **pool**, a wave generating system can be provided within the center of the **pool**. The wave generating system can discharge water in a vertically upward motion to form a ring-shaped wave. The ring-shaped waves can propagate from proximate the center of the wave **pool** outward toward the edge thereof.

Classifications:
International (IPC 8-9): A47K3/10 (Advanced/Invention); A47K3/10 (Core/Invention)
CPC: E04H4/0006 A63B69/0093
European: A63B69/00U
US: 4/491 405/79



Family:

Publication number	Publication date	Application number	Application date
US2009151064 AA	20090618	US20080337354	20081217
WO09079605 A1	20090625	WO2008US87283	20081217

Priority:
US20070007954P 20071217 US20080337354 20081217

Probable Assignee: CARNAHAN RICHARD
Assignee(s): (std): CARNAHAN RICHARD ; MLADICK RICHARD
Inventor(s): (std): MLADICK RICHARD ; CARNAHAN RICHARD
Agent(s): HAYNES AND BOONE LLP IP SECTION; CARTE NORMAN E
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 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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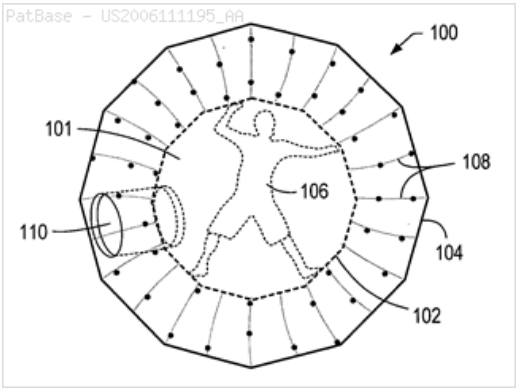
Patent	Date recorded	Event group	Code	Event	Details
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US2009151064 AA	20120409	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
WO09079605 A1	20090625	LSPB	+	published / reissued	
WO09079605 A1	20100618	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09079605 A1	20110323	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 08862633 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

3) Family number: 33025026 (US2006111195A)

Title: WATER AMUSEMENT PARK CONVEYORS

Abstract: An amusement ride system and method are described. In some embodiments, an amusement ride system may be generally related to water amusement attractions and rides. Further, the disclosure generally relates to water-powered rides and to a system and method in which participants may be more involved in a water attraction. An amusement ride system may include system for conveying a participant from a first source of water to a second source of water. The system may include one or more fluid jets. The fluid jets may function to produce a fluid stream having a predetermined velocity which is selectively greater, less than, or the same as a velocity of a participant at each of the fluid jet locations and are oriented tangentially with respect to the surface of the source of water so as to contact a participant and/or participant vehicle. An amusement ride system may include a system for controlling a participant flow rate through a multi path water amusement ride system. The system may include at least one gate mechanism which functions, upon activation, to inhibit a participant from entering one or more path choices. An amusement ride system may include a system for facilitating entry of a participant on a floatation device. The system may include one or more portions of water including a depth of water which allows a participant to more easily enter a floatation device.

Classifications:
International (IPC 8-9): A63G21/00 A63G21/18 A63G31/00 A63G31/10 A63H31/00 B65G15/00 B65G35/00 B65G49/00 B66B21/00 (Advanced/Invention);
A63G21/00 (Advanced/Non-invention);
A63G21/00 A63G31/00 A63H31/00 (Core/Invention)
CPC: A63G3/02 A63G21/18 A63G29/00
European: A63G3/02 K63G21/18 K63G29/00
US: 104/69 472/117 472/128 472/128P 472/129 472/13 472/167 472/88



Family:

Publication number	Publication date	Application number	Application date
AT509679 E	20110615	AT20050851944T	20051118
AU2005309695 AA	20060601	AU20050309695	20051118
AU2005309695 BB	20110630	AU20050309695	20051118
CA2588985 AA	20070528	CA20052588985	20051118
CA2588985 C	20131119	CA20052588985	20051118
CA2797713 AA	20060601	CA20052797713	20051118
CA2797713 C	20150721	CA20052797713	20051118
DE602005028170 D1	20110630	DE200560028170T	20051118
EP1830936 A2	20070912	EP20050851944	20051118
EP1830936 A4	20100210	EP20050851944	20051118
EP1830936 B1	20110518	EP20050851944	20051118
US2006111195 AA	20060525	US20040997790	20041124
US2006135274 AA	20060622	US20050244869	20051006
US2006142090 AA	20060629	US20050244866	20051006
US7597630 BB	20091006	US20040997790	20041124
US7942752 BB	20110517	US20050244866	20051006
US8162769 BB	20120424	US20050244869	20051006
WO06057970 A2	20060601	WO2005US42185	20051118
WO06057970 A3	20070518	WO2005US42185	20051118

Priority:

US20040997790 20041124
CA20052588985 20051118
EP20050851944 20051118
US20050244866 20051006
CA20052797713 20051118
CA20122588985 20121217
US20050244869 20051006
WO2005US42185 20051118

Probable Assignee: WATER RIDE CONCEPTS INC

Assignee(s): (std): HENRY JEFFERY W ; HENRY JEFFERY WAYNE ; HENRY SCHOOLEY AND ASSOCIATES ; HENRY SCHOOLEY AND ASSOCIATES L ; WATER RIDE CONCEPTS INC

Assignee(s): HENRY SCHOOLEY AND ASSOCIATES LLC ; HENRY SCHOOLEY AND ASSOCIATES L L C

Inventor(s): (std): HENRY JEFFERY W ; HENRY JEFFERY WAYNE ; HENRY JEFFERY ; WAYNE HENRY JEFFERY

Inventor(s): HENRY JEFFERY WAYNE NEW BRAUNFELS ; JEFFERY WAYNE HENRY

Agent(s): GRIFFITH HACK; GOUDREAU GAGE DUBUC; LAVERY DE BILLY LLP; MANTEN ANNEMIEKE; ERIC B MEYERTONS MEYERTONS HOOD KIVLIN KOWERT AND GOETZEL PC; MEYERTONS HOOD KIVLIN KOWERT AND GOETZEL PC; ERIC B

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 KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AT509679 E	20110615	LSGT	+	granted / extensions (spc, cpc, pte)	

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AT509679 E	20251118	PEXP		Calculated Patent Term Expiry	
AU2005309695 AA	20060601	LSPB	+	published / reissued	
AU2005309695 AA	20100107	LSAS	PC1	ASSIGNMENT BEFORE GRANT (SECT. 113)	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC. OLDPARTY : FORMER APPLICANT(S): HENRY, SCHOOLEY & ASSOCIATES L.L.C.
AU2005309695 BB	20110630	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2005309695 BB	20111027	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2005309695 BB	20150611	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2005309695 BB	20251118	PEXP		Calculated Patent Term Expiry	
CA2588985 AA	20070528	LSPB	+	published / reissued	
CA2588985 AA	20101018	LSES	+EEER	EXAMINATION REQUEST	
CA2588985 C	20131119	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2588985 C	20151230	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20151118
CA2588985 C	20251118	PEXP		Calculated Patent Term Expiry	
CA2797713 AA	20060601	LSPB	+	published / reissued	
CA2797713 AA	20130130	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20121127
CA2797713 AA	20161231	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20161118
CA2797713 C	20150721	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2797713 C	20251118	PEXP		Calculated Patent Term Expiry	
EP1830936 A2	20070912	LSPB	+	published / reissued	
EP1830936 A2	20070912	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20070621
EP1830936 A4	20100210	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	EFFECTIVE DATE : 20100113
EP1830936 A4	20100414	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC.
EP1830936 A4	20100421	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20100319
EP1830936 B1	20110518	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1830936 B1	20110518	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1830936 B1	20110531	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1830936 B1	20110622	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1830936 B1	20110630	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602005028170 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20110630
EP1830936 B1	20110907	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20110518

EP1830936 B1	20111031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20111031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110919
EP1830936 B1	20111031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20110518
EP1830936 B1	20111130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20110518
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EP1830936 B1	20111130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20111130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20111130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518

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EP1830936 B1	20111130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20111230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20120131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20120131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20110518
EP1830936 B1	20120229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20110518
EP1830936 B1	20120229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20120229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20120229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20120425	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20120221
EP1830936 B1	20120531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO

				INFORMATION FROM NATIONAL OFFICE TO EPO]	SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20120614	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602005028170 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120221
EP1830936 B1	20120629	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20111130
EP1830936 B1	20120629	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1830936 B1	20120725	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20111118
EP1830936 B1	20120731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20111130
EP1830936 B1	20120731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20111130
EP1830936 B1	20120817	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20120731
EP1830936 B1	20120829	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1830936 B1	20120913	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 602005028170 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120601
EP1830936 B1	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20111118
EP1830936 B1	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20111118
EP1830936 B1	20121231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20111130
EP1830936 B1	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20111118
EP1830936 B1	20130628	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20120601

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EP1830936 B1	20130930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20131031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : HU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20110518
EP1830936 B1	20251118	PEXP		Calculated Patent Term Expiry	
US2006111195 AA	20060525	LSPB	+	published / reissued	
US2006111195 AA	20090824	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENRY, SCHOOLEY AND ASSOCIATES; REEL/FRAME:023136/0926 EFFECTIVE DATE : 20090805
US2006135274 AA	20060622	LSPB	+	published / reissued	
US2006135274 AA	20070108	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HENRY, SCHOOLEY & ASSOCIATES, L.L.C., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENRY, JEFFERY WAYNE; REEL/FRAME:018774/0510 EFFECTIVE DATE : 20050304
US2006135274 AA	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENRY, SCHOOLEY AND ASSOCIATES, L.L.C.; REEL/FRAME:023194/0784 EFFECTIVE DATE : 20090805
US2006142090 AA	20060629	LSPB	+	published / reissued	
US2006142090 AA	20070108	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HENRY, SCHOOLEY & ASSOCIATES, L.L.C., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENRY, JEFFERY WAYNE; REEL/FRAME:018774/0493 EFFECTIVE DATE : 20050304
US2006142090 AA	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENRY, SCHOOLEY AND ASSOCIATES, L.L.C.; REEL/FRAME:023194/0775 EFFECTIVE DATE : 20090805
US2006142090 AA	20110427	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7597630 BB	20091006	LSGT	+	granted / extensions (spc, cpc, pte)	
US7597630 BB	20050329	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HENRY, SCHOOLEY & ASSOCIATES, L.L.C., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST;

					ASSIGNOR:HENRY, JEFFERY WAYNE; REEL/FRAME:016407/0267 EFFECTIVE DATE : 20050304
US7597630 BB	20090916	LSGT	PAT1	Patented Case	
US7597630 BB	20130307	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7597630 BB	20171106	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7597630 BB	20171106	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7597630 BB	20171106	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7597630 BB	20171128	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20171006
US7597630 BB	20251008	PEXP		Calculated Patent Term Expiry (PTA 318 days)	
US7942752 BB	20110517	LSGT	+	granted / extensions (spc, cpc, pte)	
US7942752 BB	20110427	LSGT	PAT1	Patented Case	
US7942752 BB	20141106	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7942752 BB	20190107	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7942752 BB	20190624	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7942752 BB	20190624	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7942752 BB	20190624	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7942752 BB	20190716	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190517
US7942752 BB	20270122	PEXP		Calculated Patent Term Expiry (PTA 473 days)	
US8162769 BB	20120424	LSGT	+	granted / extensions (spc, cpc, pte)	
US8162769 BB	20120404	LSGT	PAT1	Patented Case	
US8162769 BB	20160424	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8162769 BB	20160523	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8162769 BB	20160523	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8162769 BB	20160614	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160424
US8162769 BB	20260723	PEXP		Calculated Patent Term Expiry (PTA 290 days)	

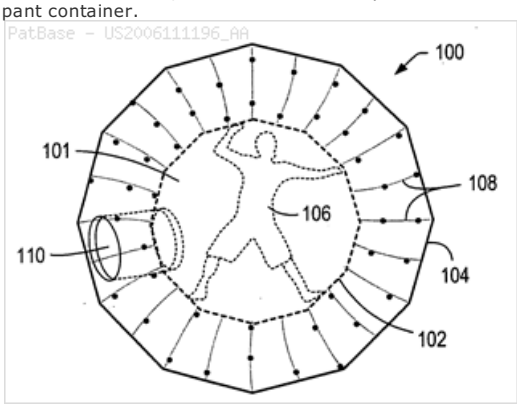
WO06057970 A2	20060601	LSPB	+	published / reissued	
WO06057970 A3	20070525	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06057970 A3	20070528	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005309695 COUNTRY OF REF DOCUMENT : AU
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WO06057970 A3	20070621	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2005309695 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20051118 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO06057970 A3	20070621	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005851944 COUNTRY OF REF DOCUMENT : EP
WO06057970 A3	20070621	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2005309695 COUNTRY OF REF DOCUMENT : AU
WO06057970 A3	20070912	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2005851944 COUNTRY OF REF DOCUMENT : EP

4) Family number: 33025027 (US2006111196A)

Title: ROLLABLE CARRIER RIDE

Abstract: An amusement ride system and method are described. In some embodiments, an amusement ride system may be generally related to water amusement attractions and rides. Further, the disclosure generally relates to water-powered rides and to a system and method in which participants may be more involved in a water attraction. In some embodiments, an amusement ride system may include a rollable carrier. The rollable carrier may include an exterior rollable surface and an inner area. The inner area may include a participant container. In some embodiments, an amusement ride system may include a water path system. The water path system may function to substantially contain the rollable carrier such that the rollable carrier will remain in the water path system while rolling. In some embodiments, a rollable carrier may function to roll in a water path system while containing a participant in the participant container.

Classifications:
International (IPC 8-9): A63G31/00 A63G31/10 (Advanced/Invention); A63G31/00 (Advanced/Non-invention); A63G31/00 (Core/Invention)
CPC: A63G3/02 A63G21/18 A63G29/00
European: A63G29/00 A63G3/02 K63G21/18
US: 441/65 472/117 472/128 472/129



Family:

Publication number	Publication date	Application number	Application date
US2006111196 AA	20060525	US20040997791	20041124
US7497784 BB	20090303	US20040997791	20041124

Priority:

US20040997791 20041124

Probable Assignee: WATER RIDE CONCEPTS INC
Assignee(s): (std): HENRY JEFFERY W ; WATER RIDE CONCEPTS INC
Assignee(s): HENRY SCHOOLEY AND ASSOCIATES LLC
Inventor(s): (std): HENRY JEFFERY W ; HENRY JEFFERY WAYNE
Inventor(s): HENRY JEFFERY
Agent(s): MEYERTONS HOOD KIVLIN KOWERT AND GOETZEL PC; MEYERTONS ERIC B

Legal status (INPADOC)

View legal status timeline

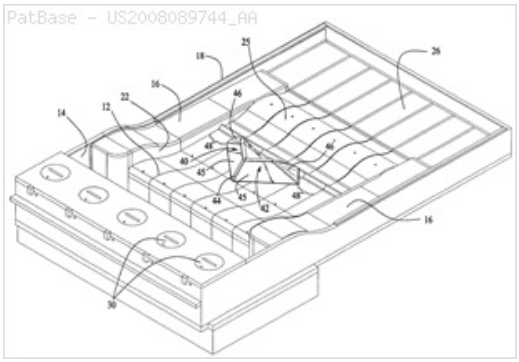
Patent	Date recorded	Event group	Code	Event	Details
US2006111196 AA	20060525	LSPB	+	published / reissued	
US7497784 BB	20090303	LSGT	+	granted / extensions (spc, cpc, pte)	
US7497784 BB	20050404	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HENRY, SCHOOLEY & ASSOCIATES, L.L.C., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENRY, JEFFERY WAYNE; REEL/FRAME:016420/0852 EFFECTIVE DATE : 20050304
US7497784 BB	20090211	LSGT	PAT1	Patented Case	
US7497784 BB	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENRY, SCHOOLEY AND ASSOCIATES; REEL/FRAME:023194/0719 EFFECTIVE DATE : 20090805
US7497784 BB	20120830	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7497784 BB	20170303	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7497784 BB	20170403	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR	

				1.362	
US7497784 BB	20170403	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7497784 BB	20170425	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170303
US7497784 BB	20241207	PEXP		Calculated Patent Term Expiry (PTA 13 days)	

5) Family number: 41731032 (US2008089744A)

Title: BARRELING WAVE GENERATING APPARATUS AND METHOD

Abstract: A wave forming apparatus has a channel for containing a flow of water, the channel having an inlet end connected to a water supply for supplying a flowing stream of water, a base, and spaced side walls, and at least one oblique foil member in the channel. The oblique foil member has a leading face extending at an oblique angle to the water stream in the channel, and a trailing, venturi face with a leading portion facing one of the side walls to form a venturi or constricted pass between the side wall and leading portion of the venturi face. The leading face, venturi face, and venturi pass together are adapted to form a standing barreling wave at the venturi pass.



Classifications:
International (IPC 8-9): A47K3/10 A63B69/00 A63B69/12 A63G31/00 B23P11/00 B63B35/85 E02B1/00 E02B3/00 E02B3/02 E04H4/00 E04H4/14 F04D35/00 G06F3/0481 G06F3/0482 G06F3/0484 G06F3/0486 (Advanced/Invention);
A63B69/00 A63B71/04 A63G31/00 B63B35/85 (Advanced/Non-invention);
E02B1/00 E02B3/00 (Core/Invention)
CPC: A63B69/125 E02B3/02 E04H4/0006 A63B71/04 A63B69/0093 A63G31/007 B63B2035/855 Y10T29/49947 G06F3/04817 G06F3/0486 G06F3/04847 G06F3/04842 G06F3/0482
European: A63B69/00U A63B69/12B A63G31/00 E04H4/00A K63B69/00U K63B71/04 K63G21/18
US: 1/1 29/525.01 29/525.010S 4/491 405/79 405/79P 405/80 472/128

Family:

Publication number	Publication date	Application number	Application date
CA2803379 AA	20130903	CA20132803379	20130124
CA2803379 C	20140527	CA20132803379	20130124
CA2825739 AA	20140501	CA20132825739	20130823
DE602007041275 D1	20150603	DE200760041275T	20071012
DE602013000111 D1	20140828	DE201360000111T	20130304
EP2078114 A2	20090715	EP20070844243	20071012
EP2078114 A4	20110824	EP20070844243	20071012
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EP2634327 A3	20131030	EP20130157612	20130304
EP2634327 B1	20140716	EP20130157612	20130304
EP2728089 A2	20140507	EP20130190442	20131028
EP2728089 A3	20170809	EP20130190442	20131028
US2008089744 AA	20080417	US20060550239	20061017
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US2011052322 AA	20110303	US20100943876	20101110
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US2013322967 AA	20131205	US20130962158	20130808
US2014105685 AA	20140417	US20130105817	20131213
US2014115770 AA	20140501	US20130740419	20130114
US2015330093 AA	20151119	US20150808076	20150724
US2019032350 AA	20190131	US20180149051	20181001
US2019257101 AA	20190822	US20190402070	20190502
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US8303213 BB	20121106	US20100700036	20100204
US8434966 BA	20130507	US20120411520	20120303
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US8602685 BA	20131210	US20130962158	20130808
US8622651 BB	20140107	US20100943876	20101110
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US9103133 BB	20150811	US20130740419	20130114
US9279263 BB	20160308	US20120603223	20120904
USRE47023 E	20180904	US20170672759	20170809
US10145135 BB	20181204	US20150808076	20150724
US10280640 BB	20190507	US20180149051	20181001
WO08048907 A2	20080424	WO2007US81275	20071012
WO08048907 A3	20081211	WO2007US81275	20071012

Priority:

US20060550239 20061017
US20080022680P 20080122
US20100700036 20100204
US20120603223 20120904
CA20132803379 20130124
US20130105817 20131213
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EP20070844243 20071012
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US20100943876 20101110
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WO2007US81275 20071012
US20100700042 20100204
US20120411520 20120303
US20130740419 20130114
US20130962158 20130808
US20170672759 20170809

Probable Assignee: AMERICAN WAVE MACHINES INC

Assignee(s): (std): AMERICAN WAVE MACHINCES INC ; AMERICAN WAVE MACHINES INC ; AMERICAN WAVE MACHINIES INC ; MCFARLAND BRUCE ; MCFARLAND BRUCE C

Assignee(s): AMERICAN WAVE MACHINES INC SOLANA BEACH

Inventor(s): (std): GINESTET CLEMENT ; MCFARLAND BRUCE ; MCFARLAND BRUCE C

Inventor(s): MCFARLAND BRUCE SOLANA BEACH ; MCFARLAND BRUCE C SOLANA BEACH

Agent(s): MBM INTELLECTUAL PROPERTY LAW LLP; VIERING JENTSCHURA AND PARTNER MBB PATENT U RECHTSANWAELTE; VIERING JENTSCHURA AND PARTNER; VIERING JENTSCHURA AND PARTNER PATENT U RECHTSANWAELTE; PROCOPIO CORY HARGREAVES AND SAVITCH LLP; MANUEL F DE LA CERRA; MANUEL F; MANUEL; MANUEL DE LA; DE LA CERRA MANUEL; PROCTOR KATHERINE

Designated states: AE AG AL AM 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 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
CA2803379 AA	20130903	LSPB	+	published / reissued	
CA2803379 C	20140527	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2803379 C	20330124	PEXP		Calculated Patent Term Expiry	
CA2825739 AA	20140501	LSPB	+	published / reissued	
CA2825739 AA	20180829	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20180824
EP2078114 A2	20090715	LSPB	+	published / reissued	
EP2078114 A2	20090715	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090511
EP2078114 A4	20110824	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	EFFECTIVE DATE : 20110726
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EP2078114 A4	20141231	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20141201
EP2078114 B1	20150429	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2078114 B1	20150429	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2078114 B1	20150430	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP2078114 B1	20150603	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602007041275 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20150603
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EP2078114 B1	20150925	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
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EP2078114 B1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150829
EP2078114 B1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150730
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EP2078114 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150429
EP2078114 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150429
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EP2078114 B1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20150429
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EP2078114 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150429
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EP2078114 B1	20170131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20161025 YEAR OF FEE PAYMENT : 10
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EP2078114 B1	20171023	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 11
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EP2078114 B1	20271012	PEXP		Calculated Patent Term Expiry	
EP2634327 A2	20130904	LSPB	+	published / reissued	
EP2634327 A2	20160531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160322 YEAR OF FEE PAYMENT : 4
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EP2634327 A3	20140319	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20140219
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EP2634327 B1	20140716	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2634327 B1	20140731	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2634327 B1	20140813	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
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EP2634327 B1	20141210	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20140716
EP2634327 B1	20141215	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 677774 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20140716
EP2634327 B1	20141229	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2634327 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20141016
EP2634327 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20140716
EP2634327 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE

				VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20141117
EP2634327 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20141016
EP2634327 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20141017
EP2634327 B1	20150227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20141116
EP2634327 B1	20150227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150227	LSLE	-PG25	LAPSED IN A CONTRACTING	COUNTRY OF REF DOCUMENT : RS

				STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20140716
EP2634327 B1	20150417	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602013000111 COUNTRY OF REF DOCUMENT : DE
EP2634327 B1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20140716
EP2634327 B1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20140716
EP2634327 B1	20150624	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20150417
EP2634327 B1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150304
EP2634327 B1	20151030	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT :

				CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20160113	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2634327 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150304
EP2634327 B1	20160322	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 : 4
EP2634327 B1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20140716
EP2634327 B1	20161031	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2634327 B1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160331
EP2634327 B1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160331
EP2634327 B1	20170323	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 : 5
EP2634327 B1	20170428	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20170323 YEAR OF FEE PAYMENT : 5
EP2634327 B1	20170531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : HU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT; INVALID AB INITIO LAPSED DATE : 20130304
EP2634327 B1	20170531	LSFE	+PGFP	ANNUAL FEE PAID	COUNTRY OF REF DOCUMENT :

				TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	GB PAYMENT DATE : 20170327 YEAR OF FEE PAYMENT : 5
EP2634327 B1	20170731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20170731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20170330 YEAR OF FEE PAYMENT : 5
EP2634327 B1	20170831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20180326	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 6
EP2634327 B1	20180430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20180326 YEAR OF FEE PAYMENT : 6
EP2634327 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SM NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20180531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20180326 YEAR OF FEE PAYMENT : 6
EP2634327 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : MK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20180731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20180328 YEAR OF FEE PAYMENT : 6
EP2634327 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2634327 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20190326 YEAR OF FEE PAYMENT : 7
EP2634327 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20190325 YEAR OF FEE PAYMENT : 7
EP2634327 B1	20190731	LSFE	+PGFP	ANNUAL FEE PAID	COUNTRY OF REF DOCUMENT :

				TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	DE PAYMENT DATE : 20190329 YEAR OF FEE PAYMENT : 7
EP2634327 B1	20330304	PEXP		Calculated Patent Term Expiry	
EP2728089 A2	20140507	LSPB	+	published / reissued	
EP2728089 A2	20140507	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20131028
EP2728089 A3	20180321	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20180208
EP2728089 A3	20181107	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20181004
US10145135 BB	20181204	LSGT	+	granted / extensions (spc, cpc, pte)	
US10145135 BB	20181114	LSGT	PAT1	Patented Case	
US10145135 BB	20350724	PEXP		Calculated Patent Term Expiry	
US10280640 BB	20190507	LSGT	+	granted / extensions (spc, cpc, pte)	
US10280640 BB	20181001	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10280640 BB	20181022	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10280640 BB	20181126	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MCFARLAND, BRUCE; GINESTET, CLEMENT; REEL/FRAME:047581/0699 EFFECTIVE DATE : 20150921
US10280640 BB	20190417	LSGT	PAT1	Patented Case	
US10280640 BB	20381001	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US2008089744 AA	20080417	LSPB	+	published / reissued	
US2008089744 AA	20100120	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2009185863 AA	20090723	LSPB	+	published / reissued	
US2009185863 AA	20100505	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2010135727 AA	20100603	LSPB	+	published / reissued	
US2010135727 AA	20130814	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011052322 AA	20110303	LSPB	+	published / reissued	
US2011052322 AA	20130930	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE; REEL/FRAME:031312/0259 EFFECTIVE DATE : 20130808
US2011052322 AA	20131218	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011188937 AA	20110804	LSPB	+	published / reissued	

US2011188937 AA	20121017	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2013227777 AA	20130905	LSPB	+	published / reissued	
US2013227777 AA	20160217	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2013322967 AA	20131205	LSPB	+	published / reissued	
US2014105685 AA	20140417	LSPB	+	published / reissued	
US2014105685 AA	20150610	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014115770 AA	20140501	LSPB	+	published / reissued	
US2014115770 AA	20150722	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2015330093 AA	20151119	LSPB	+	published / reissued	
US2015330093 AA	20160830	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MCFARLAND, BRUCE; GINESTET, CLEMENT; REEL/FRAME:039586/0729 EFFECTIVE DATE : 20150921
US2015330093 AA	20170410	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2015330093 AA	20171023	LSES	WAE1	Withdrawn Abandonment, awaiting examiner action	
US2015330093 AA	20171024	LSAL	NAF1	Notice of Appeal Filed	
US2015330093 AA	20171030	LSES	-NFA2	Non Final Action Counted, Not Yet Mailed	
US2015330093 AA	20171101	LSES	NFA1	Non Final Action Mailed	
US2015330093 AA	20181114	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2019032350 AA	20190131	LSPB	+	published / reissued	
US2019032350 AA	20181228	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2019032350 AA	20190319	LSFE	+PPR1	Publications -- Issue Fee Payment Received	
US2019032350 AA	20190322	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2019032350 AA	20190417	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2019257101 AA	20190822	LSPB	+	published / reissued	
US7658571 BB	20100209	LSGT	+	granted / extensions (spc, cpc, pte)	
US7658571 BB	20061017	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE C.; REEL/FRAME:018402/0428 EFFECTIVE DATE : 20061009
US7658571 BB	20061017	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF

					ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE C.; REEL/FRAME:018402/0428 EFFECTIVE DATE : 20061009
US7658571 BB	20100120	LSGT	PAT1	Patented Case	
US7658571 BB	20130211	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7658571 BB	20170210	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7658571 BB	20270827	PEXP		Calculated Patent Term Expiry (PTA 314 days)	
US7722291 BB	20100525	LSGT	+	granted / extensions (spc, cpc, pte)	
US7722291 BB	20090121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE C.; REEL/FRAME:022132/0255 EFFECTIVE DATE : 20090119
US7722291 BB	20090121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE C.; REEL/FRAME:022132/0255 EFFECTIVE DATE : 20090119
US7722291 BB	20100505	LSGT	PAT1	Patented Case	
US7722291 BB	20130625	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7722291 BB	20170605	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7722291 BB	20290121	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8303213 BB	20121106	LSGT	+	granted / extensions (spc, cpc, pte)	
US8303213 BB	20121017	LSGT	PAT1	Patented Case	
US8303213 BB	20130930	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE; REEL/FRAME:031312/0259 EFFECTIVE DATE : 20130808
US8303213 BB	20151106	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8303213 BB	20300921	PEXP		Calculated Patent Term Expiry (PTA 229 days)	
US8434966 BA	20130507	LSGT	+	granted / extensions (spc, cpc, pte)	
US8434966 BA	20130417	LSGT	PAT1	Patented Case	
US8434966 BA	20130417	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US8434966 BA	20130930	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE; REEL/FRAME:031312/0259 EFFECTIVE DATE : 20130808
US8434966 BA	20160507	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8434966 BA	20320303	PEXP		Calculated Patent Term Expiry	
US8523484 BB	20130903	LSGT	+	granted / extensions (spc, cpc, pte)	
US8523484 BB	20130814	LSGT	PAT1	Patented Case	

US8523484 BB	20130930	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE; REEL/FRAME:031312/0259 EFFECTIVE DATE : 20130808
US8523484 BB	20160906	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8523484 BB	20190618	LSRE	CC	CERTIFICATE OF CORRECTION	
US8523484 BB	20300225	PEXP		Calculated Patent Term Expiry (PTA 21 days)	
US8602685 BA	20131210	LSGT	+	granted / extensions (spc, cpc, pte)	
US8602685 BA	20130930	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE; REEL/FRAME:031312/0259 EFFECTIVE DATE : 20130808
US8602685 BA	20131120	LSGT	PAT1	Patented Case	
US8602685 BA	20131120	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US8602685 BA	20161210	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8602685 BA	20330808	PEXP		Calculated Patent Term Expiry	
US8622651 BB	20140107	LSGT	+	granted / extensions (spc, cpc, pte)	
US8622651 BB	20131218	LSGT	PAT1	Patented Case	
US8622651 BB	20170107	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8622651 BB	20310609	PEXP		Calculated Patent Term Expiry (PTA 211 days)	
US9068371 BB	20150630	LSGT	+	granted / extensions (spc, cpc, pte)	
US9068371 BB	20150610	LSGT	PAT1	Patented Case	
US9068371 BB	20160830	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE; REEL/FRAME:039588/0959 EFFECTIVE DATE : 20160830
US9068371 BB	20180702	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US9068371 BB	20331213	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US9103133 BB	20150811	LSGT	+	granted / extensions (spc, cpc, pte)	
US9103133 BB	20130930	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE; REEL/FRAME:031312/0259 EFFECTIVE DATE : 20130808
US9103133 BB	20150722	LSGT	PAT1	Patented Case	
US9103133 BB	20180811	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US9103133 BB	20330118	PEXP		Calculated Patent Term Expiry (PTA 4 days and a terminal disclaimer has been filed)	

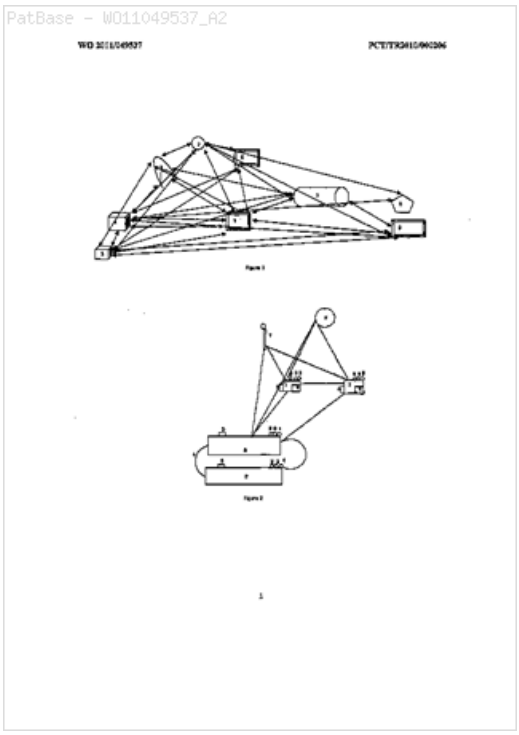
US9279263 BB	20160308	LSGT	+	granted / extensions (spc, cpc, pte)	
US9279263 BB	20160217	LSGT	PAT1	Patented Case	
US9279263 BB	20160830	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN WAVE MACHINES, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MCFARLAND, BRUCE; REEL/FRAME:039588/0959 EFFECTIVE DATE : 20160830
US9279263 BB	20190308	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US9279263 BB	20341210	PEXP		Calculated Patent Term Expiry (PTA 827 days and a terminal disclaimer has been filed)	
USRE47023 E	20180821	LSGT	PAT1	Patented Case	
USRE47023 E	20180910	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
WO08048907 A2	20080424	LSPB	+	published / reissued	
WO08048907 A3	20090418	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08048907 A3	20090511	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007844243 COUNTRY OF REF DOCUMENT : EP

6) Family number: 48789038 (WO11049537A2)

Title: CEPMATIK

Abstract: The invention is a communication tool having more than one function. It provides advantages in terms of users to have information about other users to the extent that the user let them or in terms of the capability of following information and documents which have to be under the government's control.

Classifications:
International (IPC 8-9): G06K5/00 G08B21/22 (Advanced/Invention)
CPC: G08B21/22
European: G08B21/22



Family:

Publication number	Publication date	Application number	Application date
TR200907930 A2	20110121	TR20090007930	20091021
WO11049537 A2	20110428	WO2010TR00206	20101021
WO11049537 A3	20110630	WO2010TR00206	20101021

Priority:

TR20090007930 20091021

Probable Assignee: SECKIN ALI

Assignee(s): (std): ALI SECKIN ; SECKIN ALI

Assignee(s): AL SECK N

Inventor(s): (std): ALI SECKIN ; SECKIN ALI

Inventor(s): AL SECK N

Agent(s): MURAT YE ILYURT

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)

View legal status timeline

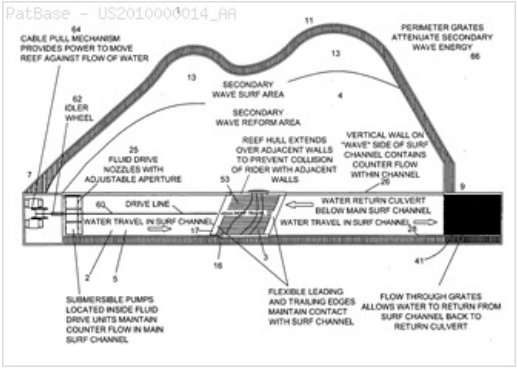
Patent	Date recorded	Event group	Code	Event	Details
TR200907930 A2	20110121	LSPB	+	published / reissued	
WO11049537 A2	20110428	LSPB	+	published / reissued	
WO11049537 A3	20120423	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11049537 A3	20121114	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10793065 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) :

7) Family number: 44122047 (US2010000014A)

Title: WAVE **POOL** WITH MOVING REEF **WAVE** **GENERATOR** EXTENSION AND COUNTER CURRENT

Abstract: The invention relates to a wave **pool** with a beach having a body of water and a **wave** **generator** that travels along a relatively shallow channel across from the beach. The **wave** **generator** is adapted to travel through the channel and displace the water in the channel to create primary waves on which surfing maneuvers can be performed. The primary waves in turn enter into the body of water to produce secondary waves that can be acted upon by the inclined **pool** floor so that they eventually break and spill onto the beach. The water in the channel is preferably provided with a reverse current to enable the absolute speed of the **wave** **generator** to be reduced, which allows the channel to be shorter in length without significantly impacting the wave effects that are created, which helps reduce the cost of construction. The **wave** **generator** is preferably provided with a forward extending wing section that causes the leading edge to extend further out in front of the flow forming surface, which provides added safety to the participants.

Classifications:
International (IPC 8-9): A47K3/10 E02B3/00 (Advanced/Invention); A47K3/10 (Core/Invention)
CPC: E04H4/0006
European: E04H4/00A
US: 4/491 4/491P 405/79 472/128



Family:

Publication number	Publication date	Application number	Application date
AU2009258167 AA	20091217	AU20090258167	20090528
AU2009258167 BB	20160421	AU20090258167	20090528
EP2312981 A1	20110427	EP20090762844	20090528
US2010000014 AA	20100107	US20090455107	20090528
US8496403 BB	20130730	US20090455107	20090528
WO09151548 A1	20091217	WO2009US03255	20090528

Priority:
US20080130053P 20080528 US20090455107 20090528 WO2009US03255 20090528

Probable Assignee: CHARLES SAUERBIER

Assignee(s): (std): CHARLES SAUERBIER ; LOCHTEFELD THOMAS ; LOCHTEFELD THOMAS J ; SAUERBIER CHARLES ; SAUERBIER CHARLES E ; THOMAS LOCHTEFELD

Inventor(s): (std): SAUERBIER CHARLES E ; LOCHTEFELD THOMAS J

Inventor(s): THOMAS J LOCHTEFELD ; CHARLES E SAUERBIER

Agent(s): HODGKINSON MCINNES PATENTS; DAVIES COLLISON CAVE; SHELSTON IP; SHELSTON IP PTY LTD; VOSSIUS AND PARTNER; PATENT OFFICE OF J JOHN SHIMAZAKI PLLC; J JOHN; SHIMAZAKI J JOHN

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
AU2009258167 AA	20091217	LSPB	+	published / reissued	
AU2009258167 AA	20161222	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
AU2009258167 BB	20160421	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2009258167 BB	20290528	PEXP		Calculated Patent Term Expiry	
EP2312981 A1	20110427	LSPB	+	published / reissued	
EP2312981 A1	20110427	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20101224
EP2312981 A1	20160720	LSWD	-18W	APPLICATION WITHDRAWN	EFFECTIVE DATE : 20160610
US2010000014 AA	20100107	LSPB	+	published / reissued	
US8496403 BB	20130730	LSGT	+	granted / extensions (spc, cpc, pte)	
US8496403 BB	20130710	LSGT	PAT1	Patented Case	

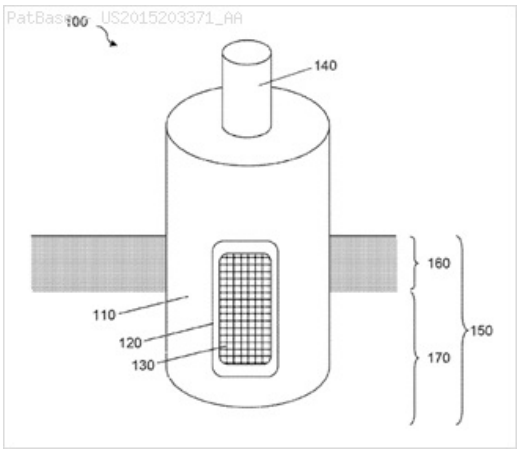
US8496403 BB	20170828	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US8496403 BB	20170828	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8496403 BB	20170828	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8496403 BB	20170919	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170730
US8496403 BB	20291017	PEXP		Calculated Patent Term Expiry (PTA 142 days)	
WO09151548 A1	20091217	LSPB	+	published / reissued	
WO09151548 A1	20101129	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009258167 COUNTRY OF REF DOCUMENT : AU
WO09151548 A1	20101130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09151548 A1	20101223	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009258167 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090528 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO09151548 A1	20101224	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009762844 COUNTRY OF REF DOCUMENT : EP

8) Family number: 56201052 (US2015203371A)

Title: LIQUID SEPARATION DEVICE

Abstract: A device for separating liquids such as oil and water includes a hydrophobic and oleophilic mesh that allows oil to pass through while preventing water from passing through. The mesh can be fabricated simply from inexpensive materials by coating a mesh with a hydrophobic polymer.

Classifications:
International (IPC 8-9): B01D17/00 B01D17/04 B01D29/00 B01D29/03 C02F1/40 (Advanced/Invention)
CPC: B01D17/10 C02F1/40 B01D29/03 B01D29/0093 C02F2101/32 B01D17/045 C02F2103/08
US: 210/499 210/776 427/244



Family:

Publication number	Publication date	Application number	Application date
US2015203371 AA	20150723	US20130433554	20131003
WO14055770 A1	20140410	WO2013US63280	20131003

Priority:

US20120709304P 20121003 US20130433554 20131003 WO2013US63280 20131003

Probable Assignee: ENI SPA

Assignee(s): (std): BAGATIN ROBERTO ; DENG DA ; ENI SPA ; MASSACHUSETTS INST TECHNOLOGY ; GSCHWEND PHILIP M ; PRENDERGAST DANIEL P ; STELLACCI FRANCESCO

Assignee(s): MASSACHUSETTS INST OF TECHNOLOGY

Inventor(s): (std): BAGATIN ROBERTO ; DENG DA ; GSCHWEND PHILIP M ; STELLACCI FRANCESCO ; PRENDERGAST DANIEL P

Agent(s): FOX HAROLD H 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 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
US2015203371 AA	20150723	LSPB	+	published / reissued	
US2015203371 AA	20160914	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ENI SPA, ITALY OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BAGATIN, ROBERTO; REEL/FRAME:039735/0979 EFFECTIVE DATE : 20160913
US2015203371 AA	20171102	LSES	-NFA2	Non Final Action Counted, Not Yet Mailed	
US2015203371 AA	20171114	LSES	NFA1	Non Final Action Mailed	
US2015203371 AA	20181113	LSES	NFA1	Non Final Action Mailed	
US2015203371 AA	20190826	LSES	ADV1	Advisory Action Mailed	
WO14055770 A1	20140410	LSPB	+	published / reissued	
WO14055770 A1	20150403	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14433554 COUNTRY OF REF DOCUMENT : US
WO14055770 A1	20150407	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

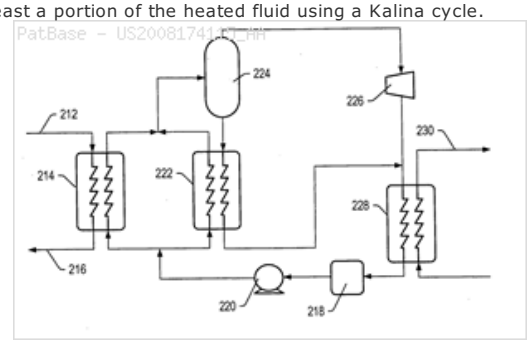
WO14055770 A1	20151028	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13783720 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

9) Family number: 42104055 (US2008174115A)

Title: POWER SYSTEMS UTILIZING THE HEAT OF PRODUCED FORMATION FLUID

Abstract: Systems, methods, and heaters for treating a subsurface formation are described herein. At least one method includes treating a hydrocarbon containing formation. The method may include providing heat to the formation; producing heated fluid from the formation; and generating electricity from at least a portion of the heated fluid using a Kalina cycle.

Classifications:
International (IPC 8-9): E21B36/02 E21B36/04 E21B43/24 E21B43/28 F01K15/00 (Advanced/Invention); F01K15/00 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/256 166/267 166/302 166/57 166/59 166/60 290/2 290/2P 299/5



Family:

Publication number	Publication date	Application number	Application date
US2008174115 AA	20080724	US20070788822	20070420
US7866385 BB	20110111	US20070788822	20070420

Priority:
US20060794298P 20060421 US20060853096P 20061020 US20070788822 20070420

Probable Assignee: SHELL OIL CO
Assignee(s): (std): LAMBIRTH GENE RICHARD ; SHELL OIL CO
Assignee(s): SHELL OIL COMPANY
Inventor(s): (std): LAMBIRTH GENE RICHARD
Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2008174115 AA	20080724	LSPB	+	published / reissued	
US7866385 BB	20110111	LSGT	+	granted / extensions (spc, cpc, pte)	
US7866385 BB	20071015	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:LAMBIRTH, GENE RICHARD; REEL/FRAME:019964/0573 EFFECTIVE DATE : 20071001
US7866385 BB	20101222	LSGT	PAT1	Patented Case	
US7866385 BB	20140611	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7866385 BB	20180903	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US7866385 BB	20190218	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US7866385 BB	20190218	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7866385 BB	20190218	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7866385 BB	20190312	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190111

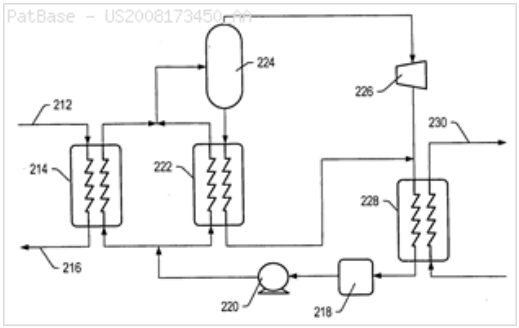
US7866385 BB	20290330	PEXP	Calculated Patent Term Expiry (PTA 710 days)

10) Family number: 42104056 (US2008173450A)

Title: TIME SEQUENCED HEATING OF MULTIPLE LAYERS IN A HYDROCARBON CONTAINING FORMATION

Abstract: A method for treating a hydrocarbon containing formation may include providing heat to a first hydrocarbon layer in the formation from a first heater located in an opening in the formation. The opening and the first heater may have a horizontal or inclined portion located in the first hydrocarbon layer and at least one connecting portion extending between the horizontal or inclined portion and the surface. Isolation material is placed in the opening such that the isolation material partially isolates the layer in which the horizontal or inclined portion of the first heater is located. An additional horizontal or inclined opening portion that extends from at least one of the connecting portions of the opening is formed in a second hydrocarbon layer. A second heater to provide heat the second hydrocarbon formation is placed in the additional substantially horizontal opening portion.

Classifications:
International (IPC 8-9): E21B33/13 E21B36/04 E21B43/24 E21B43/30 (Advanced/Invention);
E21B33/13 E21B36/00 E21B43/00 E21B43/16 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/245 166/285 166/302 166/376 166/377 166/387 166/50



Family:

Publication number	Publication date	Application number	Application date
US2008173450 AA	20080724	US20070788859	20070420
US7635023 BB	20091222	US20070788859	20070420

Priority:

US20060794298P 20060421 US20060853096P 20061020 US20070788859 20070420

Probable Assignee: SHELL OIL CO

Assignee(s): (std): GOLDBERG BERNARD ; HALE ARTHUR HERMAN ; MILLER DAVID SCOTT ; SHELL OIL CO ; VINEGAR HAROLD J

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): MILLER DAVID SCOTT ; VINEGAR HAROLD J ; GOLDBERG BERNARD ; HALE ARTHUR HERMAN

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2008173450 AA	20080724	LSPB	+	published / reissued	
US7635023 BB	20091222	LSGT	+	granted / extensions (spc, cpc, pte)	
US7635023 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GOLDBERG, BERNARD; HALE, ARTHUR HERMAN; MILLER, DAVID SCOTT; AND OTHERS; REEL/FRAME:019701/0609; SIGNING DATES FROM 20070703 TO 20070714
US7635023 BB	20091202	LSGT	PAT1	Patented Case	
US7635023 BB	20130314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7635023 BB	20180122	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7635023 BB	20180122	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7635023 BB	20180122	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7635023 BB	20180213	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY	EFFECTIVE DATE : 20171222

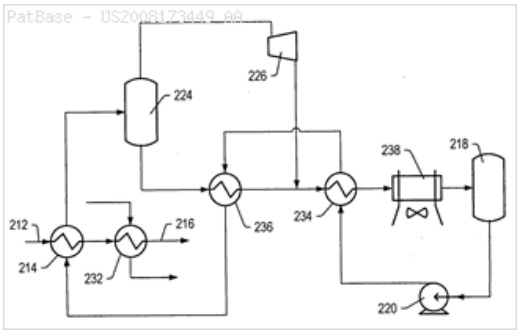
			MAINTENANCE FEE
US7635023 BB	20270719	PEXP	Calculated Patent Term Expiry (PTA 90 days)

11) Family number: 42104057 (US2008173449A)

Title: SOUR GAS INJECTION FOR USE WITH IN SITU HEAT TREATMENT

Abstract: Systems, methods, and heaters for treating a subsurface formation are described herein. At least one method for providing acidic gas to a subsurface formation is described herein. The method may include providing heat from one or more heaters to a portion of a subsurface formation; producing fluids that include one or more acidic gases from the formation using a heat treatment process. At least a portion of one of the acidic gases may be introduced into the formation, or into another formation, through one or more wellbores at a pressure below a lithostatic pressure of the formation in which the acidic gas is introduced.

Classifications:
International (IPC 8-9): E21B36/04 E21B41/02 E21B43/24 E21B43/40 (Advanced/Invention);
E21B36/00 E21B41/00 E21B43/16 E21B43/34 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/266 166/267 166/272.1 166/302 166/60 166/902 405/129.35 588/250



Family:

Publication number	Publication date	Application number	Application date
US2008173449 AA	20080724	US20070788864	20070420
US7610962 BB	20091103	US20070788864	20070420

Priority:
US20060794298P 20060421 US20060853096P 20061020 US20070788864 20070420

Probable Assignee: SHELL OIL CO
Assignee(s): (std): FOWLER THOMAS DAVID ; SHELL OIL CO
Assignee(s): SHELL OIL COMPANY
Inventor(s): (std): FOWLER THOMAS DAVID
Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

View legal status timeline

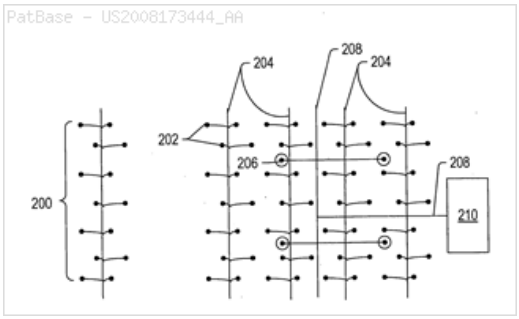
Patent	Date recorded	Event group	Code	Event	Details
US2008173449 AA	20080724	LSPB	+	published / reissued	
US7610962 BB	20091103	LSGT	+	granted / extensions (spc, cpc, pte)	
US7610962 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:FOWLER, THOMAS DAVID; REEL/FRAME:019701/0347 EFFECTIVE DATE : 20070713
US7610962 BB	20091014	LSGT	PAT1	Patented Case	
US7610962 BB	20130314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7610962 BB	20171204	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7610962 BB	20171204	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7610962 BB	20171204	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7610962 BB	20171226	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20171103
US7610962 BB	20271102	PEXP		Calculated Patent Term Expiry (PTA 196 days)	

12) Family number: 42104058 (US2008173444A)

Title: ALTERNATE ENERGY SOURCE USAGE FOR IN SITU HEAT TREATMENT PROCESSES

Abstract: Systems, methods, and heaters for treating a subsurface formation are described herein. At least one system for providing power to one or more subsurface heaters is described herein. The system may include an intermittent power source; a transformer coupled to the intermittent power source, and a tap controller coupled to the transformer. The transformer may be configured to transform power from the intermittent power source to power with appropriate operating parameters for the heaters. The tap controller may be configured to monitor and control the transformer so that a constant voltage is provided to the heaters from the transformer regardless of the load of the heaters and the power output provided by the intermittent power source.

Classifications:
International (IPC 8-9): E21B43/24 H05B3/02 (Advanced/Invention); E21B43/16 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/245 166/250.15 166/250.150P 166/53 166/53S 392/301



Family:

Publication number	Publication date	Application number	Application date
US2008173444 AA	20080724	US20070788868	20070420
US7912358 BB	20110322	US20070788868	20070420

Priority:

US20060794298P 20060421 US20060853096P 20061020 US20070788868 20070420

Probable Assignee: SHELL OIL CO

Assignee(s): (std): GOODWIN CHARLES R ; RICHARD JAMES ; SHELL OIL CO ; STONE FRANCIS MARION

Assignee(s): SHELL OIL COMPANY ; SALAMANDER SOLUTIONS INC

Inventor(s): (std): STONE FRANCIS MARION ; GOODWIN CHARLES R ; RICHARD JAMES ; STONE JR FRANCIS MARION ; RICHARD JR JAMES

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2008173444 AA	20080724	LSPB	+	published / reissued	
US2008173444 AA	20110302	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7912358 BB	20110322	LSGT	+	granted / extensions (spc, cpc, pte)	
US7912358 BB	20071015	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:STONE, FRANCIS MARION, JR.; GOODWIN, CHARLES R.; RICHARD, JAMES, JR.; REEL/FRAME:019964/0618; SIGNING DATES FROM 20070703 TO 20071004
US7912358 BB	20071015	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:STONE, FRANCIS MARION, JR.; GOODWIN, CHARLES R.; RICHARD, JAMES, JR.; REEL/FRAME:019966/0274; SIGNING DATES FROM 20070703 TO 20071004
US7912358 BB	20071015	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:STONE, FRANCIS MARION, JR.; GOODWIN, CHARLES R.; RICHARD, JAMES, JR.; SIGNING DATES FROM 20070703 TO 20071004; REEL/FRAME:019964/0618
US7912358 BB	20071015	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER

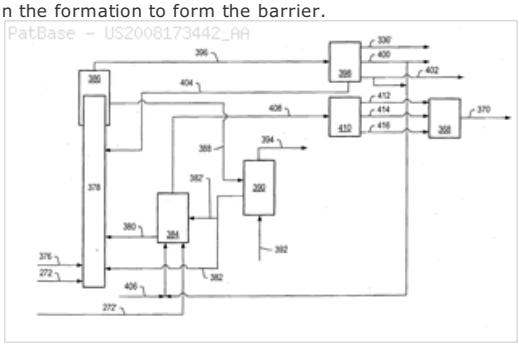
					OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:STONE, FRANCIS MARION, JR.; GOODWIN, CHARLES R.; RICHARD, JAMES, JR.; SIGNING DATES FROM 20070703 TO 20071004; REEL/FRAME:019966/0274
US7912358 BB	20110302	LSGT	PAT1	Patented Case	
US7912358 BB	20140827	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7912358 BB	20180906	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7912358 BB	20291124	PEXP		Calculated Patent Term Expiry (PTA 949 days)	

13) Family number: 42104059 (US2008173442A)

Title: SULFUR BARRIER FOR USE WITH IN SITU PROCESSES FOR TREATING FORMATIONS

Abstract: Methods for forming a barrier around at least a portion of a treatment area in a subsurface formation are described herein. Sulfur may be introduced into one or more wellbores located inside a perimeter of a treatment area in the formation having a permeability of at least 0.1 darcy. At least some of the sulfur is allowed to move towards portions of the formation cooler than the melting point of sulfur to solidify the sulfur in the formation to form the barrier.

Classifications:
International (IPC 8-9): E21B33/138 E21B43/24 E21B43/285 E21B43/30 (Advanced/Invention);
E21B33/138 E21B43/00 E21B43/16 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/229 166/245 166/288 166/302 299/5 405/129.35 405/263 405/52



Family:

Publication number	Publication date	Application number	Application date
US2008173442 AA	20080724	US20070788861	20070420
US7631689 BB	20091215	US20070788861	20070420

Priority:

US20060794298P 20060421 US20060853096P 20061020 US20070788861 20070420

Probable Assignee: SHELL OIL CO

Assignee(s): (std): CHRISTENSEN DEL SCOT ; SHELL OIL CO ; VINEGAR HAROLD J

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): VINEGAR HAROLD J ; CHRISTENSEN DEL SCOT

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

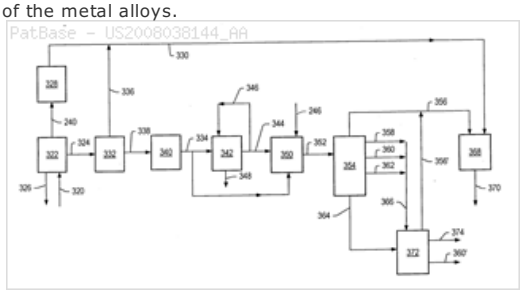
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Patent	Date recorded	Event group	Code	Event	Details
US2008173442 AA	20080724	LSPB	+	published / reissued	
US7631689 BB	20091215	LSGT	+	granted / extensions (spc, cpc, pte)	
US7631689 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:VINEGAR, HAROLD J.; CHRISTENSEN, DEL SCOT; REEL/FRAME:019701/0046; SIGNING DATES FROM 20070703 TO 20070717
US7631689 BB	20091124	LSGT	PAT1	Patented Case	
US7631689 BB	20130314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7631689 BB	20180115	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7631689 BB	20180119	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7631689 BB	20180119	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7631689 BB	20180206	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20171215
US7631689 BB	20271111	PEXP		Calculated Patent Term Expiry (PTA 205 days)	

14) Family number: 42104061 (US2008038144A)

Title: HIGH STRENGTH ALLOYS

Abstract: High strength metal alloys are described herein. At least one composition of a metal alloy includes chromium, nickel, copper, manganese, silicon, niobium, tungsten and iron. System, methods, and heaters that include the high strength metal alloys are described herein. At least one heater system may include a canister at least partially made from material containing at least one of the metal alloys. At least one system for heating a subterranean formation may include a tubular that is at least partially made from a material containing at least one of the metal alloys.



Classifications:
International (IPC 8-9): C22C30/02 C22C38/02 C22C38/04 C22C38/08 C22C38/12 C22C38/16 C22C38/18 C22C38/20 C22C38/22 C22C38/26 C22C38/38 C22C38/40 C22C38/42 C22C38/44 C22C38/48 C22C38/58 E21B36/00 (Advanced/Invention); C22C30/00 C22C38/02 C22C38/04 C22C38/08 C22C38/12 C22C38/16 C22C38/18 C22C38/20 C22C38/22 C22C38/26 C22C38/38 C22C38/40 C22C38/42 C22C38/44 C22C38/48 C22C38/58 E21B36/00 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 148/326 148/327 148/419 148/442 166/248 166/302 166/60 166/66 420/45 420/49 420/58 420/582 420/584.1 420/59 420/61

Family:

Publication number	Publication date	Application number	Application date
US2008038144 AA	20080214	US20070788858	20070420
US7785427 BB	20100831	US20070788858	20070420

Priority:
US20060794298P 20060421 US20060853096P 20061020 US20070788858 20070420

Probable Assignee: SHELL OIL CO

Assignee(s): (std): JOHN RANDY C ; KIM DONG S ; MAZIASZ PHILLIP J ; SANTELLA MICHAEL L ; SCHNEIBEL JOACHIM H ; SHELL OIL CO ; SIKKA VINOD K ; SHINGLEDECKER JOHN P ; VINEGAR HAROLD J

Assignee(s): SHELL OIL COMPANY ; US DEPARTMENT OF ENERGY

Inventor(s): (std): KIM DONG S ; SIKKA VINOD K ; JOHN RANDY C ; SANTELLA MICHAEL L ; MAZIASZ PHILLIP J ; SHINGLEDECKER JOHN P ; SCHNEIBEL JOACHIM H ; VINEGAR HAROLD J ; SIKKA VINOD KUMAR ; JOHN RANDY CARL ; KIM DONG SUB ; SANTELLA MICHAEL LEONARD ; SCHNEIBEL JOACHIM HUGO ; SHINGLEDECKER JOHN PAUL ; MAZIASZ PHILLIP JAMES

Inventor(s): SIKKA VINOD ; SANTELLA MICHAEL ; VINEGAR HAROLD ; SHINGLEDECKER JOHN ; JOHN RANDY ; MAZIASZ PHILLIP ; SCHNEIBEL JOACHIM ; KIM DONG

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2008038144 AA	20080214	LSPB	+	published / reissued	
US7785427 BB	20100831	LSGT	+	granted / extensions (spc, cpc, pte)	
US7785427 BB	20070809	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MAZIASZ, PHILLIP JAMES; SHINGLEDECKER, JOHN PAUL; SANTELLA, MICHAEL LEONARD; AND OTHERS; REEL/FRAME:019672/0055; SIGNING DATES FROM 20070703 TO 20070717
US7785427 BB	20070809	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MAZIASZ, PHILLIP JAMES; SHINGLEDECKER, JOHN PAUL; SANTELLA, MICHAEL LEONARD; AND OTHERS; SIGNING DATES FROM 20070703 TO 20070717; REEL/FRAME:019672/0055
US7785427 BB	20100811	LSGT	PAT1	Patented Case	
US7785427 BB	20110411	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : U.S. DEPARTMENT OF ENERGY, DISTRICT OF COLUMBIA

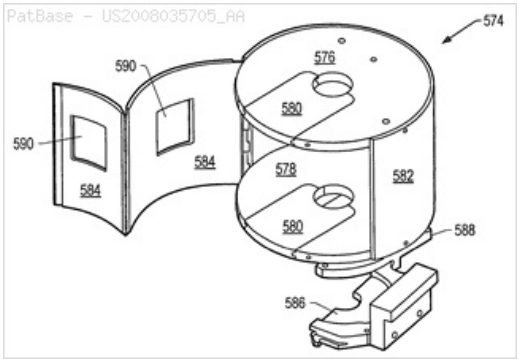
					OLDPARTY : CONFIRMATORY LICENSE; ASSIGNOR:SHELL EXPLORATION & PRODUCTION COMPANY; REEL/FRAME:026101/0892 EFFECTIVE DATE : 20100901
US7785427 BB	20140129	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7785427 BB	20180416	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7785427 BB	20181008	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7785427 BB	20181008	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7785427 BB	20181030	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180831
US7785427 BB	20270420	PEXP		Calculated Patent Term Expiry	

15) Family number: 42104062 (US2008035705A)

Title: WELDING SHIELD FOR COUPLING HEATERS

Abstract: Systems for coupling end portions of two elongated heater portions and methods of using such systems to treat a subsurface formation are described herein. A system may include a holding system configured to hold end portions of the two elongated heater portions so that the end portions are abutted together or located near each other; a shield for enclosing the end portions, and one or more inert gas inlets configured to provide at least one inert gas to flush the system with inert gas during welding of the end portions. The shield may be configured to inhibit oxidation during welding that joins the end portions together. The shield may include a hinged door that, when closed, is configured to at least partially isolate the interior of the shield from the atmosphere. The hinged door, when open, is configured to allow access to the interior of the shield.

Classifications:
International (IPC 8-9): B23K31/02 B23K37/00 B23K37/04 B23K9/095 (Advanced/Invention);
B23K31/02 B23K37/00 B23K37/04 B23K9/095 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 219/72 219/74 228/102 228/212 228/214 228/219 228/42 228/44.3 228/49.3 228/8



Family:

Publication number	Publication date	Application number	Application date
US2008035705 AA	20080214	US20070788826	20070420
US7673786 BB	20100309	US20070788826	20070420

Priority:
US20060794298P 20060421 US20060853096P 20061020 US20070788826 20070420

Probable Assignee: SHELL OIL CO
Assignee(s): (std)**:** MENOTTI JAMES L ; SHELL OIL CO
Assignee(s): SHELL OIL COMPANY
Inventor(s): (std)**:** MENOTTI JAMES L ; MENOTTI JAMES LOUIS
Inventor(s): MENOTTI JAMES
Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2008035705 AA	20080214	LSPB	+	published / reissued	
US7673786 BB	20100309	LSGT	+	granted / extensions (spc, cpc, pte)	
US7673786 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MENOTTI, JAMES LOUIS; REEL/FRAME:019701/0358 EFFECTIVE DATE : 20070710
US7673786 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY,TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MENOTTI, JAMES LOUIS; REEL/FRAME:019701/0358 EFFECTIVE DATE : 20070710
US7673786 BB	20100217	LSGT	PAT1	Patented Case	
US7673786 BB	20130918	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7673786 BB	20171023	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7673786 BB	20180409	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)

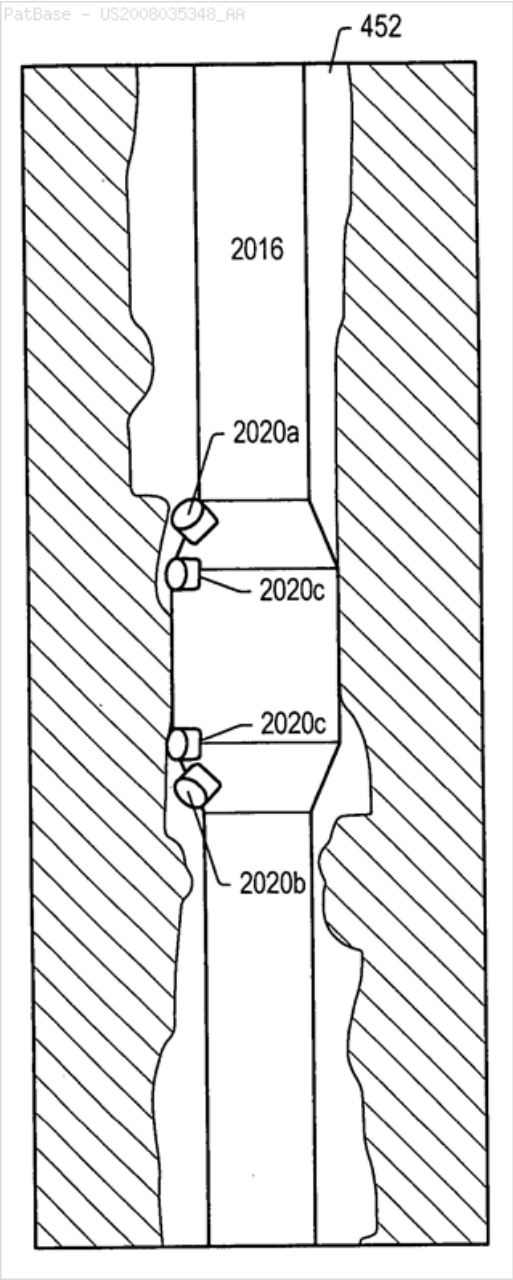
US7673786 BB	20180409	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7673786 BB	20180409	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7673786 BB	20180501	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180309
US7673786 BB	20271001	PEXP		Calculated Patent Term Expiry (PTA 164 days)	

16) Family number: 42104063 (US2008035348A)

Title: TEMPERATURE LIMITED HEATERS USING PHASE TRANSFORMATION OF FERROMAGNETIC MATERIAL

Abstract: Systems, methods, and heaters for treating a subsurface formation are described herein. Systems and methods for making heaters are described herein. At least one heater includes a ferromagnetic conductor and an electrical conductor. The electrical conductor is electrically coupled to the ferromagnetic conductor. The heater provides a first amount of heat at a lower temperature. The heater may provide a second reduced amount of heat when the heater reaches a selected temperature, or enters a selected temperature range, at which the ferromagnetic conductor undergoes a phase transformation.

Classifications:
International (IPC 8-9): E21B43/24 (Advanced/Invention); E21B43/16 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/302 392/301



Family:

Publication number	Publication date	Application number	Application date
US2008035348 AA	20080214	US20070788863	20070420
US7597147 BB	20091006	US20070788863	20070420

Priority:
US20060794298P 20060421 US20060853096P 20061020 US20070788863 20070420

Probable Assignee: UNITED STATES DEPARTMENT OF ENERGY
Assignee(s): (std): BRADY MICHAEL P ; HORTON JOSEPH A JR ; SHELL OIL CO ; VITEK JOHN M
Assignee(s): US DEPARTMENT OF ENERGY ; SHELL OIL COMPANY ; UNITED STATES DEPARTMENT OF ENERGY
Inventor(s): (std): HORTON JOSEPH A JR ; BRADY MICHAEL P ; VITEK JOHN M ; HORTON JR JOSEPH ARNO ; BRADY MICHAEL PATRICK ; VITEK JOHN MICHAEL
Inventor(s): HORTON JOSEPH AJR ; VITEK JOHN ; BRADY MICHAEL ; HORTON JOSEPH
Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

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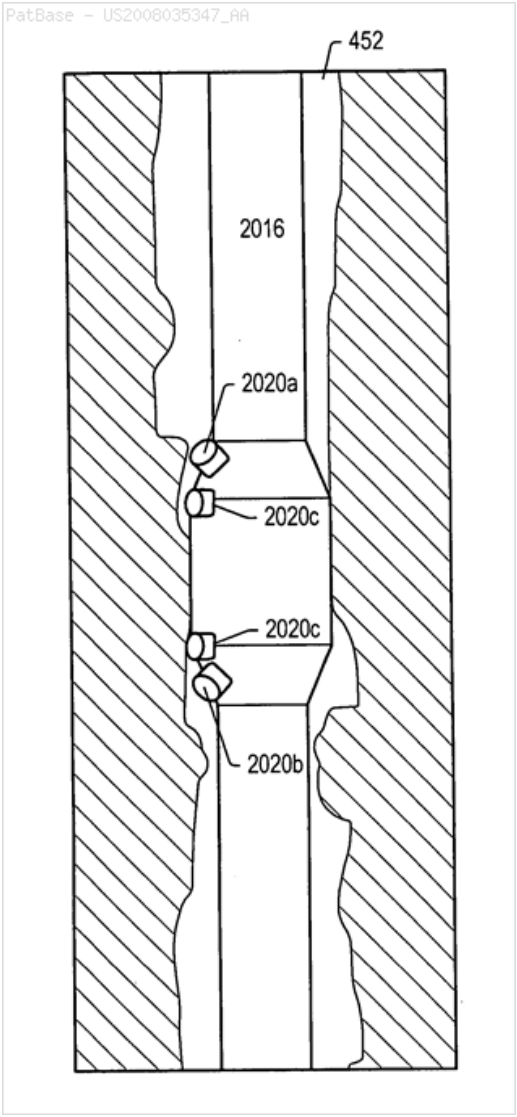
Patent	Date recorded	Event group	Code	Event	Details
US2008035348 AA	20080214	LSPB	+	published / reissued	
US2008035348 AA	20090317	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : UNITED STATES DEPARTMENT OF ENERGY, DISTRICT OF CO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JABLONSKI, PAUL D.; REEL/FRAME:022406/0284 EFFECTIVE DATE : 20090312
US2008035348 AA	20090320	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : U.S. DEPARTMENT OF ENERGY, DISTRICT OF COLUMBIA OLDPARTY : CONFIRMATORY LICENSE; ASSIGNOR:UT-BATTELLE; REEL/FRAME:022428/0593 EFFECTIVE DATE : 20090319
US2008035348 AA	20090916	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7597147 BB	20091006	LSGT	+	granted / extensions (spc, cpc, pte)	
US7597147 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRADY, JR., MICHAEL PATRICK; HORTON, JR., JOSEPH ARNO; VITEK, JOHN MICHAEL; REEL/FRAME:019701/0144 EFFECTIVE DATE : 20070711
US7597147 BB	20090916	LSGT	PAT1	Patented Case	
US7597147 BB	20130314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7597147 BB	20170330	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7597147 BB	20270519	PEXP		Calculated Patent Term Expiry (PTA 29 days)	

17) Family number: 42104064 (US2008035347A)

Title: ADJUSTING ALLOY COMPOSITIONS FOR SELECTED PROPERTIES IN TEMPERATURE LIMITED HEATERS

Abstract: Heaters for treating a subsurface formation are described herein. Such heaters can be obtained by using the systems and methods described herein. The heater includes a heater section including iron, cobalt, and carbon. The heater section has a Curie temperature less than a phase transformation temperature. The Curie temperature is at least 740 degrees centigrade The heater section provides, when time varying current is applied to the heater section, an electrical resistance.

Classifications:
International (IPC 8-9): E21B43/24 H05B3/10 (Advanced/Invention); E21B7/15 (Advanced/Non-invention); E21B43/16 H05B3/10 (Core/Invention); E21B7/14 (Core/Non-invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/302 219/553 392/301 392/469



Family:

Publication number	Publication date	Application number	Application date
US2008035347 AA	20080214	US20070788860	20070420
US7683296 BB	20100323	US20070788860	20070420

Priority:
US20060794298P 20060421 US20060853096P 20061020 US20070788860 20070420

Probable Assignee: SHELL OIL CO
Assignee(s): (std): BRADY MICHAEL P ; HORTON JOSEPH A JR ; SHELL OIL CO ; VITEK JOHN M
Assignee(s): SHELL OIL COMPANY ; US DEPARTMENT OF ENERGY
Inventor(s): (std): HORTON JOSEPH A JR ; BRADY MICHAEL P ; VITEK JOHN M ; VITEK JOHN MICHAEL ; BRADY MICHAEL PATRICK ; HORTON JR JOSEPH ARNO
Inventor(s): HORTON JOSEPH AJR ; HORTON JOSEPH ; BRADY MICHAEL ; VITEK JOHN
Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2008035347 AA	20080214	LSPB	+	published / reissued	
US7683296 BB	20100323	LSGT	+	granted / extensions (spc, cpc, pte)	

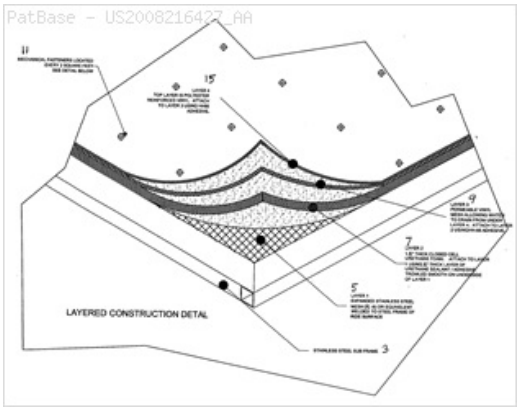
US7683296 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRADY JR., MICHAEL PATRICK; HORTON JR., JOSEPH ARNO; VITEK, JOHN MICHAEL; REEL/FRAME:019701/0052 EFFECTIVE DATE : 20070711
US7683296 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY,TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRADY JR., MICHAEL PATRICK; HORTON JR., JOSEPH ARNO; VITEK, JOHN MICHAEL; REEL/FRAME:019701/0052 EFFECTIVE DATE : 20070711
US7683296 BB	20100303	LSGT	PAT1	Patented Case	
US7683296 BB	20110411	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : U.S. DEPARTMENT OF ENERGY, DISTRICT OF COLUMBIA OLDPARTY : CONFIRMATORY LICENSE; ASSIGNOR:SHELL EXPLORATION & PRODUCTION COMPANY; REEL/FRAME:026101/0884 EFFECTIVE DATE : 20100901
US7683296 BB	20130918	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7683296 BB	20171106	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7683296 BB	20180423	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7683296 BB	20180423	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7683296 BB	20180423	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7683296 BB	20180515	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180323
US7683296 BB	20270829	PEXP		Calculated Patent Term Expiry (PTA 131 days)	

18) Family number: 42146065 (US2008216427A)

Title: PADDED WATER RIDE SURFACES

Abstract: The present invention relates to an improvement in the construction of water ride surfaces and comprises at least one layer of soft permeable material built into the padded substrate of a structurally supported ride surface. The permeable material connects to a drainage system and is preferably sandwiched between a slick skin upper waterproof membrane, and a supporting substrate beneath it. The advantage to this improvement is when water leaks through the waterproof membrane, the permeable material prevents water from building up inside the padded substrate, and allows the water to be drained out, rather than blistering and bubbling up under the waterproof membrane, thereby helping to preserve the integrity and longevity of the ride surface.

Classifications:
International (IPC 8-9): A63C19/00 A63G21/18 A63G31/02 A63G31/06 E04C2/02 E04H4/12 (Advanced/Invention); A63C19/04 (Advanced/Non-invention); A63C19/00 A63G21/00 E04C2/02 (Core/Invention)
International (IPC 1-7): A63G21/18 E04B1/00 E04C2/02
CPC: A63G21/18
European: A63G21/18
US: 472/117 472/90 52/309.9 52/309.900P



Family:

Publication number	Publication date	Application number	Application date
AR063695 AA	20090211	AR2007P103693	20070821
BRPI0721429 A2	20140325	BR2007PI21429	20070810
CA2680562 AA	20090909	CA20072680562	20070810
CA2680562 C	20151222	CA20072680562	20070810
PE16682008 A1	20081128	PE20070001118	20070817
US2008216427 AA	20080911	US20070716254	20070309
US8550926 BB	20131008	US20070716254	20070309
WO09048441 A2	20090416	WO2007US17784	20070810
WO09048441 A3	20090604	WO2007US17784	20070810

Priority:
US20070716254 20070309 WO2007US17784 20070810

Probable Assignee: FLOWRIDER SURF LTD
Assignee(s): (std): LOCHTEFEID THOMAS J ; LOCHTEFELD THOMAS J
Assignee(s): THOMAS J LOCHTEFELD ; FLOWRIDER SURF LTD
Inventor(s): (std): LOCHTEFELD THOMAS J
Inventor(s): THOMAS J LOCHTEFELD
Agent(s): OYEN WIGGS GREEN AND MUTALA LLP; J JOHN SHIMAZAKI PLLC; J JOHN; SHIMAZAKI J JOHN
Designated states: AE AG AL AM 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 LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR 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 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
AR063695 AA	20090211	LSPB	+	published / reissued	
AR063695 AA	20100906	LSWD	-FB	SUSPENSION OF GRANTING PROCEDURE	
BRPI0721429 A2	20150630	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	TEXT : REFERENTE A 8A ANUIDADE.
BRPI0721429 A2	20151124	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)	TEXT : EM VIRTUDE DO ARQUIVAMENTO PUBLICADO NA RPI 2321 DE 30-06-2015 E CONSIDERANDO AUSENCIA DE MANIFESTACAO DENTRO DOS PRAZOS LEGAIS, INFORMO QUE CABE SER MANTIDO O ARQUIVAMENTO DO PEDIDO DE PATENTE, CONFORME O DISPOSTO NO ARTIGO 12, DA RESOLUCAO 113/2013.

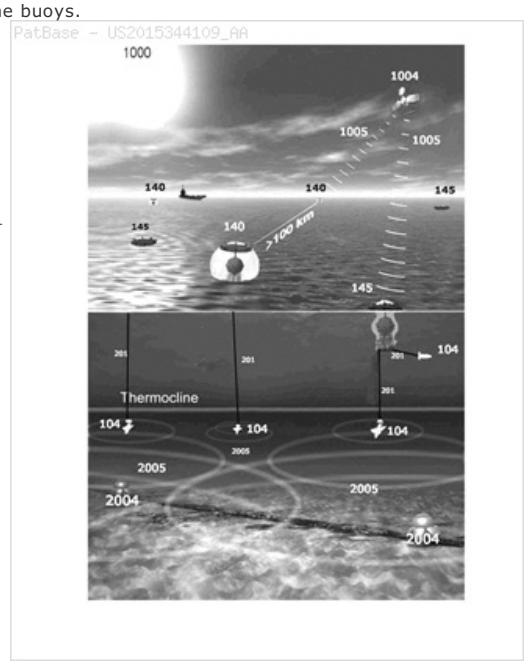
CA2680562 AA	20090909	LSPB	+	published / reissued	
CA2680562 AA	20120810	LSES	+EEER	EXAMINATION REQUEST	
CA2680562 C	20151222	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2680562 C	20270810	PEXP		Calculated Patent Term Expiry	
PE16682008 A1	20081128	LSPB	+	published / reissued	
PE16682008 A1	20110228	LSGT	+FG	GRANT, REGISTRATION	
PE16682008 A1	20150331	LSWD	-FD	APPLICATION DECLARED VOID OR LAPSED	
US2008216427 AA	20080911	LSPB	+	published / reissued	
US8550926 BB	20131008	LSGT	+	granted / extensions (spc, cpc, pte)	
US8550926 BB	20130918	LSGT	PAT1	Patented Case	
US8550926 BB	20160907	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : FLOWRIDER SURF, LTD., CANADA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:WAVE LOCH, LLC; REEL/FRAME:039658/0641 EFFECTIVE DATE : 20140228
US8550926 BB	20171106	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US8550926 BB	20171106	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8550926 BB	20171106	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8550926 BB	20171128	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20171008
US8550926 BB	20291110	PEXP		Calculated Patent Term Expiry (PTA 977 days)	
WO09048441 A2	20090416	LSPB	+	published / reissued	
WO09048441 A3	20090909	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2680562 COUNTRY OF REF DOCUMENT : CA
WO09048441 A3	20090910	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09048441 A3	20100407	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 07875225 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) :
WO09048441 A3	20140325	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0721429 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20090909

19) Family number: 60977065 (US2015344109A)

Title: CONTROLLABLE BUOYS AND NETWORKED BUOY SYSTEMS

Abstract: Buoyant sensor networks are described, comprising floating buoys with sensors and energy harvesting capabilities. The buoys can control their buoyancy and motion, and can organize communication in a distributed fashion. Some buoys may have tethered underwater vehicles with a smart spooling system that allows the vehicles to dive deep underwater while remaining in communication and connection with the buoys.

Classifications:
International (IPC 8-9): B63B22/00 B63B22/02 B63B22/18 B63B22/20 B63B22/22 B63B22/24 B63B35/12 B63C11/48 B63G8/00 B66D1/50 F03B13/04 F03B13/14 G01V1/00 G05D1/00 G05D1/02 H02S10/40 (Advanced/Invention);
B63B22/00 (Advanced/Non-invention)
CPC: B63B22/20 B63B22/22 B63B22/24 B63B2022/006 B63B2203/00 B63B2213/02 B63G8/001 B63G2008/007 Y02E10/38 B63B22/02 G05D1/0088 G05D1/0206
US: 367/5 440/1 440/113 440/15 440/38 440/6 441/1 441/30 701/21



Family:

Publication number	Publication date	Application number	Application date
US2015344109 AA	20151203	US20150729007	20150602
US2015346726 AA	20151203	US20150729011	20150602
US9563203 BB	20170207	US20150729011	20150602
US10067507 BB	20180904	US20150729007	20150602
WO15187742 A2	20151210	WO2015US33845	20150602
WO15187742 A3	20170518	WO2015US33845	20150602
WO15187743 A1	20151210	WO2015US33846	20150602

Priority:

US20140006698P 20140602 US20150153322P 20150427 US20150729007 20150602 US20150729011 20150602

Probable Assignee: CALIFORNIA INST OF TECHNOLOGY

Assignee(s): (std): CALIFORNIA INST OF TECHN

Assignee(s): CALIFORNIA INST OF TECHNOLOGY ; NASA

Inventor(s): (std): DAVOODI FARANAK ; DAVOUDI FARHOOMAN ; BURDICK JOEL W

Agent(s): STEINFL AND BRUNO LLP; CASH BRIAN J 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
US10067507 BB	20180904	LSGT	+	granted / extensions (spc, cpc, pte)	
US10067507 BB	20150810	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CALIFORNIA INSTITUTE OF TECHNOLOGY, CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DAVOODI, FARANAK; DAVOUDI, FARHOOMAN; SIGNING DATES FROM 20150603 TO 20150707; REEL/FRAME:036293/0480
US10067507 BB	20150810	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NASA, DISTRICT OF COLUMBIA OLDPARTY : CONFIRMATORY

					LICENSE; ASSIGNOR:CALIFORNIA INSTITUTE OF TECHNOLOGY; REEL/FRAME:036334/0590 EFFECTIVE DATE : 20150604
US10067507 BB	20150921	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CALIFORNIA INSTITUTE OF TECHNOLOGY, CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BURDICK, JOEL W.; REEL/FRAME:036615/0351 EFFECTIVE DATE : 20150918
US10067507 BB	20180821	LSGT	PAT1	Patented Case	
US10067507 BB	20361209	PEXP		Calculated Patent Term Expiry (PTA 556 days)	
US2015344109 AA	20151203	LSPB	+	published / reissued	
US2015344109 AA	20171130	LSES	NFA1	Non Final Action Mailed	
US2015344109 AA	20180713	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2015344109 AA	20180731	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2015344109 AA	20180821	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2015346726 AA	20151203	LSPB	+	published / reissued	
US2015346726 AA	20170118	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US9563203 BB	20170207	LSGT	+	granted / extensions (spc, cpc, pte)	
US9563203 BB	20150810	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CALIFORNIA INSTITUTE OF TECHNOLOGY, CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DAVOODI, FARANAK; DAVOUDI, FARHOOMAN; SIGNING DATES FROM 20150603 TO 20150707; REEL/FRAME:036293/0469
US9563203 BB	20150810	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NASA, DISTRICT OF COLUMBIA OLDPARTY : CONFIRMATORY LICENSE; ASSIGNOR:CALIFORNIA INSTITUTE OF TECHNOLOGY; REEL/FRAME:036334/0653 EFFECTIVE DATE : 20150604
US9563203 BB	20150921	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CALIFORNIA INSTITUTE OF TECHNOLOGY, CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BURDICK, JOEL W.; REEL/FRAME:036615/0359 EFFECTIVE DATE : 20150911
US9563203 BB	20170118	LSGT	PAT1	Patented Case	
US9563203 BB	20350602	PEXP		Calculated Patent Term Expiry	
WO15187742 A2	20151210	LSPB	+	published / reissued	
WO15187742 A2	20161202	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15187742 A2	20170621	LSNE	-122	EP: PCT APPLICATION	REF DOCUMENT NUMBER : 15803395 COUNTRY OF REF DOCUMENT : EP

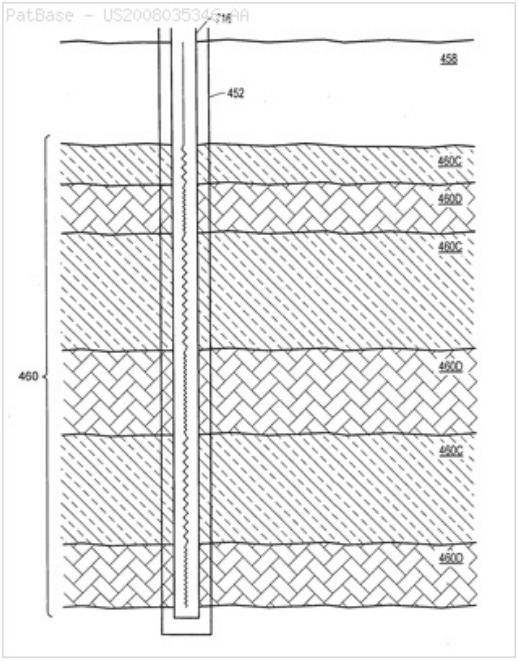
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WO15187743 A1	20151210	LSPB	+	published / reissued	
WO15187743 A1	20161202	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15187743 A1	20170621	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 15803456 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

20) Family number: 42104065 (US2008035346A)

Title: METHODS OF PRODUCING TRANSPORTATION FUEL

Abstract: Systems, methods, and heaters for treating a subsurface formation are described herein. At least one method for producing transportation fuel is described herein. The method for producing transportation fuel may include providing formation fluid having a boiling range distribution between -5 degrees centigrade and 350 degrees centigrade from a subsurface in situ heat treatment process to a subsurface treatment facility. A liquid stream may be separated from the formation fluid. The separated liquid stream may be hydrotreated and then distilled to produce a distilled stream having a boiling range distribution between 150 degrees centigrade and 350 degrees centigrade The distilled liquid stream may be combined with one or more additives to produce transportation fuel.

Classifications:
International (IPC 8-9): C10L1/10 C10L1/16 E21B43/00 E21B43/24 (Advanced/Invention); E21B43/16 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/267 166/302 208/15 208/16 44/300 585/14



Family:

Publication number	Publication date	Application number	Application date
US2008035346 AA	20080214	US20070788772	20070420
US8083813 BB	20111227	US20070788772	20070420

Priority:
US20060794298P 20060421 US20060853096P 20061020 US20070788772 20070420

Probable Assignee: SHELL OIL CO

Assignee(s): (std): BAULDREAY JOANNA M ; CHERRILLO RALPH A ; CHERRILLO RALPH ANTHONY ; NAIR VIJAY ; ROES AUGUSTINUS W M ; ROES AUGUSTINUS WILHELMUS MARIA ; SHELL OIL CO

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): CHERRILLO RALPH A ; NAIR VIJAY ; ROES AUGUSTINUS W M ; BAULDREAY JOANNA M ; ROES AUGUSTINUS WILHELMUS MARIA ; CHERRILLO RALPH ANTHONY

Inventor(s): ROES AUGUSTINUS WM ; BAULDREAY JOANNA ; ROES AUGUSTINUS ; CHERRILLO RALPH

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2008035346 AA	20080214	LSPB	+	published / reissued	
US2008035346 AA	20111207	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US8083813 BB	20111227	LSGT	+	granted / extensions (spc, cpc, pte)	
US8083813 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NAIR, VIJAY; ROES, AUGUSTINUS WILHELMUS MARIA; CHERRILLO, RALPH ANTHONY; AND OTHERS; REEL/FRAME:019701/0251; SIGNING DATES FROM 20070709 TO 20070713
US8083813 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER

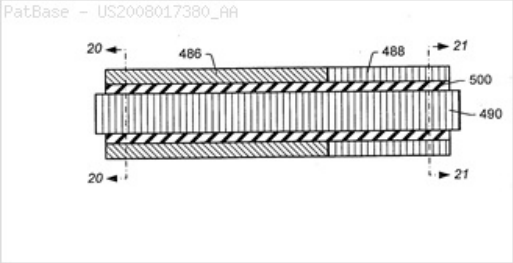
					OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NAIR, VIJAY; ROES, AUGUSTINUS WILHELMUS MARIA; CHERRILLO, RALPH ANTHONY; AND OTHERS; SIGNING DATES FROM 20070709 TO 20070713; REEL/FRAME:019701/0251
US8083813 BB	20111207	LSGT	PAT1	Patented Case	
US8083813 BB	20150610	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8083813 BB	20190819	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US8083813 BB	20270917	PEXP		Calculated Patent Term Expiry (PTA 150 days)	

21) Family number: 42104066 (US2008017380A)

Title: NON-FERROMAGNETIC OVERBURDEN CASING

Abstract: Systems, methods, and heaters for treating a subsurface formation are described herein. At least one system for electrically insulating an overburden portion of a heater wellbore is described. The system may include a heater wellbore located in a subsurface formation and an electrically insulating casing located in the overburden portion of the heater wellbore. The casing may include at least one non-ferromagnetic material such that ferromagnetic effects are inhibited in the casing.

Classifications:
International (IPC 8-9): E21B17/00 E21B36/00 E21B43/24 (Advanced/Invention); E21B17/00 E21B36/00 E21B43/16 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/242.1 166/242.4 166/302 166/60 166/65.1



Family:

Publication number	Publication date	Application number	Application date
US2008017380 AA	20080124	US20070788871	20070420
US7793722 BB	20100914	US20070788871	20070420

Priority:
US20060794298P 20060421 US20060853096P 20061020 US20070788871 20070420

Probable Assignee: SHELL OIL CO
Assignee(s): (std): HARRIS CHRISTOPHER K ; MASON STANLEY L ; SHELL OIL CO ; VINEGAR HAROLD J
Assignee(s): SHELL OIL COMPANY
Inventor(s): (std): HARRIS CHRISTOPHER K ; VINEGAR HAROLD J ; MASON STANLEY L ; HARRIS CHRISTOPHER KELVIN ; MASON STANLEY LEROY
Inventor(s): VINEGAR HAROLD ; MASON STANLEY ; HARRIS CHRISTOPHER
Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2008017380 AA	20080124	LSPB	+	published / reissued	
US7793722 BB	20100914	LSGT	+	granted / extensions (spc, cpc, pte)	
US7793722 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:VINEGAR, HAROLD J.; HARRIS, CHRISTOPHER KELVIN; MASON, STANLEY LEROY; REEL/FRAME:019701/0433; SIGNING DATES FROM 20070703 TO 20070705
US7793722 BB	20070815	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:VINEGAR, HAROLD J.; HARRIS, CHRISTOPHER KELVIN; MASON, STANLEY LEROY; SIGNING DATES FROM 20070703 TO 20070705; REEL/FRAME:019701/0433
US7793722 BB	20100825	LSGT	PAT1	Patented Case	
US7793722 BB	20140212	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7793722 BB	20180430	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7793722 BB	20181022	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY

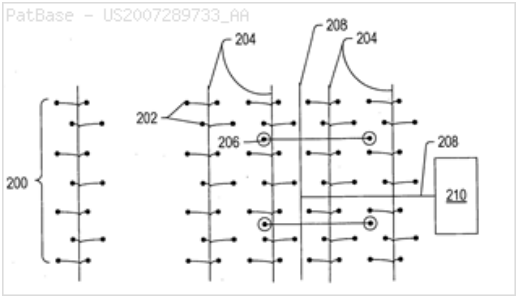
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US7793722 BB	20181022	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7793722 BB	20181113	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180914
US7793722 BB	20270509	PEXP		Calculated Patent Term Expiry (PTA 19 days)	

22) Family number: 42104068 (US2007289733A)

Title: WELLHEAD WITH NON-FERROMAGNETIC MATERIALS

Abstract: Wellheads for coupling to a heater located in a wellbore in a subsurface formation are described herein. At least one wellhead may include a heater located in a wellbore in a subsurface formation; and a wellhead coupled to the heater. The wellhead may be configured to electrically couple the heater to one or more surface electrical components. The wellhead may include at least one non-ferromagnetic material such that ferromagnetic effects are inhibited in the wellhead. Systems and methods for using such wellheads for treating a subsurface formation are described herein.

Classifications:
International (IPC 8-9): E21B34/02 E21B36/04 E21B43/24 (Advanced/Invention); E21B34/00 E21B36/00 E21B43/16 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/302 166/60 166/75.11



Family:

Publication number	Publication date	Application number	Application date
US2007289733 AA	20071220	US20070788870	20070420
US7533719 BB	20090519	US20070788870	20070420

Priority:

US20060794298P 20060421 US20060853096P 20061020 US20070788870 20070420

Probable Assignee: SHELL OIL CO
Assignee(s): (std): HINSON RICHARD A ; SHELL OIL CO ; VINEGAR HAROLD J
Assignee(s): SHELL OIL COMPANY
Inventor(s): (std): VINEGAR HAROLD J ; HINSON RICHARD A
Inventor(s): VINEGAR HAROLD ; HINSON RICHARD
Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

View legal status timeline

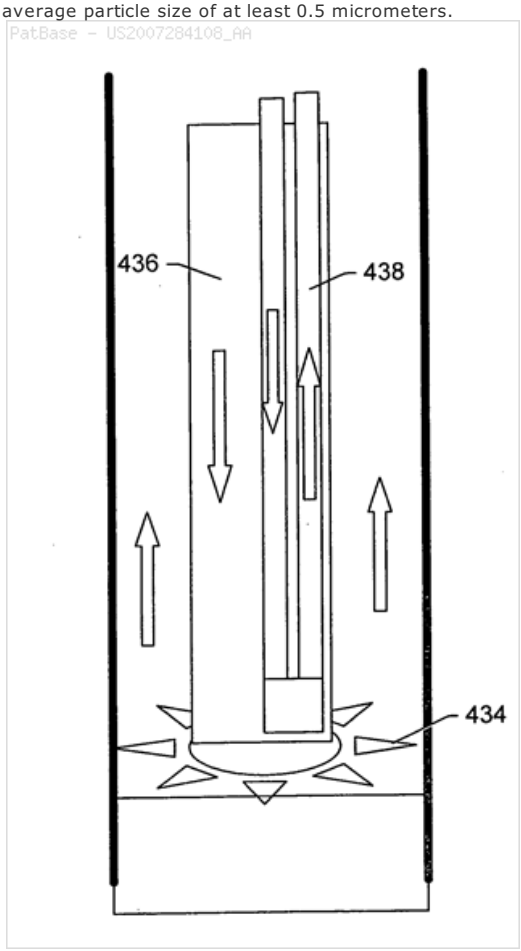
Patent	Date recorded	Event group	Code	Event	Details
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US7533719 BB	20090519	LSGT	+	granted / extensions (spc, cpc, pte)	
US7533719 BB	20070824	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HINSON, RICHARD A.; VINEGAR, HAROLD J.; REEL/FRAME:019746/0527; SIGNING DATES FROM 20070703 TO 20070820
US7533719 BB	20090429	LSGT	PAT1	Patented Case	
US7533719 BB	20121105	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7533719 BB	20170519	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7533719 BB	20170619	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7533719 BB	20170619	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7533719 BB	20170711	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170519
US7533719 BB	20270420	PEXP		Calculated Patent Term Expiry	

23) Family number: 42104069 (US2007284108A)

Title: COMPOSITIONS PRODUCED USING AN IN SITU HEAT TREATMENT PROCESS

Abstract: Systems, methods, and heaters for treating a subsurface formation are described herein. At least one method for producing hydrocarbons from a subsurface formation includes providing heat to the subsurface formation using an in situ heat treatment process. One or more formation particles may be formed during heating of the subsurface formation. Fluid that includes hydrocarbons and the formation particles may be produced from the subsurface formation. The formation particles in the produced fluid may include cenospheres and have an average particle size of at least 0.5 micrometers.

Classifications:
International (IPC 8-9): E21B36/00 E21B43/24 E21B43/34 (Advanced/Invention); E21B36/00 E21B43/16 E21B43/34 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/267 166/302



Family:

Publication number	Publication date	Application number	Application date
US2007284108 AA	20071213	US20070788867	20070420
US7604052 BB	20091020	US20070788867	20070420

Priority:

US20060794298P 20060421 US20060853096P 20061020 US20070788867 20070420

Probable Assignee: SHELL OIL CO

Assignee(s): (std): MUNSTERMAN ERWIN H ; NAIR VIJAY ; ROES AUGUSTINUS W M ; SHELL OIL CO ; VAN DEN BERG FRANCISCUS GONDUL ; VAN BERGEN PETRUS F

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): MUNSTERMAN ERWIN HENH ; VAN BERGEN PETRUS FRANCISCUS ; ROES AUGUSTINUS WILHELMUS MARIA ; VAN DEN BERG FRANCISCUS GONDUL ; NAIR VIJAY ; ROES AUGUSTINUS W M ; VAN BERGEN PETRUS F ; MUNSTERMAN ERWIN H

Inventor(s): VAN DEN BERG FRANCISCUS GONDULFUS ANTONIUS ; VAN DEN BERG FRANCISCUS GONDULFUS A ; ROES AUGUSTINUS WM ; VAN BERGEN PETRUS ; ROES AUGUSTINUS ; MUNSTERMAN ERWIN ; VAN DEN BERG FRANCISCUS GONDULFUS

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2007284108 AA	20071213	LSPB	+	published / reissued	
US7604052 BB	20091020	LSGT	+	granted / extensions (spc, cpc, pte)	
US7604052 BB	20070820	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF

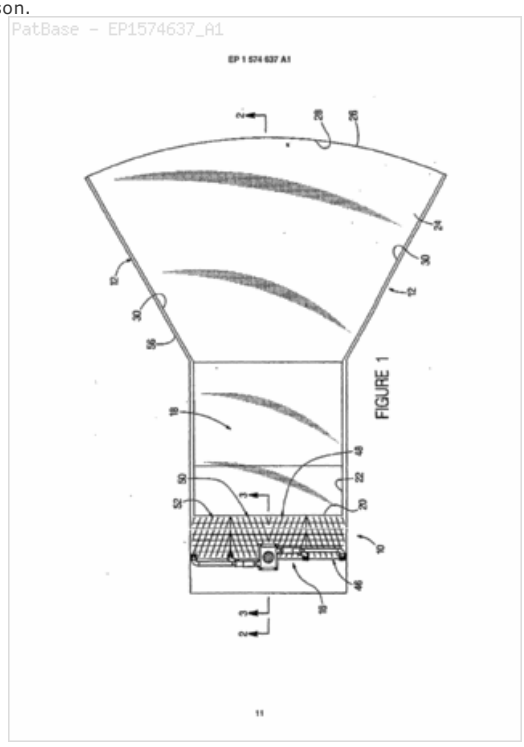
					ASSIGNORS INTEREST; ASSIGNORS:ROES, AUGUSTINUS WILHELMUS MARIA; NAIR, VIJAY; MUNSTERMAN, ERWIN; AND OTHERS; REEL/FRAME:019720/0726; SIGNING DATES FROM 20070719 TO 20070808
US7604052 BB	20090930	LSGT	PAT1	Patented Case	
US7604052 BB	20130314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7604052 BB	20171120	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7604052 BB	20171120	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7604052 BB	20171120	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7604052 BB	20171212	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20171020
US7604052 BB	20280131	PEXP		Calculated Patent Term Expiry (PTA 286 days)	

24) Family number: 32224095 (EP1574637A1)

Title: Pneumatic **wave** **generator**

Abstract: A pneumatic/hydraulic **wave** **generator** for a swimming **pool** includes a plurality of caissons communicating with the deep end of the **pool** through a submerged passage. A pneumatic system includes a motor-driven impeller fan housed horizontally within a manifold housing and communicating with duct lines to the caissons through pneumatic valve assemblies. Each valve assembly includes a pendulum sleeve having a butterfly valve mounted therein that is actuated by swinging movement of the sleeve between an open and a closed position. Disposed within an upper air chamber portion of each caisson below an associate caisson valve assembly is a dispersion grate for evenly distributing air from the valve assembly across the upper surface of water disposed within the caisson.

Classifications:
International (IPC 8-9): E04H4/00 (Advanced/Invention);
E04H4/00 (Core/Invention)
International (IPC 1-7): E04H4/00
CPC: E04H4/0006
European: E04H4/00A



Family:

Publication number	Publication date	Application number	Application date
EP1574637 A1	20050914	EP20040251425	20040312

Priority:
EP20040251425 20040312

Probable Assignee: RAIKE GEORGE W
Assignee(s): (std): RAIKE GEORGE W
Inventor(s): (std): RAIKE GEORGE W
Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

Legal status (INPADOC)

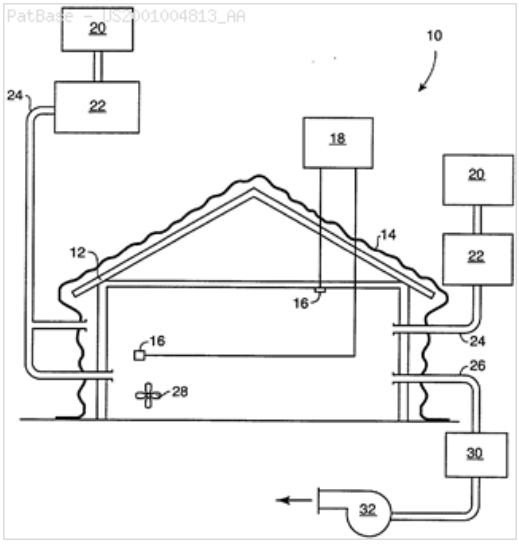
View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
EP1574637 A1	20050914	LSPB	+	published / reissued	
EP1574637 A1	20060531	LSFE	+AKX	DESIGNATION FEES PAID	
EP1574637 A1	20070110	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20060315

25) Family number: 30284097 (US2001004813A)

Title: System and method for removing harmful organic substances from an enclosure

Abstract: A system and method for removing harmful biological and organic substances from an enclosed structure, vehicle or container includes protecting heat-sensitive articles within the enclosure. The structure is enclosed with a tent having an air inlet and outlet. A plurality of temperature probes are positioned at predetermined locations within the structure. The air within the structure is heated to a predetermined temperature of between a 110 degrees Fahrenheit and 400 degrees Fahrenheit to kill organisms and cause harmful substances in the structure to migrate into the ambient air. The heated air carrying the harmful substances is vented from the structure and passed through a filter to remove the harmful substances from the heated air. The system effectively kills insects, molds, viruses and bacteria and reduces the levels of allergens and volatile organic compounds in the structure.



Classifications:
International (IPC 8-9): A01M1/20 A01M1/24 A01M19/00 A01M21/04 A01M25/00 A01M7/00 A01N25/18 A01P1/00 A61L11/00 A61L2/00 A61L2/02 A61L2/04 A61L2/06 A61L2/07 A61L2/08 A61L2/10 A61L2/16 A61L2/18 A61L2/20 A61L2/22 A61L2/24 A61L2/26 A61L9/00 A61L9/14 A61L9/16 A61L9/20 A62B7/08 B60H1/02 B60H3/00 F23G7/06 F24F3/16 F26B19/00
F26B7/00 (Advanced/Invention);
F24F11/00 (Advanced/Non-invention);
A01M1/00 A01M1/20 A01M19/00 A01M21/00 A01N25/18 A01P1/00 A61L2/00 A61L2/04 A61L2/10 A61L2/16 A61L2/20 A61L2/26 A61L9/14 A61L9/16 A61L9/18 (Core/Invention)
International (IPC 1-7): A01M1/00 A01M1/20 A01M17/00 A01M5/00 A01M7/00 A61L11/00 A61L2/00 A61L2/04 A61L2/06 A61L2/10 A61L2/20 A61L2/24 A61L2/26 A61L9/00 A62B7/08 C23F11/00 F04C2/00 G01D11/26 G01N1/00
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European: A01M1/20D A01M1/22D A01M1/24 A01M19/00 A01M21/04 A61L2/02 A61L2/04 A61L2/06 A61L2/08 A61L2/08J A61L2/10 A61L2/16 A61L2/20 A61L2/20C A61L2/22 A61L2/26 A61L9/015 A61L9/14 A61L9/16 A61L9/20 F23G7/06 F24F3/16 K01M200/011 K01M200/012 K01M201/01 K01M201/02 K61L202/122 K61L202/140 K61L202/160 K61L202/250 K61L209/111 L01D257/206C L01D257/702 L01D257/90 L01D257/91 L01D259/804 R24F11/00C1C R24F3/16D
US: 34/100 34/201 34/380 34/381 34/497 422/1 422/119 422/123 422/123S 422/125 422/1P 422/1S 422/22 422/22S 422/24 422/24P 422/24S 422/26 422/26S 422/27 422/27S 422/28 422/28S 422/292 422/292P 422/292S 422/3 422/305 422/305S 422/306 422/306S 422/307 422/307S 422/32 422/32S 422/33 422/33S 422/3P 422/3S 422/4 422/4S 422/5 422/5P 422/5S 43/1 43/124 43/124P 43/132.1 43/132.100P 43/139 43/144 431/240 454/156 454/159 454/160 52/213 52/592

Family:

Publication number	Publication date	Application number	Application date
AU2002237906 AA	20020812	AU20020237906	20020123
AU2002360656 AA	20040225	AU20020360656	20021218
AU2002368210 AA	20040504	AU20020368210	20021205
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CA2435513 AA	20030721	CA20022435513	20020123
CA2468902 AA	20040526	CA20022468902	20021205
CA2494686 AA	20050204	CA20022494686	20021218
CA2494686 C	20090915	CA20022494686	20021218
EP1353551 A1	20031022	EP20020704211	20020123
EP1353551 A4	20070328	EP20020704211	20020123
EP1474609 A2	20041110	EP20020808039	20021205
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EP1538898 A4	20070516	EP20020795930	20021218
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US7690148 BB	20100406	US20080276667	20081124
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US8272143 BA	20120925	US20030644553	20030819
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WO08006035 A2	20080110	WO2007US72880	20070705
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WO08108864 A2	20080912	WO2007US72870	20070705
WO08108864 A3	20081224	WO2007US72870	20070705
WO12067908 A1	20120524	WO2011US59902	20111109
WO12068131 A1	20120524	WO2011US60818	20111115

Priority:

US19990321915 19990528
US20010014727 20011210
US20020358223P 20020220
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US20050122579 20050504
US20070773616 20070705
US20100949683 20101118

Probable Assignee: THERMAPURE INC

Assignee(s): (std): HEDMAN DAVID ; HEDMAN DAVID E ; SEARS TROY ; THERMAPURE INC ; TPE ASSOCIATES LLC

Inventor(s): (std): DAVID E HEDMAN ; SEARS TROY ; HEDMAN DAVID ; HEDMAN DAVID E

Inventor(s): THERMAPURE INC

Agent(s): SPRUSON AND FERGUSON; GOWLING LAFLEUR HENDERSON LLP; KELLY BAUERSFELD LOWRY AND KELLEY LLP; KELLY LOWRY AND KELLEY LLP; KELLY AND KELLEY LLP; OMELVENY AND MYERS LLP; KELLEY SCOTT W

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 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 YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2002237906 AA	20020812	LSPB	+	published / reissued	
AU2002360656 AA	20040225	LSPB	+	published / reissued	
AU2002360656 AA	20070823	LSAS	PC1	ASSIGNMENT BEFORE GRANT (SECT. 113)	PARTYTYPE : OWNER OWNER : THERMAPURE, INC. OLDPARTY : FORMER APPLICANT(S): HEDMAN, DAVID E.
AU2002360656 AA	20090716	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
AU2002368210 AA	20040504	LSPB	+	published / reissued	
AU2002368210 AA	20040923	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
CA2435513 AA	20030721	LSPB	+	published / reissued	
CA2435513 AA	20080123	LSLE	-FZDE	DEAD	
CA2468902 AA	20040526	LSPB	+	published / reissued	
CA2468902 AA	20081205	LSLE	-FZDE	DEAD	
CA2494686 AA	20050204	LSPB	+	published / reissued	
CA2494686 AA	20070119	LSES	+EEER	EXAMINATION REQUEST	
CA2494686 C	20090915	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2494686 C	20221218	PEXP		Calculated Patent Term Expiry	
EP1353551 A1	20031022	LSPB	+	published / reissued	
EP1353551 A1	20031022	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20030718
EP1353551 A4	20070328	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND	EFFECTIVE DATE : 20070226

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EP1353551 A4	20080116	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20070526
EP1474609 A2	20041110	LSPB	+	published / reissued	
EP1474609 A2	20041110	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20040707
EP1474609 A4	20050420	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	EFFECTIVE DATE : 20050303
EP1474609 A4	20050803	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20050621
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EP1474609 A4	20070718	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20070116
EP1538898 A1	20050615	LSPB	+	published / reissued	
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EP1538898 A4	20070516	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	EFFECTIVE DATE : 20070416
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EP1538898 A4	20080220	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20080121
EP1538898 A4	20100901	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20100302
US2001004813 AA	20010628	LSPB	+	published / reissued	
US2001004813 AA	20020923	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2002066223 AA	20020606	LSPB	+	published / reissued	
US2002066223 AA	20060601	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TPE ASSOCIATES, LLC, CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HEDMAN, DAVID; SEARS, TROY; REEL/FRAME:017707/0753; SIGNING DATES FROM 20060510 TO 20060523
US2002066223 AA	20060601	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TPE ASSOCIATES, LLC, CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HEDMAN, DAVID; SEARS, TROY; SIGNING DATES FROM 20060510 TO 20060523; REEL/FRAME:017707/0753
US2002066223 AA	20130717	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2002189154 AA	20021219	LSPB	+	published / reissued	
US2002189154 AA	20050427	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2004028554 AA	20040212	LSPB	+	published / reissued	
US2004028554 AA	20120627	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE

US2004028583 AA	20040212	LSPB	+	published / reissued	
US2004028583 AA	20060712	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2005013727 AA	20050120	LSPB	+	published / reissued	
US2005013727 AA	20071126	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2005220662 AA	20051006	LSPB	+	published / reissued	
US2005220662 AA	20120815	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2008014111 AA	20080117	LSPB	+	published / reissued	
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US2008014111 AA	20101103	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2009071062 AA	20090319	LSPB	+	published / reissued	
US2009071062 AA	20100317	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011064605 AA	20110317	LSPB	+	published / reissued	
US2011064605 AA	20101119	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : THERMAPURE, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HEDMAN, DAVID E.; REEL/FRAME:025409/0651 EFFECTIVE DATE : 20101117
US2011064605 AA	20130627	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2011064607 AA	20110317	LSPB	+	published / reissued	
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US2011064607 AA	20130627	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2011219665 AA	20110915	LSPB	+	published / reissued	
US2011219665 AA	20140408	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : THERMAPURE, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HEDMAN, DAVID E.; REEL/FRAME:032627/0013 EFFECTIVE DATE : 20140404
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US7690148 BB	20170928	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7690148 BB	20281128	PEXP		Calculated Patent Term Expiry (PTA 4 days)	
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US7837932 BB	20101103	LSGT	PAT1	Patented Case	
US7837932 BB	20140423	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7837932 BB	20180510	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7837932 BB	20290706	PEXP		Calculated Patent Term Expiry (PTA 732 days)	
US8221678 BB	20120717	LSGT	+	granted / extensions (spc, cpc, pte)	

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US8256135 BB	20140619	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : THERMAPURE, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HEDMAN, DAVID E.; REEL/FRAME:033139/0091 EFFECTIVE DATE : 20140617
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US8256135 BB	20290411	PEXP		Calculated Patent Term Expiry (PTA 1438 days and a terminal disclaimer has been filed)	
US8272143 BA	20120925	LSGT	+	granted / extensions (spc, cpc, pte)	
US8272143 BA	20120905	LSGT	PAT1	Patented Case	
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US8272143 BA	20140408	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : THERMAPURE, INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HEDMAN, DAVID E.; REEL/FRAME:032626/0697 EFFECTIVE DATE : 20140404
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US8272143 BA	20310114	PEXP		Calculated Patent Term Expiry (PTA 2705 days)	
US8499489 BB	20130806	LSGT	+	granted / extensions (spc, cpc, pte)	
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US8499489 BB	20240918	PEXP		Calculated Patent Term Expiry (PTA 1013 days and a terminal disclaimer has been filed)	
US8852501 BB	20141007	LSGT	+	granted / extensions (spc, cpc, pte)	
US8852501 BB	20140917	LSGT	PAT1	Patented Case	
US8852501 BB	20180405	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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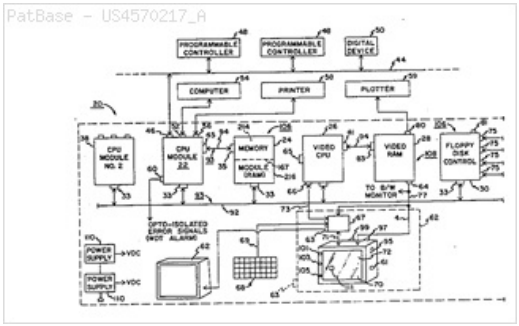
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WO02060247 A1	20030721	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2435513 COUNTRY OF REF DOCUMENT : CA
WO02060247 A1	20031022	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002704211 COUNTRY OF REF DOCUMENT : EP
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WO02060247 A1	20060328	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
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WO04014134 A1	20050202	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002795930 COUNTRY OF REF DOCUMENT : EP
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WO04014134 A1	20050204	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2494686 COUNTRY OF REF DOCUMENT : CA
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WO04034766 A2	20040429	LSPB	+	published / reissued	
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WO04034766 A2	20040707	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002808039 COUNTRY OF REF DOCUMENT : EP
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WO08006035 A2	20080110	LSPB	+	published / reissued	

WO08006035 A3	20090107	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08006035 A3	20090206	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : RU
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WO08108864 A2	20080912	LSPB	+	published / reissued	
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WO08108864 A3	20090205	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : RU
WO08108864 A3	20090819	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 07873888 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) :
WO12067908 A1	20120524	LSPB	+	published / reissued	
WO12067908 A1	20130521	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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WO12068131 A1	20120524	LSPB	+	published / reissued	
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26) Family number: 30040098 (US4570217A)

Title: MAN MACHINE INTERFACE

Abstract: A man-machine interface for use with industrial processes is disclosed having the capability of design and configuration of the interrelationship of components forming an overall industrial process. The man-machine interface further provides operator use, including process monitoring and control, as well as alarm annunciation. Most user interaction with the man-machine interface is performed through a color CRT monitor having a touch panel on the surface of the CRT screen. Operator use may be limited to touch panel interaction while configurer and designer use normally further includes use of a keyboard. The man-machine interface utilizes distributed processing and incorporates a high level graphic language. The graphic language facilitates real time graphic display implementation through use of dynamic and static variables. Variable types are dynamically associated with variable values so that variables can undergo type changes without detrimental effect. Video bit bangers and shifters further enhance the versatility and ease of implementing rapid modifications of graphic displays. The man-machine interface further incorporates a new bus structure including a new bus arbitration technique, a unidirectional memory boundary protection mechanism, an improved interrupt system, and an improved watchdog timer circuit.



Classifications:
International (IPC 8-9): G06F1/14 G06F11/00 G06F11/07 G06F11/10 G06F13/12 G06F13/26 G06F13/37 G06F13/42 G06F3/06 G06F9/00 G06F9/44 G06F9/46 G06F9/48 G06F9/50 G09G5/02 G09G5/393 (Advanced/Invention);
F02B75/02 (Advanced/Non-invention);
G06F1/14 G06F11/00 G06F11/07 G06F11/10 G06F13/12 G06F13/20 G06F13/36 G06F13/42 G06F3/06 G06F9/44 G06F9/46 G09G5/02 G09G5/36 (Core/Invention);
F02B75/02 (Core/Non-invention)
International (IPC 1-7): G06F15/20 G06F15/46 G06F3/02 G06F3/153 G06F9/00
CPC: G09G5/003 G06F9/4812 G06F9/485 G06F9/5016 G06F9/526 G06F9/544 G06F11/10 G06F9/4825 F02B2075/025 G05B2219/36168 G06F1/14 G06F3/0601 G06F9/44 G06F9/4881 G06F9/52 G06F11/00 G06F11/0736 G06F11/0757 G06F11/0763 G06F11/0772 G06F11/1044 G06F13/128 G06F13/26 G06F13/37 G06F13/4213 G06F2003/0692 G09G5/022 G09G5/393 G06F2209/521 Y02P80/114
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US: 364/188 364/191 364/900 700/83 714/E11.003 714/E11.006 714/E11.025 714/E11.032

Family:

Publication number	Publication date	Application number	Application date
CA1183609 A1	19850305	CA19830424713	19830328
EP0107263 A2	19840502	EP19830301773	19830329
EP0107263 A3	19870520	EP19830301773	19830329
US4570217 A	19860211	US19830479191	19830328

Priority:

US19820363404 19820329 CA19830424713 19830328 US19830479191 19830328

Probable Assignee: SCHNEIDER AUTOMATION INC

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Agent(s): SMART AND BIGGAR

Designated states: AT BE CH DE FR GB IT LI LU NL SE

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
EP0107263 A2	19840502	LSPB	+	published / reissued	
EP0107263 A3	19880727	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 19871123
US4570217 A	19860211	LSGT	+	granted / extensions (spc, cpc, pte)	
US4570217 A	19851212	LSGT	PAT1	Patented Case	
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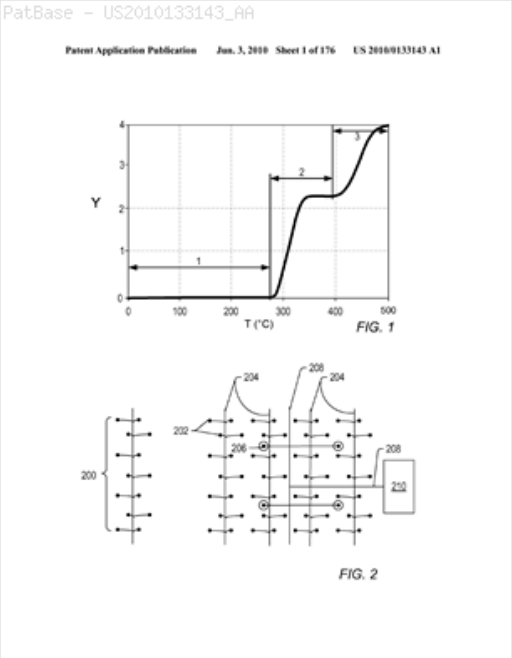
					OWNER : MODICON INC., DELAWARE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:GOULD TECHNOLOGY INC.; REEL/FRAME:005093/0849 EFFECTIVE DATE : 19880630
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US4570217 A	19930726	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4570217 A	19940103	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NEW MODICON, INC., MASSACHUSETTS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MODICON, INC.; REEL/FRAME:006816/0237 EFFECTIVE DATE : 19931223
US4570217 A	19940218	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MODICON, INC., MASSACHUSETTS OLDPARTY : CHANGE OF NAME; ASSIGNOR:NEW MODICON, INC.; REEL/FRAME:006869/0166 EFFECTIVE DATE : 19931231
US4570217 A	19950814	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AEG SCHNEIDER AUTOMATION, INC., MASSACHUSETTS OLDPARTY : CHANGE OF NAME; ASSIGNOR:MODICON, INC.; REEL/FRAME:007570/0195 EFFECTIVE DATE : 19941014
US4570217 A	19970806	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4570217 A	19971222	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHNEIDER AUTOMATION INC., MASSACHUSETTS OLDPARTY : CHANGE OF NAME; ASSIGNOR:AEG SCHNEIDER AUTOMATION, INC.; REEL/FRAME:008855/0799 EFFECTIVE DATE : 19960801
US4570217 A	20000829	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GOULD INC., ILLINOIS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ALLEN, BRUCE S.; KING, BRUCE A.; HUDNALL, RICHARD E.; AND OTHERS; REEL/FRAME:011077/0788; SIGNING DATES FROM 19830310 TO 19830311
US4570217 A	20000829	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GOULD INC., ILLINOIS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DUNLAVEY, MICHAEL R.; LAPIDUS, STANLEY N.; FRIEDEL, SEYMOUR A.; AND OTHERS; REEL/FRAME:011084/0838; SIGNING DATES FROM 19830310 TO 19830315
US4570217 A	20000829	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GOULD INC., ILLINOIS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DUPRIE, HAROLD J.; REEL/FRAME:011072/0547 EFFECTIVE DATE : 19830321
US4570217 A	20000829	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GOULD INC., ILLINOIS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BROWN, MICHAEL; REEL/FRAME:011077/0750 EFFECTIVE DATE : 19830311
US4570217 A	20030328	PEXP		Calculated Patent Term Expiry	

27) Family number: 45102103 (US2010133143A)

Title: COMPOSITIONS PRODUCED USING AN IN SITU HEAT TREATMENT PROCESS

Abstract: Methods for treating a subsurface formation and compositions produced therefrom are described herein. At least one method for producing hydrocarbons from a subsurface formation includes providing heat to the subsurface formation using an in situ heat treatment process. One or more formation particles may be formed during heating of the subsurface formation. Fluid that includes hydrocarbons and the formation particles may be produced from the subsurface formation. The formation particles in the produced fluid may include cenospheres and have an average particle size of at least 0.5 micrometers.

Classifications:
International (IPC 8-9): C10C3/00 C10L1/04 C10L1/12 C10L1/14 E21B43/24 (Advanced/Invention);
C10C3/00 C10L1/00 (Core/Invention)
CPC: E21B43/2401 G05F1/10 E21B36/04 Y10S166/902 Y10T307/406 B32B1/08 B32B15/013 B32B15/015 C21D6/002 C21D6/007 C21D2211/001 C21D2211/004 C21D2211/005 C22C38/02 C22C38/04 C22C38/10 C22C38/14 C22C38/24 C22C38/28 C22C38/30 B32B9/002 B32B9/045 B32B2307/202 B32B2307/208 C22C38/12
European: E21B36/04
US: 166/256 166/262 208/14 208/14S 208/23 208/23P 208/43 585/13



Family:

Publication number	Publication date	Application number	Application date
US2010133143 AA	20100603	US20090552955	20090902
US8450540 BB	20130528	US20090552955	20090902

Priority:

US20060794298P 20060421 US20060853096P 20061020 US20070788867 20070420 US20090552955 20090902

Probable Assignee: SHELL OIL CO

Assignee(s): (std): MUNSTERMAN ERWIN HUNH ; NAIR VIJAY ; ROES AUGUSTINUS WILHELMUS MARIA ; SHELL OIL CO ; VAN BERGEN PETRUS FRANCISCUS ; VAN DEN BERG FRANCISCUS GONDULFUS ANTONIUS

Assignee(s): SHELL OIL COMPANY

Inventor(s): (std): VAN DEN BERG FRANCISCUS GONDULFUS ANTONIUS ; VAN DEN BERG FRANCISCUS GONDUL ; MUNSTERMAN ERWIN HUNH ; NAIR VIJAY ; ROES AUGUSTINUS WILHELMUS MARIA ; VAN BERGEN PETRUS FRANCISCUS

Agent(s): SHELL OIL COMPANY; SHELL OIL CO

Legal status (INPADOC)

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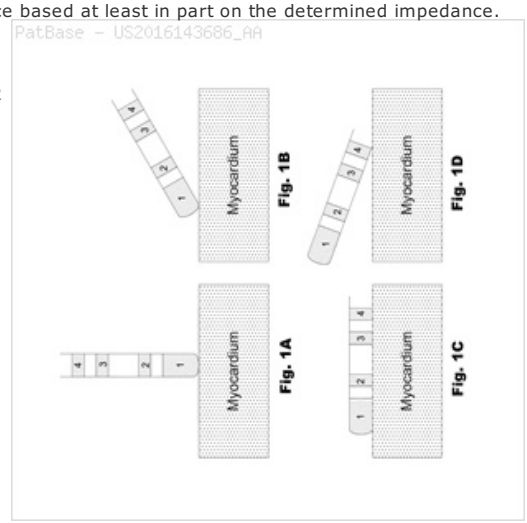
Patent	Date recorded	Event group	Code	Event	Details
US2010133143 AA	20100603	LSPB	+	published / reissued	
US2010133143 AA	20130508	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US8450540 BB	20130528	LSGT	+	granted / extensions (spc, cpc, pte)	
US8450540 BB	20130508	LSGT	PAT1	Patented Case	
US8450540 BB	20161117	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8450540 BB	20310912	PEXP		Calculated Patent Term Expiry (PTA 740 days)	

28) Family number: 62457106 (US2016143686A)

Title: INTER-ELECTRODE IMPEDANCE FOR DETECTING TISSUE DISTANCE, ORIENTATION, CONTACT AND CONTACT QUALITY

Abstract: A method of determining the distance between an electrode catheter disposed in a body fluid adjacent an internal body surface, and the internal body surface, the method comprising: applying an alternating voltage or an alternating current that alternates at between about 10 kHZ and about 100 kHz between at least one pair of electrodes on the electrode catheter; determining the impedance between at least one pair of electrodes on the electrode catheter; and determining the distance between the electrode catheter and the internal body surface based at least in part on the determined impedance.

Classifications:
International (IPC 8-9)**:** A61B18/12 A61B18/14 A61B5/053 (Advanced/Invention)
CPC: A61B18/1233 A61B18/1492 A61B2018/00011 A61B2018/00702 A61B2018/00791 A61B2018/00875 A61B34/73 A61B2018/00684 A61B2090/061 A61B2090/065
US: 606/34



Family:

Publication number	Publication date	Application number	Application date
US2016143686 AA	20160526	US20150946767	20151119
WO16081786 A1	20160526	WO2015US61708	20151119

Priority:

US20140082120P 20141119 US20150946767 20151119

Probable Assignee: STEREOTAXIS INC

Assignee(s): (std)**:** STEREOTAXIS INC

Assignee(s): SILICON VALLEY BANK

Inventor(s): (std)**:** KASTELEIN NATHAN ; TUNAY ILKER

Agent(s): WHEELOCK BRYAN K

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
US2016143686 AA	20160526	LSPB	+	published / reissued	
US2016143686 AA	20151123	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STEREOTAXIS, INC., MISSOURI OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TUNAY, ILKER; KASTELEIN, NATHAN; REEL/FRAME:037111/0962 EFFECTIVE DATE : 20151120
US2016143686 AA	20160602	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SILICON VALLEY BANK, CALIFORNIA OLDPARTY : SUPPLEMENT TO INTELLECTUAL PROPERTY SECURITY AGREEMENT; ASSIGNOR:STEREOTAXIS, INC.; REEL/FRAME:038864/0895 EFFECTIVE DATE : 20160519
US2016143686 AA	20171113	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SILICON VALLEY BANK, CALIFORNIA OLDPARTY : SECURITY INTEREST; ASSIGNORS:STEREOTAXIS, INC.; STEREOTAXIS INTERNATIONAL, INC.; REEL/FRAME:044452/0073 EFFECTIVE DATE : 20171107

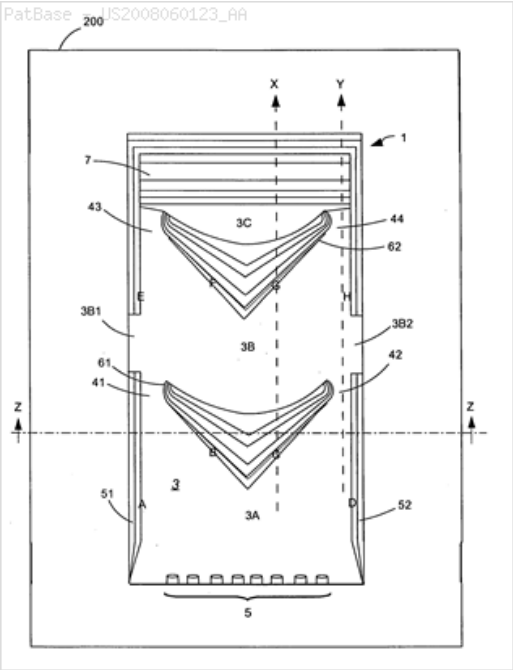
US2016143686 AA	20180508	LSES	NFA1	Non Final Action Mailed	
WO16081786 A1	20160526	LSPB	+	published / reissued	
WO16081786 A1	20170519	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO16081786 A1	20171213	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 15860213 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

29) Family number: 41605107 (US2008060123A)

Title: WAVE **POOL** REEF DESIGN

Abstract: Disclosed is a wave **pool** for creating multiple surf-able waves when a wave generating device forces water into a first end of the wave **pool**. The wave **pool** includes a first deep area adjacent the end of the wave **pool** having the wave generating device. It is followed by a first **artificial** reef that creates a first shallow area that causes a swell created by the wave generating device to become a first surf-able wave. This is followed by a second deep area that causes the first surf-able wave to revert to a swell. A second **artificial** reef creates a second shallow area causing the swell to become a second surf-able wave. A basin and swash area follows the second **artificial** reef for dissipating the remaining energy of the second surf-able wave. An optional set of edge shallows can extend substantially the length of the wave **pool** to create a surf-able curling wave along each side of the wave **pool**.

Classifications:
International (IPC 8-9): A47K3/10 E02B3/00 E04H4/00 F04D35/00 (Advanced/Invention);
E02B3/00 E04H4/00 F04D35/00 (Core/Invention)
CPC: A63B69/0093 A63B69/125 F04D35/00
European: A63B69/00U A63B69/12B F04D35/00
US: 4/491 4/491P



Family:

Publication number	Publication date	Application number	Application date
US2008060123 AA	20080313	US20070890953	20070808
US2010088814 AA	20100415	US20090587750	20091013
WO08039271 A2	20080403	WO2007US17628	20070808
WO08039271 A3	20081127	WO2007US17628	20070808

Priority:
US20060836182P 20060808 US20070890953 20070808 US20090587750 20091013

Probable Assignee: JOHNSON GARRETT T
Assignee(s): (std): JOHNSON GARRETT T
Inventor(s): (std): JOHNSON GARRETT T
Inventor(s): JOHNSON GARRETT
Agent(s): WILLIAMS MULLEN; HARPER M BRUCE
Designated states: AE AG AL AM 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 LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR 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 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
US2008060123 AA	20080313	LSPB	+	published / reissued	
US2008060123 AA	20091118	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010088814 AA	20100415	LSPB	+	published / reissued	
US2010088814 AA	20131202	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
WO08039271 A2	20080403	LSPB	+	published / reissued	
WO08039271 A3	20090210	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08039271 A3	20090308	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : RU

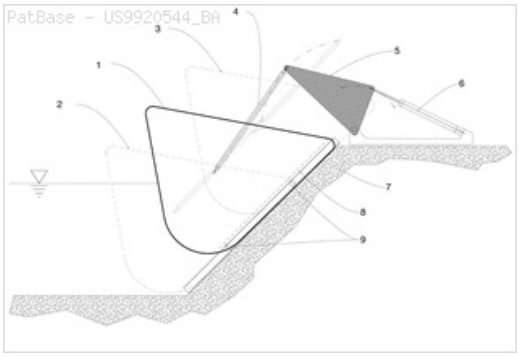
WO08039271 A3	20091118	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 07836625 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) :

30) Family number: 68926112 (US9920544B)

Title: PLUNGER **WAVE** **GENERATOR** APPARATUS FOR EFFICIENTLY PRODUCING WAVES IN A BODY OF WATER

Abstract: An apparatus for creating a surfing wave in a body of water. An apparatus for the purpose of efficiently producing a variety of surfing waves having a repetition rate and size suitable for surfing. The waves are generated using a controlled up and down motion of mechanical plungers in a way that allows the control of the shape and therefore surf characteristics of the wave. A linear array of plungers is used so that they interact in different ways with bathometry of the body of water and can be changed to further alter the surfing characteristics of the waves. The motion of the individual plungers can be adjusted so that effects of different wave travel distance to the bathometry can be compensated for consistent wave characteristics.

Classifications:
International (IPC 8-9): E02B3/00 E02B5/08 E02B7/00 E02B9/00 E02B9/08 E04H4/00 (Advanced/Invention)
CPC: E04H4/0006 Y02E10/28



Family:

Publication number	Publication date	Application number	Application date
US9920544 BA	20180320	US20160362939	20161129

Priority:
US20160362939 20161129

Probable Assignee: BENNETT WALTER JUDSON
Assignee(s): (std): BENNETT WALTER JUDSON ; BUSHEY JOHN ; GUNN MATTHEW
Inventor(s): (std): GUNN MATTHEW ; BUSHEY JOHN ; BENNETT WALTER JUDSON

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US9920544 BA	20180320	LSGT	+	granted / extensions (spc, cpc, pte)	
US9920544 BA	20180228	LSGT	PAT1	Patented Case	
US9920544 BA	20180228	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US9920544 BA	20361204	PEXP		Calculated Patent Term Expiry (PTA 5 days)	

31) Family number: 49367125 (DOP2009000082A)

Title: SISTEMAS VARIABLES PARA LA PRODUCCION DE ENERGIA HIDROELECTRICA VARIABLE SYSTEMS FOR PRODUCING Hydropower (Machine translation)

Abstract: Source: DOP2009000082A [ES] La invencion trata sobre u sistema variado capaz de producir energia a trav?0s de una cantidad de agua obtenida a partir de la superficie natual de agua existente en un lago, un rio, mar, oceano o una perforacion una cantidad de energia hidroeletrica superior a la energia necesaria para elevar la misma cantidad de agua de su nivel de la tierra vecina o al nivel de uno o varios reservorios. El sistema permite tambien producir energia hidroelectrica a partir de la fuerza de la corriente de agua de un rio o a partir de las olas del mar o de un oceano. El sistema esta basado en la creacion de un movimiento de graveda de la corriente de aguaq gracias a una pendiente y/o una caida natural o **artificial** a lo largo de los cuales se han instalados varias turbinas o alternadores. El paso repetitivo y sucesivo de la misma cantidad de agua en varias turbinmas o alternadores de una manera sucesiva va a producir multiple energias. La realizacion del sistema reemplaza entonces la contruccion de presas, que hasta ahora eran indispensables para la produccion de energia hidroelectrica. **Machine translation:** The invention deals or varied system capable of producing energy to trav? 0s of an amount of water obtained from the natual surface of water in a lake, river, sea, ocean or drilling a number of higher than the energy required to raise the same amount of water from its neighboring level or level of one or more reservoirs earth Hidroeletrica energy. The system can also produce hydroelectric power from the force of the water flow of a river or from sea waves or an ocean. The system is based on creating a movement graveda aguaq stream thanks to a slope and / or natural or **artificial** fall along which several turbines have been installed or alternators. The repetitive and thereafter the same amount of water in several turbinmas or a succession alternators step will produce multiple energies. The realization of the system then replaces the contruction of dams, which have hitherto been indispensable for the production of hydroelectricity.

Classifications:

Family:

Publication number	Publication date	Application number	Application date
DOP2009000082 A	20101031	DO20090000082	20090420

Priority:

DO20090000082 20090420

Probable Assignee:	BARBARY SALAH SADARI
Assignee(s): (std)**:**	BARBARY SALAH SADARI
Assignee(s):	SALAH SADARI BARBARY
Inventor(s): (std)**:**	BARBARY SALAH SADARI
Inventor(s):	SALAH SADARI BARBARY

Legal status (INPADOC)

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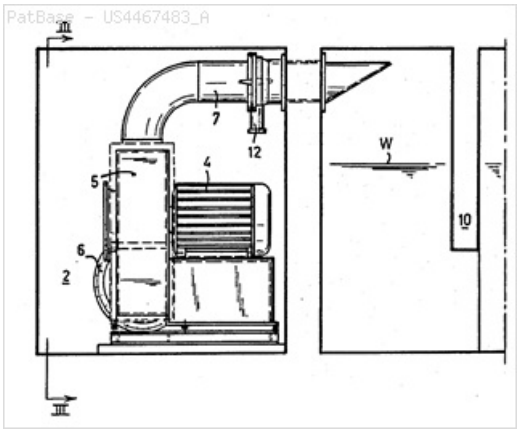
Patent	Date recorded	Event group	Code	Event	Details
DOP2009000082 A	20101031	LSPB	+	published / reissued	

32) Family number: 4920131 (US4467483A)

Title: PNEUMATIC **WAVE** **GENERATOR**

Abstract: A pneumatic **wave** **generator** for a surf **pool**, comprising a caisson divided into a plurality of wave generating chambers, and a ventilator space with a source of compressed air capable of alternately effecting aspiration and expiration above the water surfaces in the wave generating chambers via a conduit system provided with air inlet and air outlet valves. According to the invention, in each of the wave generating chambers, the air inlet valve and the air outlet valve are coupled together and provided with a common drive.

Classifications:
International (IPC 8-9): E04H4/00 (Advanced/Invention); E04H4/00 (Core/Invention)
International (IPC 1-7): E02B3/00 E04H3/18 F04D35/00
CPC: Y10T137/87169 E04H4/0006
European: E04H4/00A
US: 137/596 4/491 405/79
Locarno class: 44/91



Family:

Publication number	Publication date	Application number	Application date
NL8203906 A	19840501	NL19820003906	19821008
US4467483 A	19840828	US19830469521	19830224
US4558474 A	19851217	US19830520078	19830803

Priority:
NL19820003906 19821008 US19830469521 19830224 US19830520078 19830803

Probable Assignee: ECOPOOL DESIGN LTD

Assignee(s): (std): ECOPOOL DESIGN ; HANDELSMAATSCHAPPIJ EDOCH BV ; HANDELSMAATSCHAPPIJ EDOCH B V

Assignee(s): ECOPOOL DESIGN QUEENS HOUSE DON ROAD ST A BRITISH ; HANDELSMAATSCHAPPIJ EDOCH TE LEERDAM BV ; ECOPOOL DESIGN LTD ; ELLIS HERBERT S ; ECOPOOL DESIGN LIMITED ; HANDELSMAATSCHAPPIJ EDOCH B V TE LEERDAM ; ECOPOOL DESIGN A CORP OF GREAT BRITAIN LTD ; AQUATIC AMUSEMENT ASSOCIATES LTD ; DIRK BASTENHOFF ; DIRK BASTENHOFF VD BOETZELAERLAAN

Inventor(s): (std): BASTENHOF DIRK

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
NL8203906 A	19840501	LSPB	+	published / reissued	
NL8203906 A	19840501	LSES	+A1B	A SEARCH REPORT HAS BEEN DRAWN UP	
NL8203906 A	19891201	LSLE	-BV	THE PATENT APPLICATION HAS LAPSED	
US4467483 A	19840828	LSGT	+	granted / extensions (spc, cpc, pte)	
US4467483 A	19830224	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ECOPOOL DESIGN LIMITED P.O.BOX 301,QUEENS HOUSE,DO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:004099/0798 EFFECTIVE DATE : 19830209
US4467483 A	19840627	LSGT	PAT1	Patented Case	
US4467483 A	19840627	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US4467483 A	19851206	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : DIRK BASTENHOFF, V.D. BOETZELAERLAAN 65, LANGERAK, OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:ECOPOOL DESIGN LIMITED P. O. BOX 301, QUEENS HOUSE,

					DON RD. ST. HELIER, JERSEY, CHANNEL ISLANDS, GREAT BRITAIN, A CORP OF GREAT BRITAIN; REEL/FRAME:004484/0122 EFFECTIVE DATE : 19851015
US4467483 A	19860124	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AQUATIC AMUSEMENT ASSOCIATES, LTD. OLDPARTY : LICENSE; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:004502/0708 EFFECTIVE DATE : 19860115
US4467483 A	19860124	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ELLIS, HERBERT S., PO BOX 5101, 116 RAILROAD AVENU OLDPARTY : LICENSE; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:004502/0708 EFFECTIVE DATE : 19860115
US4467483 A	19870213	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ECOPOOL DESIGN LIMITED P.O. BOX 301, QUEENS HOUSE, OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:EDOCH, B.V. A CORP. OF THE NETHERLANDS; REEL/FRAME:004667/0473 EFFECTIVE DATE : 19860808
US4467483 A	19870213	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ECOPOOL DESIGN LIMITED,GREAT BRITAIN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:EDOCH, B.V. A CORP. OF THE NETHERLANDS; REEL/FRAME:004667/0473 EFFECTIVE DATE : 19860808
US4467483 A	19880201	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4467483 A	19911125	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AQUATIC AMUSEMENT ASSOCIATES, LTD., NEW YORK OLDPARTY : TO AMEND LICENSE AGREEMENT RECORDED JANUARY 24, 1986, AT REEL 4502, FRAME 708, TO AMEND THE TERMS OF THE AGREEMENT AND TO ADD PATENT NUMBER 4,400,273.; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:006071/0501 EFFECTIVE DATE : 19911104
US4467483 A	19920220	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4467483 A	19960828	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4558474 A	19851217	LSGT	+	granted / extensions (spc, cpc, pte)	
US4558474 A	19830803	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ECOPOOL DESIGN LIMITED, P.O. BOX 301, QUEENS HOUSE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:004161/0467 EFFECTIVE DATE : 19830208
US4558474 A	19830803	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ECOPOOL DESIGN LIMITED, QUEENS HOUSE, DON ROAD, ST OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:004161/0467 EFFECTIVE DATE : 19830208
US4558474 A	19851015	LSGT	PAT1	Patented Case	
US4558474 A	19851015	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US4558474 A	19851206	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : DIRK BASTENHOFF, V.D. BOETZELAERLAAN 65, LANGERAK, OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:ECOPOOL DESIGN LIMITED P. O. BOX 301, QUEENS HOUSE, DON RD. ST. HELIER, JERSEY, CHANNEL ISLANDS, GREAT BRITAIN, A CORP OF GREAT BRITAIN; REEL/FRAME:004484/0122 EFFECTIVE DATE : 19851015

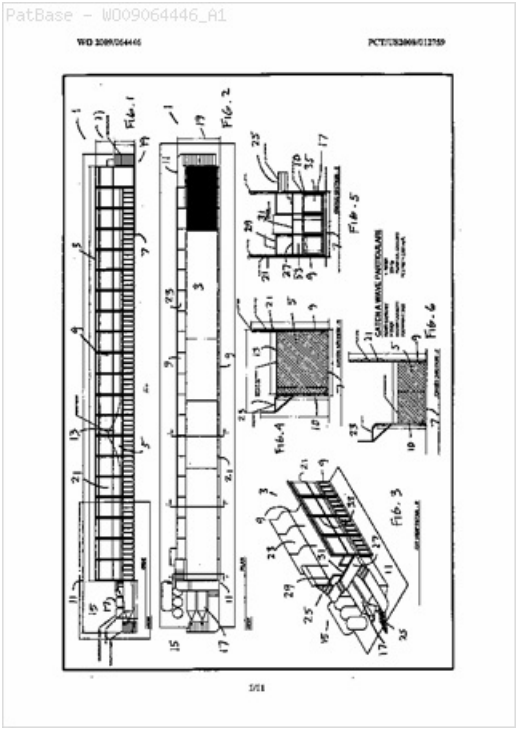
US4558474 A	19860124	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AQUATIC AMUSEMENT ASSOCIATES, LTD. OLDPARTY : LICENSE; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:004502/0708 EFFECTIVE DATE : 19860115
US4558474 A	19860124	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ELLIS, HERBERT S., PO BOX 5101, 116 RAILROAD AVENU OLDPARTY : LICENSE; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:004502/0708 EFFECTIVE DATE : 19860115
US4558474 A	19870213	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ECOPOOL DESIGN LIMITED P.O. BOX 301, QUEENS HOUSE, OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:EDOCH, B.V. A CORP. OF THE NETHERLANDS; REEL/FRAME:004667/0473 EFFECTIVE DATE : 19860808
US4558474 A	19870213	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ECOPOOL DESIGN LIMITED,GREAT BRITAIN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:EDOCH, B.V. A CORP. OF THE NETHERLANDS; REEL/FRAME:004667/0473 EFFECTIVE DATE : 19860808
US4558474 A	19891016	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4558474 A	19911125	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AQUATIC AMUSEMENT ASSOCIATES, LTD., NEW YORK OLDPARTY : TO AMEND LICENSE AGREEMENT RECORDED JANUARY 24, 1986, AT REEL 4502, FRAME 708, TO AMEND THE TERMS OF THE AGREEMENT AND TO ADD PATENT NUMBER 4,400,273.; ASSIGNOR:BASTENHOF, DIRK; REEL/FRAME:006071/0501 EFFECTIVE DATE : 19911104
US4558474 A	19931122	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4558474 A	19970617	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

33) Family number: 43270137 (WO09064446A1)

Title: TRAINING METHOD AND APPARATUS FOR SURFING USING SOLITARY WAVE CHANNEL

Abstract: The invention relates to a wave channel having a body of water therein with a **wave** **generator** that creates periodic waves that travel from one end to another upon which novice surfers can surf for training purposes. The front side wall is preferably made of see-through material and a flexible protective barrier is preferably provided to prevent errant surfers and boards from damaging the side wall. One or more wave dampening systems can be provided, such as at either end of the channel, to help reduce or eliminate unwanted rip currents and wave reflections within the channel.

Classifications:
International (IPC 8-9): A47K3/10 (Advanced/Invention); A47K3/10 (Core/Invention)
CPC: A63G31/007 A63B69/0093 A63B69/125
European: A63G31/00 K63B69/00U K63B69/12B K63G21/18



Family:

Publication number	Publication date	Application number	Application date
WO09064446 A1	20090522	WO2008US12759	20081113

Priority:
US20070002885 20071113 US20070002885P 20071113

Probable Assignee: LOCHTEFELD THOMAS J
Assignee(s): (std): LOCHTEFELD THOMAS J
Inventor(s): (std): LOCHTEFELD THOMAS J
Agent(s): SHIMAZAKI J JOHN
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 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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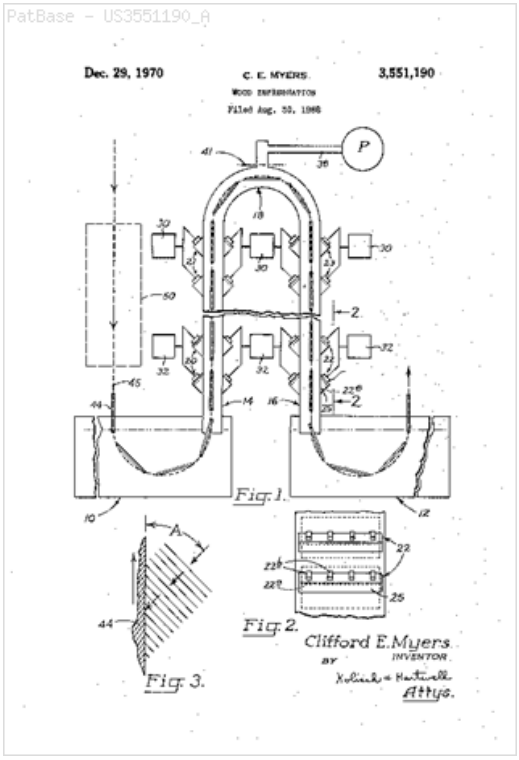
Patent	Date recorded	Event group	Code	Event	Details
WO09064446 A1	20090522	LSPB	+	published / reissued	
WO09064446 A1	20100515	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09064446 A1	20110209	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 08850151 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

34) Family number: 734138 (US3551190A)

Title: WOOD IMPREGNATION

Abstract: ABSTRACT OF THE DISCLOSURE
Impregnation of a porous article such as wood with a liquid medium by immersing the article in the medium and using compressional wave energy directed against the article through such medium to accelerate the impregnation by removing air as such forms on the surface of the article.

Classifications:
International (IPC 8-9): B27K3/08 B27K3/10 (Advanced/Invention); B27K3/02 (Core/Invention)
International (IPC 1-7): B05C3/04 B27K3/00 B27K5/00
CPC: Y10T428/662 B27K3/08 B27K5/0065
European: B27K3/08 B27K3/10 B27K5/00R B27K5/00R9
US: 117/116 118/50 118/612 427/297 427/440 427/601 428/541



Family:

Publication number	Publication date	Application number	Application date
GB1256031 A	19711208	GB19690034895	19690710
US3551190 A	19701229	US19680756578	19680830

Priority:
US19680756578 19680830

Probable Assignee:	WELSH PANEL CO
Assignee(s): (std)**:**	WELSH CORP ; WELSH PANEL CO
Inventor(s): (std)**:**	MYERS CLIFFORD E
Inventor(s):	CLIFFORD E MYERS

Legal status (INPADOC)

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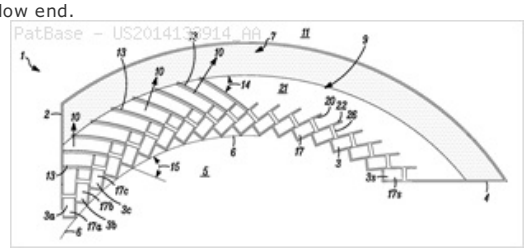
Patent	Date recorded	Event group	Code	Event	Details
GB1256031 A	19711208	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1256031 A	19720419	LSGT	+PS	PATENT SEALED	
GB1256031 A	19760211	LSLE	-PLNP	PATENT LAPSED THROUGH NONPAYMENT OF RENEWAL FEES	
GB1256031 A	19890710	PEXP		Calculated Patent Term Expiry	
US3551190 A	19701229	LSGT	+	granted / extensions (spc, cpc, pte)	

35) Family number: 52330146 (US2014133914A)

Title: METHOD AND APPARATUS FOR PRODUCING WAVES SUITABLE FOR SURFING USING STAGGERED **WAVE GENERATORS** EXTENDED ALONG A CURVED STAGGER LINE

Abstract: The invention relates to a wave **pool** having a deep end and a shallow end, wherein a plurality of **wave generators** is provided along the deep end that are extended along a curved stagger line positioned at an oblique angle relative to the moving waves. The **wave generators** are preferably extended in a substantially staggered manner relative to the travel direction of the waves, wherein a pair of dividing walls is preferably provided in front of each generator, wherein the dividing walls are extended substantially forward with an outward fade angle of no more than about 20 degrees relative to each other. The **wave generators** are preferably operated in sequence, such that a plurality of wave segments is generated, and such that the wave segments can travel forward and then merge together to form a substantially uniform resultant wave which travels forward and then breaks along the shallow end.

Classifications:
International (IPC 8-9): A63B69/00 E04H4/00 E04H4/12 (Advanced/Invention)
CPC: E04H4/0006 A63B69/0093 A63B2208/03
US: 1/1 4/491 405/79



Family:

Publication number	Publication date	Application number	Application date
AU2011367245 AA	20121108	AU20110367245	20110504
AU2011367245 BB	20170601	AU20110367245	20110504
AU2011367245 CA	20170831	AU20110367245	20110504
AU2013341189 AA	20140515	AU20130341189	20131107
AU2013341189 BB	20180208	AU20130341189	20131107
BR112013028436 A2	20170124	BR20131128436	20110504
CA2835055 AA	20131104	CA20112835055	20110504
CA2835055 C	20190611	CA20112835055	20110504
CA2890337 AA	20150505	CA20132890337	20131107
CN103620134 A	20140305	CN201180071842	20110504
CN103620134 B	20170811	CN201180071842	20110504
CN105051300 A	20151111	CN201380067344	20131107
CN105051300 B	20180102	CN201380067344	20131107
DE602011042412 D1	20171123	DE201160042412T	20110504
EP2707558 A1	20140319	EP20110864636	20110504
EP2707558 A4	20150812	EP20110864636	20110504
EP2707558 B1	20171011	EP20110864636	20110504
EP2929108 A1	20151014	EP20130852746	20131107
EP2929108 A4	20161207	EP20130852746	20131107
ES2653719 T3	20180208	ES20110864636T	20110504
GC5601 A	20170514	GC2012P021199	20120505
GC9965 A	20190310	GC2014P027107	20140505
PT2707558 T	20171229	PT20110864636T	20110504
SG11201503480P A1	20150528	SG20151103480	20131107
US2014133914 AA	20140515	US20130073945	20131107
US2014189948 AA	20140710	US20110115415	20110504
US2017138074 AA	20170518	US20170419708	20170130
US9556633 BB	20170131	US20130073945	20131107
US9777494 BB	20171003	US20110115415	20110504
US10233660 BB	20190319	US20170419708	20170130
WO12150908 A1	20121108	WO2011SG00176	20110504
WO14074664 A1	20140515	WO2013US68853	20131107
WO14074664 A4	20140814	WO2013US68853	20131107

Priority:

EP20110864636 20110504 WO2011SG00176 20110504 US201207235598P 20121107
US20130073945 20131107 WO2013US68853 20131107 US20140115415 20140318
US20170419708 20170130

Probable Assignee: LOCHTEFELD

Assignee(s): (std): BASTENHOF DIRK ; LOCHTEFELD THOMAS ; LOCHTEFELD THOMAS J ; STAGGER REEF PTE LTD

Assignee(s): LOCHTEFELD ; BASTENHOF

Inventor(s): (std): LOCHTEFELD THOMAS J ; BASTENHOF DIRK ; DIRK BASTENHOF ; THOMAS J LOCHTEFELD ; LOCHTEFELD THOMAS

Inventor(s): LOCHTEFELD THOMAS J LA JOLLA

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BLAKE CASSELS AND GRAYDON LLP; STOLMAR AND PARTNER PATENTANWAELTE PARTG MBB; VOSSIUS AND PARTNER; VOSSIUS AND PARTNER PATENTANWAELTE RECHTSANWAELTE MBB; VOSSIUS AND PARTNER PATENTANWAELTE RECHTSANWAELTE MBB; ELZABURU SLP ELZABURU SLP; ATTORNEY MOHAMMAD SALEH ALOTAISHAN; SULEIMAN I AL AMMAR LAW OFFICE; J JOHN; SHIMAZAKI J JOHN; LAM CHUNG NIAM

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
AU2011367245 AA	20121108	LSPB	+	published / reissued	
AU2011367245 AA	20170608	LSRE	DA2	APPLICATIONS FOR AMENDMENT SECTION 104	TEXT : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 22 MAY 2017
AU2011367245 AA	20170831	LSRE	DA3	AMENDMENTS MADE SECTION 104	TEXT : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 22 MAY 2017
AU2011367245 AA	20170928	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2011367245 BB	20170601	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2011367245 BB	20310504	PEXP		Calculated Patent Term Expiry	
AU2013341189 AA	20140515	LSPB	+	published / reissued	
AU2013341189 AA	20170223	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
AU2013341189 BB	20180208	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2013341189 BB	20180607	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2013341189 BB	20331107	PEXP		Calculated Patent Term Expiry	
CA2835055 AA	20131104	LSPB	+	published / reissued	
CA2835055 AA	20160505	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20160503
CA2835055 C	20190611	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2835055 C	20310504	PEXP		Calculated Patent Term Expiry	
CA2890337 AA	20150505	LSPB	+	published / reissued	
CN103620134 A	20140305	LSPB	+	published / reissued	
CN103620134 A	20170811	LSGT	+GR01	PATENT GRANT	
CN103620134 B	20170811	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103620134 B	20310504	PEXP		Calculated Patent Term Expiry	
CN105051300 A	20151111	LSPB	+	published / reissued	
CN105051300 A	20151111	LSPB	+C06	PUBLICATION	
CN105051300 B	20180102	LSGT	+	granted / extensions (spc, cpc, pte)	
CN105051300 B	20180102	LSGT	+GR01	PATENT GRANT	
CN105051300 B	20331107	PEXP		Calculated Patent Term Expiry	
EP2707558 A1	20140319	LSPB	+	published / reissued	
EP2707558 A1	20140319	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20131204
EP2707558 A4	20150812	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND	EFFECTIVE DATE : 20150710

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EP2707558 A4	20161214	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20161118
EP2707558 A4	20170517	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20170419
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EP2707558 B1	20171013	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP2707558 B1	20180208	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2653719 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20180208
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EP2707558 B1	20180430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20180111
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EP2707558 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20171011
EP2707558 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20171011
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EP2707558 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20171011
EP2707558 B1	20180831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20171011
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EP2707558 B1	20190131	LSFE	+PGFP	ANNUAL FEE PAID	COUNTRY OF REF DOCUMENT

				TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	: DE PAYMENT DATE : 20181129 YEAR OF FEE PAYMENT : 8
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EP2707558 B1	20190228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20181129 YEAR OF FEE PAYMENT : 8
EP2707558 B1	20190228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20181129 YEAR OF FEE PAYMENT : 8
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EP2707558 B1	20190415	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : UEP REF DOCUMENT NUMBER : 936182 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20171011
EP2707558 B1	20190628	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20190530 YEAR OF FEE PAYMENT : 9
EP2707558 B1	20190731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20190529 YEAR OF FEE PAYMENT : 9
EP2707558 B1	20190731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20190620 YEAR OF FEE PAYMENT : 9
EP2707558 B1	20190731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20190506 YEAR OF FEE PAYMENT : 9
EP2707558 B1	20190731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20190531 YEAR OF FEE PAYMENT : 9
EP2707558 B1	20190830	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20190527 YEAR OF FEE PAYMENT : 9
EP2707558 B1	20190830	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20190530 YEAR OF FEE PAYMENT : 9

EP2707558 B1	20310504	PEXP		Calculated Patent Term Expiry	
EP2929108 A1	20151014	LSPB	+	published / reissued	
EP2929108 A1	20151014	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150608
EP2929108 A4	20161207	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	EFFECTIVE DATE : 20161109
EP2929108 A4	20180919	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20180821
EP2929108 A4	20180919	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : LOCHTEFELD, THOMAS J.
EP2929108 A4	20180919	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : BASTENHOF, DIRK
EP2929108 A4	20190807	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20190708
ES2653719 T3	20180208	LSGT	+	granted / extensions (spc, cpc, pte)	
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GC5601 A	20170514	LSGT	+	granted / extensions (spc, cpc, pte)	
GC5601 A	20320505	PEXP		Calculated Patent Term Expiry	
GC9965 A	20190310	LSGT	+	granted / extensions (spc, cpc, pte)	
GC9965 A	20340505	PEXP		Calculated Patent Term Expiry	
PT2707558 T	20171229	LSGT	+	granted / extensions (spc, cpc, pte)	
PT2707558 T	20310504	PEXP		Calculated Patent Term Expiry	
SG11201503480P A1	20150528	LSPB	+	published / reissued	
US10233660 BB	20190319	LSGT	+	granted / extensions (spc, cpc, pte)	
US10233660 BB	20190227	LSGT	PAT1	Patented Case	
US10233660 BB	20370130	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US2014133914 AA	20140515	LSPB	+	published / reissued	
US2014133914 AA	20170111	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014189948 AA	20140710	LSPB	+	published / reissued	
US2014189948 AA	20170522	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2014189948 AA	20170824	LSFE	+AWA3	Awaiting TC Resp, Issue Fee Payment Verified	
US2014189948 AA	20170824	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2014189948 AA	20170913	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2017138074 AA	20170518	LSPB	+	published / reissued	
US2017138074 AA	20180214	LSES	NFA1	Non Final Action Mailed	
US2017138074 AA	20180713	LSES	+NAM1	Notice of Allowance Mailed -- Application	

				Received in Office of Publications	
US2017138074 AA	20181026	LSWD	-ABD2	Abandoned -- Failure to Pay Issue Fee	
US2017138074 AA	20190221	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2017138074 AA	20190227	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US9556633 BB	20170131	LSGT	+	granted / extensions (spc, cpc, pte)	
US9556633 BB	20170111	LSGT	PAT1	Patented Case	
US9556633 BB	20341031	PEXP		Calculated Patent Term Expiry (PTA 358 days)	
US9777494 BB	20171003	LSGT	+	granted / extensions (spc, cpc, pte)	
US9777494 BB	20151118	LSES	NFA1	Non Final Action Mailed	
US9777494 BB	20170913	LSGT	PAT1	Patented Case	
US9777494 BB	20320516	PEXP		Calculated Patent Term Expiry (PTA 378 days)	
WO12150908 A1	20121108	LSPB	+	published / reissued	
WO12150908 A1	20131104	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2835055 COUNTRY OF REF DOCUMENT : CA
WO12150908 A1	20131104	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12150908 A1	20131204	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2011864636 COUNTRY OF REF DOCUMENT : EP
WO12150908 A1	20131219	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011367245 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20110504 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO12150908 A1	20140318	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14115415 COUNTRY OF REF DOCUMENT : US
WO12150908 A1	20170124	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112013028436 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20131104
WO14074664 A1	20140515	LSPB	+	published / reissued	
WO14074664 A1	20131107	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 201380067344.8 COUNTRY OF REF DOCUMENT : CN
WO14074664 A4	20150505	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2890337 COUNTRY OF REF DOCUMENT : CA
WO14074664 A4	20150507	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14074664 A4	20150528	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013341189 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20131107

					KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14074664 A4	20150529	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2013852746 COUNTRY OF REF DOCUMENT : EP

36) Family number: 49956160 (US2011304495A)

Title: BEAT-PRODUCT RADIO IMAGING METHOD (RIM)

Abstract: A beat-product radio imaging method (RIM) system uses a matched continuous wave (CW) transmitter and receiver to electronically image material in between. Signal attenuation measurements are taken from a number of different transmitter and receiver perspectives around the material. The transmitter and receiver each have a crystal oscillator rated at 10-ppm or better frequency uncertainty. The receiver's crystal oscillator is used as a local oscillator to beat down the transmitter's carrier frequency to baseband. The frequency error between the local oscillator and the transmitter carrier frequencies produces a beat product of less than one Hertz in frequency and its magnitude is inversely proportional to the path attenuation between the transmitter and receiver. An extremely low-pass filter is used to remove everything above one Hertz in the detector. The receiver sensitivity is therefore extraordinarily high.

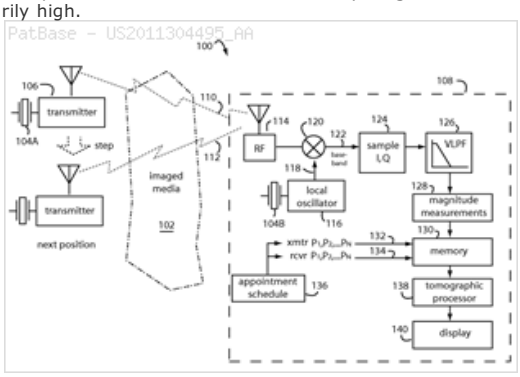
Classifications:

International (IPC 8-9): G01S13/00 G01S13/32 G01S13/56 G01S13/86 G01S13/88 G01S13/89 G01S7/35 G01S7/41 G01V11/00 G01V3/00 G01V3/10 G01V3/12 G01V3/17 G01V7/02 H01Q1/32 H01Q1/52 H01Q21/06 H04W4/04 (Advanced/Invention); G01S7/02 G01V3/15 G01V3/17 (Advanced/Non-invention)

CPC: G01V3/104 G01S13/003 G01S13/56 G01S13/40 G01S13/888 G01S7/35 G01S13/32 G01S13/867 G01S13/86 G01S13/89 G01S7/414 G01S2007/027 G01V3/12 G01V3/17 G01S13/885 H01Q1/04 H01Q9/0442 H01Q21/28 G01V3/15 G01S7/003 G01S13/0209 G01V3/00 G01V7/02 H01Q1/3216 H01Q1/521 H01Q21/062

European: G01S13/00B G01S13/88D G01V3/12

US: 1/1 324/329 342/114 342/175 342/179 342/180 342/21 342/22 342/22P 342/27 342/28



Family:

Publication number	Publication date	Application number	Application date
US2011304495 AA	20111215	US20100815420	20100615
US2012062408 AA	20120315	US20110301762	20111121
US2014125508 AA	20140508	US20140150736	20140108
US2014125509 AA	20140508	US20140152823	20140110
US2014139224 AA	20140522	US20140155566	20140115
US2014306839 AA	20141016	US20130862379	20130413
US2014368196 AA	20141218	US20140477090	20140904
US2016097879 AA	20160407	US20150970575	20151216
US2017097440 AA	20170406	US20160381600	20161216
US8063814 BA	20111122	US20100815420	20100615
US8847813 BB	20140930	US20110301762	20111121
US9024802 BB	20150505	US20130862379	20130413
US9207307 BB	20151208	US20140150736	20140108
US9207316 BB	20151208	US20140152823	20140110
US9541641 BB	20170110	US20150970575	20151216
US9568632 BB	20170214	US20140477090	20140904
US9645237 BB	20170509	US20160381600	20161216
WO18111335 A1	20180621	WO2017US31259	20170505

Priority:

US20100815420 20100615 US20110301762 20111121 US20130750318P 20130108
US20130862379 20130413 US20140150736 20140108 US20140152823 20140110
US20140155566 20140115 US20140477090 20140904 US20140555566 20141126
US20150214981P 20150906 US20150970575 20151216 US20160381600 20161216

Probable Assignee: STOLAR INC

Assignee(s): (std): BAUSOV IGOR ; DUNCAN JOSEPH ; SANCHEZ TITO ; STOLAR INC ; STOLAR RES CORP ; STOLAR RES INC ; STOLARCZYK GERALD ; STOLARCZYK LARRY G ; STOLARCZYK GERALD L

Assignee(s): STOLAR RESEARCH CORP ; STOLAR RESEARCH INC

Inventor(s): (std): STOLARCZYK GERALD ; BAUSOV IGOR ; STOLARCZYK LARRY G ; SANCHEZ TITO ; DUNCAN JOSEPH ; VALENTINE CHANCE DAIN ; MAIN RICHARD B ; STOLARCZYK GERALD L ; MAIN RICHARD BREWSTER ; HUTCHINS JEFFREY D ; UHL BRECKEN H ; BRIGGS MATTHEW L ; SALAZAR ERNEST M ; SANCHEZ TITO L ; MYERS JOHN A ; BEARD BEAUX L ; STOLARCZYK LARRY ; STOLARCZYK GERALD LEE ; HOWARD JOHN G

Agent(s): RICHARD B; MAIN LAW FIRM; MAIN CAFE; MAIN LAW CAFE; MAIN RICHARD BREWSTER

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 DJ 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 KH KM KN KP KR KW 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
US2011304495 AA	20111215	LSPB	+	published / reissued	
US2011304495 AA	20151122	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US2011304495 AA	20151221	LSLE	-STCH	INFORMATION ON STATUS: PATENT	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE

				DISCONTINUATION	FEES UNDER 37 CFR 1.362
US2011304495 AA	20160112	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151122
US2012062408 AA	20120315	LSPB	+	published / reissued	
US2012062408 AA	20140801	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STOLAR RESEARCH CORPORATION, NEW MEXICO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DUNCAN, JOSEPH; SANCHEZ, TITO; REEL/FRAME:033440/0914 EFFECTIVE DATE : 20140626
US2012062408 AA	20140910	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014125508 AA	20140508	LSPB	+	published / reissued	
US2014125508 AA	20151118	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014125508 AA	20151128	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STOLAR INCORPORATED, NEW MEXICO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:STOLAR RESEARCH CORPORATION; REEL/FRAME:037161/0812 EFFECTIVE DATE : 20151109
US2014125509 AA	20140508	LSPB	+	published / reissued	
US2014125509 AA	20151118	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014139224 AA	20140522	LSPB	+	published / reissued	
US2014139224 AA	20140303	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STOLAR RESEARCH CORPORATION, NEW MEXICO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:STOLARCZYK, GERALD L; SANCHEZ, TITO L; VALENTINE, CHANCE DAIN; AND OTHERS; REEL/FRAME:032340/0595 EFFECTIVE DATE : 20140303
US2014139224 AA	20151128	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STOLAR INCORPORATED, NEW MEXICO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:STOLAR RESEARCH CORPORATION; REEL/FRAME:037161/0812 EFFECTIVE DATE : 20151109
US2014139224 AA	20160821	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2014306839 AA	20141016	LSPB	+	published / reissued	
US2014306839 AA	20150415	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014368196 AA	20141218	LSPB	+	published / reissued	
US2014368196 AA	20170125	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2016097879 AA	20160407	LSPB	+	published / reissued	
US2016097879 AA	20161221	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2017097440 AA	20170406	LSPB	+	published / reissued	
US2017097440 AA	20170419	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE

US8063814 BA	20111122	LSGT	+	granted / extensions (spc, cpc, pte)	
US8063814 BA	20111102	LSGT	PAT1	Patented Case	
US8063814 BA	20151221	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8063814 BA	20300615	PEXP		Calculated Patent Term Expiry	
US8847813 BB	20140930	LSGT	+	granted / extensions (spc, cpc, pte)	
US8847813 BB	20140910	LSGT	PAT1	Patented Case	
US8847813 BB	20151128	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STOLAR INCORPORATED, NEW MEXICO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:STOLAR RESEARCH CORPORATION; REEL/FRAME:037161/0812 EFFECTIVE DATE : 20151109
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US9024802 BB	20150505	LSGT	+	granted / extensions (spc, cpc, pte)	
US9024802 BB	20150415	LSGT	PAT1	Patented Case	
US9024802 BB	20181224	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US9024802 BB	20190610	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US9024802 BB	20190610	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US9024802 BB	20190610	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US9024802 BB	20190702	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190505
US9024802 BB	20340114	PEXP		Calculated Patent Term Expiry (PTA 276 days)	
US9207307 BB	20151208	LSGT	+	granted / extensions (spc, cpc, pte)	
US9207307 BB	20140304	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STOLAR RESEARCH CORPORATION, NEW MEXICO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:STOLARCZYK, GERALD L; VALENTINE, CHANCE DAIN; MAIN, RICHARD BREWSTER; AND OTHERS; REEL/FRAME:032341/0042 EFFECTIVE DATE : 20140303
US9207307 BB	20151118	LSGT	PAT1	Patented Case	
US9207307 BB	20190729	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US9207307 BB	20340619	PEXP		Calculated Patent Term Expiry (PTA 162 days)	

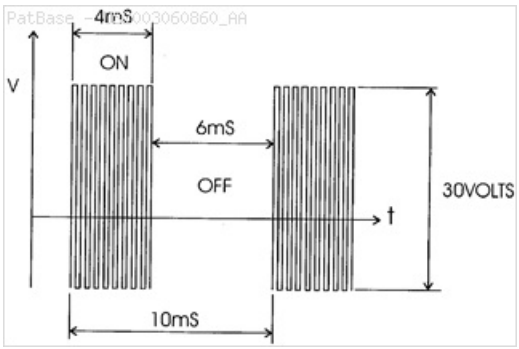
US9207316 BB	20151208	LSGT	+	granted / extensions (spc, cpc, pte)	
US9207316 BB	20151118	LSGT	PAT1	Patented Case	
US9207316 BB	20190729	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US9207316 BB	20340619	PEXP		Calculated Patent Term Expiry (PTA 160 days)	
US9541641 BB	20170110	LSGT	+	granted / extensions (spc, cpc, pte)	
US9541641 BB	20161221	LSGT	PAT1	Patented Case	
US9541641 BB	20351216	PEXP		Calculated Patent Term Expiry	
US9568632 BB	20170214	LSGT	+	granted / extensions (spc, cpc, pte)	
US9568632 BB	20170125	LSGT	PAT1	Patented Case	
US9568632 BB	20350111	PEXP		Calculated Patent Term Expiry (PTA 129 days)	
US9645237 BB	20170509	LSGT	+	granted / extensions (spc, cpc, pte)	
US9645237 BB	20170419	LSGT	PAT1	Patented Case	
US9645237 BB	20361216	PEXP		Calculated Patent Term Expiry	
WO18111335 A1	20180621	LSPB	+	published / reissued	
WO18111335 A1	20190618	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

37) Family number: 20792172 (US2003060860A)

Title: ELECTRICAL STIMULATION OF TISSUE FOR THERAPEUTIC AND DIAGNOSTIC PURPOSES

Abstract: Electrobiological stimulation is carried out transcranially by applying high frequency squarewave bursts exhibiting no d.c. term across the cranial region. Such stimulation is commenced employing ramp generators and positive and negative voltage converters which evolve the requisite baseform and burst frequencies having a voltage waveform which is square in nature. Both voltage and current are sensed and subjected to comparator logic in conjunction with predetermined thresholds and windows. Overcurrent detection and overvoltage detection is provided in hard wired fashion to assure rapid shutdown response. D.C offset detection is provided along with waveform balance tests to further assure the safety of the system. Diagnostic procedures as well as therapeutic procedures may be carried out with a system version which provides for the application of a stimulus in conjunction with safety monitoring and controller based development of stimulating waveforms, all of which exhibits no d.c. term. Feed point voltage waveforms and current waveforms are mathematically processed and compared for diagnostic analysis.

Classifications:
International (IPC 8-9): A61N1/08 A61N1/18 A61N1/32 A61N1/40 (Advanced/Invention)
International (IPC 1-7): A61N1/05 A61N1/18
CPC: A61N1/08 A61N1/32 A61N1/40
European: A61N1/08 A61N1/32 A61N1/40
US: 607/11 607/27 607/28 607/45 607/45P 607/63 607/64 607/68 607/69 607/72 607/72P 607/74 607/74S 607/8



Family:

Publication number	Publication date	Application number	Application date
AU2001289037 AA	20020326	AU20010289037	20010913
AU200189037 A1	20020326	AU20010089037	20010913
AU200189037 A5	20020326	AU20010089037	20010913
EP1331966 A1	20030806	EP20010968823	20010913
US2003060860 AA	20030327	US20020272094	20021016
US2006241719 AA	20061026	US20060473563	20060623
US6505079 BA	20030107	US20000661068	20000913
US7092760 BB	20060815	US20020272094	20021016
US7463931 BB	20081209	US20060473563	20060623
WO0222203 A1	20020321	WO2001US28527	20010913

Priority:

US20000661068 20000913 WO2001US28527 20010913 US20020272094 20021016
US20060473563 20060623

Probable Assignee: FOSTER BIO TECHNOLOGY CORP
Assignee(s): (std): FLETCHER THOMAS L ; FOSTER BIO TECHNOLOGY CORP ; FOSTER GEORGE B
Inventor(s): (std): FOSTER GEORGE B ; FLETCHER THOMAS L
Inventor(s): FLETCHER THOMAS ; FOSTER GEORGE ; THOMAS L FLETCHER ; GEORGE B FOSTER
Agent(s): DIANE E BURKE MUELLER AND SMITH LPA; MUELLER AND SMITH LPA; MUELLER SMITH
Designated states: AT AU BE BR CA CH CN CY DE DK ES FI FR GB GR IE IN IT JP KP LI LU MC MX NL PT RU SE TR

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2001289037 AA	20020326	LSPB	+	published / reissued	
AU200189037 A1	20020326	LSPB	+	published / reissued	
EP1331966 A1	20030806	LSPB	+	published / reissued	
EP1331966 A1	20030806	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20030314
EP1331966 A1	20041201	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20040401
US2003060860 AA	20030327	LSPB	+	published / reissued	
US2006241719 AA	20061026	LSPB	+	published / reissued	
US6505079 BA	20030107	LSGT	+	granted / extensions (spc, cpc, pte)	
US6505079 BA	20000913	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : FOSTER BIO TECHNOLOGY CORP., OHIO

					OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FOSTER, GEORGE B.; FLETCHER, THOMAS L.; REEL/FRAME:011223/0144 EFFECTIVE DATE : 20000913
US6505079 BA	20060516	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6505079 BA	20110107	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6505079 BA	20110207	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6505079 BA	20110207	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6505079 BA	20110301	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20110107
US6505079 BA	20200913	PEXP		Calculated Patent Term Expiry	
US7092760 BB	20060815	LSGT	+	granted / extensions (spc, cpc, pte)	
US7092760 BB	20021016	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : FOSTER BIO TECHNOLOGY CORP., OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FOSTER, GEORGE B.; FLETCHER, THOMAS L.; REEL/FRAME:013409/0626; SIGNING DATES FROM 20021007 TO 20021016
US7092760 BB	20100815	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7092760 BB	20100913	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7092760 BB	20100913	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7092760 BB	20101005	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20100815
US7092760 BB	20240609	PEXP		Calculated Patent Term Expiry (PTA 602 days and a terminal disclaimer has been filed)	
US7463931 BB	20081209	LSGT	+	granted / extensions (spc, cpc, pte)	
US7463931 BB	20121209	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7463931 BB	20130107	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7463931 BB	20130107	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7463931 BB	20130129	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20121209
US7463931 BB	20270127	PEXP		Calculated Patent Term Expiry (PTA 218 days and a terminal disclaimer has been filed)	
WO0222203 A1	20020321	LSPB	+	published / reissued	
WO0222203 A1	20030314	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO	REF DOCUMENT NUMBER : 2001968823 COUNTRY OF REF DOCUMENT :

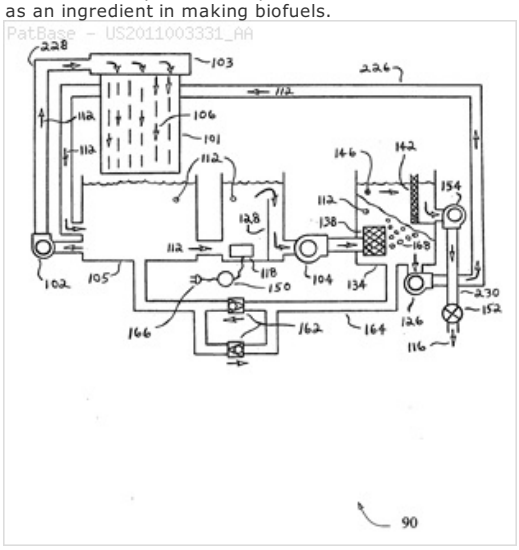
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WO0222203 A1	20030806	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001968823 COUNTRY OF REF DOCUMENT : EP
WO0222203 A1	20040401	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001968823 COUNTRY OF REF DOCUMENT : EP
WO0222203 A1	20050913	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP

38) Family number: 48068175 (US2011003331A)

Title: METHOD FOR ENHANCED PRODUCTION OF BIOFUELS AND OTHER CHEMICALS USING BIOLOGICAL ORGANISMS

Abstract: The invention of this disclosure, also known as the method of this disclosure, provides the means of improved Chemical Product production from chemical production systems that use biological organisms to produce the desired chemicals. This improved production is by means of subjecting chemical producing organisms to vibration waves or to an electrical voltage potential. The waves or voltage accomplish one of two things or both: they will improve the extraction of the chemicals from the bodies and cells of organisms, or they will increase the rate at which the organisms synthesize chemicals. To illustrate how one of many possible chemical production systems can incorporate this method, a specific configuration for a continuous chemical production system called the Oil Production System **90** is presented in this disclosure for the production of an example chemical: Vegetable Oil that is used as an ingredient in making biofuels.

Classifications:
International (IPC 8-9): C12M1/00 C12P1/00 (Advanced/Invention)
CPC: Y02E50/13 C12P7/649 C12M35/02 C12M35/04 C12M43/02 C12M47/06
European: C12M35/02 C12M35/04 C12M43/02 C12M47/06 C12P7/64E4
US: 435/289.1 435/289.100S 435/41 435/41P



Family:

Publication number	Publication date	Application number	Application date
US2011003331 AA	20110106	US20100799640	20100427

Priority:

US20090215091P 20090502 US20100799640 20100427

Probable Assignee: PAVIA THOMAS CLAYTON
Assignee(s): (std): PAVIA THOMAS CLAYTON
Inventor(s): (std): PAVIA THOMAS CLAYTON
Agent(s): THOMAS CLAYTON PAVIA

Legal status (INPADOC)

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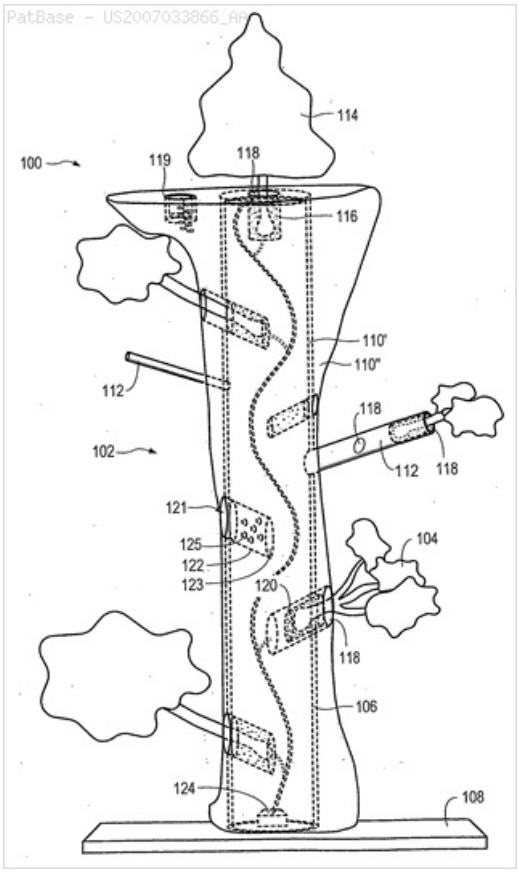
Patent	Date recorded	Event group	Code	Event	Details
US2011003331 AA	20110106	LSPB	+	published / reissued	
US2011003331 AA	20121206	LSWD	-EAB1	Expressly Abandoned -- During Examination	

39) Family number: 33545180 (US2007033866A)

Title: LIFT APPARATUS FOR BASE-MOUNTED PLANT

Abstract: An lift apparatus may include a holder and a lift mechanism. A holder may function to couple with a plant held at least partially in an opening of the base element. The base element and the plant may form a portion of a composite tree. The base element may be configured to couple to a surface. The lift mechanism may be coupled to the holder. The lift mechanism may function to move at least a portion of the holder to lift the plant out of the opening. Portions of the living plants may form branches of the composite tree.

Classifications:
International (IPC 8-9): A01G13/06 A01G9/02 A47G33/12 A63G21/18 A63H23/16 B25J5/00 (Advanced/Invention); A63G21/18 A63H23/10 B25J5/00 (Advanced/Non-invention); A01G9/02 A47G33/00 A63G21/00 B25J5/00 (Core/Invention)
CPC: A01G9/022 A01G23/043 A01G27/005 A41G1/007 A63G3/00 A63G21/18
European: A01G23/04A A01G27/00E A01G9/02C A41G1/00D A63G21/18 A63G3/00 K63G21/18 K63G3/00
US: 47/40.5 47/40.500P 47/65.7 47/65.700P 47/66.6 47/66.600S 47/83 472/117 472/128 472/136



Family:

Publication number	Publication date	Application number	Application date
AU2006236172 AA	20061026	AU20060236172	20060420
CA2611139 AA	20071129	CA20062611139	20060420
EP1876880 A2	20080116	EP20060751275	20060420
KR20080017316 A	20080226	KR20077027033	20071120
US2007033866 AA	20070215	US20060407845	20060420
US2007033867 AA	20070215	US20060407862	20060420
US2007033868 AA	20070215	US20060407875	20060420
US2007051036 AA	20070308	US20060407861	20060420
US2007051037 AA	20070308	US20060407874	20060420
US2007051038 AA	20070308	US20060407885	20060420
US2007051039 AA	20070308	US20060407886	20060420
US7785207 BB	20100831	US20060407875	20060420
US7921601 BB	20110412	US20060407886	20060420
WO06113936 A2	20061026	WO2006US15503	20060420
WO06113936 A3	20070907	WO2006US15503	20060420

Priority:

US20050673326P 20050420 US20050713849P 20050902 US20060407845 20060420
US20060407874 20060420 US20060407886 20060420 US20060407862 20060420
US20060407875 20060420 US20060407861 20060420 US20060407885 20060420
WO2006US15503 20060420

Probable Assignee: WATER RIDE CONCEPTS INC

Assignee(s): (std): HENRY JEFFERY W ; HENRY JEFFERY WAYNE ; HENRY SCHOOLEY AND ASSOCIATES ; HENRY SCHOOLEY AND ASSOCIATES L ; SCHOOLEY JOHN T ; SCHOOLEY JOHN TIMOTHY ; WATER RIDE CONCEPTS INC

Assignee(s): HENRY SCHOOLEY AND ASSOCIATES L L C ; HENRY SCHOOLEY AND ASSOCIATES LLC

Inventor(s): (std): SCHOOLEY JOHN T ; HENRY JEFFERY W ; SCHOOLEY JOHN TIMOTHY ; HENRY JEFFERY WAYNE

Inventor(s): JEFFERY WAYNE HENRY ; JOHN TIMOTHY SCHOOLEY ; SCHOOLEY JOHN ; HENRY JEFFERY

Agent(s): GRIFFITH HACK; GOUDREAU GAGE DUBUC; DE KERNIER GABRIEL; MEYERTONS HOOD KIVLIN KOWERT AND GOETZEL PC; ERIC B

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 KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM 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
AU2006236172 AA	20061026	LSPB	+	published / reissued	
AU2006236172 AA	20100128	LSAS	PC1	ASSIGNMENT BEFORE GRANT (SECT. 113)	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC. OLDPARTY : FORMER APPLICANT(S): HENRY, SCHOOLEY & ASSOCIATES L.L.C.
AU2006236172 AA	20131114	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
CA2611139 AA	20071129	LSPB	+	published / reissued	
CA2611139 AA	20110321	LSES	+EEER	EXAMINATION REQUEST	
CA2611139 AA	20140420	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20140221
EP1876880 A2	20080116	LSPB	+	published / reissued	
EP1876880 A2	20080116	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20071119
EP1876880 A2	20100310	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC.
EP1876880 A2	20140423	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20131101
KR20080017316 A	20080226	LSPB	+	published / reissued	
KR20080017316 A	20080122	LSES	A201	REQUEST FOR EXAMINATION	
KR20080017316 A	20091022	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20080017316 A	20100308	LSAS	N231	NOTIFICATION OF CHANGE OF APPLICANT	
KR20080017316 A	20100427	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20080017316 A	20101122	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20080017316 A	20110830	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
US2007033866 AA	20070215	LSPB	+	published / reissued	
US2007033866 AA	20061030	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY WAYNE; SCHOOLEY, JOHN TIMOTHY; REEL/FRAME:018478/0713 EFFECTIVE DATE : 20061020
US2007033866 AA	20120915	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007033867 AA	20070215	LSPB	+	published / reissued	
US2007033867 AA	20061030	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFREY WAYNE; SCHOOLEY, JOHN TIMOTHY;

					REEL/FRAME:018478/0724 EFFECTIVE DATE : 20061020
US2007033867 AA	20111120	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007033868 AA	20070215	LSPB	+	published / reissued	
US2007051036 AA	20070308	LSPB	+	published / reissued	
US2007051036 AA	20061117	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY WAYNE; SCHOOLEY, JOHN TIMOTHY; REEL/FRAME:018610/0188 EFFECTIVE DATE : 20061020
US2007051036 AA	20121006	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007051037 AA	20070308	LSPB	+	published / reissued	
US2007051037 AA	20061116	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY WAYNE; SCHOOLEY, JOHN TIMOTHY; REEL/FRAME:018613/0895 EFFECTIVE DATE : 20061020
US2007051037 AA	20120915	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007051038 AA	20070308	LSPB	+	published / reissued	
US2007051038 AA	20061116	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY WAYNE; SCHOOLEY, JOHN TIMOTHY; REEL/FRAME:018603/0496 EFFECTIVE DATE : 20061020
US2007051038 AA	20111020	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007051039 AA	20070308	LSPB	+	published / reissued	
US2007051039 AA	20110323	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7785207 BB	20100831	LSGT	+	granted / extensions (spc, cpc, pte)	
US7785207 BB	20061030	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY WAYNE; SCHOOLEY, JOHN TIMOTHY; REEL/FRAME:018478/0785 EFFECTIVE DATE : 20061020
US7785207 BB	20100811	LSGT	PAT1	Patented Case	
US7785207 BB	20140514	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7785207 BB	20180416	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7785207 BB	20181008	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7785207 BB	20181008	LSLE	-STCH	INFORMATION ON STATUS: PATENT	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE

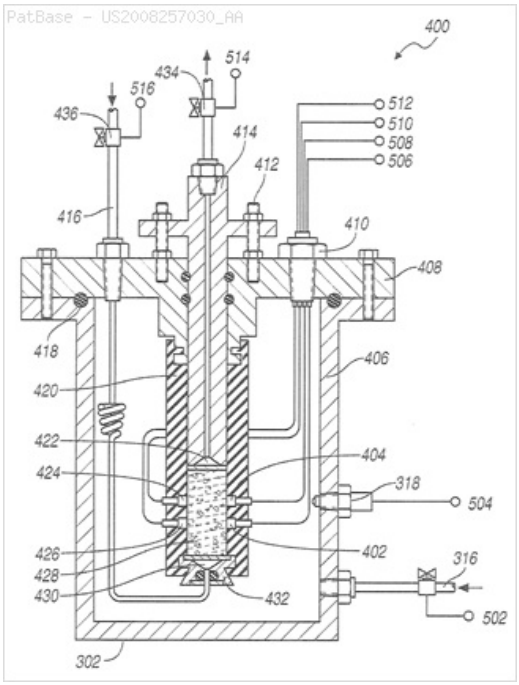
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US7785207 BB	20181030	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180831
US7785207 BB	20271002	PEXP		Calculated Patent Term Expiry (PTA 530 days)	
US7921601 BB	20110412	LSGT	+	granted / extensions (spc, cpc, pte)	
US7921601 BB	20061115	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY WAYNE; SCHOOLEY, JOHN TIMOTHY; REEL/FRAME:018601/0498 EFFECTIVE DATE : 20061021
US7921601 BB	20110323	LSGT	PAT1	Patented Case	
US7921601 BB	20140923	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7921601 BB	20181203	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7921601 BB	20190520	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7921601 BB	20190520	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7921601 BB	20190520	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7921601 BB	20190625	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190412
US7921601 BB	20270315	PEXP		Calculated Patent Term Expiry (PTA 329 days)	
WO06113936 A2	20061026	LSPB	+	published / reissued	
WO06113936 A3	20071023	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06113936 A3	20071119	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006236172 COUNTRY OF REF DOCUMENT : AU
WO06113936 A3	20071119	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006751275 COUNTRY OF REF DOCUMENT : EP
WO06113936 A3	20071120	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : RU
WO06113936 A3	20071120	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020077027033 COUNTRY OF REF DOCUMENT : KR
WO06113936 A3	20071129	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2611139 COUNTRY OF REF DOCUMENT : CA

40) Family number: 42409181 (US2008257030A)

Title: PETROPHYSICAL FLUID FLOW PROPERTY DETERMINATION

Abstract: A method and apparatus for determining petrophysical parameters within a geologic formation pressurizes a geologic sample through a set of predetermined effective pressures, energizes the sample at each predetermined effective pressure with an electric current and/or sonic energy, and measures a conductivity value (electrical conductivity and/or sonic velocity). Permeability and/or porosity are also measured at each pressure through a traditional method and the functions are compared so that permeability and/or porosity can be subsequently derived from a sonic or electrical measurement of a comparable sample under a effective pressure. An apparatus is also described for acquiring the measurements under tri-axial compression, with a computerized interface in one embodiment.

Classifications:
International (IPC 8-9): E21B47/00 E21B49/00 G01N15/08 G01N27/04 G01N29/07 G01V3/00 (Advanced/Invention); E21B47/00 E21B49/00 G01N15/08 G01N27/04 G01N29/04 G01V3/00 (Core/Invention)
CPC: G01N15/08 G01N2203/0256
European: G01N15/08 S01N203/02G3 S01N3/02G3
US: 324/376 324/376S 73/152.11 73/152.110P 73/152.16 73/152.160S 73/38 73/38S 73/597 73/597S 73/601 73/601S 73/825 73/825S



Family:

Publication number	Publication date	Application number	Application date
US2008257030 AA	20081023	US20070736748	20070418
US7472588 BB	20090106	US20070736748	20070418
WO08130346 A1	20081030	WO2007US09571	20070419

Priority:
US20070736748 20070418

Probable Assignee: SOROWELL PRODUCTION SERVICES LLC

Assignee(s): (std): BREIDENSTEIN WALTER ; BUDANSKY YURY ; LEVITAN LEONID ; SLAVIN VYACHESLAV I ; SOROWELL PRODUCTION SERVICES L

Assignee(s): SOROWELL PRODUCTION SERVICES LLC

Inventor(s): (std): LEVITAN LEONID ; SLAVIN VYACHESLAV I ; BUDANSKY YURY ; BREIDENSTEIN WALTER

Agent(s): HARNESS DICKEY AND PIERCE PLC; BROOKS KUSHMAN PC; EUSEBI CHRISTOPHER A ET AL

Designated states: AE AG AL AM 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 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 PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN 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
US2008257030 AA	20081023	LSPB	+	published / reissued	
US2008257030 AA	20081217	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7472588 BB	20090106	LSGT	+	granted / extensions (spc, cpc, pte)	
US7472588 BB	20070419	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SOROWELL PRODUCTION SERVICES LLC, MICHIGAN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SLAVIN, VYACHESLAV I.; BUDANSKY, YURY; LEVITAN, LEONID; AND OTHERS;

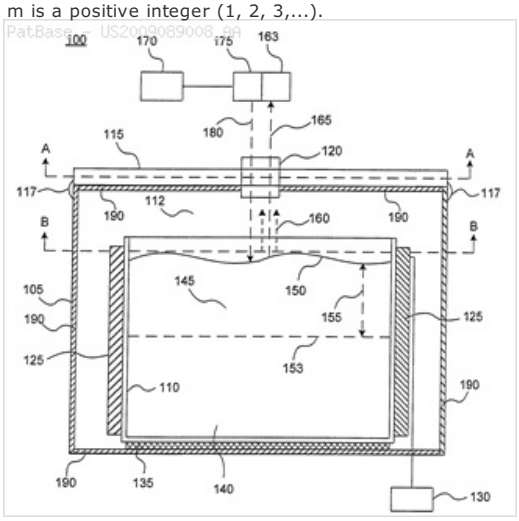
					REEL/FRAME:019179/0400 EFFECTIVE DATE : 20070417
US7472588 BB	20081217	LSGT	PAT1	Patented Case	
US7472588 BB	20120706	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7472588 BB	20161220	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7472588 BB	20270710	PEXP		Calculated Patent Term Expiry (PTA 83 days)	
WO08130346 A1	20081030	LSPB	+	published / reissued	
WO08130346 A1	20091020	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08130346 A1	20100526	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 07775771 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

41) Family number: 43087189 (US2009089008A)

Title: METHODS AND SYSTEMS FOR MONITORING A SOLID-LIQUID INTERFACE

Abstract: Methods and systems are provided for monitoring a solid-liquid interface, including providing a vessel configured to contain an at least partially melted material; detecting radiation reflected from a surface of a liquid portion of the at least partially melted material; providing sound energy to the surface; measuring a disturbance on the surface; calculating at least one frequency associated with the disturbance; and determining a thickness of the liquid portion based on the at least one frequency, wherein the thickness is calculated based on L=(2m-1)vs/4f, where f is the frequency where the disturbance has an amplitude maximum, vs is the speed of sound in the material, and m is a positive integer (1, 2, 3,...).

Classifications:
International (IPC 8-9): C30B11/00 C30B15/20 C30B15/26 G01B15/02 G01B17/02 (Advanced/Invention); C30B11/00 C30B15/20 G01B15/02 G01B17/02 (Core/Invention)
CPC: C30B11/006 C30B15/20 C30B15/26 C30B29/06
European: C30B11/00H C30B15/20 C30B15/26 C30B29/06
US: 250/227.14 250/573 250/574 702/170 702/170P 73/293



Family:

Publication number	Publication date	Application number	Application date
US2009089008 AA	20090402	US20080233989	20080919
US8030633 BB	20111004	US20080233989	20080919
WO09042519 A1	20090402	WO2008US76993	20080919

Priority:
US20070975589P 20070927 US20080233989 20080919

Probable Assignee: BP PLC
Assignee(s): (std): BP CORP NORTH AMERICA INC ; CLARK ROGER F ; STODDARD NATHAN G
Assignee(s): BP NORTH AMERICA INC CORP ; BP PLC
Inventor(s): (std): STODDARD NATHAN G ; CLARK ROGER F
Agent(s): CAROL WILSON BP AMERICA INC; THOMAS E; NEMO THOMAS E
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 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)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2009089008 AA	20090402	LSPB	+	published / reissued	
US8030633 BB	20111004	LSGT	+	granted / extensions (spc, cpc, pte)	
US8030633 BB	20080919	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BP CORPORATION NORTH AMERICA INC., ILLINOIS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:STODDARD, NATHAN G.; CLARK, ROGER F.; REEL/FRAME:021558/0242 EFFECTIVE DATE : 20080219
US8030633 BB	20151004	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8030633 BB	20151102	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8030633 BB	20151102	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

US8030633 BB	20151124	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151004
US8030633 BB	20290204	PEXP		Calculated Patent Term Expiry (PTA 138 days)	
WO09042519 A1	20090402	LSPB	+	published / reissued	
WO09042519 A1	20100330	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09042519 A1	20101027	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 08833785 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

42) Family number: 56429193 (WO14071536A1)

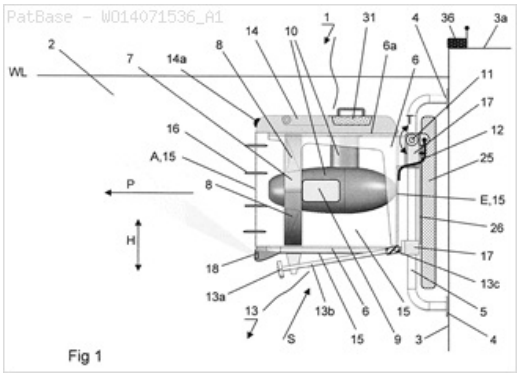
Title: ADJUSTABLE COUNTERCURRENT SYSTEM

Abstract: The invention relates to a countercurrent system (1) which is a horizontal axial turbomachine. The housing (6) can be adjusted vertically by means of the guide pipe (5) and the pipe guide (17) and horizontally by means of the rail guide (22), and the housing can be inclined by means of rotating means. The housing (6) is adjusted together with the propeller (8), the drive motor (9), and the Kort nozzle (7), which interact in the housing. Additionally, the display and control panel (14), the light projector (18), the extendable and foldable nozzle cover (12), and a float (25) are located on the housing (6). When the countercurrent system (1) is not in use, the system is used as a filter and water quality system comprising a filter (33) and a metering system (34).

Classifications:

International (IPC 8-9): A61H33/00 A63B69/12 E04H4/00 E04H4/12 F04D13/08 F04D29/60 (Advanced/Invention)

CPC: A61H33/6047 A63B2207/02 A63B2225/09 A63B2225/093 A61H33/0091 A61H33/02 A61H2033/0037 A61H2201/0165 A61H2201/1215 A61H2201/1238 A61H2201/1664 A61H2201/1678 A61H2201/5005 A61H2201/5043 A61H2201/5092 A61H2201/5058 E04H4/0006 A63B69/125



Family:

Publication number	Publication date	Application number	Application date
CH707215 A2	20140515	CH20120002356	20121112
CH707912 A2	20141015	CH20130000729	20130406
EP2941305 A1	20151111	EP20130826918	20131112
WO14071536 A1	20140515	WO2013CH00197	20131112

Priority:

CH20120002356 20121112 CH20130000729 20130406 WO2013CH00197 20131112

Probable Assignee: MUELLER PETER A

Assignee(s): (std): MUELLER PETER A ; MUELLER SANDRO

Assignee(s): PETER A MUELLER

Inventor(s): (std): MUELLER PETER A ; MUELLER SANDRO

Inventor(s): SANDRO MUELLER ; PETER A MUELLER

Agent(s): ISLER JOERG

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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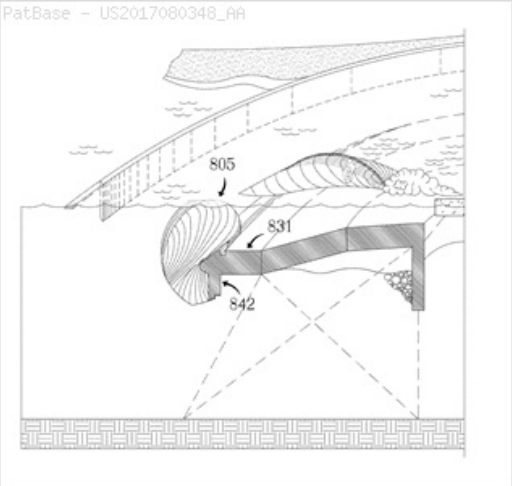
Patent	Date recorded	Event group	Code	Event	Details
CH707215 A2	20140515	LSPB	+	published / reissued	
CH707215 A2	20151231	LSRV	-AZW	REJECTION (APPLICATION)	
CH707912 A2	20141015	LSPB	+	published / reissued	
CH707912 A2	20160715	LSRV	-AZW	REJECTION (APPLICATION)	
EP2941305 A1	20151111	LSPB	+	published / reissued	
EP2941305 A1	20151111	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150922
EP2941305 A1	20161102	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160601
WO14071536 A1	20140515	LSPB	+	published / reissued	
WO14071536 A1	20150512	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14071536 A1	20150611	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2013826918 COUNTRY OF REF DOCUMENT : EP

43) Family number: 65261193 (US2017080348A)

Title: SUBMERGED WAVE GENERATION SYSTEM

Abstract: A wave generation system may comprise a submerged platform. The submerged platform may be attached to the bottom of a body of water by cables or pilings. A **wave generator** may be coupled to the submerged platform. The **wave generator** may create waves above the submerged platform. The shape of the submerged platform may dictate the shape of the waves. The submerged platform may be adjusted by raising or lowering the submerged platform. The shape of the submerged platform may be adjusted by adjusting the pitch of various sections of the submerged platform. A portion of the energy in the generated waves may be transmitted beyond the submerged platform and dissipated by a surrounding body of water.

Classifications:
International (IPC 8-9): A63B69/00 A63G31/00 E02B3/00 E04H4/00 (Advanced/Invention)
CPC: A63G31/007 E04H4/0006 A63G3/00 E02B3/062 A63B69/0093 Y02A10/15
US: 1/1 405/79



Family:

Publication number	Publication date	Application number	Application date
US2017080348 AA	20170323	US20160268262	20160916

Priority:
US20150220402P 20150918 US20160268262 20160916

Probable Assignee: MLADICK RICHARD M
Assignee(s): (std)**:** MLADICK RICHARD M
Inventor(s): (std)**:** MLADICK RICHARD M

Legal status (INPADOC)

View legal status timeline

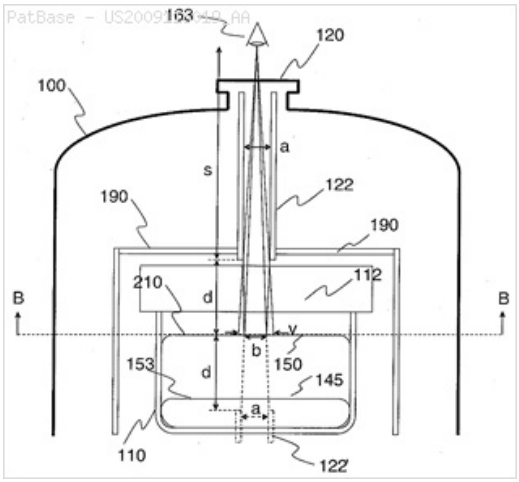
Patent	Date recorded	Event group	Code	Event	Details
US2017080348 AA	20170323	LSPB	+	published / reissued	
US2017080348 AA	20170807	LSES	NFA1	Non Final Action Mailed	
US2017080348 AA	20171218	LSES	-NFA2	Non Final Action Counted, Not Yet Mailed	
US2017080348 AA	20171219	LSES	NFA1	Non Final Action Mailed	
US2017080348 AA	20180716	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	

44) Family number: 43087201 (US2009116019A)

Title: METHODS AND SYSTEMS FOR MONITORING A SOLID-LIQUID INTERFACE

Abstract: Methods and systems are provided for monitoring a solid-liquid interface, including providing a vessel configured to contain an at least partially melted material; detecting radiation reflected from a surface of a liquid portion of the at least partially melted material that is parallel with the liquid surface; measuring a disturbance on the surface; calculating at least one frequency associated with the disturbance; and determining a thickness of the liquid portion based on the at least one frequency, wherein the thickness is calculated based on L = f 2 w 2 g, where g is the gravitational constant, w is the horizontal width of the liquid, and f is the at least one frequency.

Classifications:
International (IPC 8-9): C30B11/00 C30B13/00 C30B15/20 C30B15/26 G01N21/55 G01N29/00 (Advanced/Invention); C30B11/00 C30B13/00 C30B15/20 G01N21/55 G01N29/00 (Core/Invention)
CPC: Y10T117/1004 C30B11/006 C30B15/20 C30B15/26 C30B29/06
European: C30B11/00H C30B15/20 C30B15/26 C30B29/06
US: 117/14 117/201 117/52 210/513 250/559.27 250/573 250/577 356/43 356/445 356/630 73/579



Family:

Publication number	Publication date	Application number	Application date
US2009116019 AA	20090507	US20080233694	20080919
US7758696 BB	20100720	US20080233694	20080919
WO09042503 A1	20090402	WO2008US76933	20080919

Priority:
US20070975603P 20070927 US20080233694 20080919

Probable Assignee: BP PLC
Assignee(s): (std): BP CORP NORTH AMERICA INC ; CLARK ROGER F ; KARY TIM ; STODDARD NATHAN G
Assignee(s): BP NORTH AMERICA INC CORP ; BP PLC
Inventor(s): (std): KARY TIM ; STODDARD NATHAN G ; CLARK ROGER F
Agent(s): CAROL WILSON BP AMERICA INC; JOHN P; THOMAS E; NEMO THOMAS E
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 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
US2009116019 AA	20090507	LSPB	+	published / reissued	
US7758696 BB	20100720	LSGT	+	granted / extensions (spc, cpc, pte)	
US7758696 BB	20080919	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BP CORPORATION NORTH AMERICA INC., ILLINOIS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:STODDARD, NATHAN G.; CLARK, ROGER F.; KARY, TIM; REEL/FRAME:021558/0266 EFFECTIVE DATE : 20080219
US7758696 BB	20140720	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7758696 BB	20140818	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7758696 BB	20140818	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

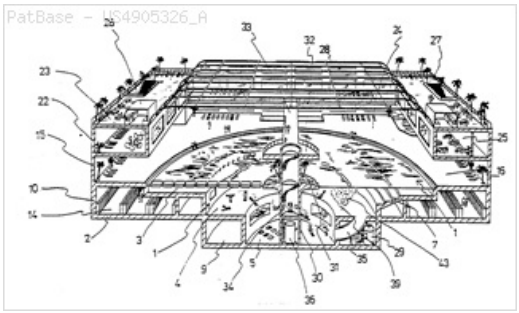
US7758696 BB	20140909	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20140720
US7758696 BB	20280921	PEXP		Calculated Patent Term Expiry (PTA 2 days)	
WO09042503 A1	20090402	LSPB	+	published / reissued	
WO09042503 A1	20100330	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09042503 A1	20101027	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 08833974 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

45) Family number: 3029216 (US4905326A)

Title: Diving **pool**

Abstract: A diving **pool** allowing scuba diving to be easily and safely enjoyed, which comprises a **pool** bottom progressively becoming deeper from its periphery towards its center, a tower constructed on the **pool** bottom at a central deepest area and rising to a level above the **pool** surface, an **artificial** island formed at a level of the **pool** surface around the tower, and a deck above the level of the **pool** surface around the tower; wherein the diving **pool** can be further equipped, if desired, with a water stream generator adapted to generate a water stream and a **wave** **generator** adapted to generate waves in the **pool**.

Classifications:
International (IPC 8-9): E04H3/16 E04H4/00 (Advanced/Invention); E04H3/14 E04H4/00 (Core/Invention)
International (IPC 1-7): E04H3/16 E04H3/18 E04H4/00
CPC: E04H3/16
European: E04H3/16
US: 4/488 472/128 52/169.7
Locarno class: 44/88



Family:

Publication number	Publication date	Application number	Application date
JP1263365 A2	19891019	JP19880092569	19880414
JP1263366 A2	19891019	JP19880092570	19880414
JP1263367 A2	19891019	JP19880092571	19880414
JP1790036 C3	19930929	JP19880092569	19880414
JP1790037 C3	19930929	JP19880092570	19880414
JP1790038 C3	19930929	JP19880092571	19880414
JP5002070 B4	19930111	JP19880092569	19880414
JP5002071 B4	19930111	JP19880092570	19880414
JP5002072 B4	19930111	JP19880092571	19880414
US4905326 A	19900306	US19880273424	19881118

Priority:
JP19880092569 19880414 JP19880092570 19880414 JP19880092571 19880414

Probable Assignee: KASHIMA KENSETSU KK
Assignee(s): (std): KAJIMA CORP
Assignee(s): KASHIMA KENSETSU KK
Inventor(s): (std): YOSHIDA TADASHI ; NAKAMURA TATSURO ; BABA HIDEAKI

Legal status (INPADOC)

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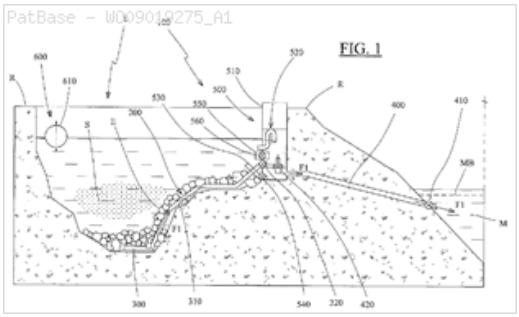
Patent	Date recorded	Event group	Code	Event	Details
JP1263365 A2	19891019	LSPB	+	published / reissued	
JP1263366 A2	19891019	LSPB	+	published / reissued	
JP1263367 A2	19891019	LSPB	+	published / reissued	
JP1790036 C3	19930929	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1790036 C3	20080414	PEXP		Calculated Patent Term Expiry	
JP1790037 C3	19930929	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1790037 C3	20080414	PEXP		Calculated Patent Term Expiry	
JP1790038 C3	19930929	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1790038 C3	20080414	PEXP		Calculated Patent Term Expiry	
JP5002070 B4	19930111	LSPB	+	published / reissued	
JP5002071 B4	19930111	LSPB	+	published / reissued	
JP5002072 B4	19930111	LSPB	+	published / reissued	
JP5002072 B4	20050111	LSLE	-LAPS	CANCELLATION	

				BECAUSE OF NO PAYMENT OF ANNUAL FEES	
US4905326 A	19900306	LSGT	+	granted / extensions (spc, cpc, pte)	
US4905326 A	19881118	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KASHIMA KENSETSU KABUSHIKI KAISHA, 1-2-7, MOTOAKAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNORS:NAKAMURA, TATSURO; BABA, HIDEAKI; YOSHIDA, TADASHI; REEL/FRAME:004980/0873; SIGNING DATES FROM 19881008 TO 19881027
US4905326 A	19881118	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KASHIMA KENSETSU KABUSHIKI KAISHA, JAPAN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:NAKAMURA, TATSURO; BABA, HIDEAKI; YOSHIDA, TADASHI; SIGNING DATES FROM 19881008 TO 19881027; REEL/FRAME:004980/0873
US4905326 A	19930426	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4905326 A	19970516	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4905326 A	20020306	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4905326 A	20020402	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US4905326 A	20020402	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US4905326 A	20020430	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20020306
US4905326 A	20081118	PEXP		Calculated Patent Term Expiry	

46) Family number: 42941217 (WO09019275A1)

Title: INSTALLATION AND METHOD FOR REDUCING EUTROPHICATION IN A BASIN

Abstract: The present invention relates to an installation (100) intended to be incorporated into a natural (B) or **artificial** (B') basin in order to reduce eutrophication, the installation comprising a means (200) external to the basin (B, B') for collecting and transferring water from the bottom of the basin (B, B') and which is liable to contain sediment(s) which has settled under gravity. The collection and transfer means (200) comprises a drain or a network of drains (300) connected to an outfall (400) that passes through a rocky belt (R) or the casing (V) of the basin (B, B') and which emerges, on a slope, outside the basin (B, B') through a valve (410) that allows said basin to be drained or filled. A method for reducing eutrophication in a natural or **artificial** basin is also claimed.



Classifications:
International (IPC 8-9): C02F7/00 E02B1/00 E02B3/02 E02B8/02 E02B9/00 E04H4/00 E04H4/12 E04H4/14 (Advanced/Invention); C02F103/00 (Advanced/Non-invention); C02F7/00 E02B8/00 E02B9/00 E04H4/00 (Core/Invention)
CPC: Y02W10/15 E04H4/1209 C02F7/00 C02F2103/007 E02B1/003 E02B3/023 E02B8/02 E02B9/00 E04H4/0006 E04H4/0012 Y02E10/22 Y02A10/28 Y02A10/383
European: E02B1/00B E02B3/02B E02B8/02 E02B9/00 E04H4/00A E04H4/00B E04H4/12A M02F103/00H M02F7/00 Y02E10/22

Family:

Publication number	Publication date	Application number	Application date
EP2179110 A1	20100428	EP20080786907	20080805
FR2919884 A1	20090213	FR20070005792	20070809
FR2919884 B1	20171103	FR20070005792	20070809
WO09019275 A1	20090212	WO2008EP60299	20080805

Priority:
FR20070005792 20070809 WO2008EP60299 20080805

Probable Assignee: HEMISPHERE SUB SARL

Assignee(s): (std): BOUCHERON ERIC ; HEMISPHERE SUB ; HEMISPHERE SUB SARL ; PROD HOMME JOHANN

Assignee(s): HEMISPHERE SUB SOC A RESPONSABILITE LIMITEE ; HEMISPHERE SUB SOCIETE A RESPONSABILITE LIMITEE

Inventor(s): (std): BOUCHERON ERIC ; PROD HOMME JOHANN

Inventor(s): JOHANN PROD HOMME ; ERIC BOUCHERON

Agent(s): CABINET LE GUEN ET MAILLET; LE GUEN AND ASSOCIES; MAILLET ALAIN

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
EP2179110 A1	20100428	LSPB	+	published / reissued	
EP2179110 A1	20100428	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100216
EP2179110 A1	20100623	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20100526
EP2179110 A1	20141231	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : 2VENIR CONSEIL SARL
EP2179110 A1	20150325	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20150227
EP2179110 A1	20160106	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20150710
FR2919884 A1	20090213	LSPB	+	published / reissued	
FR2919884 A1	20140718	LSAS	TP	TRANSMISSION OF PROPERTY	PARTYTYPE : OWNER OWNER : 2VENIR CONSEIL, FR EFFECTIVE DATE : 20140617
FR2919884 A1	20160830	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 10
FR2919884 A1	20170829	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT

					: 11
FR2919884 B1	20171103	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2919884 B1	20180831	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2919884 B1	20270809	PEXP		Calculated Patent Term Expiry	
WO09019275 A1	20090212	LSPB	+	published / reissued	
WO09019275 A1	20100210	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09019275 A1	20100216	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008786907 COUNTRY OF REF DOCUMENT : EP

47) Family number: 53000223 (WO13016767A1)

Title: **ARTIFICIAL** REEF

Abstract: An **artificial** reef (1) has an underwater sail (3) with tie down points (10) connected to one or more anchor points (7) via one or more respective tie down links (11) to anchor the sail within a body of water (2). Material or gas of lower density than the water is introduced under the underwater sail to provide an upwards lift force to expand or inflate the sail in an upwards direction and form the reef.

Classifications:
International (IPC 8-9): E02B3/04 (Advanced/Invention)
CPC: E02B3/046 E02B3/04 Y02A10/26

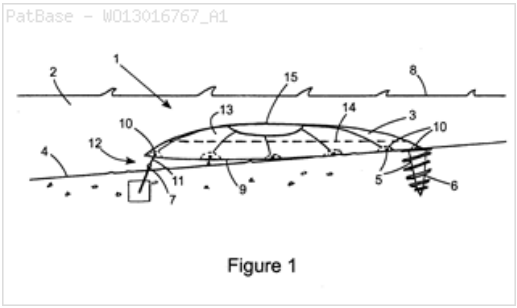


Figure 1

Family:

Publication number	Publication date	Application number	Application date
AU2012289825 AA	20130207	AU20120289825	20120801
GB201402848 A0	20140402	GB20140002848	20120801
GB2508110 A1	20140521	GB20140002848	20120801
WO13016767 A1	20130207	WO2012AU00905	20120801

Priority:

AU20110903050 20110801 AU20120289825 20120801 WO2012AU00905 20120801

Probable Assignee: BOTTEGAL TROY

Assignee(s): (std): BOTTEGAL TROY ; BOTTEGAL TROY J ; BOTTEGAL TROY JOHN

Assignee(s): BOTTEGAL TROY JOHN MR ; TROY JOHN BOTTEGAL

Inventor(s): (std): BOTTEGAL TROY JOHN

Inventor(s): TROY JOHN BOTTEGAL

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY 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 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 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)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2012289825 AA	20130207	LSPB	+	published / reissued	
AU2012289825 AA	20170302	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2) (D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
GB2508110 A1	20140521	LSPB	+	published / reissued	
GB2508110 A1	20171108	LSWD	-WAP	APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	
WO13016767 A1	20130207	LSPB	+	published / reissued	
WO13016767 A1	20140203	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13016767 A1	20140218	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	TEXT : PCT FILING DATE = 20120801 REF DOCUMENT NUMBER : 1402848 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13016767 A1	20140218	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT

					NUMBER : 1402848.4 COUNTRY OF REF DOCUMENT : GB
WO13016767 A1	20140227	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012289825 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120801 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13016767 A1	20140827	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12820551 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

48) Family number: 58403233 (WO16033671A1)

Title: SUSTAINABLE SYSTEM AND PROCESS FOR GENERATING **ARTIFICIAL** WAVES

Abstract: The present invention relates in general to the sector of swimming **pools** provided with **artificial** waves and in general refers to a process and to a device for generating waves with low energy consumption. The solution in question is composed basically of a tower and sliding box, in which the box is raised inside the tower and the weight force thereof will act on the water, expelling a volume via an outlet opening. Furthermore, during the drop, the system recovers some of the energy and reutilizes it in order that the sliding box can be raised again. The solution further utilizes accumulators and/or hydraulic cylinders basically for damping the fall and for braking the sliding box during descent, storing braking energy and, furthermore, actively raising the sliding box. Moreover, by means of these elements and the movement of the sliding box, the energy recovery system acts on the excess pressure generated and directs it to the energy storage module via the accumulators.

Classifications:
International (IPC 8-9): E04H4/00 F03B13/14 F03B15/00 F04D35/00 (Advanced/Invention)
CPC: E04H4/00 F03B13/14 F03B15/00 Y02E10/38 F04D35/00

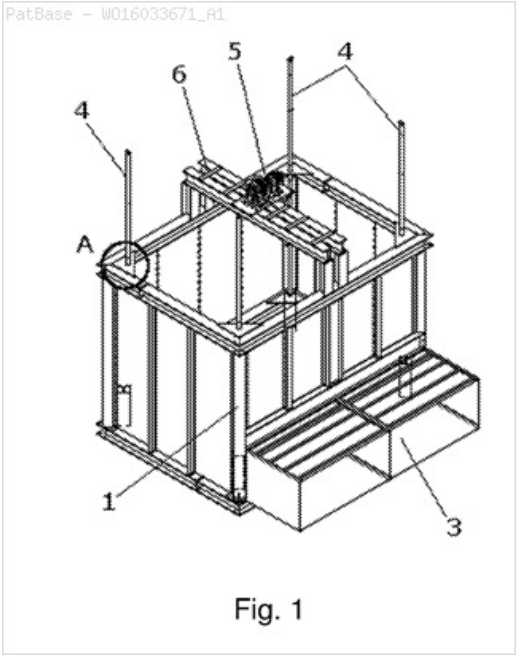


Fig. 1

Family:

Publication number	Publication date	Application number	Application date
BR102014021957 A2	20150106	BR20141021957	20140904
BR102014021957 B1	20170307	BR20141021957	20140904
BR132015020493 E2	20151201	BR20151320493	20150825
BR132015020493 F1	20180206	BR20151320493	20150825
WO16033671 A1	20160310	WO2015BR50140	20150903

Priority:

BR20141021957 20140904 BR20151320493 20150825

Probable Assignee: PEDRO JOSE MOACYR RANGEL NETO

Assignee(s): (std): DA COSTA RAMOS TIAGO ; NETO PEDRO JOSE MOACIR RANGEL ; NETO PEDRO JOSE MOACYR RANGEL ; RAMOS TIAGO DA COSTA ; TIAGO DA COSTA RAMOS ; RANGEL NETO PEDRO JOSE MOACYR ; PEDRO JOSE MOACYR RANGEL NETO

Assignee(s): PEDRO JOSE MOACIR RANGEL NETO

Inventor(s): (std): PEDRO JOSE MOACYR RANGEL NETO ; NETO PEDRO JOSE MOACYR RANGEL ; DA COSTA RAMOS TIAGO ; RANGEL NETO PEDRO JOSE MOACYR ; TIAGO DA COSTA RAMOS ; RAMOS TIAGO DA COSTA ; NETO PEDRO JOSE MOACIR RANGEL

Inventor(s): PEDRO JOSE MOACIR RANGEL NETO

Agent(s): LEAO BARCELLOS MILTON LUCIDIO

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
BR102014021957 A2	20150106	LSPB	B03B	PUBLICATION OF AN APPLICATION: ANTICIPATED PUBLICATION	
BR102014021957 A2	20150210	LSPB	B03H	PUBLICATION OF AN APPLICATION: RECTIFICATION	TEXT : REFERENTE A RPI 2296 DE 06/01/2015, QUANTO AOS ITENS (71 E 72), CONFORME SOLICITADO NA PETICAO NO 860140154233/RJ DE 11/09/2014.

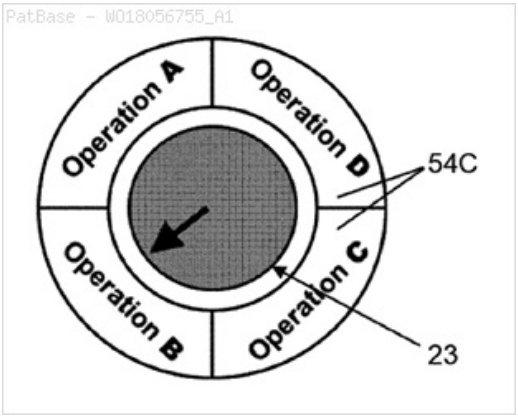
BR102014021957 A2	20150602	LSGT	+B27B	REQUEST FOR A GREEN PATENT GRANTED	
BR102014021957 A2	20160719	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BR102014021957 A2	20170131	LSGT	B09A	DECISION: INTENTION TO GRANT	
BR102014021957 B1	20170307	LSGT	+B16A	PATENT OR CERTIFICATE OF ADDITION OF INVENTION GRANTED	
BR102014021957 B1	20180403	LSFE	B24B	PATENT ANNUAL FEE: REQUIREMENT FOR COMPLEMENTING ANNUAL FEE	
BR102014021957 B1	20180417	LSFE	B24E	PATENT ANNUAL FEE: RESOLUTION CANCELLED	
BR102014021957 B1	20340904	PEXP		Calculated Patent Term Expiry	
BR132015020493 E2	20151201	LSPB	B03B	PUBLICATION OF AN APPLICATION: ANTICIPATED PUBLICATION	
BR132015020493 E2	20160614	LSGT	+B27B	REQUEST FOR A GREEN PATENT GRANTED	
BR132015020493 E2	20171205	LSGT	B09A	DECISION: INTENTION TO GRANT	
BR132015020493 F1	20180206	LSGT	+B16A	PATENT OR CERTIFICATE OF ADDITION OF INVENTION GRANTED	
BR132015020493 F1	20350825	PEXP		Calculated Patent Term Expiry	
WO16033671 A1	20160310	LSPB	+	published / reissued	
WO16033671 A1	20170306	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO16033671 A1	20170927	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 15837461 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

49) Family number: 69029260 (WO18056755A1)

Title: MOBILE COMMUNICATION TERMINALS, THEIR DIRECTIONAL INPUT UNITS, AND METHODS THEREOF

Abstract: This disclosure generally relates to various directional input units of a mobile communication terminal, where such directional input units receive a single user input or multiple concurrent user inputs and then acquires at least one selecting (user) sub-input therefrom while a terminal is in its powered-off state or its off-state. After acquiring the selecting user sub-input, a terminal runs at least one pre-selected operation which is selected from a set of multiple pre-selected operations and which matches the selecting user sub-input when a terminal powers on from its powered-off state or wakes up from its off-state. A directional input unit may acquire the selecting user sub-input from a movement of at least a portion thereof, a contact between at least a portion thereof and a user body part, or the like. As a result, a terminal can provide a user with more seamless operations.

Classifications:
International (IPC 8-9): G06F21/31 H04M1/725 (Advanced/Invention)
CPC: H04M1/233 H04M1/67 G06F21/31 G06F1/1626 G06F1/1671 G06F1/169 G06F3/0338 G06F3/03548 G06F3/0482



Family:

Publication number	Publication date	Application number	Application date
WO18056755 A1	20180329	WO2017KR10477	20170922

Priority:

US20160398817P 20160923

Probable Assignee: JUNG JAELARK

Assignee(s): (std): JUNG JAELARK ; LEE JAEKYU ; SHIM YOUNGTACK

Inventor(s): (std): SHIM YOUNGTACK ; JUNG JAELARK ; LEE JAEKYU

Agent(s): PARK WEONMEE

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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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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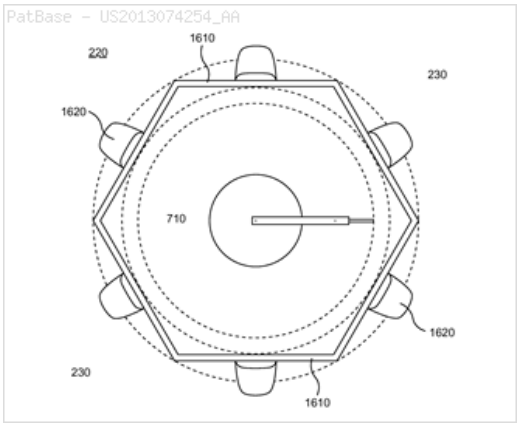
Patent	Date recorded	Event group	Code	Event	Details
WO18056755 A1	20180329	LSPB	+	published / reissued	
WO18056755 A1	20190322	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2019516183 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO18056755 A1	20190326	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

50) Family number: 53291261 (US2013074254A)

Title: ISLAND WAVE **POOL**

Abstract: An island wave **pool** for a water amusement park is presented. A wave generation apparatus is positioned on an island, the island located within a water-filled swimming **pool**. The water-filled swimming **pool** is suitable for water recreation activities, including wading, swimming, and wave riding. A beach recreation area bounds the outer perimeter of the **pool**. The wave generation apparatus on the central island generates single or multiple continuous waves in the water-filled swimming **pool**. Wave generation apparatuses are presented, including an island-based caisson **wave** **generator** and an island-based plow, channel, and reef **wave** **generator**.

Classifications:
International (IPC 8-9): A47K3/10 (Advanced/Invention)
CPC: E04H4/0006
US: 4/491



Family:

Publication number	Publication date	Application number	Application date
US2013074254 AA	20130328	US20110244678	20110925

Priority:

US20110244678 20110925

Probable Assignee: HENDERSON DAVID JOHN

Assignee(s): (std): HENDERSON DAVID JOHN ; PAYNE SILVIA ; PAYNE STEVEN ; STREETY DAWN RENE

Inventor(s): (std): PAYNE SILVIA ; HENDERSON DAVID JOHN ; STREETY DAWN RENE ; PAYNE STEVEN

Legal status (INPADOC)

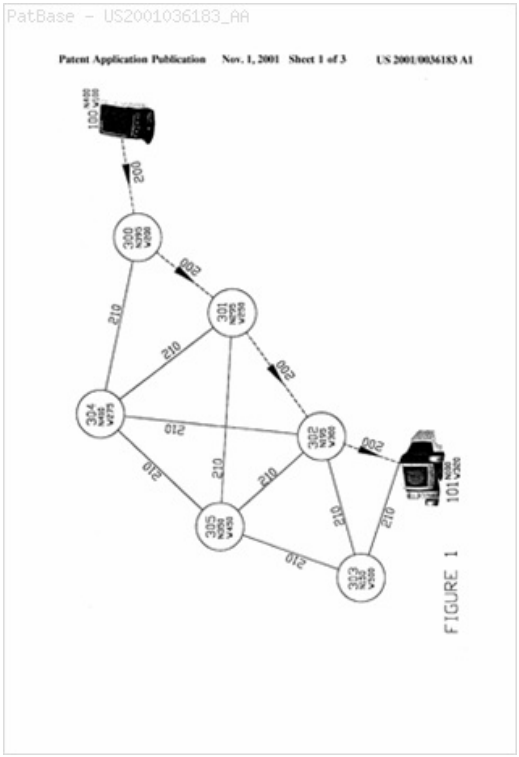
View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2013074254 AA	20130328	LSPB	+	published / reissued	
US2013074254 AA	20140407	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	

51) Family number: 30776263 (US2001036183A)

Title: METHOD FOR ROUTING DATA PACKETS USING AN IP ADDRESS BASED IN GEO POSITION

Abstract: Method of routing data over a network in which contact is made with a home network to determine the reported geo-position, using this geo-position to transmit data to the device over a path through a node in which the node reads the geo-position, accesses a list of possible recipients and their geo-positions, compares its location to the positions, selects a recipient based at least in part on the proximity of the recipient to the device, and transmits the data over the best path. Eventually, the device becomes the recipient. A geo-position may be transmitted as part of an IP address. The geo-position information can be generated from a GPS receiver. This method and/or IP address may be used in a method of doing business in which the geo-position is used to identify the source and location for delivery. This information may be incorporated into a purchase order or confirmation receipt.



Classifications:

International (IPC 8-9): G01S1/04 G01S19/09 G01S19/10 G01S19/11 G01S19/21 G01S19/42 G01S19/46 G01S5/14 G01S7/36 G06F15/16 G06F17/30 G06F7/00 G06K7/10 G08C19/16 H03D3/24 H03K7/02 H03K7/04 H03K7/06 H03K7/08 H03K9/04 H03K9/06 H04B1/00 H04B1/69 H04B1/7163 H04B1/717 H04B1/7176 H04B10/04 H04B10/12 H04B10/155 H04B14/02 H04B14/04 H04B3/00 H04B3/52 H04B3/54 H04J11/00 H04J3/24 H04J7/02 H04L1/08 H04L12/00 H04L12/28 H04L12/437 H04L12/50 H04L12/54 H04L12/56 H04L12/64 H04L12/66 H04L12/733 H04L12/751 H04L12/841 H04L12/933 H04L25/00 H04L25/03 H04L25/49 H04L27/00 H04L27/01 H04L29/06 H04L29/08 H04L29/12 H04L5/14 H04M1/00 H04M11/00 H04N19/66 H04Q1/00 H04Q5/22 H04W4/00 H04W4/02 H04W40/20 H04W8/26 H04W99/00 (Advanced/Invention);
H03K7/08 H04B1/69 H04B1/7163 H04B1/7176 H04B14/02 H04L29/12 H04M7/00 H04W64/00 H04W80/04 (Advanced/Non-invention);
G01S19/00 G01S5/14 G06F15/16 H04B1/69 H04B3/00 H04J11/00 H04L12/28 H04L12/56 H04L12/66 H04L25/00 H04L25/49 H04L27/00 H04L29/06 H04L29/08 H04L5/14 H04M1/00
H04Q5/00 (Core/Invention);
H04B1/69 H04L29/12 H04M7/00 (Core/Non-invention);
H04L (Subclass/Invention)

International (IPC 1-7): G01S5/02 G02B6/00 G06F17/30 G06F7/00 H04B1/69 H04B10/12 H04B7/185 H04J3/22 H04L H04L12/28 H04L27/00 H04M11/00

CPC: H04L43/0847 H04L5/0044 H04L12/413 H04L12/4633 H04L25/49 H04B1/71632 H04W72/04 H04B1/71635 H04B3/54 H04B2203/545 H04B10/508 H04B10/524 H04L12/2856 G01S5/14 G01S19/48 G01S19/10 G01S19/21 G01S19/215 G01S19/46 H04B14/026 H04L25/03834 H04L51/20 H04L51/28 H04L51/36 H04L67/327 H04L69/18 H04L51/14 H04W40/20 G01S1/045 G06K7/10306 H04L12/437 H04L47/28 H04L1/08 H04N19/66 H04L49/15 H04L29/06 H04L29/12009 H04L29/12783 H04L29/12801 H04L45/02 H04L45/122 H04L61/35 H04L61/6004 H04L65/1006 H04L65/1009 H04L67/18 H04L69/329 H04W8/26 H04W64/00 H04W80/04 H04L25/0384 H04L27/0004 H04W99/00 H04B3/52 H04B1/7176 H04B1/69 H04B1/7172 H04B2203/5416 H03K7/08 G01S19/11 H04L5/1469 H04L12/6418 H04L12/66 H04L25/4902 Y10S707/99943 Y10S707/99945 Y10S707/99948 G06F16/211 H04W4/029

European: G01S19/10 G01S19/11 G01S19/21 G01S19/21S G01S19/46 G01S5/14 G01S5/14B3 G06K7/10A7A H04B1/7163 H04B1/7163A H04B1/7163C H04B1/7176 H04B1/717A H04B10/508 H04B10/524 H04B14/02B H04B3/54 H04L12/26M3B2 H04L12/28P1 H04L12/413 H04L12/437 H04L12/46E H04L12/58G H04L12/58U H04L12/66 H04L25/03E1 H04L25/49 H04L25/49A H04L27/00B H04L29/06 H04L29/06K H04L29/08A7 H04L29/08N17 H04L29/08N31Y H04L29/12A6 H04L43/08E2 H04L45/02 H04L45/122 H04L5/14T H04L51/14 H04L51/36 H04L61/35 H04W4/02 H04W4/20 H04W40/20 H04W8/26 H04W99/00 T04B1/69U T04B1/69U1C T04B1/7163 T04B1/7176 T04B203/54M6 T04B203/54P10 T04L12/56W6B T04L29/08A7 T04L29/12A T04L29/12A6 T04L29/12A9A T04L5/00C4 T04L61/00 T04L61/35 T04L61/60A T04W64/00 T04W72/04 T04W8/26 T04W80/04

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Family:

Publication number	Publication date	Application number	Application date
AU2003231277 AA	20031117	AU20030231277	20030430
AU2003231277 BB	20070201	AU20030231277	20030430
BRPI0309686 A	20050222	BR2003PI09686	20030430
CA2483610 AA	20041028	CA20032483610	20030430
CA2483610 C	20151006	CA20032483610	20030430
CN101422005 A	20090429	CN20038015247	20030430
CN101422005 B	20130403	CN20038015247	20030430
EP1502401 A1	20050202	EP20030724414	20030430
EP1502401 A4	20110831	EP20030724414	20030430
EP2153534 A2	20100217	EP20070751437	20070221
HK1073953 A3	20051021	HK20050106517	20050729
IL164572 A0	20051218	IL20040164572	20041014
IL164572 A1	20101130	IL20030164572	20030430
US2001036183 AA	20011101	US20010803270	20010308
US2002076193 AA	20020620	US20010812545	20010320
US2003228005 AA	20031211	US20030427039	20030430
US2004234271 AA	20041125	US20040874652	20040623
US2005063708 AA	20050324	US20040963034	20041011
US2005094784 AA	20050505	US20040967859	20041018
US2005131922 AA	20050616	US20040967850	20041018

US2005240607 AA	20051027	US20050170489	20050629
US2005254554 AA	20051117	US20050118928	20050429
US2006165015 AA	20060727	US20050318283	20051223
US2007205867 AA	20070906	US20070740731	20070426
US2008002709 AA	20080103	US20070677408	20070221
US2008086571 AA	20080410	US20070946084	20071128
US2008107188 AA	20080508	US20070740755	20070426
US2008159416 AA	20080703	US20070928853	20071030
US2008273605 AA	20081106	US20080141973	20080619
US2009110030 AA	20090430	US20070932459	20071031
US2009110085 AA	20090430	US20070932254	20071031
US2009110108 AA	20090430	US20070932365	20071031
US2009285205 AA	20091119	US20090511135	20090729
US2010002604 AA	20100107	US20090558123	20090911
US2010329247 AA	20101230	US20070932841	20071031
US2011103461 AA	20110505	US20110987352	20110110
US2011188541 AA	20110804	US20110080020	20110405
US2012119934 AA	20120517	US20120360085	20120127
US2014064288 AA	20140306	US20130016358	20130903
US2014161041 AA	20140612	US20140177773	20140211
US2014203964 AA	20140724	US20140247814	20140408
US2014253291 AA	20140911	US20140284557	20140522
US2014254633 AA	20140911	US20140284568	20140522
US2014258338 AA	20140911	US20140284583	20140522
US2015078393 AA	20150319	US20140561483	20141205
US2015263783 AA	20150917	US20150728156	20150602
US2015319564 AA	20151105	US20150798895	20150714
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ZA200408359 A	20051019	ZA20040008359	20041015
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Priority:

US19990159239P 19991012 US19990162094P 19991028 US19990163426P 19991103
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US20150798895 20150714

Probable Assignee: LIGHTWAVES SYSTEMS INC

Assignee(s): (std): BAYCH LESLIE D ; GERKE JOSEPH A ; KENNEDY PHILIP T ; LIGHTWAVE SYSTEMS ; LIGHTWAVE SYSTEMS INC ; LIGHTWAVES SYSTEMS INC ; MELICK BRUCE D ; LIGHTWAVES SYTEMS INC ; SNYDER DAVID M ; PROBST GREGORY P ; SONG XUEJIE ; STANFORD JOHN G ; KENNEDY PHILLIP T ; GERKE JOSEPH G ; BAYCK LESLIE D ; STANFORD JON G

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Inventor(s): PHILLIP T KENNEDY ; LESLIE D BAYCK ; BRUCE D MELICK ; GERKE JOSEPH ; KENNEDY PHILIP ; SNYDER DAVID ; MELICK BRUCE ; BAYCH LESLIE ; PROBST GREGORY

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; TORYS LLP; WOMBWELL FRANCIS; WOLFF BREGMAN AND GOLLER; MCKEE VOORHEES AND SEASE PLC; MCKEES VOORHEES AND SEASE PLC; MCKEE VOORHEES AND SEASE P L C; MCKEE VOORHEES AND SEASE; MCKEE VORHEES AND SEASE PLC; GOODHUE JOHN D

Designated states: AE AG AL AM 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 SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2003231277 AA	20031117	LSPB	+	published / reissued	
AU2003231277 BB	20070201	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2003231277 BB	20070531	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2003231277 BB	20171123	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2003231277 BB	20230430	PEXP		Calculated Patent Term Expiry	
BRPI0309686 A	20050222	LSPB	+	published / reissued	
BRPI0309686 A	20160726	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0309686 A	20161227	LSRV	B09B	DECISION: REFUSAL	
BRPI0309686 A	20170711	LSRV	B09B	DECISION: REFUSAL	
CA2483610 AA	20041028	LSPB	+	published / reissued	
CA2483610 AA	20041028	LSES	+EEER	EXAMINATION REQUEST	
CA2483610 C	20151006	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2483610 C	20180611	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20180430
CA2483610 C	20230430	PEXP		Calculated Patent Term Expiry	

CN101422005 A	20090429	LSPB	+	published / reissued	
CN101422005 A	20090429	LSPB	+C06	PUBLICATION	
CN101422005 B	20130403	LSGT	+	granted / extensions (spc, cpc, pte)	
CN101422005 B	20130403	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN101422005 B	20180518	LSLE	-CF01	TERMINATION OF PATENT RIGHT DUE TO NON-PAYMENT OF ANNUAL FEE	
CN101422005 B	20230430	PEXP		Calculated Patent Term Expiry	
EP1502401 A1	20050202	LSPB	+	published / reissued	
EP1502401 A1	20050202	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20041122
EP1502401 A1	20060524	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC.
EP1502401 A4	20110831	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	EFFECTIVE DATE : 20110801
EP1502401 A4	20120829	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20120725
EP1502401 A4	20160106	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20151210
EP1502401 A4	20161012	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160421
EP1502401 A4	20171124	LSWD	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : WD REF DOCUMENT NUMBER : 1073953 COUNTRY OF REF DOCUMENT : HK
EP2153534 A2	20100217	LSPB	+	published / reissued	
EP2153534 A2	20100217	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080922
EP2153534 A2	20121128	LSRE	D18D	APPLICATION DEEMED TO BE WITHDRAWN (DELETED)	
EP2153534 A2	20130213	LSRE	D18D	APPLICATION DEEMED TO BE WITHDRAWN (DELETED)	
EP2153534 A2	20141112	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20141010
EP2153534 A2	20170402	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R003
EP2153534 A2	20170809	LSRV	-18R	APPLICATION REFUSED	EFFECTIVE DATE : 20170402
HK1073953 A3	20051021	LSPB	+	published / reissued	
IL164572 A1	20101130	LSPB	+	published / reissued	
IL164572 A1	20110331	LSGT	+FF	PATENT GRANTED	
IL164572 A1	20130530	LSFE	+KB	PATENT RENEWED	
IL164572 A1	20180131	LSLE	-MM9K	PATENT NOT IN FORCE DUE TO NON-PAYMENT OF RENEWAL FEES	
US2001036183 AA	20011101	LSPB	+	published / reissued	
US2001036183 AA	20020514	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : DLB LIMITED, IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; REEL/FRAME:012904/0201 EFFECTIVE DATE : 20020501
US2001036183 AA	20021028	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; REEL/FRAME:013430/0688 EFFECTIVE DATE : 20021015

US2001036183 AA	20030618	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DLB LIMITED; REEL/FRAME:013745/0231 EFFECTIVE DATE : 20030604
US2001036183 AA	20040625	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : MERGER AND CHANGE OF NAME; ASSIGNOR:DLB LIMITED; REEL/FRAME:014770/0649 EFFECTIVE DATE : 20021004
US2001036183 AA	20051207	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2002076193 AA	20020620	LSPB	+	published / reissued	
US2002076193 AA	20021024	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; REEL/FRAME:013426/0404 EFFECTIVE DATE : 20021015
US2002076193 AA	20030618	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DLB LIMITED; REEL/FRAME:013745/0231 EFFECTIVE DATE : 20030604
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US2002076193 AA	20090624	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2003228005 AA	20031211	LSPB	+	published / reissued	
US2004234271 AA	20041125	LSPB	+	published / reissued	
US2005063708 AA	20050324	LSPB	+	published / reissued	
US2005094784 AA	20050505	LSPB	+	published / reissued	
US2005131922 AA	20050616	LSPB	+	published / reissued	
US2005131922 AA	20091103	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PROBST, GREGORY P.; GERKE, JOSEPH A.; REEL/FRAME:023459/0865 EFFECTIVE DATE : 20091012
US2005131922 AA	20110706	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2005240607 AA	20051027	LSPB	+	published / reissued	
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US2005254554 AA	20051117	LSPB	+	published / reissued	
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US2007205867 AA	20070906	LSPB	+	published / reissued	

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US2007205867 AA	20140611	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
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US2008002709 AA	20110629	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
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US2008107188 AA	20080508	LSPB	+	published / reissued	
US2008107188 AA	20090520	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2008159416 AA	20080703	LSPB	+	published / reissued	
US2008273605 AA	20081106	LSPB	+	published / reissued	
US2008273605 AA	20110427	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2009110030 AA	20090430	LSPB	+	published / reissued	
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US2009110030 AA	20130508	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
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US2009110108 AA	20110427	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2009285205 AA	20091119	LSPB	+	published / reissued	
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US2010002604 AA	20100107	LSPB	+	published / reissued	
US2010002604 AA	20140305	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2010329247 AA	20101230	LSPB	+	published / reissued	
US2010329247 AA	20110525	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011103461 AA	20110505	LSPB	+	published / reissued	
US2011103461 AA	20140611	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011188541 AA	20110804	LSPB	+	published / reissued	
US2011188541 AA	20120704	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
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US2012119934 AA	20120619	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ALBERTA INNOVATES - TECHNOLOGY FUTURES, CANADA OLDPARTY : MINISTERIAL TRANSFER ORDER; ASSIGNOR:ALBERTA RESEARCH COUNCIL INC.; REEL/FRAME:028427/0671 EFFECTIVE DATE : 20091217
US2012119934 AA	20140528	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014064288 AA	20140306	LSPB	+	published / reissued	
US2014064288 AA	20141230	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014161041 AA	20140612	LSPB	+	published / reissued	
US2014161041 AA	20150805	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014203964 AA	20140724	LSPB	+	published / reissued	
US2014203964 AA	20161221	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014253291 AA	20140911	LSPB	+	published / reissued	
US2014253291 AA	20160907	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014254633 AA	20140911	LSPB	+	published / reissued	
US2014254633 AA	20150617	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2014258338 AA	20140911	LSPB	+	published / reissued	
US2014258338 AA	20170309	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2014258338 AA	20170614	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2014258338 AA	20170628	LSGT	STCF	INFORMATION ON STATUS: PATENT	TEXT : PATENTED CASE

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US2015263783 AA	20150917	LSPB	+	published / reissued	
US2015263783 AA	20160504	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2015319564 AA	20151105	LSPB	+	published / reissued	
US2015319564 AA	20151210	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : PAYOR NUMBER ASSIGNED (ORIGINAL EVENT CODE: ASPN)
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US2015319564 AA	20180105	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2015319564 AA	20180131	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
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US6707424 BA	20070319	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619

					EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6707424 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619

					EFFECTIVE DATE : 20090917
US6707424 BA	20101130	LSRE	CC	CERTIFICATE OF CORRECTION	
US6707424 BA	20110901	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6707424 BA	20150902	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6707424 BA	20201011	PEXP		Calculated Patent Term Expiry	
US6868419 BA	20050315	LSGT	+	granted / extensions (spc, cpc, pte)	
US6868419 BA	20010319	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : DLB LIMITED, IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; REEL/FRAME:011639/0658 EFFECTIVE DATE : 20010315
US6868419 BA	20020514	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LINEAR DATA SYSTEMS, LLC, IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DLB LIMITED; REEL/FRAME:012904/0198 EFFECTIVE DATE : 20020501
US6868419 BA	20021028	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE; REEL/FRAME:013430/0676 EFFECTIVE DATE : 20021015
US6868419 BA	20030617	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:LINEAR DATA SYSTEMS, L.L.C.; REEL/FRAME:013744/0342 EFFECTIVE DATE : 20030609
US6868419 BA	20050223	LSGT	PAT1	Patented Case	
US6868419 BA	20090302	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6868419 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US6868419 BA	20130301	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6868419 BA	20170315	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6868419 BA	20170410	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6868419 BA	20170410	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6868419 BA	20170502	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170315
US6868419 BA	20211227	PEXP		Calculated Patent Term Expiry (PTA 426 days)	
US6976034 BA	20051213	LSGT	+	granted / extensions (spc, cpc, pte)	
US6976034 BA	20051122	LSGT	PAT1	Patented Case	
US6976034 BA	20051122	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US6976034 BA	20090901	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6976034 BA	20131210	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6976034 BA	20171213	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : 11.5 YR SURCHARGE-LATE PMT W/IN 6 MO, SMALL ENTITY (ORIGINAL EVENT CODE: M2556)
US6976034 BA	20171213	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6976034 BA	20240218	PEXP		Calculated Patent Term Expiry (PTA 240 days and a terminal disclaimer has been filed)	
US6980566 BB	20051227	LSGT	+	granted / extensions (spc, cpc, pte)	
US6980566 BB	20051207	LSGT	PAT1	Patented Case	
US6980566 BB	20090626	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US6980566 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US6980566 BB	20130621	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6980566 BB	20171227	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : 11.5 YR SURCHARGE-LATE PMT W/IN 6 MO, SMALL ENTITY (ORIGINAL EVENT CODE: M2556)
US6980566 BB	20171227	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6980566 BB	20230820	PEXP		Calculated Patent Term Expiry (PTA 895 days)	
US7123843 BB	20061017	LSGT	+	granted / extensions (spc, cpc, pte)	
US7123843 BB	20060927	LSGT	PAT1	Patented Case	
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7123843 BB	20100405	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7123843 BB	20140414	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7123843 BB	20180528	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7123843 BB	20181119	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7123843 BB	20181119	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7123843 BB	20181119	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7123843 BB	20181211	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20181017
US7123843 BB	20240818	PEXP		Calculated Patent Term Expiry (PTA 56 days)	
US7181247 BA	20070220	LSGT	+	granted / extensions (spc, cpc, pte)	
US7181247 BA	20070131	LSGT	PAT1	Patented Case	

US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7181247 BA	20100813	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7181247 BA	20140818	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7181247 BA	20190325	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7181247 BA	20190325	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7181247 BA	20190325	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7181247 BA	20190416	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190220
US7181247 BA	20240811	PEXP		Calculated Patent Term Expiry (PTA 180 days)	
US7340283 BA	20080304	LSGT	+	granted / extensions (spc, cpc, pte)	
US7340283 BA	20080213	LSGT	PAT1	Patented Case	
US7340283 BA	20080213	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7340283 BA	20110901	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7340283 BA	20150826	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7340283 BA	20270112	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US7376191 BB	20080520	LSGT	+	granted / extensions (spc, cpc, pte)	
US7376191 BB	20030804	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; AND OTHERS; REEL/FRAME:013848/0469; SIGNING DATES FROM 20030730 TO 20030801
US7376191 BB	20080430	LSGT	PAT1	Patented Case	
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T.,

					IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376191 BB	20111108	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7376191 BB	20160520	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7376191 BB	20160620	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	

US7376191 BB	20160620	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7376191 BB	20160712	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160520
US7376191 BB	20241223	PEXP		Calculated Patent Term Expiry (PTA 603 days and a terminal disclaimer has been filed)	
US7376357 BB	20080520	LSGT	+	granted / extensions (spc, cpc, pte)	
US7376357 BB	20080430	LSGT	PAT1	Patented Case	
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7376357 BB	20111108	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7376357 BB	20160520	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7376357 BB	20160620	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7376357 BB	20160620	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7376357 BB	20160712	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160520
US7376357 BB	20241011	PEXP		Calculated Patent Term Expiry	
US7545868 BB	20090609	LSGT	+	granted / extensions (spc, cpc, pte)	
US7545868 BB	20070629	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, PHILIP T.; GERKE, JOSEPH A.; SNYDER, DAVID M.; REEL/FRAME:019497/0206 EFFECTIVE DATE : 20070427
US7545868 BB	20090520	LSGT	PAT1	Patented Case	
US7545868 BB	20090804	LSRE	CC	CERTIFICATE OF	

US7545868 BB	20090917	LSAS	AS	CORRECTION ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917

US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7545868 BB	20091105	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BAYCH, LESLIE D.; MELICK, BRUCE D.; PROBST, GREGORY P.; REEL/FRAME:023471/0353; SIGNING DATES FROM 20091012 TO 20091104
US7545868 BB	20130603	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7545868 BB	20170609	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7545868 BB	20270426	PEXP		Calculated Patent Term Expiry	
US7561808 BB	20090714	LSGT	+	granted / extensions (spc, cpc, pte)	
US7561808 BB	20020514	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : DLB LIMITED, IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; REEL/FRAME:012904/0211 EFFECTIVE DATE : 20020501
US7561808 BB	20090624	LSGT	PAT1	Patented Case	
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : IOWA FARM BUREAU, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPAL LIFE INSURANCE COMPANY, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BIRD, CATHERINE PESEK, ILLINOIS

					OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, VICKIE, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BAYCH, LES, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KENNEDY, PHILIP T., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GERKE, JOSEPH A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SCHWESER, GILBERT CARL, IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : STONEHOCKER, TIMOTHY L., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LORENZ, ROBERT A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROHDE, CHARLES A., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ROSS, DONALD M., IOWA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : REIHMAN, RANDY L., IOWA

					OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20090917	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALVORSON, PAUL A., SOUTH CAROLINA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:LIGHTWAVES SYSTEMS, INC.; REEL/FRAME:023263/0619 EFFECTIVE DATE : 20090917
US7561808 BB	20130705	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7561808 BB	20170713	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7561808 BB	20221112	PEXP		Calculated Patent Term Expiry (PTA 602 days and a terminal disclaimer has been filed)	
US7571211 BA	20090804	LSGT	+	granted / extensions (spc, cpc, pte)	
US7571211 BA	20090715	LSGT	PAT1	Patented Case	
US7571211 BA	20090715	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7571211 BA	20130805	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7571211 BA	20170801	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7571211 BA	20230415	PEXP		Calculated Patent Term Expiry	
US7826540 BB	20101102	LSGT	+	granted / extensions (spc, cpc, pte)	
US7826540 BB	20101013	LSGT	PAT1	Patented Case	
US7826540 BB	20140429	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7826540 BB	20180618	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7826540 BB	20181210	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7826540 BB	20181210	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7826540 BB	20181210	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7826540 BB	20190101	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20181102
US7826540 BB	20271030	PEXP		Calculated Patent Term Expiry	
US7881619 BB	20110201	LSGT	+	granted / extensions (spc, cpc, pte)	
US7881619 BB	20050110	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; REEL/FRAME:015544/0928 EFFECTIVE DATE : 20041020
US7881619 BB	20110112	LSGT	PAT1	Patented Case	
US7881619 BB	20140801	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

US7881619 BB	20180924	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7881619 BB	20190311	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7881619 BB	20190311	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7881619 BB	20190311	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7881619 BB	20190402	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190201
US7881619 BB	20260627	PEXP		Calculated Patent Term Expiry (PTA 617 days and a terminal disclaimer has been filed)	
US7944978 BB	20110517	LSGT	+	granted / extensions (spc, cpc, pte)	
US7944978 BB	20080226	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, PHILIP T.; GERKE, JOSEPH A.; SNYDER, DAVID M.; AND OTHERS; REEL/FRAME:020558/0509 EFFECTIVE DATE : 20080121
US7944978 BB	20110427	LSGT	PAT1	Patented Case	
US7944978 BB	20141117	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7944978 BB	20190107	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7944978 BB	20190624	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7944978 BB	20190624	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7944978 BB	20190624	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7944978 BB	20190716	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190517
US7944978 BB	20300129	PEXP		Calculated Patent Term Expiry (PTA 821 days)	
US7944979 BB	20110517	LSGT	+	granted / extensions (spc, cpc, pte)	
US7944979 BB	20110427	LSGT	PAT1	Patented Case	
US7944979 BB	20110713	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PROBST, GREGORY P.; GERKE, JOSEPH A.; STANFORD, JON G.; SIGNING DATES FROM 20110610 TO 20110622; REEL/FRAME:026583/0243

US7944979 BB	20141117	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7944979 BB	20190107	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7944979 BB	20190624	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7944979 BB	20190624	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7944979 BB	20190624	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7944979 BB	20190716	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190517
US7944979 BB	20280619	PEXP		Calculated Patent Term Expiry	
US7961705 BB	20110614	LSGT	+	granted / extensions (spc, cpc, pte)	
US7961705 BB	20080211	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, PHILIP T.; GERKE, JOSEPH A.; SNYDER, DAVID M.; AND OTHERS; REEL/FRAME:020492/0460 EFFECTIVE DATE : 20080121
US7961705 BB	20091111	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BAYCH, LESLIE D.; MELICK, BRUCE D.; PROBST, GREGORY P.; SIGNING DATES FROM 20091012 TO 20091104; REEL/FRAME:023502/0837
US7961705 BB	20110525	LSGT	PAT1	Patented Case	
US7961705 BB	20141125	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7961705 BB	20190204	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7961705 BB	20190722	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7961705 BB	20190722	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7961705 BB	20190722	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7961705 BB	20190813	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190614
US7961705 BB	20300413	PEXP		Calculated Patent Term Expiry (PTA 895 days)	
US7979498 BB	20110712	LSGT	+	granted / extensions	

				(spc, cpc, pte)	
US7979498 BB	20110622	LSGT	PAT1	Patented Case	
US7979498 BB	20150109	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7979498 BB	20190304	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7979498 BB	20190819	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7979498 BB	20190819	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7979498 BB	20190819	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7979498 BB	20190910	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190712
US7979498 BB	20290731	PEXP		Calculated Patent Term Expiry (PTA 2 days)	
US7983146 BB	20110719	LSGT	+	granted / extensions (spc, cpc, pte)	
US7983146 BB	20110629	LSGT	PAT1	Patented Case	
US7983146 BB	20150116	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7983146 BB	20190311	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7983146 BB	20190718	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : 7.5 YR SURCHARGE - LATE PMT W/IN 6 MO, SMALL ENTITY (ORIGINAL EVENT CODE: M2555); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7983146 BB	20190718	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7983146 BB	20290501	PEXP		Calculated Patent Term Expiry (PTA 1402 days)	
US7983349 BB	20110719	LSGT	+	granted / extensions (spc, cpc, pte)	
US7983349 BB	20070322	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, PHILIP T.; GERKE, JOSEPH A.; SNYDER, DAVID M.; REEL/FRAME:019049/0662 EFFECTIVE DATE : 20070320
US7983349 BB	20110629	LSGT	PAT1	Patented Case	
US7983349 BB	20150116	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7983349 BB	20190311	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7983349 BB	20190826	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7983349 BB	20190826	LSLE	-PEX1	Patent Expired Due to	

				NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7983349 BB	20190826	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7983349 BB	20190917	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190719
US7983349 BB	20270404	PEXP		Calculated Patent Term Expiry (PTA 42 days and a terminal disclaimer has been filed)	
US7986729 BB	20110726	LSGT	+	granted / extensions (spc, cpc, pte)	
US7986729 BB	20041209	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, PHILIP T.; MELICK, BRUCE D.; SNYDER, DAVID M.; AND OTHERS; REEL/FRAME:015432/0508 EFFECTIVE DATE : 20041018
US7986729 BB	20110706	LSGT	PAT1	Patented Case	
US7986729 BB	20150702	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7986729 BB	20190318	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7986729 BB	20190902	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7986729 BB	20190902	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7986729 BB	20190924	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190726
US7986729 BB	20290123	PEXP		Calculated Patent Term Expiry (PTA 1558 days and a terminal disclaimer has been filed)	
US8085813 BB	20111227	LSGT	+	granted / extensions (spc, cpc, pte)	
US8085813 BB	20060403	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; REEL/FRAME:017409/0281 EFFECTIVE DATE : 20060105
US8085813 BB	20111207	LSGT	PAT1	Patented Case	
US8085813 BB	20150629	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8085813 BB	20190819	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US8085813 BB	20270722	PEXP		Calculated Patent Term Expiry (PTA 576 days)	
US8130144 BA	20120306	LSGT	+	granted / extensions (spc, cpc, pte)	
US8130144 BA	20120215	LSGT	PAT1	Patented Case	
US8130144 BA	20120215	LSGT	STCF	INFORMATION ON	TEXT : PATENTED CASE

				STATUS: PATENT GRANT	
US8130144 BA	20120501	LSRE	CC	CERTIFICATE OF CORRECTION	
US8130144 BA	20150901	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8130144 BA	20271026	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8165146 BA	20120424	LSGT	+	granted / extensions (spc, cpc, pte)	
US8165146 BA	20030507	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVE SYSTEMS INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; AND OTHERS; REEL/FRAME:013633/0072 EFFECTIVE DATE : 20030115
US8165146 BA	20120404	LSGT	PAT1	Patented Case	
US8165146 BA	20120404	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US8165146 BA	20150902	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8165146 BA	20260714	PEXP		Calculated Patent Term Expiry (PTA 1275 days)	
US8229007 BB	20120724	LSGT	+	granted / extensions (spc, cpc, pte)	
US8229007 BB	20120704	LSGT	PAT1	Patented Case	
US8229007 BB	20120911	LSRE	CC	CERTIFICATE OF CORRECTION	
US8229007 BB	20160122	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8229007 BB	20310405	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8270452 BB	20120918	LSGT	+	granted / extensions (spc, cpc, pte)	
US8270452 BB	20050801	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; AND OTHERS; REEL/FRAME:016336/0037; SIGNING DATES FROM 20050722 TO 20050728
US8270452 BB	20050801	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MELICK, BRUCE D.; SNYDER, DAVID M.; BAYCH, LESLIE D.; AND OTHERS; SIGNING DATES FROM 20050722 TO 20050728; REEL/FRAME:016336/0037
US8270452 BB	20120829	LSGT	PAT1	Patented Case	
US8270452 BB	20160318	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8270452 BB	20290814	PEXP		Calculated Patent Term Expiry (PTA 1568 days)	
US8345778 BB	20130101	LSGT	+	granted / extensions (spc, cpc, pte)	
US8345778 BB	20080123	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, PHILIP T.; GERKE, JOSEPH A.;

					SNYDER, DAVID M.; AND OTHERS; REEL/FRAME:020402/0984 EFFECTIVE DATE : 20080121
US8345778 BB	20121212	LSGT	PAT1	Patented Case	
US8345778 BB	20161230	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8345778 BB	20291005	PEXP		Calculated Patent Term Expiry (PTA 705 days and a terminal disclaimer has been filed)	
US8451879 BB	20130528	LSGT	+	granted / extensions (spc, cpc, pte)	
US8451879 BB	20080804	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, PHILIP T.; GERKE, JOSEPH A.; SNYDER, DAVID M.; AND OTHERS; REEL/FRAME:021335/0713 EFFECTIVE DATE : 20080121
US8451879 BB	20130508	LSGT	PAT1	Patented Case	
US8451879 BB	20170526	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8451879 BB	20300410	PEXP		Calculated Patent Term Expiry (PTA 892 days and a terminal disclaimer has been filed)	
US8542695 BA	20130924	LSGT	+	granted / extensions (spc, cpc, pte)	
US8542695 BA	20130904	LSGT	PAT1	Patented Case	
US8542695 BA	20130904	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US8542695 BA	20131105	LSRE	CC	CERTIFICATE OF CORRECTION	
US8542695 BA	20170925	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : SURCHARGE FOR LATE PAYMENT, SMALL ENTITY (ORIGINAL EVENT CODE: M2554)
US8542695 BA	20170925	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8542695 BA	20320302	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8681789 BB	20140325	LSGT	+	granted / extensions (spc, cpc, pte)	
US8681789 BB	20140305	LSGT	PAT1	Patented Case	
US8681789 BB	20140527	LSRE	CC	CERTIFICATE OF CORRECTION	
US8681789 BB	20170801	LSRE	CC	CERTIFICATE OF CORRECTION	
US8681789 BB	20171106	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US8681789 BB	20180323	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : SURCHARGE FOR LATE PAYMENT, SMALL ENTITY (ORIGINAL EVENT CODE: M2554)
US8681789 BB	20180323	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8681789 BB	20290911	PEXP		Calculated Patent Term Expiry	
US8754808 BB	20140617	LSGT	+	granted / extensions (spc, cpc, pte)	
US8754808 BB	20140528	LSGT	PAT1	Patented Case	
US8754808 BB	20180129	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US8754808 BB	20180615	LSFE	FEPP	FEE PAYMENT	TEXT : SURCHARGE FOR LATE

				PROCEDURE	PAYMENT, SMALL ENTITY (ORIGINAL EVENT CODE: M2554)
US8754808 BB	20180615	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8754808 BB	20320127	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8766773 BB	20140701	LSGT	+	granted / extensions (spc, cpc, pte)	
US8766773 BB	20070522	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LIGHTWAVES SYSTEMS, INC., IOWA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KENNEDY, PHILIP T.; GERKE, JOSEPH A.; SNYDER, DAVID M.; REEL/FRAME:019327/0959 EFFECTIVE DATE : 20070427
US8766773 BB	20140611	LSGT	PAT1	Patented Case	
US8766773 BB	20180212	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US8766773 BB	20180627	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : SURCHARGE FOR LATE PAYMENT, SMALL ENTITY (ORIGINAL EVENT CODE: M2554)
US8766773 BB	20180627	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8766773 BB	20291223	PEXP		Calculated Patent Term Expiry (PTA 972 days and a terminal disclaimer has been filed)	
US8768176 BB	20140701	LSGT	+	granted / extensions (spc, cpc, pte)	
US8768176 BB	20140611	LSGT	PAT1	Patented Case	
US8768176 BB	20180212	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US8768176 BB	20180627	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : SURCHARGE FOR LATE PAYMENT, SMALL ENTITY (ORIGINAL EVENT CODE: M2554)
US8768176 BB	20180627	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8768176 BB	20310110	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8775666 BB	20140708	LSGT	+	granted / extensions (spc, cpc, pte)	
US8775666 BB	20140618	LSGT	PAT1	Patented Case	
US8775666 BB	20141028	LSRE	CC	CERTIFICATE OF CORRECTION	
US8775666 BB	20180219	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US8775666 BB	20180806	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US8775666 BB	20180806	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
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US8775666 BB	20180828	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180708

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US8937967 BB	20180910	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
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US9077441 BB	20190812	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
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US9119143 BB	20190415	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
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US9350418 BB	20160422	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
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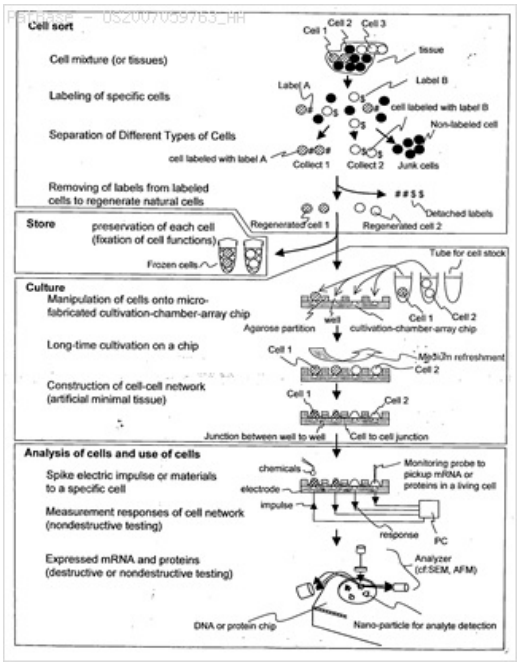
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WO03094461 A1	20041006	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003231277 COUNTRY OF REF DOCUMENT : AU
WO03094461 A1	20041015	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200408359 COUNTRY OF REF DOCUMENT : ZA
WO03094461 A1	20041015	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004/08359 COUNTRY OF REF DOCUMENT : ZA
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52) Family number: 32617271 (US2007059763A)

Title: CELLOMICS SYSTEM

Abstract: In labeling a cell, and separating and collecting the cell according to a degree of the labeling using a cell separator, effects on the cell is minimized and the use of the collected cell is facilitated, thereby, when labeling a cell, the cell is labeled in the state where interaction of each cell is retained. In the labeling, a specific labeling material present on a surface of a target cell is taken in the cell via a transporter, and the cell is dispersed one by one to separate the same with a cell separator. Immediately after the separation, the cell is put in a solution not containing the specific labeling substance to remove the specific labeling substance taken in the cell. This series of steps is continuously conducted with a cell separation chip.



Classifications:
International (IPC 8-9): A01N1/02 B01D57/02 B01D61/42 B01J19/00 B01L7/00 B03C5/00 B04B5/00 C07H21/04 C12M1/00 C12M1/20 C12M1/26 C12M1/33 C12M1/34 C12M1/38 C12M3/00 C12M3/04 C12N1/00 C12N1/06 C12N11/10 C12N11/12 C12N15/09 C12N5/00 C12N5/07 C12N5/071 C12N5/10 C12Q1/02 C12Q1/42 C12Q1/68 C40B30/10 C40B40/02 C40B40/08 C40B60/12 G01N1/28 G01N21/27 G01N21/33 G01N21/64 G01N23/225 G01N27/02 G01N27/28 G01N27/30 G01N27/416 G01N27/447 G01N33/48 G01N33/483 G01N33/50 G01N33/53 G01N33/543 G01N33/547 G01N33/553 G01N33/566 G01N33/58 G01N35/08 G01N35/10 G01N37/00 H01L29/06 (Advanced/Invention);
C12M1/00 C12M1/28 C12M1/34 C12N1/04 C12N15/09 G01N33/48 G01N33/53 G01N33/566 G01N33/68 (Advanced/Non-invention);
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CPC: C12M33/04 C12M41/36 C12M47/04 C12M25/01 C12M45/22 C12M47/02 C12M25/02 C12M33/00 C12M41/46 C12M23/34 C12M25/14 G01N33/566 B01L7/50 A01N1/0284 C12M23/04 G01N33/5061
European: G01N33/566
US: 204/462 204/613 435/287.1 435/29 435/307.1 435/374 435/39 435/6 435/6.12 435/6.120P 435/7.1 506/10 506/12 506/14 506/17 506/17S 506/39 506/9 506/9S 536/23.1 536/23.1 536/23.100P

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EP1626278 A2	20060215	EP20050016714	20050801
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Priority:

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Probable Assignee: ON CHIP CELLOMICS CONSORTIUM

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Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP1626278 A2	20060215	LSPB	+	published / reissued	
EP1626278 A3	20070207	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20061220
EP1626278 A3	20070228	LSFE	+AKX	DESIGNATION FEES PAID	COUNTRY OF REF DOCUMENT : AT COUNTRY OF REF DOCUMENT : BE COUNTRY OF REF DOCUMENT : BG COUNTRY OF REF DOCUMENT : CH COUNTRY OF REF DOCUMENT : CY COUNTRY OF REF DOCUMENT :

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EP1626278 A3	20080326	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : ON-CHIP CELLOMICS CONSORTIUM
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JP2006042671 A2	20090213	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090212
JP2006042671 A2	20090428	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006042671 A2	20090513	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20090512
JP2006042671 A2	20090514	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006042671 A2	20090604	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20090601
JP2006042671 A2	20090605	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006042671 A2	20090605	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006047029 A2	20060216	LSPB	+	published / reissued	
JP2006047029 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006047029 A2	20071107	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20071106
JP2006047029 A2	20080108	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080107
JP2006047029 A2	20080201	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006047029 A2	20080213	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080212
JP2006047029 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006047029 A2	20080306	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080228
JP2006047029 A2	20080328	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006047029 A2	20080328	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006061027 A2	20060309	LSPB	+	published / reissued	
JP2006061027 A2	20051208	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20051207
JP2006061027 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703

JP2006061027 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006061027 A2	20080806	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080805
JP2006061027 A2	20081003	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081002
JP2006061027 A2	20090204	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20090203
JP2006061027 A2	20090403	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090402
JP2006061027 A2	20090527	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20090526
JP2006061027 A2	20091013	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20091009
JP2006075035 A2	20060323	LSPB	+	published / reissued	
JP2006075035 A2	20051208	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20051207
JP2006075035 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006075035 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006075035 A2	20090205	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090204
JP2006075035 A2	20090407	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090406
JP2006075035 A2	20091007	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20091006
JP2006075120 A2	20060323	LSPB	+	published / reissued	
JP2006075120 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006075120 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006075120 A2	20081022	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20081021
JP2006075120 A2	20081220	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081219
JP2006075120 A2	20090129	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006075120 A2	20090204	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20090203
JP2006075120 A2	20090205	LSGT	+A01	WRITTEN DECISION TO GRANT A	TEXT : JAPANESE INTERMEDIATE CODE: A01

				PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	
JP2006075120 A2	20090305	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20090226
JP2006075120 A2	20090306	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006075120 A2	20090306	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006081482 A2	20060330	LSPB	+	published / reissued	
JP2006081482 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006081482 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006081482 A2	20080820	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080819
JP2006081482 A2	20081021	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081020
JP2006081482 A2	20081111	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006081482 A2	20081119	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20081118
JP2006081482 A2	20081120	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006081482 A2	20081218	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20081211
JP2006081482 A2	20081219	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006081482 A2	20081219	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006088034 A2	20060406	LSPB	+	published / reissued	
JP2006094703 A2	20060413	LSPB	+	published / reissued	
JP2006094703 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006094703 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006094703 A2	20080820	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080819
JP2006094703 A2	20081021	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081020
JP2006094703 A2	20090204	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20090203

JP2006094703 A2	20090404	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090403
JP2006094703 A2	20090527	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20090526
JP2006094703 A2	20091019	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20091016
JP2006094703 A2	20110728	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006094703 A2	20110901	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20110823
JP2006094703 A2	20110902	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006094703 A2	20110905	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 13
JP2006094829 A2	20060413	LSPB	+	published / reissued	
JP2006094829 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006094829 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006094829 A2	20080806	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080805
JP2006094829 A2	20081002	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081001
JP2006094829 A2	20081029	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20081028
JP2006094829 A2	20081225	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081224
JP2006094829 A2	20090226	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006094829 A2	20090304	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20090303
JP2006094829 A2	20090305	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006094829 A2	20090312	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20090305
JP2006094829 A2	20090319	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006094829 A2	20090319	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150

JP2006098082 A2	20060413	LSPB	+	published / reissued	
JP2006098082 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006098082 A2	20071121	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20071120
JP2006098082 A2	20080122	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080121
JP2006098082 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006098082 A2	20080325	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006098082 A2	20080402	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080401
JP2006098082 A2	20080501	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080423
JP2006098082 A2	20080502	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006098082 A2	20080508	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006098185 A2	20060413	LSPB	+	published / reissued	
JP2006098185 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006098185 A2	20071121	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20071120
JP2006098185 A2	20080122	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080121
JP2006098185 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006098185 A2	20080409	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080408
JP2006098185 A2	20080606	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080605
JP2006098185 A2	20080829	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006098185 A2	20080903	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080902
JP2006098185 A2	20080904	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006098185 A2	20081002	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080924

JP2006098185 A2	20081003	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006098185 A2	20081006	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006098328 A2	20060413	LSPB	+	published / reissued	
JP2006098328 A2	20060117	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060116
JP2006098328 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006098328 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006098328 A2	20080702	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080701
JP2006098328 A2	20080823	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080822
JP2006098328 A2	20080909	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006098328 A2	20080917	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080916
JP2006098328 A2	20080918	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006098328 A2	20081002	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080924
JP2006098328 A2	20081003	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006098328 A2	20081006	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006098330 A2	20060413	LSPB	+	published / reissued	
JP2006098330 A2	20060117	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060116
JP2006098330 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006098330 A2	20071121	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20071120
JP2006098330 A2	20080122	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080121
JP2006098330 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006098330 A2	20080409	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080408
JP2006098330 A2	20080606	LSRE	A521	WRITTEN	TEXT : JAPANESE

				AMENDMENT	INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080605
JP2006098330 A2	20080829	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006098330 A2	20080903	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080902
JP2006098330 A2	20080904	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006098330 A2	20081002	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080924
JP2006098330 A2	20081003	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006098330 A2	20081006	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006101718 A2	20060420	LSPB	+	published / reissued	
JP2006101718 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006101718 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006101718 A2	20081105	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20081104
JP2006101718 A2	20081225	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081224
JP2006101718 A2	20090127	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006101718 A2	20090204	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20090203
JP2006101718 A2	20090205	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006101718 A2	20090305	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20090226
JP2006101718 A2	20090306	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006101718 A2	20090306	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006105752 A2	20060420	LSPB	+	published / reissued	
JP2006105752 A2	20060218	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060217
JP2006105752 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703

JP2006105752 A2	20070905	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20070904
JP2006105752 A2	20071103	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20071102
JP2006105752 A2	20071226	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20071225
JP2006105752 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006105752 A2	20080219	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080218
JP2006105752 A2	20080404	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006105752 A2	20080416	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080415
JP2006105752 A2	20080501	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080423
JP2006105752 A2	20080502	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006105752 A2	20080508	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006109748 A2	20060427	LSPB	+	published / reissued	
JP2006112790 A2	20060427	LSPB	+	published / reissued	
JP2006112790 A2	20060218	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060217
JP2006112790 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006112790 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006112790 A2	20080416	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080415
JP2006112790 A2	20080613	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080612
JP2006112790 A2	20080625	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006112790 A2	20080702	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20080701
JP2006112790 A2	20080703	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006112790 A2	20080731	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20080724

JP2006112790 A2	20080801	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006112790 A2	20080801	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006112792 A2	20060427	LSPB	+	published / reissued	
JP2006112792 A2	20060218	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060217
JP2006112792 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006112792 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006112792 A2	20080730	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080729
JP2006112792 A2	20080926	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080925
JP2006112792 A2	20081029	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006112792 A2	20081105	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20081104
JP2006112792 A2	20081106	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006112792 A2	20081204	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20081127
JP2006112792 A2	20081205	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006112792 A2	20081205	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006112846 A2	20060427	LSPB	+	published / reissued	
JP2006115723 A2	20060511	LSPB	+	published / reissued	
JP2006115723 A2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP2006115723 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006115723 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006115723 A2	20100428	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100427
JP2006115723 A2	20100625	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100624
JP2006115723 A2	20100714	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100713

JP2006115723 A2	20100820	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100819
JP2006115723 A2	20101209	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006115723 A2	20101215	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20101214
JP2006115723 A2	20101216	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006115723 A2	20110113	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20110107
JP2006115723 A2	20110114	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006115723 A2	20110117	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006126112 A2	20060518	LSPB	+	published / reissued	
JP2006129798 A2	20060525	LSPB	+	published / reissued	
JP2006153826 A2	20060615	LSPB	+	published / reissued	
JP2006158991 A2	20060622	LSPB	+	published / reissued	
JP2006158991 A2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP2006158991 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006158991 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006158991 A2	20090430	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090428
JP2006158991 A2	20090625	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090624
JP2006158991 A2	20100226	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006158991 A2	20100303	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100302
JP2006158991 A2	20100304	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006158991 A2	20100401	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100325
JP2006158991 A2	20100402	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006158991 A2	20100405	LSFE	+FPAY	RENEWAL FEE	YEAR OF FEE PAYMENT : 3

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JP2006162264 A2	20060622	LSPB	+	published / reissued	
JP2006162264 A2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP2006162264 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006162264 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006162264 A2	20091125	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20091124
JP2006162264 A2	20100126	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100125
JP2006162264 A2	20100331	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100330
JP2006162264 A2	20100511	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100510
JP2006162264 A2	20100715	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006162264 A2	20100721	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100720
JP2006162264 A2	20100722	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006162264 A2	20100819	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100811
JP2006162264 A2	20100820	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006162264 A2	20100820	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006184168 A2	20060713	LSPB	+	published / reissued	
JP2006184168 A2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP2006184168 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006184168 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006184168 A2	20091111	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20091110
JP2006184168 A2	20100108	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100107
JP2006184168 A2	20100127	LSGT	+TRDD	DECISION OF GRANT OR REJECTION	

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JP2006184168 A2	20100203	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100202
JP2006184168 A2	20100204	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006184168 A2	20100304	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100223
JP2006184168 A2	20100305	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2006184168 A2	20100308	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006238845 A2	20060914	LSPB	+	published / reissued	
JP2006238845 A2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP2006238845 A2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP2006238845 A2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP2006238845 A2	20100512	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100511
JP2006238845 A2	20100629	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100628
JP2006238845 A2	20101221	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2006238845 A2	20110112	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20110111
JP2006238845 A2	20110113	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2006238845 A2	20110203	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20110131
JP2006238845 A2	20110204	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2006238845 A2	20110204	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2008256712 A2	20081023	LSPB	+	published / reissued	
JP2008256712 A2	20110615	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110614
JP2008256712 A2	20110810	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110809

JP2008256712 A2	20110921	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110920
JP2008256712 A2	20111110	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111109
JP2008256712 A2	20111208	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2008256712 A2	20111214	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20111213
JP2008256712 A2	20111215	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP2008256712 A2	20120119	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120110
JP2008256712 A2	20120120	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP2008256712 A2	20120120	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP2009011326 A2	20090122	LSPB	+	published / reissued	
JP4099540 B2	20080611	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4099540 B2	20110328	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4099540 B2	20240803	PEXP		Calculated Patent Term Expiry	
JP4118847 B2	20080716	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4118847 B2	20110502	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4118847 B2	20240804	PEXP		Calculated Patent Term Expiry	
JP4118857 B2	20080716	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4118857 B2	20110502	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4118857 B2	20240928	PEXP		Calculated Patent Term Expiry	
JP4118858 B2	20080716	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4118858 B2	20110502	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4118858 B2	20241005	PEXP		Calculated Patent Term Expiry	
JP4163673 B2	20081008	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4163673 B2	20110801	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4163673 B2	20241012	PEXP		Calculated Patent Term Expiry	
JP4194987 B2	20081210	LSGT	+	granted /	

				extensions (spc, cpc, pte)	
JP4194987 B2	20120619	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4194987 B2	20240929	PEXP		Calculated Patent Term Expiry	
JP4194988 B2	20081210	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4194988 B2	20120619	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4194988 B2	20240930	PEXP		Calculated Patent Term Expiry	
JP4194989 B2	20081210	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4194989 B2	20120619	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4194989 B2	20240930	PEXP		Calculated Patent Term Expiry	
JP4227092 B2	20090218	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4227092 B2	20120626	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4227092 B2	20121205	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4227092 B2	20241012	PEXP		Calculated Patent Term Expiry	
JP4234658 B2	20090304	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4234658 B2	20120626	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4234658 B2	20121219	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4234658 B2	20240917	PEXP		Calculated Patent Term Expiry	
JP4272136 B2	20090603	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4272136 B2	20090303	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4272136 B2	20120920	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272136 B2	20120925	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4272136 B2	20130321	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272136 B2	20130326	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 5
JP4272136 B2	20140320	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272136 B2	20140325	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4272136 B2	20150226	LSFE	R20	特許料納付書 (Patent fee payment form)	

JP4272136 B2	20150303	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4272136 B2	20160225	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272136 B2	20160301	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4272136 B2	20170306	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4272136 B2	20240913	PEXP		Calculated Patent Term Expiry	
JP4272137 B2	20090603	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4272137 B2	20060117	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060116
JP4272137 B2	20090303	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4272137 B2	20120920	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272137 B2	20120925	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4272137 B2	20130321	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272137 B2	20130326	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 5
JP4272137 B2	20140320	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272137 B2	20140325	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4272137 B2	20150226	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272137 B2	20150303	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4272137 B2	20160225	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4272137 B2	20160301	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4272137 B2	20170306	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4272137 B2	20241001	PEXP		Calculated Patent Term Expiry	
JP4278057 B2	20090610	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4278057 B2	20090310	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4278057 B2	20120920	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4278057 B2	20120925	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4278057 B2	20130321	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4278057 B2	20130326	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 5
JP4278057 B2	20140320	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4278057 B2	20140325	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250

JP4278057 B2	20150312	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4278057 B2	20150317	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4278057 B2	20160310	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4278057 B2	20160315	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4278057 B2	20170319	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4278057 B2	20240930	PEXP		Calculated Patent Term Expiry	
JP4320286 B2	20090826	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4320286 B2	20090602	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4320286 B2	20120621	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4320286 B2	20120626	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4320286 B2	20131107	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4320286 B2	20131112	LSFE	+R250	年金領収書, 年金領収書 (分納) (Pension receipt, annuity receipt (scheduled))	
JP4320286 B2	20140605	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4320286 B2	20240804	PEXP		Calculated Patent Term Expiry	
JP4423150 B2	20100303	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4423150 B2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP4423150 B2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP4423150 B2	20080402	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080401
JP4423150 B2	20080530	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080529
JP4423150 B2	20091106	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4423150 B2	20091118	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20091117
JP4423150 B2	20091119	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4423150 B2	20091208	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4423150 B2	20091210	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20091207

JP4423150 B2	20091211	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4423150 B2	20091211	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4423150 B2	20121227	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4423150 B2	20130108	LSFE	+R250	年金領収書, 年金領収書(分納) (Pension receipt, annuity receipt (scheduled))	
JP4423150 B2	20140428	LSAS	S533	WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF NAME	TEXT : JAPANESE INTERMEDIATE CODE: R313533
JP4423150 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4423150 B2	20140509	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	TEXT : JAPANESE INTERMEDIATE CODE: R350
JP4423150 B2	20140513	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4423150 B2	20141204	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4423150 B2	20141209	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4423150 B2	20151203	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4423150 B2	20151208	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4423150 B2	20161211	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4423150 B2	20240924	PEXP		Calculated Patent Term Expiry	
JP4467422 B2	20100526	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4467422 B2	20241228	PEXP		Calculated Patent Term Expiry	
JP4485926 B2	20100623	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4485926 B2	20100330	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4485926 B2	20130321	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4485926 B2	20130326	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 4
JP4485926 B2	20140320	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4485926 B2	20140325	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4485926 B2	20150326	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4485926 B2	20150331	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4485926 B2	20160407	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4485926 B2	20160412	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4485926 B2	20170402	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4485926 B2	20241202	PEXP		Calculated Patent	

				Term Expiry	
JP4535832 B2	20100901	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4535832 B2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP4535832 B2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP4535832 B2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP4535832 B2	20091202	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20091201
JP4535832 B2	20100128	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100127
JP4535832 B2	20100520	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4535832 B2	20100526	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100525
JP4535832 B2	20100527	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4535832 B2	20100622	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4535832 B2	20100624	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100615
JP4535832 B2	20100625	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4535832 B2	20100625	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4535832 B2	20131107	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4535832 B2	20131112	LSFE	+R250	年金領収書, 年金領収書(分納) (Pension receipt, annuity receipt (scheduled))	
JP4535832 B2	20140428	LSAS	S533	WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF NAME	TEXT : JAPANESE INTERMEDIATE CODE: R313533
JP4535832 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4535832 B2	20140509	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	TEXT : JAPANESE INTERMEDIATE CODE: R350
JP4535832 B2	20140513	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4535832 B2	20150618	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4535832 B2	20150623	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4535832 B2	20160625	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4535832 B2	20241013	PEXP		Calculated Patent	

				Term Expiry	
JP4570945 B2	20101027	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4570945 B2	20130820	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4570945 B2	20241202	PEXP		Calculated Patent Term Expiry	
JP4574707 B2	20101104	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4574707 B2	20081021	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20081020
JP4574707 B2	20091209	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20091208
JP4574707 B2	20100205	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100204
JP4574707 B2	20100722	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4574707 B2	20100728	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100727
JP4574707 B2	20100729	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4574707 B2	20100824	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4574707 B2	20100826	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100818
JP4574707 B2	20100827	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4574707 B2	20100830	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4574707 B2	20131107	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4574707 B2	20131112	LSFE	+R250	年金領収書, 年金領収書(分納) (Pension receipt, annuity receipt (scheduled))	
JP4574707 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4574707 B2	20140507	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4574707 B2	20150820	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4574707 B2	20150825	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4574707 B2	20160827	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4574707 B2	20281020	PEXP		Calculated Patent Term Expiry	
JP4585280 B2	20101124	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4585280 B2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528

JP4585280 B2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP4585280 B2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP4585280 B2	20100324	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100323
JP4585280 B2	20100525	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100524
JP4585280 B2	20100813	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4585280 B2	20100818	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100817
JP4585280 B2	20100819	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4585280 B2	20100907	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4585280 B2	20100909	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100903
JP4585280 B2	20100910	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4585280 B2	20100913	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4585280 B2	20131107	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4585280 B2	20131112	LSFE	+R250	年金領収書, 年金領収書(分納) (Pension receipt, annuity receipt (scheduled))	
JP4585280 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4585280 B2	20140507	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4585280 B2	20150903	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4585280 B2	20150908	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4585280 B2	20160910	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4585280 B2	20241108	PEXP		Calculated Patent Term Expiry	
JP4587370 B2	20101124	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4587370 B2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP4587370 B2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP4587370 B2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213

JP4587370 B2	20100602	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100601
JP4587370 B2	20100731	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100730
JP4587370 B2	20100813	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4587370 B2	20100818	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100817
JP4587370 B2	20100819	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4587370 B2	20100907	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4587370 B2	20100909	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100903
JP4587370 B2	20100917	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4587370 B2	20100924	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4587370 B2	20131107	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4587370 B2	20131112	LSFE	+R250	年金領収書, 年金領収書(分納) (Pension receipt, annuity receipt (scheduled))	
JP4587370 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4587370 B2	20140507	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4587370 B2	20150910	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4587370 B2	20150915	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4587370 B2	20160917	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4587370 B2	20241014	PEXP		Calculated Patent Term Expiry	
JP4630015 B2	20110209	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4630015 B2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP4630015 B2	20070731	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20070703
JP4630015 B2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP4630015 B2	20080311	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20080213
JP4630015 B2	20081126	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20081125

JP4630015 B2	20090127	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090126
JP4630015 B2	20100421	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100420
JP4630015 B2	20100501	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100430
JP4630015 B2	20101022	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4630015 B2	20101027	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20101026
JP4630015 B2	20101028	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4630015 B2	20101116	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4630015 B2	20101118	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20101112
JP4630015 B2	20101119	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4630015 B2	20101119	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4630015 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4630015 B2	20140507	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4630015 B2	20141120	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4630015 B2	20141125	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4630015 B2	20151112	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4630015 B2	20151117	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4630015 B2	20161119	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4630015 B2	20240803	PEXP		Calculated Patent Term Expiry	
JP4637545 B2	20110223	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4637545 B2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP4637545 B2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP4637545 B2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP4637545 B2	20100324	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100323
JP4637545 B2	20100515	LSRE	A521	WRITTEN	TEXT : JAPANESE

				AMENDMENT	INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100514
JP4637545 B2	20100804	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20100803
JP4637545 B2	20100820	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100819
JP4637545 B2	20101014	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	TEXT : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20101013
JP4637545 B2	20101027	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4637545 B2	20101104	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20101102
JP4637545 B2	20101111	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01
JP4637545 B2	20101130	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4637545 B2	20101202	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20101124
JP4637545 B2	20101203	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4637545 B2	20101203	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4637545 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4637545 B2	20140507	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4637545 B2	20141127	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4637545 B2	20141202	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4637545 B2	20151126	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4637545 B2	20151201	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4637545 B2	20161203	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4637545 B2	20241101	PEXP		Calculated Patent Term Expiry	
JP4637565 B2	20110223	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4637565 B2	20070529	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070528
JP4637565 B2	20070704	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20070703
JP4637565 B2	20080214	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20080213
JP4637565 B2	20091216	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20091215

JP4637565 B2	20100213	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100212
JP4637565 B2	20100428	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100427
JP4637565 B2	20100529	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100528
JP4637565 B2	20100908	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100907
JP4637565 B2	20101008	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20101007
JP4637565 B2	20101027	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4637565 B2	20101104	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20101102
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JP4637565 B2	20101130	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4637565 B2	20101202	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20101124
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JP4637565 B2	20101203	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150
JP4637565 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4637565 B2	20140507	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4637565 B2	20141127	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4637565 B2	20141202	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4637565 B2	20151126	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4637565 B2	20151201	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4637565 B2	20161203	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4637565 B2	20241224	PEXP		Calculated Patent Term Expiry	
JP4664646 B2	20110406	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4664646 B2	20110111	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4664646 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4664646 B2	20140507	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250

JP4664646 B2	20150108	LSFE	R20	特許料納付書 (Patent fee payment form)	
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JP4664646 B2	20160107	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4664646 B2	20160112	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4664646 B2	20170114	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4664646 B2	20241020	PEXP		Calculated Patent Term Expiry	
JP4677254 B2	20110427	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4677254 B2	20110201	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP4677254 B2	20110812	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4677254 B2	20110815	LSAS	R313114	本権移転登録申請書 (共有) (Application for registration of right to transfer (share))	
JP4677254 B2	20110815	LSAS	S111	REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP	TEXT : JAPANESE INTERMEDIATE CODE: R313114
JP4677254 B2	20110822	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	YEAR OF FEE PAYMENT : 3
JP4677254 B2	20110822	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	TEXT : JAPANESE INTERMEDIATE CODE: R350
JP4677254 B2	20140501	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4677254 B2	20140501	LSAS	S533	WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF NAME	TEXT : JAPANESE INTERMEDIATE CODE: R313533
JP4677254 B2	20140513	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4677254 B2	20140513	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	TEXT : JAPANESE INTERMEDIATE CODE: R350
JP4677254 B2	20150129	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4677254 B2	20150203	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4677254 B2	20160128	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4677254 B2	20160202	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4677254 B2	20170204	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4677254 B2	20250307	PEXP		Calculated Patent Term Expiry	
JP4812271 B2	20111109	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4812271 B2	20240830	PEXP		Calculated Patent Term Expiry	
JP4906789 B2	20120328	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4906789 B2	20120117	LSFE	R100	特許料納付書 (Patent	

				fee payment form)	
JP4906789 B2	20150115	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4906789 B2	20150120	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4906789 B2	20160114	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP4906789 B2	20160119	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP4906789 B2	20170120	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4906789 B2	20280612	PEXP		Calculated Patent Term Expiry	
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US2007059763 AA	20080211	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ON CHIP CELLOMICS CONSORTIUM, JAPAN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ON-CHIP BIOTECHNOLOGIES CO., LTD.; REEL/FRAME:020491/0195 EFFECTIVE DATE : 20080206
US2009042200 AA	20090212	LSPB	+	published / reissued	
US2009042200 AA	20110521	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2009042739 AA	20090212	LSPB	+	published / reissued	
US2009042739 AA	20110704	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2009325215 AA	20091231	LSPB	+	published / reissued	
US2009325215 AA	20111218	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010016568 AA	20100121	LSPB	+	published / reissued	
US2010016568 AA	20120125	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KANAGAWA ACADEMY OF SCIENCE AND TECHNOLOGY, JAPAN OLDPARTY : ASSIGNMENT OF 50% OF RIGHT, TITLE AND INTEREST; ASSIGNOR:ONCHIP CELLOMICS CONSORTIUM; REEL/FRAME:027591/0874 EFFECTIVE DATE : 20111006
US2010016568 AA	20151017	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010016569 AA	20100121	LSPB	+	published / reissued	
US2010016569 AA	20111229	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010018862 AA	20100128	LSPB	+	published / reissued	
US2010018862 AA	20111218	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010021933 AA	20100128	LSPB	+	published / reissued	
US2010021933 AA	20111218	LSWD	-ABD3	Abandoned -- Failure to Respond	

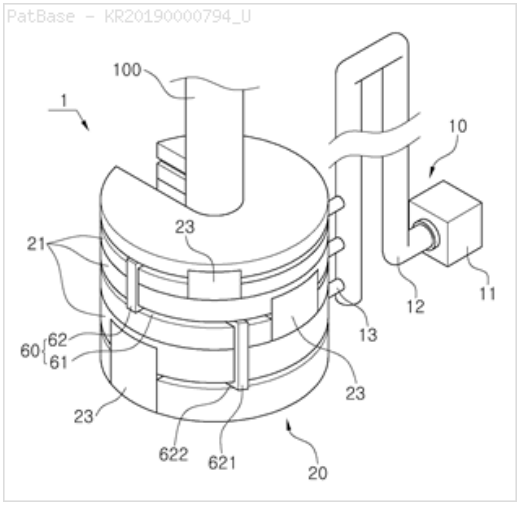
				to an Office Action	
US2013252848 AA	20130926	LSPB	+	published / reissued	
US2013252848 AA	20150429	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2015231635 AA	20150820	LSPB	+	published / reissued	
US2015231635 AA	20150413	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ON-CHIP CELLOMICS CONSORTIUM, JAPAN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:KANAGAWA ACADEMY OF SCIENCE AND TECHNOLOGY; REEL/FRAME:035393/0741 EFFECTIVE DATE : 20150410
US2015231635 AA	20160929	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US7569354 BB	20090804	LSGT	+	granted / extensions (spc, cpc, pte)	
US7569354 BB	20050803	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ONCHIP CELLOMICS CONSORTIUM, JAPAN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:OKANO, KAZUNORI; YASUDA, KENJI; REEL/FRAME:016861/0350 EFFECTIVE DATE : 20050719
US7569354 BB	20090715	LSGT	PAT1	Patented Case	
US7569354 BB	20130130	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7569354 BB	20170904	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7569354 BB	20170904	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7569354 BB	20170904	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7569354 BB	20170926	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170804
US7569354 BB	20261026	PEXP		Calculated Patent Term Expiry (PTA 449 days)	

53) Family number: 73742279 (KR20190000794U)

Title: **WAVE** **GENERATOR** FOR RIDES

Abstract: Source: KR200489749Y **Machine translation:** The present invention is installed on a ride knocked her rides wave generation device for generating a wave relates to, and more particularly, is installed in the **pool** to **pool** ??), it viaducts, stairs, such as slide-use facility or the **pool** or the water contained in the **artificial** wave (wave) from rides to form one can be obtained the effect of various amusement rides for wave generation device to relate. To this end, the present design is provided in the wave **pool** to generate rides on a wave generating apparatus, is installed on a pole of the rides **pool** pumps for sucking the water and the inlet end of the inlet of the pump is coupled to the water drawn into the interior of the blank tube is made in the form of including a transfer tube is moved, and the other end of the transfer tube inlet is coupled to the hole is provided on the inside of the water stored in the water storage space being formed inside the storage tank, and is formed on one side of the storage tank 131 is discharged to the outside of the outlet and the outlet comprising a lid for opening and closing a storage unit is provided in the storage tank outlet to open or close the cover by rotating the opening and closing portion is provided in the storage space of the storage tank to the storage space raised or lowered according to the amount of water introduced into the portion of the inner wall of the storage space, and is disposed at a position of the ceiling portion and the sensing means for sensing the position of the air bladder is detected by Detection means receiving the comprising: a control means for driving the opening and closing portion.

Classifications:
International (IPC 8-9): A63G31/00 E04H4/00 (Advanced/Invention)
CPC: E04H4/0006 A63G31/007



Family:

Publication number	Publication date	Application number	Application date
KR200489749 Y1	20190801	KR20170004956U	20170920
KR20190000794 U	20190329	KR20170004956U	20170920

Priority:

KR20170004956U 20170920

Probable Assignee: CO 1 EARTH

Assignee(s): CO 1 EARTH ; WINDOW JODY BELL LITTLEFIELD PUBLISHING CO

Legal status (INPADOC)

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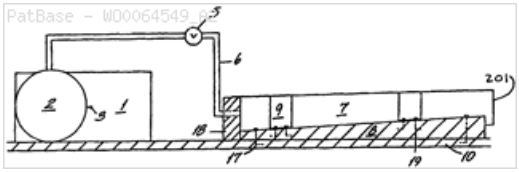
Patent	Date recorded	Event group	Code	Event	Details
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KR200489749 Y1	20270920	PEXP		Calculated Patent Term Expiry	
KR20190000794 U	20190329	LSPB	+	published / reissued	
KR20190000794 U	20170920	LSES	A201	REQUEST FOR EXAMINATION	
KR20190000794 U	20190319	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20190000794 U	20190712	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	

54) Family number: 14922281 (WO0064549A2)

Title: METHOD AND APPARATUS FOR GENERATING WAVES

Abstract: An apparatus for generating waves has a pressure storage tank, a chamber in fluid communication with the pressure storage tank and a valve coupled to control air flow from the pressure storage tank to the chamber. The volume of pressurized air within the pressurized air tank is preferably between approximately 1/8 and approximately a of the volumes of the sum of a volume of each of the chambers.

Classifications:
International (IPC 8-9): E04H4/00 (Advanced/Invention); E04H4/00 (Core/Invention)
International (IPC 1-7): A63G E04H3/16
CPC: E04H4/0006
European: E04H4/00A



Family:

Publication number	Publication date	Application number	Application date
AU200044817 A1	20001110	AU20000044817	20000421
AU200044817 A5	20001110	AU20000044817D	20000421
WO0064549 A2	20001102	WO2000US10839	20000421
WO0064549 A3	20010705	WO2000US10839	20000421

Priority:

US19990298359 19990423 US19990360287 19990722 WO2000US10839 20000421

Probable Assignee: RICHARD P CARNAHAN

Assignee(s): (std): CARNAHAN RICHARD P ; KIGHT TROY W

Assignee(s): RICHARD P CARNAHAN ; TROY W KIGHT

Inventor(s): (std): CARNAHAN RICHARD P ; KIGHT TROY W

Inventor(s): RICHARD P CARNAHAN ; TROY W KIGHT

Designated states: AE 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 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 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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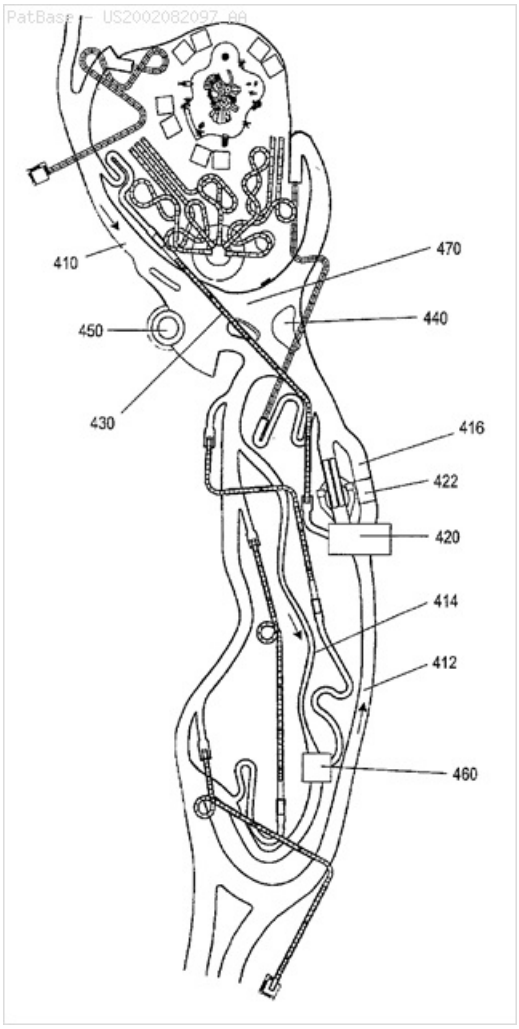
Patent	Date recorded	Event group	Code	Event	Details
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AU200044817 A5	20020321	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2) (F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
WO0064549 A2	20001102	LSPB	+	published / reissued	
WO0064549 A3	20020221	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0064549 A3	20021127	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF COUNTRY CODE : WO
WO0064549 A3	20040126	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP

55) Family number: 28209288 (US2002082097A)

Title: WATER AMUSEMENT SYSTEM AND METHOD

Abstract: A water transportation system and method are described, generally related to water amusement attractions and rides. Further, the disclosure generally relates to water-powered rides and to a system and method in which participants may be actively involved in a water attraction. This transportation system comprises at least two water stations and at least one water channel connecting the at least two water stations for the purpose of conveying participants between the at least two water stations. In addition, the water transportation system may include conveyor belt systems and water locks configured to convey participants from a first source of water to a second source of water which may or may not be at a different elevation.

Classifications:
International (IPC 8-9): A63G21/18 A63G3/00 A63G3/02 A63G31/10 (Advanced/Invention);
A63G21/00 A63G31/00 (Advanced/Non-invention)
International (IPC 1-7): A63G21/18 A63G3/00 A63G3/02
CPC: A63G3/02 A63G21/18
European: A63G21/18 A63G3/02
US: 104/70 472/117 472/117P 472/128 472/13 472/13P



Family:

Publication number	Publication date	Application number	Application date
AT311232 E	20051215	AT20010970881T	20010911
AU2001290826 AA	20020326	AU20010290826	20010911
AU2001290832 AA	20020326	AU20010290832	20010911
AU2001290832 BB	20070802	AU20010290832	20010911
AU200190826 A1	20020326	AU20010090826	20010911
AU200190826 A5	20020326	AU20010090826	20010911
AU200190832 A1	20020326	AU20010090832	20010911
AU200190832 A5	20020326	AU20010090832	20010911
CA2422023 AA	20030311	CA20012422023	20010911
CA2422023 C	20090512	CA20012422023	20010911
CA2654714 AA	20020321	CA20012654714	20010911
CA2654714 C	20121030	CA20012654714	20010911
DE60115477 D1	20060105	DE20016015477	20010911
DE60115477 D1	20060105	DE20016015477T	20010911
DE60115477 T2	20060824	DE20016015477T	20010911
EP1318864 A2	20030618	EP20010970881	20010911
EP1318864 B1	20051130	EP20010970881	20010911
EP1604712 A1	20051214	EP20050019093	20010911
US2002082097 AA	20020627	US20010952036	20010911
US2005085306 AA	20050421	US20040986720	20041112
US2005090320 AA	20050428	US20040987994	20041112
US2005090321 AA	20050428	US20040987099	20041112
US2006052171 AA	20060309	US20050218330	20050901
US2006178222 AA	20060810	US20050283503	20051118
US7285053 BB	20071023	US20010952036	20010911
US7371182 BB	20080513	US20040987099	20041112

US7491128 BB	20090217	US20040986720	20041112
US7740542 BB	20100622	US20040987994	20041112
US8070615 BB	20111206	US20050283503	20051118
US8197352 BB	20120612	US20050218330	20050901
WO0222226 A2	20020321	WO2001US28535	20010911
WO0222226 A3	20020613	WO2001US28535	20010911
WO0222227 A2	20020321	WO2001US28542	20010911
WO0222227 A3	20020606	WO2001US28542	20010911

Priority:

US20000231801P 20000911 CA20012422023 20010911 CA20012654714 20010911
EP20010970881 20010911 WO2001US28535 20010911 US20010952036 20010911
WO2001US28542 20010911 US20040987994 20041112 US20040987099 20041112
US20040986720 20041112 US20050218330 20050901 US20050283503 20051118
CA20092422023 20090319

Probable Assignee: WATER RIDE CONCEPTS INC

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Assignee(s): HENRY JEFFREY W ; HENRY JEFFREY WAYNE ; HENRY SCHOOLEY AND ASSOCIATES LLC ; NBGS INT

Inventor(s): (std): HENRY JEFFERY W ; HENRY JEFFERY WAYNE ; HENRY JEFFREY W ; SCHOOLEY JOHN ; SCHOOLEY JOHN T ; HENRY WAYNE ; HENRY JEFFREY WAYNE ; SCHOOLEY JOHN TIMOTHY

Inventor(s): HENRY JEFFERY ; JEFFERY W HENRY ; JOHN SCHOOLEY ; JEFFERY WAYNE HENRY

Agent(s): DAVIES COLLISON CAVE PTY LTD; DAVIES COLLISON CAVE; GOUDREAU GAGE DUBUC; LAVERY DE BILLY LLP; MEYERTONS HOOD KIVLIN KOWERT AND GOETZEL PC; ERIC B; MEYERSTONS ERIC B; MEYERTONS ERIC B

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 PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

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Patent	Date recorded	Event group	Code	Event	Details
AT311232 E	20051215	LSGT	+	granted / extensions (spc, cpc, pte)	
AT311232 E	20060515	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT311232 E	20210911	PEXP		Calculated Patent Term Expiry	
AU2001290826 AA	20020326	LSPB	+	published / reissued	
AU2001290832 AA	20020326	LSPB	+	published / reissued	
AU2001290832 BB	20070802	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2001290832 BB	20071129	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2001290832 BB	20100107	LSAS	PC	ASSIGNMENT REGISTERED	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC. OLDPARTY : FORMER OWNER WAS: NBGS INTERNATIONAL, INC
AU2001290832 BB	20150409	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2001290832 BB	20210911	PEXP		Calculated Patent Term Expiry	
AU200190826 A1	20020326	LSPB	+	published / reissued	
AU200190832 A1	20020326	LSPB	+	published / reissued	
CA2422023 AA	20030311	LSPB	+	published / reissued	
CA2422023 AA	20060612	LSES	+EEER	EXAMINATION REQUEST	
CA2422023 C	20090512	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2422023 C	20131023	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20130911
CA2422023 C	20210911	PEXP		Calculated Patent Term Expiry	
CA2654714 AA	20020321	LSPB	+	published / reissued	
CA2654714 AA	20090217	LSES	+EEER	EXAMINATION REQUEST	

CA2654714 C	20121030	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2654714 C	20161024	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20160912
CA2654714 C	20210911	PEXP		Calculated Patent Term Expiry	
DE60115477 D1	20061221	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60115477 D1	20061221	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60115477 D1	20100617	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., NEW BRAUNFELS, TEX., US
DE60115477 D1	20100617	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., NEW BRAUNFELS, TEX., US
DE60115477 T2	20060824	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60115477 T2	20061221	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60115477 T2	20100617	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., NEW BRAUNFELS, TEX., US
DE60115477 T2	20210911	PEXP		Calculated Patent Term Expiry	
EP1318864 A2	20030618	LSPB	+	published / reissued	
EP1318864 A2	20030618	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20030410
EP1318864 A2	20040526	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20040413
EP1318864 A2	20051116	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : NBGS INTERNATIONAL, INC
EP1318864 B1	20051130	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1318864 B1	20051130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051130
EP1318864 B1	20051130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20051130
EP1318864 B1	20051130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051130
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				INFORMATION FROM NATIONAL OFFICE TO EPO]	TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051130
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EP1318864 B1	20051130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051130
EP1318864 B1	20051130	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1318864 B1	20051130	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1318864 B1	20051229	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1318864 B1	20060228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060228
EP1318864 B1	20060228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060228
EP1318864 B1	20060228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060228
EP1318864 B1	20060313	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20060313
EP1318864 B1	20060502	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060502
EP1318864 B1	20060601	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	REF COUNTRY CODE : EP
EP1318864 B1	20060615	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL

EP1318864 B1	20060911	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20060911
EP1318864 B1	20060930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20060930
EP1318864 B1	20061108	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20060831
EP1318864 B1	20070627	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1318864 B1	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20060911
EP1318864 B1	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20051130
EP1318864 B1	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20051130
EP1318864 B1	20100611	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : TP
EP1318864 B1	20141031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20140930 YEAR OF FEE PAYMENT : 14
EP1318864 B1	20150130	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20141001 YEAR OF FEE PAYMENT : 14
EP1318864 B1	20150130	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20141015 YEAR OF FEE PAYMENT : 14
EP1318864 B1	20160401	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60115477 COUNTRY OF REF DOCUMENT : DE
EP1318864 B1	20160525	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20150911
EP1318864 B1	20160701	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20160531
EP1318864 B1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160401
EP1318864 B1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES

				NATIONAL OFFICE TO EPO]	LAPSED DATE : 20150911
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EP1318864 B1	20210911	PEXP		Calculated Patent Term Expiry	
EP1604712 A1	20051214	LSPB	+	published / reissued	
EP1604712 A1	20060524	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060330
EP1604712 A1	20060823	LSFE	+AKX	DESIGNATION FEES PAID	COUNTRY OF REF DOCUMENT : AT COUNTRY OF REF DOCUMENT : BE COUNTRY OF REF DOCUMENT : CH COUNTRY OF REF DOCUMENT : CY COUNTRY OF REF DOCUMENT : DE COUNTRY OF REF DOCUMENT : DK COUNTRY OF REF DOCUMENT : ES COUNTRY OF REF DOCUMENT : FI COUNTRY OF REF DOCUMENT : FR COUNTRY OF REF DOCUMENT : GB COUNTRY OF REF DOCUMENT : GR COUNTRY OF REF DOCUMENT : IE COUNTRY OF REF DOCUMENT : IT COUNTRY OF REF DOCUMENT : LI COUNTRY OF REF DOCUMENT : LU COUNTRY OF REF DOCUMENT : MC COUNTRY OF REF DOCUMENT : NL COUNTRY OF REF DOCUMENT : PT COUNTRY OF REF DOCUMENT : SE COUNTRY OF REF DOCUMENT : TR
EP1604712 A1	20100421	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC.
EP1604712 A1	20130925	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20130331
US2002082097 AA	20020627	LSPB	+	published / reissued	
US2005085306 AA	20050421	LSPB	+	published / reissued	
US2005085306 AA	20070108	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NBGS INTERNATIONAL, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY W.; SCHOOLEY, JOHN; REEL/FRAME:018774/0503 EFFECTIVE DATE : 20011207
US2005090320 AA	20050428	LSPB	+	published / reissued	
US2005090320 AA	20070108	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NBGS INTERNATIONAL, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFREY W.; SCHOOLEY, JOHN; REEL/FRAME:018774/0506 EFFECTIVE DATE : 20011207
US2005090320 AA	20070108	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NBGS INTERNATIONAL, INC.,TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFREY W.; SCHOOLEY, JOHN; REEL/FRAME:018774/0506 EFFECTIVE DATE : 20011207
US2005090320 AA	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER

					OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NBGS INTERNATIONAL, INC.; REEL/FRAME:023194/0870 EFFECTIVE DATE : 20090805
US2005090320 AA	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC.,TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NBGS INTERNATIONAL, INC.; REEL/FRAME:023194/0870 EFFECTIVE DATE : 20090805
US2005090321 AA	20050428	LSPB	+	published / reissued	
US2005090321 AA	20070108	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NBGS INTERNATIONAL, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY W.; SCHOOLEY, JOHN; REEL/FRAME:018765/0588 EFFECTIVE DATE : 20011207
US2006052171 AA	20060309	LSPB	+	published / reissued	
US2006052171 AA	20070108	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NBGS INTERNATIONAL, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY W.; SCHOOLEY, JOHN; REEL/FRAME:018774/0518 EFFECTIVE DATE : 20011207
US2006052171 AA	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NBGS INTERNATIONAL, INC.; REEL/FRAME:023194/0874 EFFECTIVE DATE : 20090821
US2006178222 AA	20060810	LSPB	+	published / reissued	
US2006178222 AA	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENRY, SCHOOLEY AND ASSOCIATES, L.L.C.; REEL/FRAME:023194/0878 EFFECTIVE DATE : 20090805
US7285053 BB	20071023	LSGT	+	granted / extensions (spc, cpc, pte)	
US7285053 BB	20020122	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NBGS INTERNATIONAL, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFERY W.; SCHOOLEY, JOHN; REEL/FRAME:012535/0230 EFFECTIVE DATE : 20011207
US7285053 BB	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NBGS INTERNATIONAL, INC.; REEL/FRAME:023180/0937 EFFECTIVE DATE : 20090821
US7285053 BB	20110324	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7285053 BB	20151023	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7285053 BB	20151123	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7285053 BB	20151123	LSLE	-STCH	INFORMATION ON	TEXT : PATENT EXPIRED DUE

				STATUS: PATENT DISCONTINUATION	TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7285053 BB	20151215	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151023
US7285053 BB	20240720	PEXP		Calculated Patent Term Expiry (PTA 1043 days)	
US7371182 BB	20080513	LSGT	+	granted / extensions (spc, cpc, pte)	
US7371182 BB	20080423	LSGT	PAT1	Patented Case	
US7371182 BB	20080729	LSRE	CC	CERTIFICATE OF CORRECTION	
US7371182 BB	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NBGS INTERNATIONAL, INC.; REEL/FRAME:023180/0933 EFFECTIVE DATE : 20090821
US7371182 BB	20110920	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7371182 BB	20160513	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7371182 BB	20160613	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7371182 BB	20160613	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7371182 BB	20160705	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160513
US7371182 BB	20251109	PEXP		Calculated Patent Term Expiry (PTA 362 days)	
US7491128 BB	20090217	LSGT	+	granted / extensions (spc, cpc, pte)	
US7491128 BB	20090128	LSGT	PAT1	Patented Case	
US7491128 BB	20090904	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WATER RIDE CONCEPTS, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NBGS INTERNATIONAL, INC.; REEL/FRAME:023194/0863 EFFECTIVE DATE : 20090821
US7491128 BB	20121023	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7491128 BB	20170217	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7491128 BB	20170320	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7491128 BB	20170320	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7491128 BB	20170411	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170217
US7491128 BB	20250911	PEXP		Calculated Patent Term Expiry (PTA 303 days and a terminal disclaimer has been filed)	
US7740542 BB	20100622	LSGT	+	granted / extensions (spc, cpc, pte)	
US7740542 BB	20100602	LSGT	PAT1	Patented Case	
US7740542 BB	20131211	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7740542 BB	20180205	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED

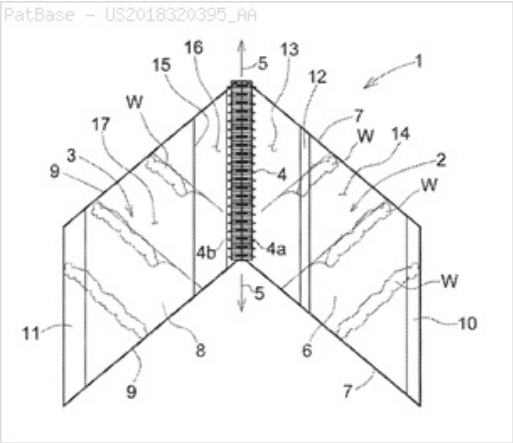
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US7740542 BB	20180723	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7740542 BB	20180814	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180622
US7740542 BB	20260405	PEXP		Calculated Patent Term Expiry (PTA 509 days)	
US8070615 BB	20111206	LSGT	+	granted / extensions (spc, cpc, pte)	
US8070615 BB	20060413	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HENRY, SCHOOLEY & ASSOCIATES, L.L.C., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HENRY, JEFFREY WAYNE; SCHOOLEY, JOHN TIMOTHY; REEL/FRAME:017782/0001 EFFECTIVE DATE : 20060325
US8070615 BB	20111116	LSGT	PAT1	Patented Case	
US8070615 BB	20151206	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8070615 BB	20160104	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8070615 BB	20160104	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8070615 BB	20160126	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151206
US8070615 BB	20260903	PEXP		Calculated Patent Term Expiry (PTA 289 days and a terminal disclaimer has been filed)	
US8197352 BB	20120612	LSGT	+	granted / extensions (spc, cpc, pte)	
US8197352 BB	20120523	LSGT	PAT1	Patented Case	
US8197352 BB	20160612	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8197352 BB	20160711	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8197352 BB	20160711	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8197352 BB	20160802	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160612
US8197352 BB	20260704	PEXP		Calculated Patent Term Expiry (PTA 306 days and a terminal disclaimer has been filed)	
WO0222226 A2	20020321	LSPB	+	published / reissued	
WO0222226 A3	20030411	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2003110374 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

WO0222226 A3	20030724	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0222226 A3	20031022	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF COUNTRY CODE : WO
WO0222226 A3	20050913	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO0222227 A2	20020321	LSPB	+	published / reissued	
WO0222227 A3	20030311	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2422023 COUNTRY OF REF DOCUMENT : CA
WO0222227 A3	20030403	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001290832 COUNTRY OF REF DOCUMENT : AU
WO0222227 A3	20030410	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001970881 COUNTRY OF REF DOCUMENT : EP
WO0222227 A3	20030618	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001970881 COUNTRY OF REF DOCUMENT : EP
WO0222227 A3	20030724	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0222227 A3	20050913	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO0222227 A3	20051130	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001970881 COUNTRY OF REF DOCUMENT : EP
WO0222227 A3	20071115	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001290832 COUNTRY OF REF DOCUMENT : AU

56) Family number: 65616290 (US2018320395A)

Title: **WAVE** **GENERATOR** SYSTEM WITH A LATERAL MOVING WAVE BARRIER FOR THE GENERATION OF WAVES IN TWO AREAS OF WATER

Abstract: **Wave** **generator** system (**1**), comprising a continuous and elongated barrier (**4**) that has a front side (**4***a*) facing a first mass of water (**2**) fitted with a first reef (**12**) and a rear side (**4***b*) facing a second mass of water (**3**) fitted with a second reef (**15**). The barrier (**4**) can move along the length (L) with a serpentine movement, and the front (**4***a*) and rear sides (**4***b*) push water from the masses of water (**2, 3**) towards the respective reefs (**12, 15**) for the formation of waves in the first mass of water (**2**) and in the second mass of water (**3**).



Classifications:
International (IPC 8-9): A47K3/10 A63B69/00 A63B69/12 A63C19/10 A63G A63G31/00 E02B3/00 E04H E04H4/00 (Advanced/Invention); A63G (Subclass/Invention)
International (IPC 1-7): A63G31/00 E04H4/00
CPC: E02B3/00 A63B69/0066 E04H4/0006 A63B69/0093
US: 1/1 405/79

Family:

Publication number	Publication date	Application number	Application date
AR106607 AA	20180131	AR2016P103383	20161104
AU2016348801 AA	20180517	AU20160348801	20161103
BR112018009025 A2	20181030	BR20181109025	20161103
BR112018009025 A8	20190226	BR20181109025	20161103
CA3003642 AA	20180430	CA20163003642	20161103
CL2018001209 A1	20181005	CL20180001209	20180504
CN108601981 A	20180928	CN201680078000	20161103
CO20180005822 A2	20180620	CO20180005822	20180605
EA201891112 A1	20181228	EA20180091112	20161103
EP3409337 A2	20181205	EP20160831892	20161103
ES2611764 AA	20170510	ES20150031602	20151106
ES2611764 BA	20180216	ES20150031602	20151106
ID201812002 A	20181109	ID2018PID03670	20161103
IL259065 A0	20180731	IL20160259065	20161103
IN201817016592 A	20180810	IN201817016592	20180502
JP2019500178 T2	20190110	JP20180541565T	20161103
KR20180082496 A	20180718	KR20187015926	20161103
MA42572 A1	20181130	MA20160042572	20161103
MA42572 B1	20190329	MA20160042572	20161103
MX2018005093 A1	20190516	MX20180005093	20161103
PE09242018 A1	20180607	PE20180000729	20161103
PH2018500961 A	20181112	PH20180500961	20180503
SG11201803736Q A1	20180628	SG20181103736	20161103
TW201727023 A	20170801	TW20160135946	20161104
US2018320395 AA	20181108	US20160773269	20161103
US10364584 BB	20190730	US20160773269	20161103
WO17077156 A2	20170511	WO2016ES70774	20161103
WO17077156 A3	20171005	WO2016ES70774	20161103
ZA201802718 A	20190130	ZA20180002718	20180424

Priority:
ES20150031602 20151106 ES20160031302 20161007 WO2016ES70774 20161103

Probable Assignee: INSTANT SPORT S L

Assignee(s): (std): INSTANT SPORT S L

Assignee(s): INSTANT SPORT SL ; ODRIOZOLA SAGASTUME JOSE MANUEL

Inventor(s): (std): ODRIOZOLA SAGASTUME JOSE MANUEL ; JOSE MANUEL ODRIOZOLA SAGASTUME ; SAGASTUME JOSE MANUEL ODRIOZOLA ; JOS MANUEL ODRIOZOLA SAGASTUME

Inventor(s): ODRIOZOLA SAGASTUME JOS MANUEL

Agent(s): FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; GOWLING WLG CANADA LLP; ESTUDIO CAREY LTDA; LUIS FELIPE CASTILLO GIBSONE; CUETO SENIDA; TRIGO JOSE RAMON; NADIA AMBADAR SH; ASAMURA PATENT OFFICE PC; BROWDY AND NEIMARK PLLC; TRIGO PECES JOSE RAMON

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 DJ 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 KW 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
AR106607 AA	20180131	LSPB	+	published / reissued	
AU2016348801 AA	20180517	LSPB	+	published / reissued	
AU2016348801 AA	20180726	LSLE	-MK7	APPLICATION LAPSED REG. 3.2A(3) - APPLICANT DID NOT COMPLY WITH FORMALITIES DIRECTION WITHIN PRESCRIBED TIME	
CA3003642 AA	20180430	LSPB	+	published / reissued	
CL2018001209 A1	20181005	LSPB	+	published / reissued	
CN108601981 A	20180928	LSPB	+	published / reissued	
CN108601981 A	20180928	LSPB	PB01	PUBLICATION	
CO20180005822 A2	20180620	LSPB	+	published / reissued	
EA201891112 A1	20181228	LSPB	+	published / reissued	
EP3409337 A2	20181205	LSPB	+	published / reissued	
EP3409337 A2	20181205	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20180615
EP3409337 A2	20190828	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20190724
ES2611764 AA	20170510	LSPB	+	published / reissued	
ES2611764 BA	20180216	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2611764 BA	20180216	LSGT	+FG2A	DEFINITIVE PROTECTION	REF DOCUMENT NUMBER : 2611764 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : B1 DESIGNATED STATE(S) : EFFECTIVE DATE : 20180216
ES2611764 BA	20351106	PEXP		Calculated Patent Term Expiry	
ID201812002 A	20181109	LSPB	+	published / reissued	
IN201817016592 A	20180810	LSPB	+	published / reissued	
JP2019500178 T2	20190110	LSPB	+	published / reissued	
KR20180082496 A	20180718	LSPB	+	published / reissued	
MA42572 A1	20181130	LSPB	+	published / reissued	
MA42572 B1	20190329	LSGT	+	granted / extensions (spc, cpc, pte)	
MA42572 B1	20361103	PEXP		Calculated Patent Term Expiry	
MX2018005093 A1	20190516	LSPB	+	published / reissued	
PE09242018 A1	20180607	LSPB	+	published / reissued	
PH2018500961 A	20181112	LSPB	+	published / reissued	
SG11201803736Q A1	20180628	LSPB	+	published / reissued	
TW201727023 A	20170801	LSPB	+	published / reissued	
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US10364584 BB	20181026	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : INSTANT SPORT, S.L, SPAIN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ODRIOZOLA SAGASTUME, JOSE MANUEL; REEL/FRAME:047322/0926 EFFECTIVE DATE : 20180515

US10364584 BB	20361103	PEXP		Calculated Patent Term Expiry	
US2018320395 AA	20181108	LSPB	+	published / reissued	
US2018320395 AA	20190509	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018320395 AA	20190613	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2018320395 AA	20190710	LSGT	PAT1	Patented Case	
US2018320395 AA	20190710	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
WO17077156 A2	20170511	LSPB	+	published / reissued	
WO17077156 A3	20180425	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : MX/A/2018/005093 COUNTRY OF REF DOCUMENT : MX
WO17077156 A3	20180430	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 3003642 COUNTRY OF REF DOCUMENT : CA
WO17077156 A3	20180501	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 259065 COUNTRY OF REF DOCUMENT : IL
WO17077156 A3	20180502	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2018541565 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
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WO17077156 A3	20180517	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016348801 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20161103 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
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WO17077156 A3	20180605	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020187015926 COUNTRY OF REF DOCUMENT : KR
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WO17077156 A3	20180606	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2016831892 COUNTRY OF REF DOCUMENT : EP
WO17077156 A3	20181030	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112018009025 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20180503
ZA201802718 A	20190130	LSGT	+	granted / extensions (spc, cpc, pte)	
ZA201802718 A	20380423	PEXP		Calculated Patent Term Expiry	

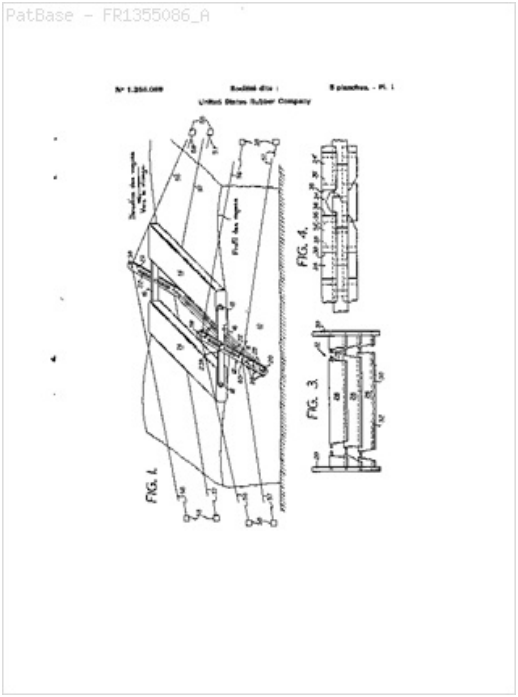
57) Family number: 20925293 (FR1355086A)

Title: PROCEDE ET APPAREIL DE DRAGAGE METHOD AND APPARATUS FOR DREDGING (Machine translation)

Abstract: Source: FR1355086A [FR] (Claim 1) RESUME A. Appareil de dragage destine a transporter une matiere particulaire solide d'une zone a une autre matiere particulaire solide d'une zone a une autre sous un liquide dans lequel les vagues se propagent, appareil caracterise en ce qu'il comprend une chicane commandee de facon a permettre l'ecoulement du liquide a travers elle dans un sens seulement, un moyen pour suspendre la chicane dans le liquide, et un moyen pour ancrer la chicane dans une position choisie dans le liquide.

Machine translation: (Claim 1) SUMMARY A. A dredging apparatus for conveying a solid particulate material from one area to another solid particulate material from one area to another in a liquid in which the waves propagate, device characterized in that it comprises a baffle controlled so to permit flow of liquid through it only in one direction, means for suspending the baffle in the liquid, and means to anchor the baffle in a selected position in the liquid.

Classifications:
International (IPC 8-9): E02B3/02 E02B3/06 (Advanced/Invention); E02B3/00 E02B3/06 (Core/Invention)
CPC: E02B3/062 E02B3/023
European: E02B3/02B E02B3/06B



Family:

Publication number	Publication date	Application number	Application date
FR1355086 A	19640313	FR19630927716	19630312

Priority:
FR19630927716 19630312

Probable Assignee: US RUBBER CO
Assignee(s): (std): US RUBBER CO
Assignee(s): UNITED STATES RUBBER CO ; UNITED STATES RUBBER COMPANY

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FR1355086 A	19640313	LSGT	+	granted / extensions (spc, cpc, pte)	
FR1355086 A	19830312	PEXP		Calculated Patent Term Expiry	

58) Family number: 60513333 (EP2931015B1)

Title: DEVICE AND METHOD FOR THE INSPECTION OF ELEMENTS INSIDE A FUSE BOX DISPOSITIF ET PROCEDE POUR L'INSPECTION D'ELEMENTS A L'INTERIEUR D'UNE BOITE DE FU

Abstract: The present invention discloses a device (1) and method to verify the correct arrangement of fuses inside a fuse box (2) and, consequently, their proper electrical connection. Said device (1) comprises a tray to receive the fuse boxes (2) and a generation and reading mechanism (10) for the generation of waves and reading thereof in said fuse boxes (2), wherein the generation and reading mechanism comprises: a) a guide matrix (100) disposed parallel on the tray; b) a **wave generator**; and c) a wave reader; wherein both the **wave generator** and the wave reader are connected to the guide matrix (100) being movable between at least two points in the guide matrix (100).

Classifications:
International (IPC 8-9): G01R31/309 G06T7/00 H01H85/00 H05K13/08 (Advanced/Invention);
G01R1/04 G01R3/00 G01R31/07 (Advanced/Non-invention)
CPC: H01H85/20 H01H85/34 H01H2085/2075 H01H2300/052

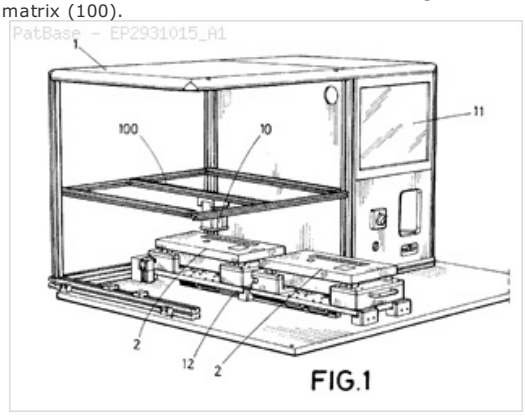


FIG.1

Family:

Publication number	Publication date	Application number	Application date
DE602015017356 D1	20181031	DE201560017356T	20150316
EP2931015 A1	20151014	EP20150159187	20150316
EP2931015 B1	20181003	EP20150159187	20150316
ES2547474 A9	20160919	ES20140030508	20140404
ES2547474 AA	20151006	ES20140030508	20140404
ES2547474 BA	20160909	ES20140030508	20140404

Priority:
ES20140030508 20140404 EP20150159187 20150316

Probable Assignee: EMDEP 2 S L
Assignee(s): (std): EMDEP 2 S L
Assignee(s): EMDEP 2 SL ; EMDEP 2 SL ALIO
Inventor(s): (std): MARTINEZ ZAMBRANA JUAN ANTONIO ; AMORES SERRANO JULIAN
Inventor(s): JULIAN AMORES SERRANO ; JUAN ANTONIO MARTINEZ ZAMBRANA
Agent(s): SCHULZ JUNGHANS PATENTANWAELTE PARTGMBB; PONS ARINO ANGEL; PONS; PONS ANGEL
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
EP2931015 A1	20151014	LSPB	+	published / reissued	
EP2931015 A1	20160427	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160315
EP2931015 A1	20170125	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20161223
EP2931015 A1	20180530	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20180508
EP2931015 B1	20181003	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2931015 B1	20181003	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2931015 B1	20181015	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2931015 B1	20181015	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 1050122 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20181015
EP2931015 B1	20181031	LSGT	REG	REFERENCE TO A	REF COUNTRY CODE : IE

				NATIONAL CODE	REF LEGAL EVENT CODE : FG4D
EP2931015 B1	20181031	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602015017356 COUNTRY OF REF DOCUMENT : DE
EP2931015 B1	20190225	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2931015 B1	20190315	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 1050122 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20181003
EP2931015 B1	20190329	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20181003
EP2931015 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20181003
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EP2931015 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20190104
EP2931015 B1	20190704	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602015017356 COUNTRY OF REF DOCUMENT : DE
EP2931015 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE

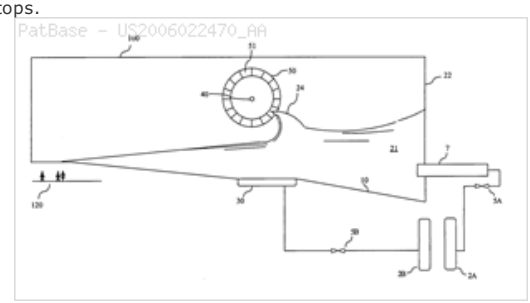
				[ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20190304 YEAR OF FEE PAYMENT : 5
EP2931015 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SM NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20181003
EP2931015 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20181003
EP2931015 B1	20190911	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20190704
EP2931015 B1	20350316	PEXP		Calculated Patent Term Expiry	
ES2547474 AA	20151006	LSPB	+	published / reissued	
ES2547474 BA	20160909	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2547474 BA	20160909	LSGT	+FG2A	DEFINITIVE PROTECTION	REF DOCUMENT NUMBER : 2547474 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : B1 DESIGNATED STATE(S) : EFFECTIVE DATE : 20160909
ES2547474 BA	20340404	PEXP		Calculated Patent Term Expiry	

59) Family number: 32585352 (US2006022470A)

Title: WAVE DRIVEN GAMING APPARATUS

Abstract: A wave actuated gaming wheel is described as a device for entertainment. In a basic form, the invention includes a **wave** **generator**, a wave tank or **pool**, a wave energy captured device, and a specially adapted gaming wheel. The wave energy capture device is mounted in the path of the wave, positioned so as to interact with an oncoming wave. Paddles, cups, or pontoons, and other supporting structure are coupled or fixed to the gaming wheel to capture energy from the wave and to transfer it to the gaming wheel in the form of rotary motion. When the wave has passed, the transfer of energy terminates. Friction, energy losses, or a brake cause the gaming wheel eventually to come to a stop. As with conventional gaming wheels or "wheels of fortune," the circumference of the wheel may be divided into a plurality of distinct gaming partitions with symbols that represent a certain possibility for a winning outcome. Players or observers seek to predict which gaming symbol might fall along a pay line when the gaming wheel stops.

Classifications:
International (IPC 8-9): A63B71/00 F03B13/00 H02P9/04 (Advanced/Invention);
A63B71/00 F03B13/00 H02P9/04 (Core/Invention)
CPC: A63F5/04 A63F5/045 A63F2250/0414 F03B13/00 F03B13/142 F05B2210/16 F05B2240/40 Y02E10/32 Y02E10/38
European: A63F5/04 F03B13/00 F03B13/14B2 K63F250/04B2 K63F5/04V R05B210/16 R05B240/40 Y02E10/32 Y02E10/38
US: 273/138.5 290/54 290/54P



Family:

Publication number	Publication date	Application number	Application date
US2006022470 AA	20060202	US20050193858	20050729
US7478811 BB	20090120	US20050193858	20050729

Priority:
US20040598016P 20040802 US20050193858 20050729

Probable Assignee: JOHNSON GARRETT
Assignee(s): (std): JOHNSON GARRETT
Inventor(s): (std): JOHNSON GARRETT
Agent(s): M BRUCE HARPER; MULLEN WILLIAMS; HARPER M BRUCE; WILLIAMS; M BRUCE

Legal status (INPADOC)

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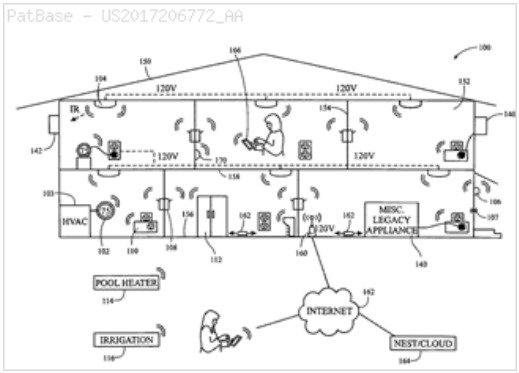
Patent	Date recorded	Event group	Code	Event	Details
US2006022470 AA	20060202	LSPB	+	published / reissued	
US2006022470 AA	20081229	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7478811 BB	20090120	LSGT	+	granted / extensions (spc, cpc, pte)	
US7478811 BB	20081229	LSGT	PAT1	Patented Case	
US7478811 BB	20130117	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7478811 BB	20161122	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7478811 BB	20260501	PEXP		Calculated Patent Term Expiry (PTA 276 days)	

60) Family number: 65555358 (US2017206772A)

Title: REMOTE ALARM HUSHING WITH ACOUSTIC PRESENCE VERIFICATION

Abstract: Embodiments of the present disclosure provide methods and systems for enabling remote alarm hushing with acoustic presence verification. Acoustic presence verification is used to assure that a device attempting to remotely deactivate an alarm is located within a certain distance of an alarming device before allowing the alarm to be hushed. Acoustic presence can be established through emission and monitoring of ultrasonic acoustic signals. The ultrasonic acoustic signals may be transmitted at a frequency that exceeds human hearing such as, for example, between 18 KHz and 22 kHz. Such ultrasonic signals have a relatively short range and are unable to penetrate walls and floors, thus providing an effective tool for ensuring that the device attempting to remotely hush an alarming device is within a line-of-sight of the alarming device.

Classifications:
International (IPC 8-9): G08B17/10 G08B21/18 G08B25/00 G08B25/04 G08B25/10 G08B3/10 H04B11/00 H04W76/00 H04W76/02 H04W76/14 (Advanced/Invention)
CPC: H04W76/023 G08B17/00 G08B25/007 G08B25/008 G08B25/10 H04W76/14 G08B25/001 H04B11/00
US: 1/1 340/506



Family:

Publication number	Publication date	Application number	Application date
CN108028009 A	20180511	CN201680053774	20161122
EP3398177 A1	20181107	EP20160882252	20161122
EP3398177 A4	20190828	EP20160882252	20161122
JP2019500659 T2	20190110	JP20180513365T	20161122
JP6537710 B2	20190703	JP20180513365T	20161122
US2017206772 AA	20170720	US20170476069	20170331
US9640061 BA	20170502	US20150986398	20151231
US10026297 BB	20180717	US20170476069	20170331
WO17116586 A1	20170706	WO2016US63395	20161122

Priority:
US20150986398 20151231 WO2016US63395 20161122 US20170476069 20170331

Probable Assignee: GOOGLE INC

Assignee(s): (std)**:** GOOGLE INC ; GOOGLE LLC

Inventor(s): (std)**:** KLIMANIS GINTS VALDIS ; WEBB NICHOLAS UNGER

Agent(s): BOULT WADE TENNANT LLP; FUKAMI PATENT OFFICE PC; VAN COURT AND ALDRIDGE LLP; VAN COURT ANDREW 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 DJ 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 KW 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
CN108028009 A	20180511	LSPB	+	published / reissued	
CN108028009 A	20180511	LSPB	PB01	PUBLICATION	
EP3398177 A1	20181107	LSPB	+	published / reissued	
EP3398177 A1	20181107	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20180307
EP3398177 A4	20190828	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	EFFECTIVE DATE : 20190725
JP2019500659 T2	20190110	LSPB	+	published / reissued	
JP2019500659 T2	20181015	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20181003
JP2019500659 T2	20181015	LSES	+A621	WRITTEN REQUEST FOR APPLICATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20181003

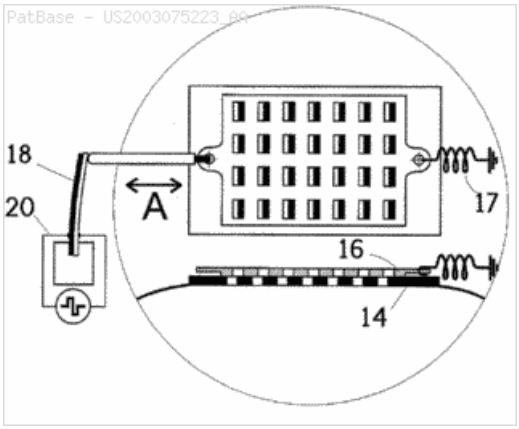
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JP2019500659 T2	20181113	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20181113
JP2019500659 T2	20190208	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20190208
JP2019500659 T2	20190412	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2019500659 T2	20190416	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20190416
JP2019500659 T2	20190613	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20190604
JP2019500659 T2	20190614	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150 REF DOCUMENT NUMBER : 6537710 COUNTRY OF REF DOCUMENT : JP
JP6537710 B2	20190703	LSGT	+	granted / extensions (spc, cpc, pte)	
JP6537710 B2	20190418	LSGT	+A01	特許査定書 (Decision of patent grant)	
JP6537710 B2	20190611	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP6537710 B2	20190614	LSGT	+R150	特許証 (Patent certificate)	
JP6537710 B2	20361122	PEXP		Calculated Patent Term Expiry	
US10026297 BB	20180717	LSGT	+	granted / extensions (spc, cpc, pte)	
US10026297 BB	20180627	LSGT	PAT1	Patented Case	
US10026297 BB	20370331	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US2017206772 AA	20170720	LSPB	+	published / reissued	
US2017206772 AA	20171109	LSES	-NFA2	Non Final Action Counted, Not Yet Mailed	
US2017206772 AA	20171114	LSES	NFA1	Non Final Action Mailed	
US2017206772 AA	20171205	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GOOGLE LLC, CALIFORNIA OLDPARTY : CHANGE OF NAME; ASSIGNOR:GOOGLE INC.; REEL/FRAME:044695/0115 EFFECTIVE DATE : 20170929
US2017206772 AA	20180410	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017206772 AA	20180512	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017206772 AA	20180619	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2017206772 AA	20180627	LSGT	STCF	INFORMATION	TEXT : PATENTED CASE

				ON STATUS: PATENT GRANT	
US9640061 BA	20170502	LSGT	+	granted / extensions (spc, cpc, pte)	
US9640061 BA	20160503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GOOGLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KLIMANIS, GINTS VALDIS; WEBB, NICHOLAS UNGER; SIGNING DATES FROM 20160428 TO 20160502; REEL/FRAME:038448/0370
US9640061 BA	20170412	LSGT	PAT1	Patented Case	
US9640061 BA	20170412	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US9640061 BA	20171002	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GOOGLE LLC, CALIFORNIA OLDPARTY : CHANGE OF NAME; ASSIGNOR:GOOGLE INC.; REEL/FRAME:044097/0658 EFFECTIVE DATE : 20170929
US9640061 BA	20351231	PEXP		Calculated Patent Term Expiry	
WO17116586 A1	20170706	LSPB	+	published / reissued	
WO17116586 A1	20180312	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2018513365 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO17116586 A1	20180703	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

61) Family number: 28626375 (US2003075223A)

Title: DISCHARGE VALVES FOR AIRBAGS AND AIRBAGS INCLUDING THE SAME

Abstract: Discharge valve for an airbag including a fixed member adapted to be arranged in connection with or associated with the airbag and having a pattern of openings and a movable member having a pattern of openings substantially identical to the pattern of openings of the fixed member. The movable member is movable relative to and alongside the fixed member to vary the correspondence between the openings on the movable member and the openings in the fixed member to thereby vary valve openings defined by the fixed member and the movable member. Variation in the valve openings results in control and/or regulation of the outflow of gas from the airbag through the discharge valve. The members may be plates, cylinders or cones.



Classifications:

International (IPC 8-9): B60C11/24 B60C23/00 B60C23/04 B60K28/00 B60K28/02 B60K28/14 B60L1/00 B60N2/02 B60N2/28 B60Q1/00 B60R21/01 B60R21/0136 B60R21/015 B60R21/016 B60R21/16 B60R21/20 B60R21/205 B60R21/213 B60R21/23 B60R21/232 B60R21/233 B60R21/235 B60R21/239 B60R21/26 B60R21/276 B60R21/30 B60R21/33 B60R22/00 B60R25/10 B62D1/11 E05F15/00 G01G19/10 G01G19/52 G01H11/00 G01M17/00 G01M17/02 G05D27/00 G06F17/00 G06F19/00 G06F7/00 G06K9/00 G07C5/00 G07C5/08 G08B21/00 G08C19/00 G09G5/00 H01H13/70 H01L43/06 H02B1/24 H03K17/97 H03K17/975 H04Q5/22 (Advanced/Invention);
B60R21/00 B60R21/01 B60R21/013 B60R21/0132 B60R21/0134 B60R21/21 (Advanced/Non-invention);
B60C23/00 B60K28/00 B60K28/10 B60L1/00 B60N2/02 B60R21/01 B60R21/015 B60R21/16 B60R21/20 B60R21/23 B60R21/26 B60R21/33 B60R22/00 B60R25/10 E05F15/00 G01G19/08 G01G19/52 G01H11/00 G01M17/00 G01M17/02 G05D27/00 G06F17/00 G06F19/00 G06F7/00 G06K9/00 G08B21/00 G08C19/00 G09G5/00 H01H13/70 H02B1/00 H03K17/94 (Core/Invention);
B60R21/01 (Core/Non-invention)

International (IPC 1-7): F16K3/00

CPC: G06F17/5018 G06F17/5095 B60W50/0205 B60W2420/52 B60W2420/54 B60R21/01 B60W40/08 B60W2040/0809 B60W2040/0818 B60W2040/0872 B60W2040/0881 B60W2050/143 B60W2050/146 B60C23/041 B60K28/066 B60R25/2081 B60R25/24 B60R2325/101 B60R2325/202 B60W2540/24 G08B21/04 B60R21/205 B60R2021/23324 B60R2021/23533 B60C23/0433 B60C23/0425 B60R2021/23161 B60R2021/23557 B60R2021/2358 B60R2021/2359 B60R21/2338 B60R2021/01211 B60R2021/23382 B60R2021/2395 G01S7/4052 G01S7/497 G01S15/523 B60N2/015 B60N2/0244 B60N2/0248 B60N2/0252 B60N2/067 B60N2/28 B60N2/2806 B60N2002/0268 B60N2002/0272 B60R16/037 B60R21/203 B60R21/21656 B60R22/20 B60R22/201 B60R25/25 B60R2001/1223 B60R2001/1253 B60R2021/0027 B60R2021/26094 B60R2022/208 B60R2022/288 B60R2022/4685 E05Y2900/55 G01S7/417 G01S7/4802 G01S7/539 G01S13/04 G01S15/04 G01S15/06 G01S15/87 G01S15/88 G01S17/88 G01S17/89 G06K9/00362 G10K2210/1282 G10K2210/3219 B60R21/01536 B60R21/01542 B60R21/01558 B60R21/01548 B60R21/01554 B60R2022/4825 B60N2/028 B60Q1/1423 B60R2021/01315 B60R2021/01327 B60J10/00 B60N2/0276 B60N2/2863 B60R19/483 B60R21/21 B60R21/33 B60R2021/0011 B60R2021/01325 B62D21/15 H01H35/146 H04Q9/00 B60R2021/01302 B60N2/0232 B60R2022/4816 B60R2022/4841 B60R2022/4858 B60R21/01534 B60R2021/01225 B60R21/01552 G01S7/52006 B60R21/01538 B60R21/015 B60R21/01526 G06K9/00369 B60R21/0153 B60R21/01544 B60C23/0408 H03K2217/96011 G06K9/00832 E05F15/40 E05Y2900/50 E05F15/43 E05F15/431 E05F2015/433 Y10T137/86734 Y10T137/86743 Y10T307/766 B60R21/276 B60R2021/2765 B60C11/24 B60R2021/01311 B60R21/017 B60R21/0134 B60R21/0136 B60R21/232 B60R21/2032 B60R21/206 B60R21/214 B60R21/233 B60R21/235 B60R21/239 B60R21/264 B60R2021/0004 B60R2021/0006 B60R2021/23107 B60R2021/23153 B60R2021/23169 B60R2021/23192 B60R2021/23308 B60R2021/23316 B60R2021/23504 B60R2021/23514 B60R2021/23519 B60R2021/23523 B60R2021/2636 B60R21/01532 B60R2021/01068 G01M17/00 B60R21/013 B60R2021/01054 B60R2021/01061 B60R2021/01109 B60R2021/01184 G07C5/085 G07C5/0891 B60R21/20 B60R21/30 G07C5/008 G07C5/0808 G01G19/4142 G05D1/0077 G05D1/021 G05D2201/0213 B60Q1/143 B60Q2300/41 B60Q2300/42 B60N2/002 B60N2/66 B60N2/829 B60N2/853 B60N2/888 B60R21/0132 B60R21/01516 B60R21/0152 B60R21/01512

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Agent(s): BRIAN ROFFE ESQ; ROFFE BRIAN; BRIAN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2003075223 AA	20030424	LSPB	+	published / reissued	
US2003075223 AA	20130701	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
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US2007126561 AA	20070111	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:018774/0030 EFFECTIVE DATE : 20070108
US2007126561 AA	20110320	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007126561 AA	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US2007132219 AA	20070614	LSPB	+	published / reissued	
US2007132219 AA	20090729	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2007135982 AA	20070614	LSPB	+	published / reissued	
US2007135982 AA	20061121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; MORIN, JEFFREY L.; DUVALL, WILBUR E.; REEL/FRAME:018618/0851; SIGNING DATES FROM 20061109 TO 20061114
US2007135982 AA	20111115	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007135982 AA	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US2007154063 AA	20070705	LSPB	+	published / reissued	
US2007154063 AA	20061117	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:018567/0012 EFFECTIVE DATE : 20061109
US2007154063 AA	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL,

					INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US2007154063 AA	20150309	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007228703 AA	20071004	LSPB	+	published / reissued	
US2007228703 AA	20090107	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2007251749 AA	20071101	LSPB	+	published / reissued	
US2007271014 AA	20071122	LSPB	+	published / reissued	
US2007271014 AA	20110824	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2007280505 AA	20071206	LSPB	+	published / reissued	
US2007282506 AA	20071206	LSPB	+	published / reissued	
US2007282506 AA	20100714	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2008040005 AA	20080214	LSPB	+	published / reissued	
US2008042410 AA	20080221	LSPB	+	published / reissued	
US2008042410 AA	20091214	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.,NEW JE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; JOHNSON, WENDELL C.; DUVALL, WILBUR E.; SIGNING DATES FROM 20070902 TO 20070906; REEL/FRAME:023650/0177
US6899134 BB	20050531	LSGT	+	granted / extensions (spc, cpc, pte)	
US6899134 BB	20021211	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; DUVAL, WILBUR E.; JOHNSON, WENDELL C.; REEL/FRAME:013581/0600; SIGNING DATES FROM 20021202 TO 20021203
US6899134 BB	20081116	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6899134 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US6899134 BB	20130531	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6899134 BB	20130701	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6899134 BB	20130723	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20130531
US6899134 BB	20221023	PEXP		Calculated Patent Term Expiry	
US7040653 BA	20060509	LSGT	+	granted / extensions (spc, cpc, pte)	
US7040653 BA	20041027	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL,

					INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:015949/0848 EFFECTIVE DATE : 20041025
US7040653 BA	20140609	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7040653 BA	20241027	PEXP		Calculated Patent Term Expiry	
US7147246 BB	20061212	LSGT	+	granted / extensions (spc, cpc, pte)	
US7147246 BB	20070313	LSRE	CC	CERTIFICATE OF CORRECTION	
US7147246 BB	20100610	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7147246 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7147246 BB	20141212	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7147246 BB	20150112	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7147246 BB	20150112	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7147246 BB	20150203	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20141212
US7147246 BB	20250224	PEXP		Calculated Patent Term Expiry	
US7284769 BB	20071023	LSGT	+	granted / extensions (spc, cpc, pte)	
US7284769 BB	20030811	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ATI-295, NEW JERSEY OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:014396/0960 EFFECTIVE DATE : 20030809
US7284769 BB	20071225	LSRE	CC	CERTIFICATE OF CORRECTION	
US7284769 BB	20111019	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7284769 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7284769 BB	20151023	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7284769 BB	20151123	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7284769 BB	20151123	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7284769 BB	20151215	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151023

US7284769 BB	20240917	PEXP		Calculated Patent Term Expiry (PTA 403 days)	
US7338069 BB	20080304	LSGT	+	granted / extensions (spc, cpc, pte)	
US7338069 BB	20090224	LSRE	CC	CERTIFICATE OF CORRECTION	
US7338069 BB	20120304	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7338069 BB	20120402	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7338069 BB	20120402	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7338069 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7338069 BB	20120424	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20120304
US7338069 BB	20260612	PEXP		Calculated Patent Term Expiry	
US7379800 BB	20080527	LSGT	+	granted / extensions (spc, cpc, pte)	
US7379800 BB	20060418	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:017499/0304 EFFECTIVE DATE : 20060417
US7379800 BB	20060418	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:017499/0318 EFFECTIVE DATE : 20060417
US7379800 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7379800 BB	20120527	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7379800 BB	20120625	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7379800 BB	20120625	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7379800 BB	20260418	PEXP		Calculated Patent Term Expiry	
US7481453 BB	20090127	LSGT	+	granted / extensions (spc, cpc, pte)	
US7481453 BB	20050518	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL INC., NEW JE OLDPARTY : ASSIGNMENT OF

					ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:016582/0883 EFFECTIVE DATE : 20050517
US7481453 BB	20090107	LSGT	PAT1	Patented Case	
US7481453 BB	20090317	LSRE	CC	CERTIFICATE OF CORRECTION	
US7481453 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7481453 BB	20130118	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7481453 BB	20160714	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7481453 BB	20260321	PEXP		Calculated Patent Term Expiry (PTA 307 days)	
US7523803 BB	20090428	LSGT	+	granted / extensions (spc, cpc, pte)	
US7523803 BB	20060612	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:017777/0345 EFFECTIVE DATE : 20060610
US7523803 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7523803 BB	20130428	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7523803 BB	20130527	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7523803 BB	20130527	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7523803 BB	20130618	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20130428
US7523803 BB	20261012	PEXP		Calculated Patent Term Expiry (PTA 122 days and a terminal disclaimer has been filed)	
US7527288 BB	20090505	LSGT	+	granted / extensions (spc, cpc, pte)	
US7527288 BB	20061026	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:018449/0958 EFFECTIVE DATE : 20060915
US7527288 BB	20090415	LSGT	PAT1	Patented Case	
US7527288 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087

					EFFECTIVE DATE : 20120405
US7527288 BB	20130416	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7527288 BB	20170505	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7527288 BB	20170605	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7527288 BB	20170605	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7527288 BB	20170627	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170505
US7527288 BB	20260905	PEXP		Calculated Patent Term Expiry	
US7549327 BB	20090623	LSGT	+	granted / extensions (spc, cpc, pte)	
US7549327 BB	20060508	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:017594/0328 EFFECTIVE DATE : 20060504
US7549327 BB	20090603	LSGT	PAT1	Patented Case	
US7549327 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7549327 BB	20130619	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7549327 BB	20170623	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7549327 BB	20170724	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7549327 BB	20170724	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7549327 BB	20170815	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170623
US7549327 BB	20260913	PEXP		Calculated Patent Term Expiry (PTA 128 days)	
US7575248 BB	20090818	LSGT	+	granted / extensions (spc, cpc, pte)	
US7575248 BB	20060713	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:017940/0001 EFFECTIVE DATE : 20060711
US7575248 BB	20090729	LSGT	PAT1	Patented Case	
US7575248 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405

US7575248 BB	20130703	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7575248 BB	20170808	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7575248 BB	20260808	PEXP		Calculated Patent Term Expiry (PTA 27 days)	
US7596242 BB	20090929	LSGT	+	granted / extensions (spc, cpc, pte)	
US7596242 BB	20061005	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL INC., NEW JE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; JOHNSON, WENDELL C.; KHVASTUKHIN, MYKHAILO; REEL/FRAME:018372/0032; SIGNING DATES FROM 20061003 TO 20061004
US7596242 BB	20090909	LSGT	PAT1	Patented Case	
US7596242 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7596242 BB	20130911	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7596242 BB	20171030	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7596242 BB	20171030	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7596242 BB	20171030	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7596242 BB	20171121	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170929
US7596242 BB	20270518	PEXP		Calculated Patent Term Expiry (PTA 225 days)	
US7650210 BB	20100119	LSGT	+	granted / extensions (spc, cpc, pte)	
US7650210 BB	20060814	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL INC., NEW JE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:018116/0469 EFFECTIVE DATE : 20060811
US7650210 BB	20091230	LSGT	PAT1	Patented Case	
US7650210 BB	20101123	LSRE	CC	CERTIFICATE OF CORRECTION	
US7650210 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7650210 BB	20130516	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7650210 BB	20130903	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD:	PARTYTYPE : OPPONENT OPPONENT : TOYOTA MOTOR CORPORATION OLDPARTY : TRIAL NO: IPR2013-00415

				INTER PARTES REVIEW	EFFECTIVE DATE : 20130708
US7650210 BB	20140520	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	PARTYTYPE : OPPONENT OPPONENT : AMERICAN HONDA MOTOR CO., INC. HONDA OF AMERICA OLDPARTY : TRIAL NO: IPR2014-00633 EFFECTIVE DATE : 20140415
US7650210 BB	20141223	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	PARTYTYPE : OPPONENT OPPONENT : HYUNDAI MOTOR COMPANY,HYUNDAI MOTOR AMERICA,HYUNDA OLDPARTY : TRIAL NO: IPR2015-00177 EFFECTIVE DATE : 20141028
US7650210 BB	20170904	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7650210 BB	20180219	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7650210 BB	20180219	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7650210 BB	20180219	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7650210 BB	20180313	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180119
US7650210 BB	20280505	PEXP		Calculated Patent Term Expiry (PTA 630 days)	
US7657354 BB	20100202	LSGT	+	granted / extensions (spc, cpc, pte)	
US7657354 BB	20100113	LSGT	PAT1	Patented Case	
US7657354 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7657354 BB	20131105	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7657354 BB	20170918	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7657354 BB	20180305	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7657354 BB	20180314	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7657354 BB	20180314	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7657354 BB	20180327	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180202
US7657354 BB	20271104	PEXP		Calculated Patent Term Expiry (PTA 6 days)	
US7672756 BB	20100302	LSGT	+	granted / extensions (spc, cpc, pte)	
US7672756 BB	20060601	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J

					OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:017719/0989 EFFECTIVE DATE : 20060601
US7672756 BB	20060601	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.,NEW JE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:017719/0989 EFFECTIVE DATE : 20060601
US7672756 BB	20100210	LSGT	PAT1	Patented Case	
US7672756 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7672756 BB	20140204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7672756 BB	20171016	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7672756 BB	20180215	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : 7.5 YR SURCHARGE - LATE PMT W/IN 6 MO, LARGE ENTITY (ORIGINAL EVENT CODE: M1555)
US7672756 BB	20180215	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7672756 BB	20280429	PEXP		Calculated Patent Term Expiry (PTA 698 days)	
US7712777 BB	20100511	LSGT	+	granted / extensions (spc, cpc, pte)	
US7712777 BB	20061012	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL INC., NEW JE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:018391/0090 EFFECTIVE DATE : 20061009
US7712777 BB	20061012	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL INC.,NEW JER OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:018391/0090 EFFECTIVE DATE : 20061009
US7712777 BB	20100421	LSGT	PAT1	Patented Case	
US7712777 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7712777 BB	20140312	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7712777 BB	20171225	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7712777 BB	20180611	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7712777 BB	20180611	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees	

				Under 37 CFR 1.362	
US7712777 BB	20180611	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7712777 BB	20290120	PEXP		Calculated Patent Term Expiry (PTA 834 days)	
US7760080 BB	20100720	LSGT	+	granted / extensions (spc, cpc, pte)	
US7760080 BB	20060713	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; DUVALL, WILBUR E.; JOHNSON, WENDELL C.; REEL/FRAME:017939/0960; SIGNING DATES FROM 20060712 TO 20060713
US7760080 BB	20060713	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; DUVALL, WILBUR E.; JOHNSON, WENDELL C.; SIGNING DATES FROM 20060712 TO 20060713; REEL/FRAME:017939/0960
US7760080 BB	20100831	LSRE	CC	CERTIFICATE OF CORRECTION	
US7760080 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7760080 BB	20140720	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7760080 BB	20140818	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7760080 BB	20140818	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7760080 BB	20140909	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20140720
US7760080 BB	20280614	PEXP		Calculated Patent Term Expiry (PTA 702 days)	
US7762582 BB	20100727	LSGT	+	granted / extensions (spc, cpc, pte)	
US7762582 BB	20060907	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL INC., NEW JE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:018237/0953 EFFECTIVE DATE : 20060827
US7762582 BB	20100707	LSGT	PAT1	Patented Case	
US7762582 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7762582 BB	20140718	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

US7762582 BB	20180312	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7762582 BB	20180903	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US7762582 BB	20180903	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7762582 BB	20180903	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7762582 BB	20180925	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180727
US7762582 BB	20281022	PEXP		Calculated Patent Term Expiry (PTA 776 days)	
US7766383 BB	20100803	LSGT	+	granted / extensions (spc, cpc, pte)	
US7766383 BB	20070206	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; JOHNSON, WENDELL C.; DUVALL, WILBUR E.; REEL/FRAME:023480/0917; SIGNING DATES FROM 20070126 TO 20070129
US7766383 BB	20070206	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; JOHNSON, WENDELL C.; DUVALL, WILBUR E.; SIGNING DATES FROM 20070126 TO 20070129; REEL/FRAME:023480/0917
US7766383 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7766383 BB	20140803	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7766383 BB	20140901	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7766383 BB	20140901	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7766383 BB	20140923	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20140803
US7766383 BB	20280711	PEXP		Calculated Patent Term Expiry (PTA 529 days)	
US7769513 BB	20100803	LSGT	+	granted / extensions (spc, cpc, pte)	
US7769513 BB	20070820	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST;

					ASSIGNORS:BREED, DAVID S.; CHEN, TIE-QI; REEL/FRAME:019718/0798; SIGNING DATES FROM 20070816 TO 20070818
US7769513 BB	20070820	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; CHEN, TIE-QI; SIGNING DATES FROM 20070816 TO 20070818; REEL/FRAME:019718/0798
US7769513 BB	20100714	LSGT	PAT1	Patented Case	
US7769513 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7769513 BB	20140718	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7769513 BB	20180319	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7769513 BB	20180725	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : 7.5 YR SURCHARGE - LATE PMT W/IN 6 MO, LARGE ENTITY (ORIGINAL EVENT CODE: M1555)
US7769513 BB	20180725	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7769513 BB	20280612	PEXP		Calculated Patent Term Expiry (PTA 297 days)	
US7779956 BB	20100824	LSGT	+	granted / extensions (spc, cpc, pte)	
US7779956 BB	20061127	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; MORIN, JEFFREY L.; DUVALL, WILBUR E.; REEL/FRAME:018628/0537; SIGNING DATES FROM 20061109 TO 20061114
US7779956 BB	20061127	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; MORIN, JEFFREY L.; DUVALL, WILBUR E.; SIGNING DATES FROM 20061109 TO 20061114; REEL/FRAME:018628/0537
US7779956 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7779956 BB	20140824	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7779956 BB	20140922	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7779956 BB	20140922	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

US7779956 BB	20141014	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20140824
US7779956 BB	20281213	PEXP		Calculated Patent Term Expiry (PTA 754 days and a terminal disclaimer has been filed)	
US7788008 BB	20100831	LSGT	+	granted / extensions (spc, cpc, pte)	
US7788008 BB	20070816	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:019703/0699 EFFECTIVE DATE : 20070815
US7788008 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7788008 BB	20140831	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7788008 BB	20140929	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7788008 BB	20140929	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7788008 BB	20141021	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20140831
US7788008 BB	20271201	PEXP		Calculated Patent Term Expiry (PTA 107 days)	
US7832762 BB	20101116	LSGT	+	granted / extensions (spc, cpc, pte)	
US7832762 BB	20060605	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:017735/0659 EFFECTIVE DATE : 20060601
US7832762 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7832762 BB	20141116	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7832762 BB	20141215	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7832762 BB	20141215	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7832762 BB	20150106	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20141116
US7832762 BB	20270208	PEXP		Calculated Patent Term Expiry (PTA 252 days and a terminal disclaimer	

				has been filed)	
US7880594 BB	20110201	LSGT	+	granted / extensions (spc, cpc, pte)	
US7880594 BB	20060706	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BREED, DAVID S.; DUVALL, WILBUR W.; JOHNSON, WENDELL C.; REEL/FRAME:017889/0566 EFFECTIVE DATE : 20060630
US7880594 BB	20110112	LSGT	PAT1	Patented Case	
US7880594 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7880594 BB	20150202	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7880594 BB	20180924	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US7880594 BB	20190128	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : 7.5 YR SURCHARGE - LATE PMT W/IN 6 MO, LARGE ENTITY (ORIGINAL EVENT CODE: M1555); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US7880594 BB	20190128	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7880594 BB	20281005	PEXP		Calculated Patent Term Expiry (PTA 825 days)	
US8019501 BB	20110913	LSGT	+	granted / extensions (spc, cpc, pte)	
US8019501 BB	20070806	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:019655/0286 EFFECTIVE DATE : 20070731
US8019501 BB	20110824	LSGT	PAT1	Patented Case	
US8019501 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US8019501 BB	20130903	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	PARTYTYPE : OPPONENT OPPONENT : TOYOTA MOTOR CORPORATION OLDPARTY : TRIAL NO: IPR2013-00416 EFFECTIVE DATE : 20130708
US8019501 BB	20150805	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8019501 BB	20190506	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US8019501 BB	20300705	PEXP		Calculated Patent Term Expiry (PTA 1068 days)	
US8060282 BB	20111115	LSGT	+	granted / extensions (spc, cpc, pte)	

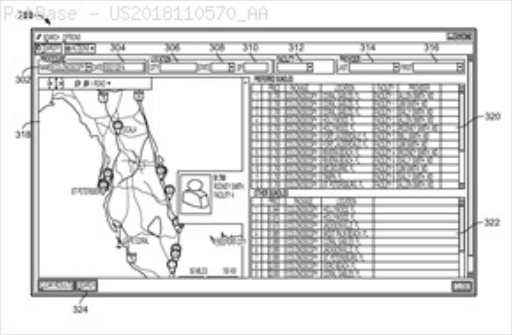
US8060282 BB	20070806	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC., NEW J OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:019655/0301 EFFECTIVE DATE : 20070731
US8060282 BB	20111026	LSGT	PAT1	Patented Case	
US8060282 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US8060282 BB	20151115	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8060282 BB	20151214	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8060282 BB	20151214	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8060282 BB	20160105	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151115
US8060282 BB	20300806	PEXP		Calculated Patent Term Expiry (PTA 1100 days)	
USRE39868 E	20100718	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
USRE39868 E	20100816	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
USRE39868 E	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405

62) Family number: 69433378 (US2018110570A)

Title: STATIC AND DYNAMIC VISUAL DEPICTIONS OF BEHAVIOR OF PARTICIPANTS IN HEALTHCARE MARKETS

Abstract: An example method for visually depicting geographic distribution of facilities or participants in a market for invasive or operative procedures includes: displaying a map of a geographic area; defining a plurality of markers on the map, each marker being associated with an invasive or operative procedure, a facility, a patient, a healthcare provider, equipment, or other participant; displaying each marker associated with a bundled invasive or operative procedure at a geographical location of a facility at which the procedure is to be performed and displaying each marker associated with a patient, healthcare provider, equipment, or other participant at a geographical location at which the patient, healthcare provider, equipment or other participant originates; calculating one or more distances between the patient, healthcare provider, equipment, or other participant and the facility; determining an activity density of procedures performed; and presenting static or dynamic visual depictions on the map representing participant behavior.

Classifications:
International (IPC 8-9)**:** A61B34/20 A61B90/00 G06F17/30 G06F19/00 G06Q30/06 (Advanced/Invention)
CPC: A61B34/20 G06Q30/0629 G06F3/0482 A61B90/39 A61B2090/3937 G06F3/04847 G16H50/70 G06F16/29 G16H40/20 G16H40/63
US: 1/1 705/2



Family:

Publication number	Publication date	Application number	Application date
US2018110570 AA	20180426	US20170782524	20171012

Priority:
US20160411749P 20161024 US20170782524 20171012

Probable Assignee: ALLEVION INC
Assignee(s): (std)**:** ALLEVION INC
Inventor(s): (std)**:** KRONGRAD ARNON ; LANGER KIMBERLY SUSAN

Legal status (INPADOC)

View legal status timeline

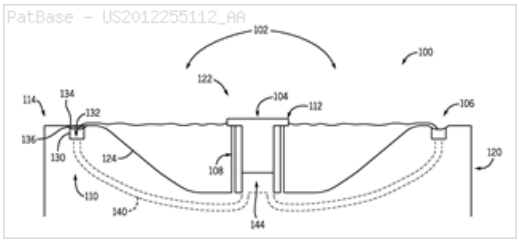
Patent	Date recorded	Event group	Code	Event	Details
US2018110570 AA	20180426	LSPB	+	published / reissued	
US2018110570 AA	20171013	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ALLEVION, INC., FLORIDA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KRONGRAD, ARNON; LANGER, KIMBERLY SUSAN; REEL/FRAME:043858/0028 EFFECTIVE DATE : 20171013

63) Family number: 52081380 (US2012255112A)

Title: SYSTEM AND METHOD FOR GENERATING WAVES IN MULTIPLE DIRECTIONS

Abstract: Present embodiments are directed to a system and method for generating waves in multiple directions. Present embodiments may include a wave generation mechanism configured to be positioned centrally within a container filled with water that is sufficiently sized to facilitate recreational activities for patrons within the container. The wave generation mechanism may include at least one actuator configured to activate at least one water-displacement medium to displace the water such that waves are propagated through the water, and a directional feature configured to direct the waves away from the wave generation mechanism after activation of the actuator such that the waves are propagated outward from the wave generation mechanism in multiple directions.

Classifications:
International (IPC 8-9): A47K3/10 A63B A63B69/12 E04H E04H4/00 E04H4/06 E04H4/14 F04D35/00 (Advanced/Invention);
A63B69/12 (Advanced/Non-invention);
A63B E04H (Subclass/Invention)
CPC: E04H4/0006 A63B69/125 E04H4/06 E04H4/141
European: E04H4/00A K63B69/12B
US: 4/491



Family:

Publication number	Publication date	Application number	Application date
CA2831790 AA	20130927	CA20122831790	20120329
CA2831790 C	20180904	CA20122831790	20120329
CN103443374 A	20131211	CN201280017186	20120329
CN103443374 B	20170405	CN201280017186	20120329
DE602012007189 D1	20150618	DE201260007189T	20120329
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HK1191991 A1	20151030	HK20140104702	20140520
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HK1191991 B	20151030	HK20140104702	20140520
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HK1191992 B	20180427	HK20140105300	20140606
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RU2013149868 A	20150520	RU20130149868	20120329
RU2592935 C2	20160727	RU20130149868	20120329
SG193470 A1	20131030	SG20130069299	20120329
US2012255112 AA	20121011	US20110083259	20110408
US9534408 BB	20170103	US20110083259	20110408
WO12138546 A2	20121011	WO2012US31266	20120329
WO12138546 A3	20121206	WO2012US31266	20120329

Priority:

US20110083259 20110408 EP20120715778 20120329 WO2012US31266 20120329

Probable Assignee: UNIVERSAL CITY STUDIOS LLC

Assignee(s): (std): OSTERMAN ROSS ALAN ; SCHWARTZ JUSTIN MICHAEL ; UNIVERSAL CITY STUDIOS LLC ; YUNIVERSAL SITI STYUDIOS ELELSI

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Agent(s): CRAIG WILSON AND CO; WITTMANN HERNANDEZ PATENTANWAELTE PARTNERSCHAFT MBB; AHMAD SHEIKH SHAKEEL; LAZCANO JESUS; HALDANES; CHINA PATENT AGENT HK LTD; UESUGI HIROSHI; OHTSUKA FUMIAKI; SUDA HIROYUKI; KUMAKURA YOSHIO; NISHIJIMA TAKAKI; FLETCHER YODER PC; POWELL W ALLEN 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 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
CA2831790 AA	20130927	LSPB	+	published / reissued	
CA2831790 AA	20161207	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20161202
CA2831790 C	20180904	LSGT	+	granted / extensions (spc, cpc, pte)	

CA2831790 C	20320329	PEXP		Calculated Patent Term Expiry	
CN103443374 A	20131211	LSPB	+	published / reissued	
CN103443374 A	20131211	LSPB	+C06	PUBLICATION	
CN103443374 B	20170405	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103443374 B	20170405	LSGT	+GR01	PATENT GRANT	
CN103443374 B	20180427	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : GR REF DOCUMENT NUMBER : 1191992 COUNTRY OF REF DOCUMENT : HK
CN103443374 B	20320329	PEXP		Calculated Patent Term Expiry	
EP2694757 A2	20140212	LSPB	+	published / reissued	
EP2694757 A2	20140212	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20131101
EP2694757 A2	20150114	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20141219
EP2694757 A2	20160429	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160328 YEAR OF FEE PAYMENT : 5
EP2694757 A2	20160429	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160328 YEAR OF FEE PAYMENT : 5
EP2694757 A2	20160531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160328 YEAR OF FEE PAYMENT : 5
EP2694757 A2	20160531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160329 YEAR OF FEE PAYMENT : 5
EP2694757 A2	20160729	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160331 YEAR OF FEE PAYMENT : 5
EP2694757 A2	20160831	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160323 YEAR OF FEE PAYMENT : 5
EP2694757 B1	20150506	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2694757 B1	20150506	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2694757 B1	20150515	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2694757 B1	20150603	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2694757 B1	20150615	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 725282 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150615
EP2694757 B1	20150618	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096

					REF DOCUMENT NUMBER : 602012007189 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20150618
EP2694757 B1	20150817	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2543158 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20150817
EP2694757 B1	20151026	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2694757 B1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150907
EP2694757 B1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20150506
EP2694757 B1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150806
EP2694757 B1	20151030	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : GR REF DOCUMENT NUMBER : 1191991 COUNTRY OF REF DOCUMENT : HK
EP2694757 B1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150906
EP2694757 B1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150807
EP2694757 B1	20151130	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT :

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EP2694757 B1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20160113	LSAS	RAP4	PATENT OWNER DATA CHANGED	PARTYTYPE : OWNER OWNER : UNIVERSAL CITY STUDIOS LLC
EP2694757 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20160209	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602012007189 COUNTRY OF REF DOCUMENT : DE
EP2694757 B1	20160215	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : UEP REF DOCUMENT NUMBER : 725282 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150506
EP2694757 B1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150506
EP2694757 B1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20150506
EP2694757 B1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506

EP2694757 B1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20160328	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 : 5
EP2694757 B1	20160413	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160209
EP2694757 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20150506
EP2694757 B1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160329
EP2694757 B1	20161228	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2694757 B1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160329
EP2694757 B1	20170327	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
EP2694757 B1	20170428	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20170327 YEAR OF FEE PAYMENT : 6
EP2694757 B1	20170428	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20170327 YEAR OF FEE PAYMENT : 6
EP2694757 B1	20170531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20170327 YEAR OF FEE PAYMENT : 6
EP2694757 B1	20170531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20170303

				[ANNOUNCED FROM NATIONAL OFFICE TO EPO]	YEAR OF FEE PAYMENT : 6
EP2694757 B1	20170630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20170630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20170630	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20170324 YEAR OF FEE PAYMENT : 6
EP2694757 B1	20170731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20170329 YEAR OF FEE PAYMENT : 6
EP2694757 B1	20170831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20170831	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20170328 YEAR OF FEE PAYMENT : 6
EP2694757 B1	20180326	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 7
EP2694757 B1	20180430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20180327 YEAR OF FEE PAYMENT : 7
EP2694757 B1	20180430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20180328 YEAR OF FEE PAYMENT : 7
EP2694757 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : HU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT; INVALID AB INITIO LAPSED DATE : 20120329
EP2694757 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL 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 : 20150506
EP2694757 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SM NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506

EP2694757 B1	20180531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20180322 YEAR OF FEE PAYMENT : 7
EP2694757 B1	20180531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20180305 YEAR OF FEE PAYMENT : 7
EP2694757 B1	20180531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20180326 YEAR OF FEE PAYMENT : 7
EP2694757 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : MK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160331
EP2694757 B1	20180731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20180402 YEAR OF FEE PAYMENT : 7
EP2694757 B1	20180731	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20180328 YEAR OF FEE PAYMENT : 7
EP2694757 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2694757 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20190325 YEAR OF FEE PAYMENT : 8
EP2694757 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20190322 YEAR OF FEE PAYMENT : 8
EP2694757 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20190327 YEAR OF FEE PAYMENT : 8
EP2694757 B1	20190531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20190305 YEAR OF FEE PAYMENT : 8
EP2694757 B1	20190731	LSFE	+PGFP	ANNUAL FEE PAID	COUNTRY OF REF DOCUMENT :

				TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	ES PAYMENT DATE : 20190401 YEAR OF FEE PAYMENT : 8
EP2694757 B1	20320329	PEXP		Calculated Patent Term Expiry	
ES2543158 T3	20150817	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2543158 T3	20320329	PEXP		Calculated Patent Term Expiry	
HK1191991 A1	20140808	LSPB	+	published / reissued	
HK1191991 A1	20151030	LSPB	+	published / reissued	
HK1191991 A1	20340520	PEXP		Calculated Patent Term Expiry	
HK1191991 A1	20340520	PEXP		Calculated Patent Term Expiry	
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HK1191991 B	20340520	PEXP		Calculated Patent Term Expiry	
HK1191992 A1	20140808	LSPB	+	published / reissued	
HK1191992 B	20180427	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1191992 B	20340606	PEXP		Calculated Patent Term Expiry	
IN08335DN2013 A	20160520	LSPB	+	published / reissued	
JP2014515797 T2	20140703	LSPB	+	published / reissued	
JP2014515797 T2	20150330	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150330
JP2014515797 T2	20150330	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20150330
JP2014515797 T2	20150609	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150608
JP2014515797 T2	20151207	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20151207
JP2014515797 T2	20160121	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20160120
JP2014515797 T2	20160414	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160414
JP2014515797 T2	20160520	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014515797 T2	20160530	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20160530
JP2014515797 T2	20160623	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20160620
JP2014515797 T2	20160701	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150 REF DOCUMENT NUMBER : 5959124 COUNTRY OF REF DOCUMENT : JP
JP5959124 B2	20160802	LSGT	+	granted / extensions (spc, cpc, pte)	

JP5959124 B2	20160602	LSGT	+A01	特許査定書 (Decision of patent grant)	
JP5959124 B2	20160621	LSFE	R100	特許料納付書 (Patent fee payment form)	
JP5959124 B2	20160701	LSGT	+R150	特許証 (Patent certificate)	
JP5959124 B2	20190627	LSFE	R20	特許料納付書 (Patent fee payment form)	
JP5959124 B2	20190702	LSFE	+R250	RECEIPT OF ANNUAL FEES	TEXT : JAPANESE INTERMEDIATE CODE: R250
JP5959124 B2	20320329	PEXP		Calculated Patent Term Expiry	
KR20140011368 A	20140128	LSPB	+	published / reissued	
KR20140011368 A	20131202	LSRE	AMND	AMENDMENT	
KR20140011368 A	20170329	LSRE	AMND	AMENDMENT	
KR20140011368 A	20180817	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20140011368 A	20181017	LSRE	AMND	AMENDMENT	
KR20140011368 A	20190228	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20140011368 A	20190403	LSRE	AMND	AMENDMENT	
KR20190067943 A	20190617	LSPB	+	published / reissued	
MY164040 A	20171115	LSGT	+	granted / extensions (spc, cpc, pte)	
MY164040 A	20320329	PEXP		Calculated Patent Term Expiry	
RU2013149868 A	20150520	LSPB	+	published / reissued	
RU2592935 C2	20160727	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2592935 C2	20320329	PEXP		Calculated Patent Term Expiry	
SG193470 A1	20131030	LSPB	+	published / reissued	
US2012255112 AA	20121011	LSPB	+	published / reissued	
US2012255112 AA	20161214	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US9534408 BB	20170103	LSGT	+	granted / extensions (spc, cpc, pte)	
US9534408 BB	20110411	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : UNIVERSAL CITY STUDIOS LLC, CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:OSTERMAN, ROSS ALAN; SCHWARTZ, JUSTIN MICHAEL; REEL/FRAME:026105/0850 EFFECTIVE DATE : 20110407
US9534408 BB	20151030	LSES	NFA1	Non Final Action Mailed	
US9534408 BB	20161214	LSGT	PAT1	Patented Case	
US9534408 BB	20341022	PEXP		Calculated Patent Term Expiry (PTA 1293 days)	
WO12138546 A2	20121011	LSPB	+	published / reissued	
WO12138546 A3	20130917	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2012715778 COUNTRY OF REF DOCUMENT : EP
WO12138546 A3	20130927	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2831790 COUNTRY OF REF DOCUMENT : CA

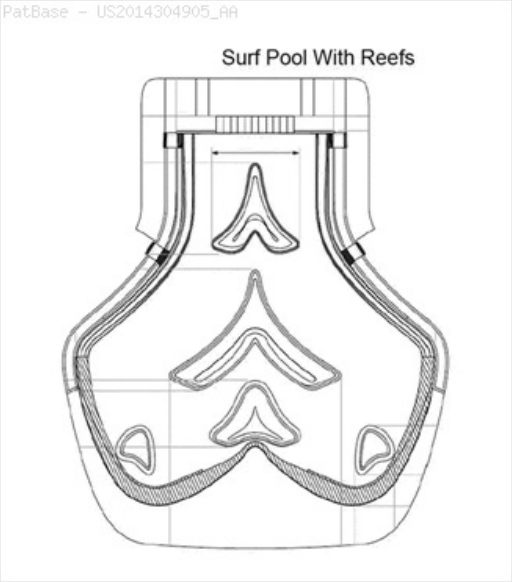
WO12138546 A3	20131007	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20137026449 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO12138546 A3	20131008	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014503693 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO12138546 A3	20131008	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12138546 A3	20131108	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013149868 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

64) Family number: 57601388 (US2014304905A)

Title: APPARATUS AND METHOD 3D **ARTIFICIAL** HYPERBOLIC REEF FOR AFFECTING SURFACE WAVES

Abstract: A 3D **artificial** hyperbolic reef system for producing plunging or barreling waves for surfing in a body of water propagates waves over a 3d hyperbolic reef which forms a wave breaking surface which has a slope sufficient to cause the waves to break in a plunging and barreling way as the waves traverse the 3d hyperbolic reef. The waves are **artificial** generated by a wave generating machine or device with a slope sufficient to break in a plunging and barreling way. Multiple waves are generated in a set frequency from the **wave generator** along the **wave generator** house (berm) side of the 3d **artificial** hyperbolic reef to produce a wave that peels laterally along the reef to produce a wave suitable for tube riding. Aspects of the invention provide a wave surf **pool** including at least one 3D hyperbolic **artificial** reef. The 3D **artificial** reef can include an inclined slope traversing the reef from the tip of the 3D hyperbolic reef to the open end, or the back side of the 3D hyperbolic reef.

Classifications:
International (IPC 8-9)**:** E04H4/00 (Advanced/Invention)
CPC: E04H4/0006
US: 4/491



Family:

Publication number	Publication date	Application number	Application date
US2014304905 AA	20141016	US20130861469	20130412

Priority:
US20130861469 20130412

Probable Assignee: BENNETT WALTER JUDSON
Assignee(s): (std)**:** BENNETT WALTER JUDSON ; EVANS DAVID
Inventor(s): (std)**:** EVANS DAVID ; BENNETT WALTER JUDSON

Legal status (INPADOC)

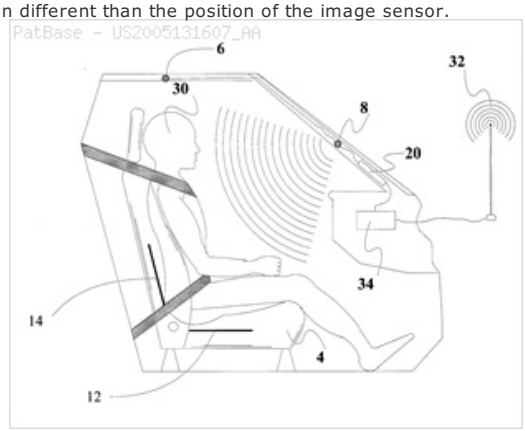
View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2014304905 AA	20141016	LSPB	+	published / reissued	
US2014304905 AA	20160803	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	

65) Family number: 33357405 (US2005131607A)

Title: METHOD AND ARRANGEMENT FOR OBTAINING INFORMATION ABOUT VEHICLE OCCUPANTS

Abstract: Arrangement and method for obtaining information about a vehicle occupant in a compartment of the vehicle in which a light source is mounted in the vehicle, structured light is projected into an area of interest in the compartment, rays of light forming the structured light originating from the light source, reflected light is detected at an image sensor at a position different than the position from which the structured light is projected, and the reflected light is analyzed relative to the projected structured light to obtain information about the area of interest. The structured light is designed to appear as if it comes from a source of light (virtual or actual) which is at a position different than the position of the image sensor.



Classifications:
International (IPC 8-9): B60N2/00 B60N2/02 B60N2/28 B60Q1/14 B60R21/01 B60R21/015 G01S15/87 G01S15/88 G01S17/88 G06K9/00 G06M7/00 (Advanced/Invention); B60R21/0134 B60R21/015 B60R22/20 (Advanced/Non-invention); G06M7/00 (Core/Invention)
International (IPC 1-7): G06F7/00
CPC: B60N2002/0272 B60N2/0232 B60N2/0244 B60N2/0276 B60N2/28 B60N2/2806 B60N2/2863 B60N2002/0268 B60R21/013 B60R21/0134 B60R25/25 B60R25/252 B60R25/255 B60R25/257 B60R2022/208 G06K9/00362 B60R21/01534 B60R21/01536 B60R21/01538 B60N2/002 G01S7/417 G01S7/4802 G01S7/539 G01S13/04 G01S15/04 G01S15/06 G01S15/87 G01S15/88 G01S17/88 G01S17/89 G06K9/00624 G06K9/00832 B60R21/0152
European: B60N2/00C B60N2/02B4 B60N2/02B6 B60N2/02B6W B60N2/28 B60N2/28B2 B60N2/28P4 B60Q1/14C1B B60R21/013 B60R21/015 B60R25/25 B60R25/25B B60R25/25D B60R25/25F G01S15/87 G01S15/88 G01S17/88 G01S7/41D G01S7/48A G01S7/539 G06K9/00H G06K9/00V G06K9/00V7 L60N2/02B6S L60Q300/410 L60Q300/420 L60R21/0134 L60R21/015G6D L60R21/015G6F L60R21/015G6H L60R21/01H3Y L60R22/20R S01S13/04 S01S15/04 S01S15/06 S01S17/89
US: 250/221 250/221P 250/578.1 348/243 367/137 382/103 701/45 701/45P

Family:

Publication number	Publication date	Application number	Application date
US2005131607 AA	20050616	US20050025501	20050103
US2006208169 AA	20060921	US20040931288	20040831
US7983817 BB	20110719	US20050025501	20050103

Priority:

US19920878571 19920505
US19930040978 19930331
US19940239978 19940509
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US20040534926P 20040108
US20040805903 20040322
US20040931288 20040831
US20040940881 20040913
US20050025501 20050103

Probable Assignee: AMERICAN VEHICULAR SCIENCES LLC

Assignee(s) (std): AUTOMOTIVE TECH INT ; BREED DAVID S ; DUVALL WILBUR E ; JOHNSON WENDELL C

Assignee(s): AMERICAN VEHICULAR SCIENCES LLC ; AUTOMOTIVE TECHNOLOGIES INT ; AUTOMOTIVE TECHNOLOGIES INT INC ; AUTOMOTIVE TECHNOLOGIES INTERNATINOAL INC ; AUTOMOTIVE TECHNOLOGIES INTERNATIONAL INC

Inventor(s) (std): BREED DAVID S ; DUVALL WILBUR E ; JOHNSON WENDELL C

Inventor(s): DUVALL WILBUR ; JOHNSON WENDELL ; BREED DAVID

Agent(s): BRIAN ROFFE ESQ; BRIAN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2005131607 AA	20050616	LSPB	+	published / reissued	
US2005131607 AA	20110629	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE

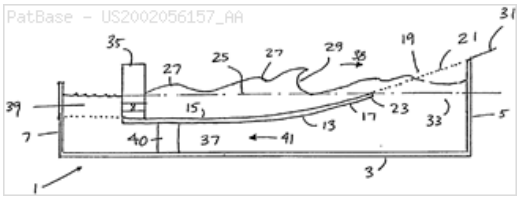
US2006208169 AA	20060921	LSPB	+	published / reissued	
US7983817 BB	20110719	LSGT	+	granted / extensions (spc, cpc, pte)	
US7983817 BB	20050103	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AUTOMOTIVE TECHNOLOGIES INTERNATIONAL INC., NEW JE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BREED, DAVID S.; REEL/FRAME:016167/0895 EFFECTIVE DATE : 20041230
US7983817 BB	20110629	LSGT	PAT1	Patented Case	
US7983817 BB	20120410	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : AMERICAN VEHICULAR SCIENCES LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:AUTOMOTIVE TECHNOLOGIES INTERNATIONAL, INC.; REEL/FRAME:028023/0087 EFFECTIVE DATE : 20120405
US7983817 BB	20150304	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7983817 BB	20190311	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US7983817 BB	20190826	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US7983817 BB	20190826	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7983817 BB	20190826	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7983817 BB	20190917	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190719
US7983817 BB	20280116	PEXP		Calculated Patent Term Expiry (PTA 1108 days)	

66) Family number: 42462408 (US2002056157A)

Title: Method and apparatus for controlling break points and reducing rip currents in wave **pools**

Abstract: The invention relates to a wave **pool** wherein a portion of the floor and/or beach is provided with a grated section. With the grated section extending along the beach, the grates will allow water to pass into a cavity, wherein backflows are eliminated and rip currents are avoided. With the grated section extending along the floor, the grated section is able to change the effective depth of the **pool** floor at that location, thereby altering the wave formation characteristics. One or more channels can be provided to circulate water away from the cavity toward the other end of the **pool**, which helps keep the **pool** in substantial equilibrium.

Classifications:
International (IPC 8-9): E04H4/00 (Advanced/Invention); E04H4/00 (Core/Invention)
International (IPC 1-7): A47K3/10
CPC: A63B69/0093 E04H4/0006
European: E04H4/00A K63B69/00U
US: 4/491 405/79



Family:

Publication number	Publication date	Application number	Application date
AU2002226894 AA	20020527	AU20020226894	20011116
AU2002226894 BB	20060810	AU20020226894	20011116
AU2002226894 CA	20120920	AU20020226894	20011116
AU2006235932 AA	20061130	AU20060235932	20061109
AU2006235932 BB	20081023	AU20060235932	20061109
AU2009200241 AA	20090212	AU20090200241	20090122
AU2009200241 BB	20120913	AU20090200241	20090122
US2002056157 AA	20020516	US20010987821	20011116
US2003009821 AA	20030116	US20020243842	20020916
US6460201 BA	20021008	US20010987821	20011116
US6738992 BB	20040525	US20020243842	20020916
WO0239862 A1	20020523	WO2001US43114	20011116

Priority:

US20000248543P 20001116 AU20020226894 20011116 US20010987821 20011116
WO2001US43114 20011116 US20020243842 20020916 AU20060235932 20061109
AU20090200241 20090122

Probable Assignee: LOCHTEFELD THOMAS

Assignee(s): (std): LOCHTEFELD THOMAS ; LOCHTEFELD THOMAS J ; THOMAS LOCHTEFELD

Assignee(s): THOMAS J LOCHTEFELD

Inventor(s): (std): LOCHTEFELD THOMAS J

Inventor(s): THOMAS J LOCHTEFELD

Agent(s): SHELSTON IP PTY LTD; HODGKINSON MCINNES PATENTS; DAVIES COLLISON CAVE; SHELSTON IP

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 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 SD SE SG SI SK SL SN SZ TD TG TJ TM 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
AU2002226894 AA	20020527	LSPB	+	published / reissued	
AU2002226894 BB	20060810	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2002226894 BB	20061207	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2002226894 BB	20120510	LSRE	DA2	APPLICATIONS FOR AMENDMENT SECTION 104	TEXT : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 19 APR 2012.
AU2002226894 BB	20211116	PEXP		Calculated Patent Term Expiry	
AU2002226894 CA	20120920	LSRE	DA3	AMENDMENTS MADE SECTION 104	TEXT : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 19 APR 2012
AU2006235932 AA	20061130	LSPB	+	published / reissued	
AU2006235932 BB	20081023	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2006235932 BB	20090219	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD	

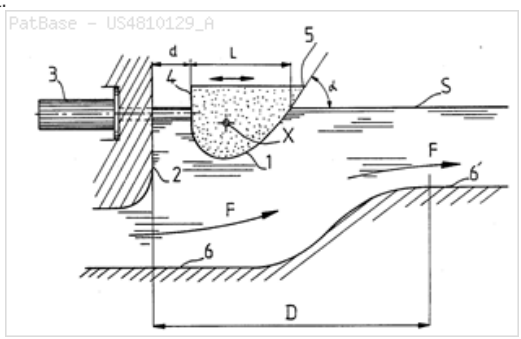
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AU2006235932 BB	20261109	PEXP		Calculated Patent Term Expiry	
AU2009200241 AA	20090212	LSPB	+	published / reissued	
AU2009200241 AA	20100610	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
AU2009200241 BB	20120913	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2009200241 BB	20130117	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2009200241 BB	20290122	PEXP		Calculated Patent Term Expiry	
US2002056157 AA	20020516	LSPB	+	published / reissued	
US2002056157 AA	20020919	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2003009821 AA	20030116	LSPB	+	published / reissued	
US2003009821 AA	20040506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US6460201 BA	20021008	LSGT	+	granted / extensions (spc, cpc, pte)	
US6460201 BA	20020919	LSGT	PAT1	Patented Case	
US6460201 BA	20060327	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6460201 BA	20100407	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6460201 BA	20140407	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6460201 BA	20211116	PEXP		Calculated Patent Term Expiry	
US6738992 BB	20040525	LSGT	+	granted / extensions (spc, cpc, pte)	
US6738992 BB	20040506	LSGT	PAT1	Patented Case	
US6738992 BB	20071115	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6738992 BB	20120522	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6738992 BB	20151124	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6738992 BB	20220916	PEXP		Calculated Patent Term Expiry	
WO0239862 A1	20020523	LSPB	+	published / reissued	
WO0239862 A1	20030613	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002226894 COUNTRY OF REF DOCUMENT : AU
WO0239862 A1	20030925	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0239862 A1	20040102	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF COUNTRY CODE : WO
WO0239862 A1	20060117	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO0239862 A1	20060117	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	TEXT : JP

67) Family number: 2884429 (US4810129A)

Title: Arrangement for generating waves in a body of water

Abstract: An arrangement for generating an **artificial** swell in a body of liquid contained in a container, such as a marine experimentation tank, a swimming **pool**, or the like, includes an elongated float parallel to a rear wall of the container and having such a cross section that a rear wall of the float is substantially vertical and generally parallel to the rear wall of the container and a front portion of the float has a nose-shaped configuration. A mechanical device is connected to the float and is operative for imparting an alternating horizontal motion to the float.

Classifications:
International (IPC 8-9): A47K3/10 E04H4/00 F04D35/00 (Advanced/Invention);
A47K3/10 E04H4/00 F04D35/00 (Core/Invention)
International (IPC 1-7): E02B1/00 E02B1/02 E02B3/00 E02B5/04 E04H3/18 F04D35/00
CPC: E02B1/006 E02B1/02 E04H4/0006
European: A47K3/10 E04H4/00A
US: 4/491 405/79



Family:

Publication number	Publication date	Application number	Application date
AT54354 E	19900715	AT19860440104T	19861201
BRPI8606163 A	19870922	BR1986PI06163	19861211
CA1278926 A1	19910115	CA19860525016	19861211
DE3672483 D1	19900809	DE19863672483	19861201
EP0236653 A1	19870916	EP19860440104	19861201
EP0236653 B1	19900704	EP19860440104	19861201
ES2017639 B3	19910301	ES19860440104T	19861201
FR2602012 A1	19880129	FR19850018454	19851211
FR2602012 B1	19881007	FR19850018454	19851211
FR2607875 A2	19880610	FR19860017113	19861204
FR2607875 B2	19890317	FR19860017113	19861204
FR2607876 A2	19880610	FR19860017314	19861209
FR2607876 B2	19900720	FR19860017314	19861209
IL80882 A0	19870331	IL19860080882	19861205
IL80882 A1	19901105	IL19860080882	19861205
IL83540 A0	19880131	IL19870083540	19870814
IN167898 A	19910105	IN1986DE01079	19861209
KR19870006319 A	19870710	KR19860010600	19861211
US4810129 A	19890307	US19870055792	19870601

Priority:

FR19850018454 19851211 EP19860440104 19861201 EP19860440104 19861201
FR19860017113 19861204 FR19860017314 19861209 CA19860525016 19861211

Probable Assignee: PRINCIPIA RECH DEV

Assignee(s): (std): GUEVEL PIERRE ; LANDEL ERIC ; PRINCIPIA RECH DEV ; PRINCIPIA RECH DEV SA

Assignee(s): PRINCIPIA RECHERCHE DEVELOPMENT SA ; PRINCIPIA RECHERCHE DEVELOPPEMEN ; PRINCIPIA RECHERCHE DEVELOPPEMENT S A ; PRINCIPIA RECHERCHE DEVELOPPEMENT SA ; PRINCIPIA RECHERCHE DEVELOPPEMENT S A VALBONNE FR

Inventor(s): (std): LANDEL ERIC ; LANDEL ERIC LES TERRASSES D AN ; GUEVEL PIERRE ; LANDEL ERICELES TERRASSES D ANTIBES BT P 5

Inventor(s): PIERRE GUEVEL ; PIERRE GUEVEL ET ERIC LANDEL ; GUEVEL PIERRE F 06740 CHATEAUNEUF DE GRASSE FR ; LANDEL ERIC LES TERRASSES D ANTIBES 070400236653FR ; LANDEL ERIC LES TERRASSES D ANTIBES BT ; LANDEL ERIC LES TERRASSES D ANTIBES BT F 06600 ANT ; LANDEL ERIC LES TERRASSES D ANTIBES BT P 5 ; LANDEL ERICALES TERRASSES D ANTIBES BT P 5 ; ERIC LANDEL

Agent(s): BKP GP; EITAN PEARL LATZER AND COHEN ZEDEK

Designated states: AT BE CH DE ES GB GR IT LI LU NL SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT54354 E	19900715	LSGT	+	granted / extensions (spc, cpc, pte)	
AT54354 E	19910115	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT54354 E	20061201	PEXP		Calculated Patent Term Expiry	
BRPI8606163 A	19870922	LSPB	+	published / reissued	
CA1278926 A1	19910115	LSGT	+	granted / extensions (spc, cpc, pte)	

CA1278926 A1	19930717	LSLE	-MKLA	LAPSED	
CA1278926 A1	20080115	PEXP		Calculated Patent Term Expiry	
DE3672483 D1	19910801	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE3672483 D1	19931209	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
EP0236653 A1	19870916	LSPB	+	published / reissued	
EP0236653 A1	19880504	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19880226
EP0236653 A1	19890412	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 19890227
EP0236653 B1	19900704	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0236653 B1	19900704	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT LAPSED DATE : 19900704
EP0236653 B1	19900704	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NL LAPSED DATE : 19900704
EP0236653 B1	19900704	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SE LAPSED DATE : 19900704
EP0236653 B1	19900704	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 19900704
EP0236653 B1	19900704	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 19900704
EP0236653 B1	19901217	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	REF COUNTRY CODE : EP
EP0236653 B1	19901231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : BE LAPSED DATE : 19901231
EP0236653 B1	19901231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : CH LAPSED DATE : 19901231
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EP0236653 B1	19910630	LSLE	-BERE	BE: LAPSED	PARTYTYPE : OWNER REF COUNTRY CODE : EP OWNER : S.A. PRINCIPIA RECHERCHE DEVELOPPEMENT EFFECTIVE DATE : 19901231
EP0236653 B1	19910830	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0236653 B1	19911219	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 19911219 YEAR OF FEE PAYMENT : 6
EP0236653 B1	19911230	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 19911230 YEAR OF FEE PAYMENT : 6
EP0236653 B1	19920108	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 19920108 YEAR OF FEE PAYMENT : 6
EP0236653 B1	19921201	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB LAPSED DATE : 19921201
EP0236653 B1	19921202	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF EXPIRATION OF PROTECTION LAPSED DATE : 19921202
EP0236653 B1	19930728	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 19921201
EP0236653 B1	19930901	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE LAPSED DATE : 19930901
EP0236653 B1	20010401	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20010301
EP0236653 B1	20061201	PEXP		Calculated Patent Term Expiry	
ES2017639 B3	19910301	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2017639 B3	20061201	PEXP		Calculated Patent Term Expiry	
FR2602012 A1	19880129	LSPB	+	published / reissued	
FR2602012 B1	19881007	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2602012 B1	19971031	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2602012 B1	20051211	PEXP		Calculated Patent Term Expiry	
IL80882 A1	19901105	LSPB	+	published / reissued	
IN167898 A	19910105	LSPB	+	published / reissued	
KR19870006319 A	19870710	LSPB	+	published / reissued	
US4810129 A	19890307	LSGT	+	granted / extensions (spc, cpc, pte)	
US4810129 A	19870601	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRINCIPIA RECHERCHE DEVELOPPEMENT S.A., PLACE SOPH OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNORS:GUEVEL, PIERRE; LANDEL, ERIC; REEL/FRAME:004719/0022; SIGNING DATES FROM

US4810129 A	19890109	LSGT	PAT1	Patented Case	
US4810129 A	19930307	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4810129 A	19930518	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19930307
US4810129 A	20180130	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US4810129 A	20180130	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

68) Family number: 75288434 (US2019232180A)

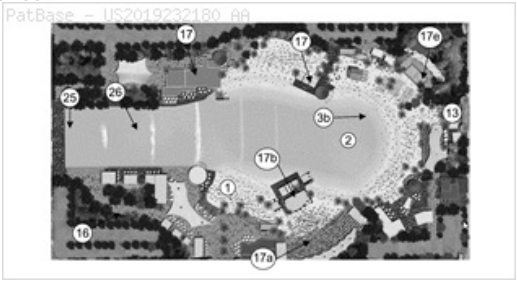
Title: PUBLICLY ACCESSIBLE URBAN BEACH ENTERTAINMENT COMPLEX INCLUDING A SURF FEATURE WITH A CENTERPIECE MAN-MADE TROPICAL-STYLE LAGOON AND METHOD FOR PROVIDING EFFICIENT UTILIZATION OF LIMITED USE LAND

Abstract: A publicly accessible urban beach entertainment complex is disclosed, with a man-made tropical, pristine-clear lagoon as the centerpiece of the complex. The lagoon includes a surf feature and surrounding the lagoon are entertainment, educational, sports, and commercial facilities. The complex has a controlled public access and provides the look and feel of a tropical beach with clear waters and sandy beaches. In addition a method for efficiently utilizing facilities and land that are vacant, underutilized, have limited uses, or that are contiguous to or nearby recreational, educational, sports, or commercial venues is disclosed. The method providing a publicly accessible urban beach entertainment complex with a centerpiece man-made tropical-style pristine-clear lagoon having a surf feature. The method allows for generating revenue and increasing efficiency by pairing vacant sites, underutilized sites, limited use land, or sites that are contiguous to entertainment, educational, sports, and/or commercial venues with urban beach entertainment complexes. The complex preferably has a controlled public access, thereby allowing entrance upon payment of a fee.

Classifications:

International (IPC 8-9): A63G31/00 A63J1/00 B63B35/44 C02F1/00 C02F1/50 C02F103/00 C02F103/42 E02B1/00 E02B17/00 E02B3/06 E02B3/20 E04B1/342 E04H14/00 E04H3/00 E04H3/02 E04H3/22 E04H4/00 E04H4/12 E04H4/14 E04H4/16 F24V40/00 G06Q99/00 G07C9/02 (Advanced/Invention);
C02F103/00 C02F103/42 (Advanced/Non-invention)

CPC: G06Q99/00 C02F1/004 C02F1/50 C02F2103/42 C02F2201/007 C02F2303/04 E04B1/342 E04H3/02 E04H3/14 E04H3/22 E04H4/0006 E04H4/1218 E04H4/1281 E04H4/144 E04H17/00 E06B11/02 E06B11/08 A63G31/007 A63J1/00 A63K1/00 E02B1/00 E02B3/20 E04B2001/0061 E04H4/1245 E04H4/129 E04H4/148 E04H4/16 F24V40/00 G07C9/02



Family:

Publication number	Publication date	Application number	Application date
US2019232180 AA	20190801	US20180990314	20180525
US2019236744 AA	20190801	US20180990141	20180525
WO19150159 A1	20190808	WO2018IB01084	20180821
WO19150160 A1	20190808	WO2018IB01089	20180821

Priority:

US20180625182P 20180201 US20180625190P 20180201 US20180639211P 20180306
US20180990141 20180525 US20180990314 20180525

Probable Assignee: CRYSTAL LAGOONS CURACAO BV

Assignee(s): (std): CRYSTAL LAGOONS CURACAO BV

Inventor(s): (std): FISCHMANN FERNANDO BENJAMIN ; FISCHMANN TORRES FERNANDO

Inventor(s): FISCHMANN TORRES FERNANDO BENJAMIN

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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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
US2019232180 AA	20190801	LSPB	+	published / reissued	
US2019232180 AA	20190419	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CRYSTAL LAGOONS (CURACAO) B.V., CURACAO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:FISCHMANN, FERNANDO BENJAMIN; REEL/FRAME:048951/0039 EFFECTIVE DATE : 20190415
US2019232180 AA	20190716	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2019236744 AA	20190801	LSPB	+	published / reissued	
US2019236744 AA	20190419	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CRYSTAL LAGOONS (CURACAO) B.V., CURACAO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:FISCHMANN, FERNANDO BENJAMIN; REEL/FRAME:050325/0888 EFFECTIVE DATE : 20190415
US2019236744 AA	20190709	LSES	NFA1	Non Final Action Mailed	

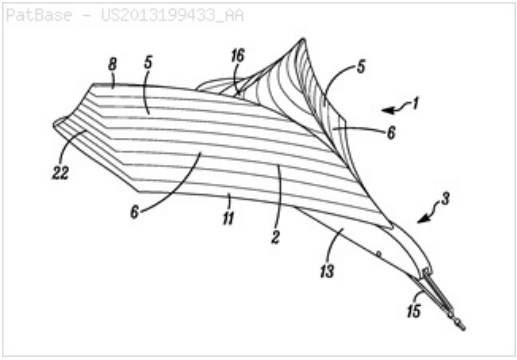
US2019236744 AA	20190826	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications
WO19150159 A1	20190808	LSPB	+	published / reissued
WO19150160 A1	20190808	LSPB	+	published / reissued

69) Family number: 54512447 (US2013199433A)

Title: METHOD AND APPARATUS FOR ADJUSTING AND STABILIZING A **WAVE GENERATOR** TRAVELING THROUGH A BODY OF WATER

Abstract: The invention relates to a positively buoyant **wave generator** adapted to travel through a body of water, wherein specific features are incorporated into the **wave generator** to help create and off-set various hydrodynamic forces that can act on the **wave generator** as it travels through the water. Rather than eliminating these hydrodynamic forces, the invention seeks to create and counter these forces, which has been found to help keep the **wave generator** in substantial equilibrium. For example, a connecting member can be extended forward and below the **wave generator**'s center of buoyancy, such that as the **wave generator** is pulled, it creates an upward force that helps to counter a downward force acting on the front end of the **wave generator** as water is lifted up. Various internal moments can also be created and off-set by adjusting the center of gravity and/or center of buoyancy and using these forces to help keep the **wave generator** in substantial equilibrium. Different configurations, surfaces and curvatures can also be used to help create additional counteracting and stabilizing forces and moments.

Classifications:
International (IPC 8-9): A63B69/00 B63B21/56 B63B35/85 B66D1/20 F03B13/14 (Advanced/Invention);
B63B1/16 B63B21/16 B63B43/06 (Advanced/Non-invention)
CPC: A63B69/0093 B63B21/56 B63B1/16 B63B21/16 B63B35/85 B63B43/06 B63B2035/855 B66D1/20 Y02E10/38
US: 1/1 114/242 405/79



Family:

Publication number	Publication date	Application number	Application date
AU2013214935 AA	20130808	AU20130214935	20130201
EP2820292 A1	20150107	EP20130743467	20130201
EP2820292 A4	20160406	EP20130743467	20130201
SG11201404533Q A1	20140828	SG20141104533	20130201
US2013199433 AA	20130808	US20130757130	20130201
US9144727 BB	20150929	US20130757130	20130201
WO13116683 A1	20130808	WO2013US24388	20130201

Priority:
US20120594447P 20120203 US20130757130 20130201 WO2013US24388 20130201

Probable Assignee: LOCHTEFELD THOMAS
Assignee(s): (std): LOCHTEFELD THOMAS ; LOCHTEFELD THOMAS J
Inventor(s): (std): LOCHTEFELD THOMAS J
Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; VOSSIUS AND PARTNER; J JOHN; SHIMAZAKI JOHN J
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
AU2013214935 AA	20130808	LSPB	+	published / reissued	
AU2013214935 AA	20160204	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
EP2820292 A1	20150107	LSPB	+	published / reissued	
EP2820292 A1	20150107	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140903
EP2820292 A1	20160406	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	EFFECTIVE DATE : 20160307
EP2820292 A1	20170315	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160901
SG11201404533Q A1	20140828	LSPB	+	published / reissued	
US2013199433 AA	20130808	LSPB	+	published / reissued	
US2013199433 AA	20150909	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE

US9144727 BB	20150929	LSGT	+	granted / extensions (spc, cpc, pte)	
US9144727 BB	20150909	LSGT	PAT1	Patented Case	
US9144727 BB	20190520	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US9144727 BB	20330701	PEXP		Calculated Patent Term Expiry (PTA 150 days)	
WO13116683 A1	20130808	LSPB	+	published / reissued	
WO13116683 A1	20140804	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13116683 A1	20140903	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2013743467 COUNTRY OF REF DOCUMENT : EP
WO13116683 A1	20140925	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013214935 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130201 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

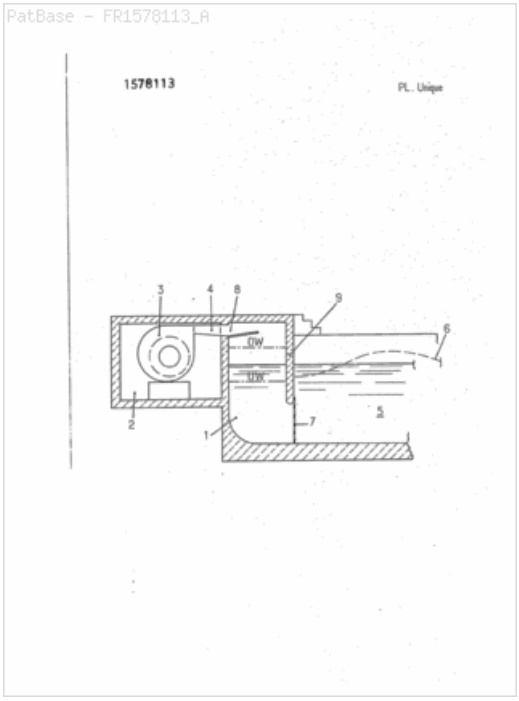
70) Family number: 647464 (FR1578113A)

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Abstract: Source: FR1578113A [FR] (Claim 1) 1) Un procede pour la generation de vagues dans des piscines ou des bassins de natation, remarquable, notamment, par les caracteristiques suivantes considerees separement ou en combinaisons: a) Une partie de la surface de l'eau est soumise directement a l'action d'une source d'air de pression. b) Un courant d'air, produit par une source d'air de pression, par exemple une soufflerie, est alternativement dirige, par periodes successives, sur deux parties voisines de la surface de l'eau du bassin, ce qui impartit a cette derniere un mouvement ondulatoire. c) Les masses, les frequences et les decalages de phases sont regles de maniere telle en synchronisme que les plus grandes hauteurs des vagues se produisent au milieu du bassin.

Machine translation: (Claim 1) 1) A method for generating waves in swimming **pools** or swimming **pools**, remarkable, especially, by the following characteristics considered separately or in combinations: a) A portion of the surface of the water is subjected directly has the action of a source of air pressure. b) A current of air, produced by a source of air pressure, for example a wind tunnel, is alternately directs, by successive periods, on two neighboring parts of the surface of the water of the basin, which imparts has this last wave motion. c) The masses, frequencies and phase shifts are adjusted so synchronously that the greatest wave heights occur in the middle of the basin.

Classifications:
International (IPC 8-9): E04H4/00 (Advanced/Invention); E04H4/00 (Core/Invention)
International (IPC 1-7): E04H3/18
CPC: E04H4/0006
European: E04H4/00A



Family:

Publication number	Publication date	Application number	Application date
FR1578113 A	19690814	FR19680155364	19680618

Priority:

FR19680155364 19680618

Legal status (INPADOC)

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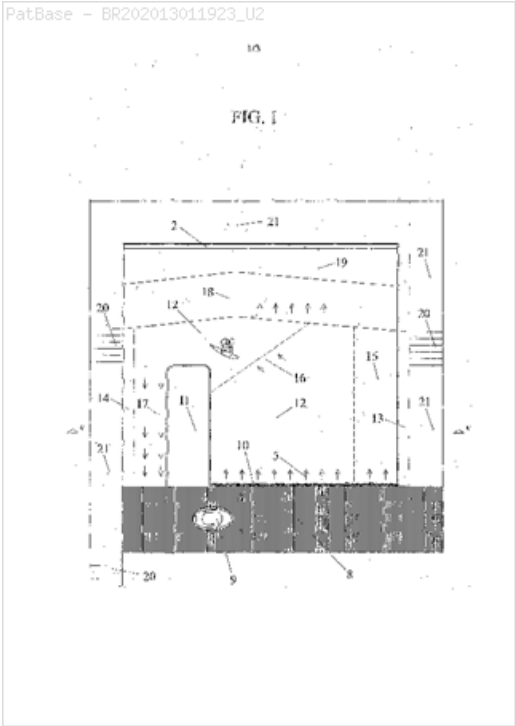
Patent	Date recorded	Event group	Code	Event	Details
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FR1578113 A	19870424	LSLE	-ST	NOTIFICATION OF LAPSE	
FR1578113 A	19880618	PEXP		Calculated Patent Term Expiry	

71) Family number: 59782467 (BR202013011923U)

Title: PISCINA DE ONDAS PORTATIL PARA ENTRETENIMENTO E AUXILIO NA PRATICA DE SURFE **POOL** PORTABLE ENTERTAINMENT AND AID IN WAVES OF SURF PRACTICE (Machine translation)

Abstract: Source: BR202013011923U [PT] 1 RESUMO "PISCINA DE ONDAS PORTATIL PARA ENTRETENIMENTO E AUXILIO NA PRATICA DO SURFE" A presente f atente de Modelo de Utilidade de uma piscina de ondas 5 portatil para entretenimento e auxilio na pratica do surfe tem por finalidade propiciar ao usuario uma maior praticidade no momento em que o mesmo deseja surfar, atraves de um sistema construtivo pre-fabricado que proporciona a formacao de ondas estacionarias ideais para tal atividade, e garante maior seguranca pela garantia de menos interferencias causadoras de instabilidades nas ondas. 10 A dita piscina de ondas e constituida por uma base (1), sobre a qual esta o reservatorio de agua (2). No reservatorio de agua (2) situam-se as motobombas (3) submersas na agua (5), sendo que na parte inferior da parede frontal (6) do reservatorio de agua (2) estao localizados os orificios (7) com tampa (22). Situada na parte frontal da piscina e sobre o reservatorio de agua (2) esta a plataforma frontal (8) dotada de Jacuzzi 15 (9) e conectada aos defletores (10), com estes se prolongando ate o piso de acesso (11) fixado na plataforma frontal (8). JA na porcao intermediaria da piscina encontra-se fixada a tampa ondulada (12) que coptoma o piso de acesso (11) ate o canal de retorno de agua (17), e esta conectada em sua parte posterior ao declinio acentuado (18) que se prolonga ate a superficie de coleta de agua (19). Caso haja a necessidade, as escadas 20 (20) e os pisos externos (21) podem ser conectados no entotno da piscina de ondas. **Machine translation:** 1 SUMMARY "**POOL** PORTABLE ENTERTAINMENT AND AID WAVES IN THE PRACTICE OF SURF" The f this watch of Utility Model a wave **pool** 5 portable entertainment and aid in the practice of surfing aims to provide the User a greater practicality in time when it wishes to surfing through a prefabricated building system which provides the formation of ideal standing waves for such activity, and ensures greater safety by ensuring least interference cause instabilities in the waves. 10 The said **pool** waves and constituted by a base (1), upon which this water tank (2). In the water tank (2) are located in motor pumps (3) submerged in the water (5), wherein the bottom of the front wall (6) of the water reservoir (2) are located the holes (7) with lid (22). Situated in front of the **pool** and the water reservoir (2) that the front platform (8) having Jacuzzi 15 (9) and connected to the baffles (10), these extending until the access floor (11) attached the front platform (8). In the intermediate **pool** porcao is fixed corrugated cover (12) coptoma access surface (11) until the water return channel (17) and is connected at its rear to the sharp decline (18) extends up to the surface water collection (19). If there is need, the stairs 20 (20) and external floors (21) can be connected in entotno the wave **pool**.

Classifications:
International (IPC 8-9): A47K3/10 E04H4/04
E04H4/12 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
BR202013011923 U2	20150630	BR20132011923U	20130514

Priority:
BR20132011923U 20130514

Probable Assignee:	FERREIRA FABIAN
Assignee(s): (std):	FERREIRA FABIAN
Assignee(s):	FABIAN FERREIRA
Inventor(s): (std):	FERREIRA FABIAN
Inventor(s):	FABIAN FERREIRA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BR202013011923 U2	20150630	LSPB	B03A	PUBLICATION OF AN APPLICATION: PUBLICATION OF A PATENT APPLICATION OR OF A CERTIFICATE OF ADDITION OF INVENTION	
BR202013011923 U2	20180313	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY	

				LAW
BR202013011923 U2	20180703	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)

72) Family number: 75511468 (WO19153067A1)

Title: MICROFLUIDIC DEVICES, SYSTEMS, INFRASTRUCTURES, USES THEREOF AND METHODS FOR GENETIC ENGINEERING USING SAME

Abstract: There are provided various microfluidics devices. Microfluidics devices that include a culture area for mixing a composition and an assay area for measuring enzyme activity of samples of the bacterial culture are for example provided. The assay area includes an optical density reader. The optical density reader includes a light emitting source and sensor to enable monitoring of the optical density of samples the bacterial culture. Microfluidic devices comprising a first plate comprising at least one hydrophilic site are also provided as well as methods of manufacture thereof. Methods for performing analyses of compositions on microfluidics devices comprising a plate assembly having a first plate and a second plate are also provided.

Classifications:
International (IPC 8-9): B81C1/00 C12M1/34 C12N15/00 C12P21/00 C12Q1/00 C12Q1/42 C12Q1/68 G01N1/00 G01N15/10 G01N21/59 G03F7/00 (Advanced/Invention)

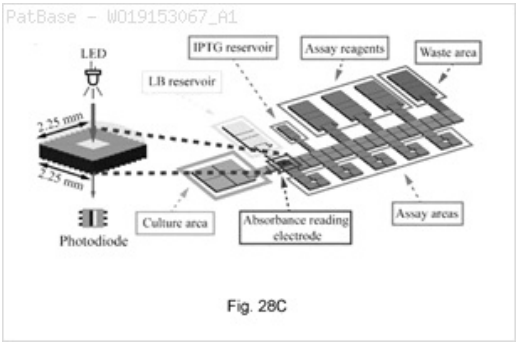


Fig. 28C

Family:

Publication number	Publication date	Application number	Application date
WO19153067 A1	20190815	WO2018CA51063	20180904

Priority:

US20180627022P 20180206 US20180693998P 20180704

Probable Assignee: VALORBEC SOC EN COMMANDITE

Assignee(s): (std)**:** VALORBEC SOC EN COMMANDITE

Inventor(s): (std)**:** SHIH STEVE ; HUSSER MATHIEU ; VO PHILIPPE ; SINHA HUGO

Agent(s): BERESKIN AND PARR LLP SENCRL SRL

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 DJ 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 JO JP KE KG KH KM KN KP KR KW 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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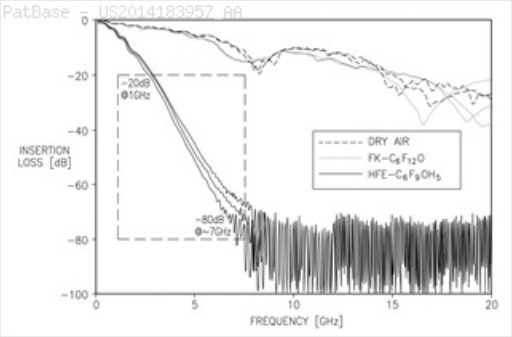
Patent	Date recorded	Event group	Code	Event	Details
WO19153067 A1	20190815	LSPB	+	published / reissued	

73) Family number: 54261470 (US2014183957A)

Title: FRAME (FORCED RECUPERATION, AGGREGATION AND MOVEMENT OF EXERGY)

Abstract: The present invention is directed to an apparatus for more efficient exergy and power usage in data centers. Denominated FRAME (standing for "Forced Recuperation, Aggregation and Movement of Exergy"), the apparatus is a power production and exergy management system (exergy being energy available to do useful work, as opposed to energy, which can be changed to a form, usually heat, rendering it unavailable). The apparatus integrates generally isothermal operation with phase-change and single-phase liquid cooling having variable operating temperatures and pressures, aided by a dynamically reconfigurable "thermal bus" comprising multi-fluid thermal fluid transport channels, virtual plumbing, and associated support devices. The apparatus minimizes exergy use through efficient operation and by recuperating and aggregating useful exergy that may then be dynamically repurposed to meet energy or power needs that would otherwise have to be met via external means.

Classifications:
International (IPC 8-9)**:** F01K13/00 F22B1/00 F28F13/00 G06F1/20 G06F19/00 H02J9/00 H04L29/06 H05K7/20 (Advanced/Invention)
CPC: H02J9/00 F01K13/006 F22B1/00 G06F1/206 H04L63/20 H05K7/20836 Y10T307/615 Y02D10/16
US: 307/64



Family:

Publication number	Publication date	Application number	Application date
EP2807347 A2	20141203	EP20120830905	20121231
US2014183957 AA	20140703	US20120732247	20121231
US9543787 BB	20170110	US20120732247	20121231
WO13102220 A2	20130704	WO2012US72333	20121231
WO13102220 A3	20130919	WO2012US72333	20121231

Priority:
US20110582182P 20111230 US20120732247 20121231 WO2012US72333 20121231

Probable Assignee: SCRUTINY INC
Assignee(s): (std)**:** DUCHESNEAU DAVID D ; SCRUTINY INC
Inventor(s): (std)**:** DUCHESNEAU DAVID D
Agent(s): CARTER STEPHEN JOHN; RICHARD T; P G SCOTT; FOSTER PEPPER PLLC; BORN PG SCOTT
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)

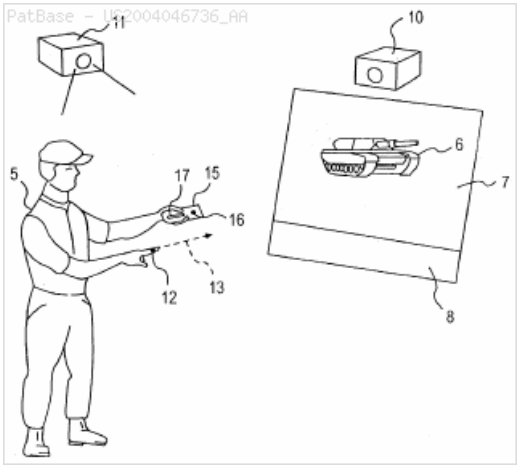
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Patent	Date recorded	Event group	Code	Event	Details
EP2807347 A2	20141203	LSPB	+	published / reissued	
EP2807347 A2	20141203	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140730
EP2807347 A2	20170104	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20161201
US2014183957 AA	20140703	LSPB	+	published / reissued	
US2014183957 AA	20161221	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US9543787 BB	20170110	LSGT	+	granted / extensions (spc, cpc, pte)	
US9543787 BB	20150812	LSES	NFA1	Non Final Action Mailed	
US9543787 BB	20161221	LSGT	PAT1	Patented Case	
US9543787 BB	20340612	PEXP		Calculated Patent Term Expiry (PTA 528 days)	
WO13102220 A2	20130704	LSPB	+	published / reissued	
WO13102220 A3	20140730	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2012830905 COUNTRY OF REF DOCUMENT : EP

74) Family number: 11839475 (US2004046736A)

Title: NOVEL MAN MACHINE INTERFACES AND APPLICATIONS

Abstract: Affordable methods and apparatus are disclosed for inputting position, attitude (orientation) or other object characteristic data to computers for the purpose of Computer Aided Design, Painting, Medicine, Teaching, Gaming, Toys, Simulations, Aids to the disabled, and internet or other experiences. Preferred embodiments of the invention utilize electro-optical sensors, and particularly TV Cameras, providing optically inputted data from specialized datum's on objects and/or natural features of objects. Objects can be both static and in motion, from which individual datum positions and movements can be derived, also with respect to other objects both fixed and moving. Real-time photogrammetry is preferably used to determine relationships of portions of one or more datums with respect to a plurality of cameras or a single camera processed by a conventional PC.



Classifications:

International (IPC 8-9): A61B3/02 A61B5/11 A61B5/12 A61B6/00 A63B24/00 A63B71/00 A63F13/00 A63F13/02 A63F13/04 A63F13/06 A63F3/00 A63F3/02 A63F7/02 A63F9/24 B60K B60K1/00 B60K35/00 B60K37/02 B60K37/06 B60Q1/00 B60R11/02 G01C21/36 G01D1/00 G01D13/00 G01F G01F1/708 G01S5/16 G05B G05B11/01 G05B15/00 G05B19/042 G06F G06F15/00 G06F15/16 G06F17/00 G06F17/30 G06F19/00 G06F3/00 G06F3/01 G06F3/03 G06F3/033 G06F3/0354 G06F3/038 G06F3/041 G06F3/042 G06F3/043 G06F3/045 G06F3/048 G06F3/0484 G06F3/0488 G06K11/06 G06K9/00 G06M11/04 G06T17/40 G06T7/00 G08B21/00 G08B6/00 G08C21/00 G09G5/00 G09G5/08 G09G5/10 G10H1/00 G10L21/00 H04B3/36 H04N5/225 H04N5/64 H04N7/18 H04N9/31 H04Q9/00 (Advanced/Invention);
A63F9/24 B60R11/00 G06F3/041 (Advanced/Non-invention);
A63B71/00 A63F3/02 A63F7/02 B60K37/04 B60Q1/00 G01D1/00 G01S5/00 G05B11/01 G05B15/00 G06F15/00 G06F15/16 G06F17/00 G06F17/30 G06F19/00 G06F3/033 G06F3/041 G06F3/048 G06K9/00 G06M11/00 G09G5/00 G09G5/08 G10L21/00 H04N5/225 H04N5/64 H04N7/18 H04N9/31 (Core/Invention);
A63F9/24 G06F3/041 (Core/Non-invention);
B60K (Subclass/Invention)

International (IPC 1-7): A63F9/24 B60K1/00 G06F19/00 G06K9/00 G09G5/00 G09G5/08

CPC: A63F7/027 A63F2003/00974 A63F2009/243 A63F2009/2435 A63F2009/2457 G06F3/0423 G06F2203/0381 H04N9/3129 G06F2203/04808 Y10S128/92 Y10S128/921 Y10S128/922 A63F2300/8023 G06F3/01 G06K9/00335 G06K9/2018 G06T2207/10021 G06T2207/30196 G06T2207/30204 A63B24/0062 A63B71/06 A63B24/0075 G06F19/3475 G06F19/3481 G06Q30/06 A63F2300/1043 A63F2300/1062 A63F2300/1081 A63F2300/6045 A63F2300/69 G06F3/038 G06F3/0428 G06F19/3418 G10H1/0008 G10H2220/321 G06T2219/2016 G06T2219/2021 G06F3/0346 G06F17/5095 G06F2217/32 G05B19/0423 A47L15/0063 G01F23/292 G05B2219/23031 G05B2219/2643 G05B2219/31048 A63F2300/1093 F24C7/082 H05B6/6435 H05B2213/04 Y10S482/90 Y10S482/901 G06F3/042 B60K37/02 G06F3/0421 G06F3/04886 G01C21/365 G01C21/265 G06T19/20 G06F2203/04109 G06F3/012 G06F3/014 A63F13/213 A63F13/245 A63F13/803 A63F13/428 A63F13/2145 A63F2300/1075 A63F2300/1087 A63F2300/30 A63F2300/308 A63F2300/8011 G07F17/3297 G06F3/0304 G06F3/0325 G06F3/011 A63F3/00643 A63F7/0005 A63F2009/0012 A63F2009/2419 A63F2009/2433 A63F2250/50 A63F2300/1068 G06F2203/04101 G01S5/16 G01C21/3664 G06F3/0312 G06F3/03545 G06F3/04847 G06F3/0488 G06F2203/04108 G06F2203/04809 G06T7/246 G06T7/593 G06T7/73 B33Y50/00 G06F3/016 G06F3/017 G06F3/0416 G06F3/04883 G16H40/63 G16H50/50 G16H20/30 A63F13/06 A63F13/10 A63F13/00 A63F13/02 A63F13/04 B60K2370/126 B60K2370/143 B60K2370/1438 B60K2370/145 B60K2370/152 B60K2370/155 B60K2370/122 B60K2370/1868 B60K2370/21 B60K2370/774 B60K2370/736 B60K2370/11 B60K2370/334 B60K2370/146 B60K2370/148 B60K2370/55 B60K35/00 B60K37/06 B60R11/02 B60R11/0235 B60R2011/0005 B60R2011/0007 B60R2011/0012 B60R2011/0028 B60R2011/0029 B60R2011/0042 B60R2011/0094 G06F3/0425 G06F3/0426 B60K2370/111 B60K2370/133 B60K2370/1468 B60K2370/1472 B60K2370/1476 B60K2370/197 B60K2370/341 B60K2370/566

European: A63B71/06 A63F13/00 A63F13/02 A63F13/04 A63F13/06 A63F13/10 A63F3/00E A63F7/02P1 B60K35/00 B60K37/02 B60K37/06 B60R11/02 B60R11/02E2 G01C21/26C G01C21/36 G01C21/36G7 G01C21/36K G01F23/292 G01S5/16 G05B19/042N G06F17/50V G06F19/34A G06F19/34H G06F19/34M G06F19/34N G06F3/00B8 G06F3/00B8G G06F3/01 G06F3/01B G06F3/01F G06F3/01G G06F3/033D G06F3/033Z2 G06F3/033Z8E G06F3/0346 G06F3/0354N G06F3/038 G06F3/03H G06F3/03H2 G06F3/03H6 G06F3/041T G06F3/042 G06F3/042B G06F3/042B4 G06F3/042C G06F3/042C1 G06F3/042P G06F3/0484P G06F3/0488 G06F3/0488G G06F3/0488T G06K9/00G G06K9/20C G06Q30/06 G06T19/00 G06T19/00R G06T7/00P1 G06T7/00R7S G06T7/20C G07F17/32P10 G10H1/00M H04N9/31B K63B24/00H K63F250/50 K63F3/00E K63F3/00Q5 K63F300/10M K63F300/10S K63F300/10T K63F300/10T1 K63F300/10V K63F300/10X K63F300/10X1 K63F300/30 K63F300/30M K63F300/60N K63F300/69 K63F300/80B K63F300/80E K63F7/00B K63F9/00D2 K63F9/24N2B K63F9/24N3 K63F9/24N3A1 K63F9/24N3B K63F9/24P2S L60K350/10J3 L60K350/10J5 L60K350/10J5D L60K350/10N1 L60K350/10N4 L60K350/20C L60K350/90A L60K350/92L3 L60K350/96A L60R11/00P1A L60R11/00P1B L60R11/00P1F L60R11/00P1L L60R11/00P1M L60R11/00R L60R11/00T S05B219/23031 S05B219/2643 S05B219/31048 S06F19/34C S06F19/34H S06F19/34M S06F203/0381 S06F203/04101 S06F203/04108 S06F203/04109 S06F203/04808 S06F203/04809 S06F217/32 S06T207/10021 S06T207/30196 S06T207/30204 S10H220/321

US: 1/1 116/205 116/205S 128/920 128/921 128/922 178/18.01 178/18.09 273/237 273/274 307/10.1 340/407.1 340/407.100P 340/407.2 340/407.200P 340/425.5 340/425.500P 345/156 345/156P 345/156S 345/157 345/157P 345/158 345/158P 345/161 345/173 345/173P 345/173S 345/174 345/174P 345/175 345/175P 345/175S 345/177 345/177P 345/184 345/184S 345/419 345/690 345/7 345/7S 348/143 348/169 348/207.1 348/207.100S 348/373 348/373P 348/744 348/744P 348/744S 348/77 348/77S 348/837 348/837S 348/E5.024 348/E5.128 348/E5.137 348/E50.24S 348/E51.28S 348/E51.37S 348/E7.085 348/E70.85S 348/E9.025 348/E9.026 348/E90.25S 348/E90.26S 358/1.12 382/103 382/103P 382/104 382/107 382/154 382/176 382/181 382/312 463/1 463/10 463/16 463/30 463/31 463/31P 463/32 463/34 463/36 463/36P 463/36S 463/37 463/4 463/5 463/7 463/8 482/5 482/8 482/8P 482/9 482/900 482/901 600/476 600/558 600/559 600/595 700/17 700/18 700/19 700/20 700/83 702/127 704/275 704/275S 704/E21.001 704/E21.001S 707/802 707/802S 707/E17.044 707/E17.044S 709/206 709/206S 715/702 715/702S 715/709 715/744 715/745 715/764 715/764P 715/788 715/789 715/810 715/811 715/833 715/833S 715/863 715/865

Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: GESTURE TECHNOLOGY PARTNERS LLC

Assignee(s): (std): PRYOR TIMOTHY R ; SMITH PETER ; PRYOR MARIE C ; PRYOR TIMOTHY ; SMITH PETER H ; MOTION GAMES LLC ; APPLE INC

Assignee(s): GESTURE TECHNOLOGY PARTNERS LLC ; APPLE INC CUPERTINO ; INCASA HEALTH LLC ; TACTILE FEEDBACK TECHNOLOGY LLC ; PSTP TECHNOLOGIES LLC

Inventor(s): (std): SMITH PETER H ; PRYOR MARIE C ; SMITH PETER ; PRYOR TIMOTHY ; PRYOR TIMOTHY R

Inventor(s): PRYOR TIMOTHY R TECUMSEH

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FREEHILLS PATENT ATTORNEY S; FPA PATENT ATTORNEYS PTY LTD; BARDEHLE PAGENBERG PARTNERSCHAFT MBB PATENTANWAELTE RECHTSANWAELTE; CALDERBANK THOMAS ROGER; LANG JOHANNES; BARTON RUSSELL GLEN; MARKS AND CLERK; NORTON ROSE FULBRIGHT HONG KONG; STITES AND HARBISON PLLC; WARNER NORCROSS AND JUDD LLP; APPLE C O MORRISON AND FOERSTER LLP LOS ANGELES; WARNER NORCROSS AND JUDD LLP,INTELLECTUAL PROPERTY GROUP; WARNER NORCROSS AND JUDD LLP INTELLECTUAL PROPERTY GROUP; DOUGLAS E; ROSS F; HUNT JR ROSS F; JACKSON DOUGLAS E; MORRISON AND FOERSTER LLP; KUBOTA GLENN M 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 YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2010249515 AA	20101125	LSPB	+	published / reissued	

AU2010249515 AA	20120119	LSPB	+	published / reissued	
AU2010249515 AA	20140821	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
AU2010249515 AA	20140821	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
CN102498442 A	20120613	LSPB	+	published / reissued	
CN102498442 A	20120613	LSPB	+C06	PUBLICATION	
CN102498442 A	20150506	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
EP1626877 A2	20060222	LSPB	+	published / reissued	
EP1626877 A2	20060222	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050923
EP1626877 A4	20110810	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	EFFECTIVE DATE : 20110711
EP1626877 A4	20120530	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20120430
EP1626877 A4	20130213	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20130114
EP1626877 A4	20130220	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20120430
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EP2213501 A2	20100804	LSPB	+	published / reissued	
EP2213501 A3	20130116	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20121105
EP2213501 A3	20130306	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20130206
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EP2433188 A2	20160309	LSDW	-R18D	APPLICATION DEEMED TO BE WITHDRAWN (CORRECTED)	EFFECTIVE DATE : 20151001
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EP2581248 A1	20160622	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	EFFECTIVE DATE : 20160525
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EP2581248 B1	20240331	PEXP		Calculated Patent Term Expiry	
HK1168914 A1	20130111	LSPB	+	published / reissued	
HK1183849 A1	20140110	LSPB	+	published / reissued	
HK1183849 B	20170901	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1183849 B	20330925	PEXP		Calculated Patent Term Expiry	
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JP2012527847 T2	20130425	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130424
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JP2012527847 T2	20140306	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20140305
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KR20120011892 A	20111219	LSES	A201	REQUEST FOR EXAMINATION	
KR20120011892 A	20120502	LSRE	AMND	AMENDMENT	
KR20120011892 A	20130320	LSES	-E902	NOTIFICATION OF	

				REASON FOR REFUSAL	
KR20120011892 A	20130620	LSRE	AMND	AMENDMENT	
KR20120011892 A	20131030	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20120011892 A	20140129	LSRE	AMND	AMENDMENT	
US2004046736 AA	20040311	LSPB	+	published / reissued	
US2005064936 AA	20050324	LSPB	+	published / reissued	
US2005129273 AA	20050616	LSPB	+	published / reissued	
US2005276448 AA	20051215	LSPB	+	published / reissued	
US2006202953 AA	20060914	LSPB	+	published / reissued	
US2006202953 AA	20110104	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOTION GAMES, LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SMITH, PETER H.; PRYOR, TIMOTHY R.; REEL/FRAME:025577/0701 EFFECTIVE DATE : 20100805
US2006202953 AA	20120118	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2006267963 AA	20061130	LSPB	+	published / reissued	
US2006267963 AA	20100421	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2008024463 AA	20080131	LSPB	+	published / reissued	
US2008024463 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2008024463 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2008024463 AA	20131203	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2008088587 AA	20080417	LSPB	+	published / reissued	
US2008088587 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2008088587 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2008088587 AA	20130918	LSAL	APL5	On Appeal -- Awaiting Decision by the Board of Appeals	
US2008088587 AA	20160127	LSAL	BDR1	Board of Appeals Decision Rendered	
US2008088587 AA	20160402	LSWD	-ABD1	Abandoned -- After Examiner's Answer	

				or Board of Appeals Decision	
US2008122786 AA	20080529	LSPB	+	published / reissued	
US2008122786 AA	20110104	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOTION GAMES, LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SMITH, PETER H.; PRYOR, TIMOTHY R.; REEL/FRAME:025577/0481 EFFECTIVE DATE : 20100805
US2008122786 AA	20130306	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2008122799 AA	20080529	LSPB	+	published / reissued	
US2008122799 AA	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US2008122799 AA	20130930	LSAL	APL5	On Appeal -- Awaiting Decision by the Board of Appeals	
US2008122799 AA	20170206	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2008122805 AA	20080529	LSPB	+	published / reissued	
US2008122805 AA	20110928	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2008125289 AA	20080529	LSPB	+	published / reissued	
US2008129704 AA	20080605	LSPB	+	published / reissued	
US2008129704 AA	20110615	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2008129707 AA	20080605	LSPB	+	published / reissued	
US2008129707 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2008129707 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2008129707 AA	20140626	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2008132332 AA	20080605	LSPB	+	published / reissued	
US2008144886 AA	20080619	LSPB	+	published / reissued	
US2008211779 AA	20080904	LSPB	+	published / reissued	
US2008211779 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2008211779 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,

					CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2008211779 AA	20161116	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2009233769 AA	20090917	LSPB	+	published / reissued	
US2009233769 AA	20110302	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOTION GAMES, LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:025887/0059 EFFECTIVE DATE : 20100806
US2009233769 AA	20121017	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2009267921 AA	20091029	LSPB	+	published / reissued	
US2009267921 AA	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US2009273563 AA	20091105	LSPB	+	published / reissued	
US2009273563 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009273563 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009273563 AA	20130619	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2009273574 AA	20091105	LSPB	+	published / reissued	
US2009273574 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009273574 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009273574 AA	20130102	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2009273575 AA	20091105	LSPB	+	published / reissued	
US2009273575 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330

US2009273575 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009300531 AA	20091203	LSPB	+	published / reissued	
US2009300531 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009300531 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009300531 AA	20120704	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2009322499 AA	20091231	LSPB	+	published / reissued	
US2009322499 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009322499 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2009322499 AA	20130102	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010182136 AA	20100722	LSPB	+	published / reissued	
US2010182136 AA	20150126	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010182137 AA	20100722	LSPB	+	published / reissued	
US2010182137 AA	20131216	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010182236 AA	20100722	LSPB	+	published / reissued	
US2010182236 AA	20140127	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010190610 AA	20100729	LSPB	+	published / reissued	
US2010190610 AA	20110302	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PRYOR, TIMOTHY R., OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, MARIE C.; REEL/FRAME:025884/0742 EFFECTIVE DATE : 20100731
US2010190610 AA	20110302	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOTION GAMES, LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:025885/0970 EFFECTIVE DATE : 20100806

US2010194976 AA	20100805	LSPB	+	published / reissued	
US2010194976 AA	20131101	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010201893 AA	20100812	LSPB	+	published / reissued	
US2010201893 AA	20140212	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2010231506 AA	20100916	LSPB	+	published / reissued	
US2010231506 AA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US2010231506 AA	20140730	LSAL	APL5	On Appeal -- Awaiting Decision by the Board of Appeals	
US2010231506 AA	20170309	LSES	NFA1	Non Final Action Mailed	
US2010231506 AA	20170925	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010231547 AA	20100916	LSPB	+	published / reissued	
US2010231547 AA	20131217	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2010277412 AA	20101104	LSPB	+	published / reissued	
US2010277412 AA	20110406	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011018830 AA	20110127	LSPB	+	published / reissued	
US2011018830 AA	20110817	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011018831 AA	20110127	LSPB	+	published / reissued	
US2011018831 AA	20121003	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2011018831 AA	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US2011018832 AA	20110127	LSPB	+	published / reissued	
US2011018832 AA	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US2011018832 AA	20140112	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2011032089 AA	20110210	LSPB	+	published / reissued	
US2011032089 AA	20111116	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011032203 AA	20110210	LSPB	+	published / reissued	
US2011032203 AA	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF

					ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US2011032203 AA	20130310	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2011032204 AA	20110210	LSPB	+	published / reissued	
US2011037725 AA	20110217	LSPB	+	published / reissued	
US2011037725 AA	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US2011037725 AA	20151123	LSAL	BDR1	Board of Appeals Decision Rendered	
US2011037725 AA	20151123	LSAL	BDR1	Board of Appeals Decision Rendered	
US2011037725 AA	20160205	LSWD	-ABD1	Abandoned -- After Examiner's Answer or Board of Appeals Decision	
US2011074724 AA	20110331	LSPB	+	published / reissued	
US2011074724 AA	20111109	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2011170746 AA	20110714	LSPB	+	published / reissued	
US2011170746 AA	20120516	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2012218181 AA	20120830	LSPB	+	published / reissued	
US2012218181 AA	20130814	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:031005/0545 EFFECTIVE DATE : 20130809
US2012218181 AA	20140219	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012277594 AA	20121101	LSPB	+	published / reissued	
US2012277594 AA	20161223	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012287072 AA	20121115	LSPB	+	published / reissued	
US2012287072 AA	20130403	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2013009900 AA	20130110	LSPB	+	published / reissued	
US2013009900 AA	20170505	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2013009900 AA	20170809	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2013009900 AA	20170810	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : PAYOR NUMBER ASSIGNED (ORIGINAL EVENT CODE: ASPN)
US2013009900 AA	20170810	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : PAYER NUMBER DE-ASSIGNED (ORIGINAL EVENT CODE: RMPN)
US2013009900 AA	20170823	LSGT	STCF	INFORMATION ON STATUS: PATENT	TEXT : PATENTED CASE

				GRANT	
US2013057594 AA	20130307	LSPB	+	published / reissued	
US2013057594 AA	20140224	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2013176206 AA	20130711	LSPB	+	published / reissued	
US2013176206 AA	20130814	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:031005/0545 EFFECTIVE DATE : 20130809
US2013176206 AA	20140519	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2013190135 AA	20130725	LSPB	+	published / reissued	
US2013190135 AA	20141029	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US2013215014 AA	20130822	LSPB	+	published / reissued	
US2013215014 AA	20130814	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:031005/0545 EFFECTIVE DATE : 20130809
US2013215014 AA	20140519	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2013241823 AA	20130919	LSPB	+	published / reissued	
US2013241823 AA	20140902	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2013267318 AA	20131010	LSPB	+	published / reissued	
US2013267318 AA	20150424	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US5982352 A	19991109	LSGT	+	granted / extensions (spc, cpc, pte)	
US5982352 A	19991028	LSGT	PAT1	Patented Case	
US5982352 A	19991028	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US5982352 A	20030418	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5982352 A	20070413	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5982352 A	20110407	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5982352 A	20150629	PEXP		Calculated Patent Term Expiry	
US6008800 A	19991228	LSGT	+	granted / extensions (spc, cpc, pte)	
US6008800 A	19991216	LSGT	PAT1	Patented Case	
US6008800 A	19991216	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US6008800 A	20030603	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6008800 A	20070604	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6008800 A	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642

					EFFECTIVE DATE : 20100330
US6008800 A	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US6008800 A	20110601	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6008800 A	20161228	PEXP		Calculated Patent Term Expiry	
US6720949 BA	20040413	LSGT	+	granted / extensions (spc, cpc, pte)	
US6720949 BA	20080413	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6720949 BA	20080512	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6720949 BA	20080512	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6720949 BA	20080603	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20080413
US6720949 BA	20181011	PEXP		Calculated Patent Term Expiry (PTA 51 days)	
US6766036 BA	20040720	LSGT	+	granted / extensions (spc, cpc, pte)	
US6766036 BA	20040701	LSGT	PAT1	Patented Case	
US6766036 BA	20040701	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US6766036 BA	20071231	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6766036 BA	20120125	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6766036 BA	20160719	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6766036 BA	20170615	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : INCASA HEALTH, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:042716/0475 EFFECTIVE DATE : 20160325
US6766036 BA	20170615	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:INCASA HEALTH, LLC; REEL/FRAME:042716/0682 EFFECTIVE DATE : 20170614
US6766036 BA	20211014	PEXP		Calculated Patent Term Expiry (PTA 464 days)	
US7042440 BB	20060509	LSGT	+	granted / extensions (spc, cpc, pte)	
US7042440 BB	20060419	LSGT	PAT1	Patented Case	
US7042440 BB	20091109	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7042440 BB	20140311	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7042440 BB	20171218	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7042440 BB	20180604	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE

				MAINTENANCE FEES	FEES (ORIGINAL EVENT CODE: EXP.)
US7042440 BB	20180604	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7042440 BB	20180604	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7042440 BB	20180626	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180509
US7042440 BB	20230721	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US7079114 BA	20060718	LSGT	+	granted / extensions (spc, cpc, pte)	
US7079114 BA	20060628	LSGT	PAT1	Patented Case	
US7079114 BA	20091109	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7079114 BA	20140307	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7079114 BA	20180226	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7079114 BA	20180813	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7079114 BA	20180813	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7079114 BA	20180813	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7079114 BA	20180904	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180718
US7079114 BA	20240802	PEXP		Calculated Patent Term Expiry (PTA 461 days and a terminal disclaimer has been filed)	
US7084859 BA	20060801	LSGT	+	granted / extensions (spc, cpc, pte)	
US7084859 BA	20060712	LSGT	PAT1	Patented Case	
US7084859 BA	20060712	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7084859 BA	20080902	LSRE	CC	CERTIFICATE OF CORRECTION	
US7084859 BA	20090825	LSRX	+RR	REQUEST FOR REEXAMINATION FILED	EFFECTIVE DATE : 20090610
US7084859 BA	20091105	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7084859 BA	20100105	LSRE	CC	CERTIFICATE OF CORRECTION	
US7084859 BA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC.,CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US7084859 BA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330

US7084859 BA	20110517	LSRX	+B1	REEXAMINATION CERTIFICATE FIRST REEXAMINATION	TEXT : CLAIMS 1, 5 AND 22 ARE CANCELLED. CLAIMS 2-3, 6-16, 20, 21 AND 23-28 ARE DETERMINED TO BE PATENTABLE AS AMENDED. CLAIMS 17-19, DEPENDENT ON AN AMENDED CLAIM, ARE DETERMINED TO BE PATENTABLE. NEW CLAIMS 29-46 ARE ADDED AND DETERMINED TO BE PATENTABLE. CLAIM 4 WAS NOT REEXAMINED.
US7084859 BA	20140102	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7084859 BA	20180118	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US7084859 BA	20230127	PEXP		Calculated Patent Term Expiry (PTA 704 days)	
US7098891 BA	20060829	LSGT	+	granted / extensions (spc, cpc, pte)	
US7098891 BA	20100106	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7098891 BA	20111213	LSRE	CC	CERTIFICATE OF CORRECTION	
US7098891 BA	20121009	LSRE	CC	CERTIFICATE OF CORRECTION	
US7098891 BA	20140829	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7098891 BA	20140929	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7098891 BA	20140929	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7098891 BA	20141021	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20140829
US7098891 BA	20191108	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US7328119 BA	20080205	LSGT	+	granted / extensions (spc, cpc, pte)	
US7328119 BA	20080116	LSGT	PAT1	Patented Case	
US7328119 BA	20080116	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7328119 BA	20110721	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7328119 BA	20160104	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7328119 BA	20190923	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7328119 BA	20260222	PEXP		Calculated Patent Term Expiry (PTA 296 days)	
US7401783 BB	20080722	LSGT	+	granted / extensions (spc, cpc, pte)	
US7401783 BB	20080702	LSGT	PAT1	Patented Case	
US7401783 BB	20120120	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7401783 BB	20160722	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7401783 BB	20160822	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	

US7401783 BB	20160822	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7401783 BB	20160913	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160722
US7401783 BB	20240719	PEXP		Calculated Patent Term Expiry	
US7466843 BB	20081216	LSGT	+	granted / extensions (spc, cpc, pte)	
US7466843 BB	20081125	LSGT	PAT1	Patented Case	
US7466843 BB	20120617	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7466843 BB	20161216	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7466843 BB	20170116	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7466843 BB	20170116	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7466843 BB	20170207	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20161216
US7466843 BB	20170615	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:042716/0295 EFFECTIVE DATE : 20170614
US7466843 BB	20250907	PEXP		Calculated Patent Term Expiry (PTA 50 days)	
US7489303 BA	20090210	LSGT	+	granted / extensions (spc, cpc, pte)	
US7489303 BA	20090121	LSGT	PAT1	Patented Case	
US7489303 BA	20090121	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US7489303 BA	20120703	LSRE	CC	CERTIFICATE OF CORRECTION	
US7489303 BA	20120728	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7489303 BA	20121009	LSRE	CC	CERTIFICATE OF CORRECTION	
US7489303 BA	20170209	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7489303 BA	20240217	PEXP		Calculated Patent Term Expiry (PTA 230 days)	
US7671851 BA	20100302	LSGT	+	granted / extensions (spc, cpc, pte)	
US7671851 BA	20100210	LSGT	PAT1	Patented Case	
US7671851 BA	20130831	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7671851 BA	20171016	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7671851 BA	20180402	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7671851 BA	20180402	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7671851 BA	20180402	LSLE	-STCH	INFORMATION ON STATUS: PATENT	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE

				DISCONTINUATION	FEES UNDER 37 CFR 1.362
US7671851 BA	20180424	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180302
US7671851 BA	20281229	PEXP		Calculated Patent Term Expiry (PTA 1096 days)	
US7675504 BA	20100309	LSGT	+	granted / extensions (spc, cpc, pte)	
US7675504 BA	20100217	LSGT	PAT1	Patented Case	
US7675504 BA	20130318	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7675504 BA	20170619	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SMITH, PETER H., MICHIGAN OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:042741/0854 EFFECTIVE DATE : 20170615
US7675504 BA	20170619	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : PSTP TECHNOLOGIES, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SMITH, PETER H.; REEL/FRAME:042741/0974 EFFECTIVE DATE : 20170617
US7675504 BA	20171023	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7675504 BA	20180409	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7675504 BA	20180409	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7675504 BA	20180409	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7675504 BA	20180501	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180309
US7675504 BA	20281007	PEXP		Calculated Patent Term Expiry (PTA 943 days)	
US7693584 BB	20100406	LSGT	+	granted / extensions (spc, cpc, pte)	
US7693584 BB	20100317	LSGT	PAT1	Patented Case	
US7693584 BB	20130711	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7693584 BB	20171120	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7693584 BB	20180507	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7693584 BB	20180507	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7693584 BB	20180507	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7693584 BB	20180529	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180406
US7693584 BB	20271031	PEXP		Calculated Patent Term Expiry	
US7714849 BB	20100511	LSGT	+	granted /	

				extensions (spc, cpc, pte)	
US7714849 BB	20100421	LSGT	PAT1	Patented Case	
US7714849 BB	20111108	LSRE	CC	CERTIFICATE OF CORRECTION	
US7714849 BB	20120110	LSRE	CC	CERTIFICATE OF CORRECTION	
US7714849 BB	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US7714849 BB	20130711	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7714849 BB	20171026	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7714849 BB	20290301	PEXP		Calculated Patent Term Expiry (PTA 944 days)	
US7756297 BB	20100713	LSGT	+	granted / extensions (spc, cpc, pte)	
US7756297 BB	20100623	LSGT	PAT1	Patented Case	
US7756297 BB	20121109	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOTION GAMES, LLC, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R., DR; REEL/FRAME:029269/0617 EFFECTIVE DATE : 20121106
US7756297 BB	20121109	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOTION GAMES, LLC, CANADA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GREAT LAKES INTELLECTUAL PROPERTY, LTD.; REEL/FRAME:029269/0569 EFFECTIVE DATE : 20121106
US7756297 BB	20130831	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7756297 BB	20140107	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	PARTYTYPE : OPPONENT OPPONENT : NINTENDO OF AMERICA, INC. OLDPARTY : TRIAL NO: IPR2014-00165 EFFECTIVE DATE : 20131119
US7756297 BB	20180226	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7756297 BB	20180813	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7756297 BB	20180813	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7756297 BB	20180813	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7756297 BB	20180904	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20180713
US7756297 BB	20271031	PEXP		Calculated Patent Term Expiry	
US7933431 BB	20110426	LSGT	+	granted / extensions (spc, cpc, pte)	
US7933431 BB	20110406	LSGT	PAT1	Patented Case	
US7933431 BB	20130814	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF

					ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:031005/0545 EFFECTIVE DATE : 20130809
US7933431 BB	20140903	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7933431 BB	20181217	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7933431 BB	20190412	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : 7.5 YR SURCHARGE - LATE PMT W/IN 6 MO, SMALL ENTITY (ORIGINAL EVENT CODE: M2555); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7933431 BB	20190412	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7933431 BB	20300712	PEXP		Calculated Patent Term Expiry	
US7973773 BB	20110705	LSGT	+	granted / extensions (spc, cpc, pte)	
US7973773 BB	20110615	LSGT	PAT1	Patented Case	
US7973773 BB	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US7973773 BB	20141016	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7973773 BB	20151215	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	PARTYTYPE : OPPONENT OPPONENT : SAMSUNG ELECTRONICS AMERICA, INC. OLDPARTY : TRIAL NO: IPR2016-00206 EFFECTIVE DATE : 20151117
US7973773 BB	20190225	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7973773 BB	20190812	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US7973773 BB	20190812	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7973773 BB	20190812	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7973773 BB	20190903	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20190705
US7973773 BB	20291214	PEXP		Calculated Patent Term Expiry (PTA 775 days)	
US8013843 BB	20110906	LSGT	+	granted / extensions (spc, cpc, pte)	
US8013843 BB	20110817	LSGT	PAT1	Patented Case	
US8013843 BB	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US8013843 BB	20150211	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

US8013843 BB	20151215	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	PARTYTYPE : OPPONENT OPPONENT : SAMSUNG ELECTRONICS AMERICA, INC. OLDPARTY : TRIAL NO: IPR2016-00207 EFFECTIVE DATE : 20151117
US8013843 BB	20190429	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US8013843 BB	20301004	PEXP		Calculated Patent Term Expiry	
US8040328 BB	20111018	LSGT	+	granted / extensions (spc, cpc, pte)	
US8040328 BB	20110928	LSGT	PAT1	Patented Case	
US8040328 BB	20150409	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8040328 BB	20190610	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US8040328 BB	20300215	PEXP		Calculated Patent Term Expiry (PTA 838 days)	
US8044941 BB	20111025	LSGT	+	granted / extensions (spc, cpc, pte)	
US8044941 BB	20111005	LSGT	PAT1	Patented Case	
US8044941 BB	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US8044941 BB	20151025	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8044941 BB	20151123	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US8044941 BB	20151215	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151025
US8044941 BB	20171106	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8044941 BB	20171106	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8044941 BB	20301004	PEXP		Calculated Patent Term Expiry	
US8068100 BB	20111129	LSGT	+	granted / extensions (spc, cpc, pte)	
US8068100 BB	20111109	LSGT	PAT1	Patented Case	
US8068100 BB	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US8068100 BB	20150211	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8068100 BB	20151215	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	PARTYTYPE : OPPONENT OPPONENT : SAMSUNG ELECTRONICS AMERICA, INC. OLDPARTY : TRIAL NO: IPR2016-00202 EFFECTIVE DATE : 20151117

US8068100 BB	20190722	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US8068100 BB	20301209	PEXP		Calculated Patent Term Expiry	
US8072440 BB	20111206	LSGT	+	granted / extensions (spc, cpc, pte)	
US8072440 BB	20111116	LSGT	PAT1	Patented Case	
US8072440 BB	20130121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TACTILE FEEDBACK TECHNOLOGY, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:029662/0527 EFFECTIVE DATE : 20130118
US8072440 BB	20150211	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8072440 BB	20151215	LSOP	IPR	AIA TRIAL PROCEEDING FILED BEFORE THE PATENT AND APPEAL BOARD: INTER PARTES REVIEW	PARTYTYPE : OPPONENT OPPONENT : SAMSUNG ELECTRONICS AMERICA, INC. OLDPARTY : TRIAL NO: IPR2016-00205 EFFECTIVE DATE : 20151117
US8072440 BB	20190729	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US8072440 BB	20301004	PEXP		Calculated Patent Term Expiry	
US8083588 BB	20111227	LSGT	+	granted / extensions (spc, cpc, pte)	
US8083588 BB	20111207	LSGT	PAT1	Patented Case	
US8083588 BB	20151227	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8083588 BB	20160125	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8083588 BB	20160125	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8083588 BB	20160216	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151227
US8083588 BB	20170615	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:042716/0295 EFFECTIVE DATE : 20170614
US8083588 BB	20301024	PEXP		Calculated Patent Term Expiry (PTA 1089 days and a terminal disclaimer has been filed)	
US8111239 BB	20120207	LSGT	+	granted / extensions (spc, cpc, pte)	
US8111239 BB	20120118	LSGT	PAT1	Patented Case	
US8111239 BB	20120403	LSRE	CC	CERTIFICATE OF CORRECTION	
US8111239 BB	20160104	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8111239 BB	20280719	PEXP		Calculated Patent Term Expiry (PTA 803 days)	
US8194924 BB	20120605	LSGT	+	granted / extensions (spc, cpc, pte)	

US8194924 BB	20120516	LSGT	PAT1	Patented Case	
US8194924 BB	20130814	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:031005/0545 EFFECTIVE DATE : 20130809
US8194924 BB	20151201	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8194924 BB	20310318	PEXP		Calculated Patent Term Expiry	
US8228305 BB	20120724	LSGT	+	granted / extensions (spc, cpc, pte)	
US8228305 BB	20120704	LSGT	PAT1	Patented Case	
US8228305 BB	20160106	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8228305 BB	20300607	PEXP		Calculated Patent Term Expiry (PTA 332 days)	
US8287374 BB	20121016	LSGT	+	granted / extensions (spc, cpc, pte)	
US8287374 BB	20120926	LSGT	PAT1	Patented Case	
US8287374 BB	20150519	LSRE	CC	CERTIFICATE OF CORRECTION	
US8287374 BB	20161016	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8287374 BB	20161114	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8287374 BB	20161114	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8287374 BB	20161206	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20161016
US8287374 BB	20170615	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : GESTURE TECHNOLOGY PARTNERS, LLC, OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:042716/0295 EFFECTIVE DATE : 20170614
US8287374 BB	20280507	PEXP		Calculated Patent Term Expiry (PTA 1338 days)	
US8306635 BB	20121106	LSGT	+	granted / extensions (spc, cpc, pte)	
US8306635 BB	20121017	LSGT	PAT1	Patented Case	
US8306635 BB	20160505	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8306635 BB	20310523	PEXP		Calculated Patent Term Expiry (PTA 850 days)	
US8405604 BB	20130326	LSGT	+	granted / extensions (spc, cpc, pte)	
US8405604 BB	20130306	LSGT	PAT1	Patented Case	
US8405604 BB	20170131	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8405604 BB	20300928	PEXP		Calculated Patent Term Expiry (PTA 1063 days)	
US8427449 BB	20130423	LSGT	+	granted / extensions (spc, cpc, pte)	
US8427449 BB	20130403	LSGT	PAT1	Patented Case	
US8427449 BB	20161006	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8427449 BB	20320723	PEXP		Calculated Patent	

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US8482534 BB	20130709	LSGT	+	granted / extensions (spc, cpc, pte)	
US8482534 BB	20130619	LSGT	PAT1	Patented Case	
US8482534 BB	20170709	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8482534 BB	20170807	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8482534 BB	20170807	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8482534 BB	20170829	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170709
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US8482535 BB	20130619	LSGT	PAT1	Patented Case	
US8482535 BB	20161229	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8482535 BB	20310510	PEXP		Calculated Patent Term Expiry (PTA 669 days)	
US8538562 BB	20130917	LSGT	+	granted / extensions (spc, cpc, pte)	
US8538562 BB	20130828	LSGT	PAT1	Patented Case	
US8538562 BB	20171016	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US8538562 BB	20171016	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8538562 BB	20171016	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8538562 BB	20171107	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170917
US8538562 BB	20310519	PEXP		Calculated Patent Term Expiry (PTA 409 days)	
US8576199 BA	20131105	LSGT	+	granted / extensions (spc, cpc, pte)	
US8576199 BA	20100503	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : APPLE INC., CALIFORNIA OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:PRYOR, TIMOTHY R.; REEL/FRAME:024320/0642 EFFECTIVE DATE : 20100330
US8576199 BA	20131016	LSGT	PAT1	Patented Case	
US8576199 BA	20131016	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	TEXT : PATENTED CASE
US8576199 BA	20150407	LSRE	CC	CERTIFICATE OF CORRECTION	
US8576199 BA	20170420	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8576199 BA	20310507	PEXP		Calculated Patent Term Expiry (PTA 1387 days)	
US8610674 BB	20131217	LSGT	+	granted / extensions (spc, cpc, pte)	

US8610674 BB	20131126	LSGT	PAT1	Patented Case	
US8610674 BB	20180115	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	TEXT : PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
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US8610674 BB	20180119	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US8610674 BB	20180206	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20171217
US8610674 BB	20310107	PEXP		Calculated Patent Term Expiry (PTA 546 days and a terminal disclaimer has been filed)	
US8665245 BB	20140304	LSGT	+	granted / extensions (spc, cpc, pte)	
US8665245 BB	20140212	LSGT	PAT1	Patented Case	
US8665245 BB	20171016	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US8665245 BB	20180301	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : SURCHARGE FOR LATE PAYMENT, SMALL ENTITY (ORIGINAL EVENT CODE: M2554)
US8665245 BB	20180301	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8665245 BB	20320803	PEXP		Calculated Patent Term Expiry (PTA 886 days and a terminal disclaimer has been filed)	
US8892219 BB	20141118	LSGT	+	granted / extensions (spc, cpc, pte)	
US8892219 BB	20141029	LSGT	PAT1	Patented Case	
US8892219 BB	20180702	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US8892219 BB	20181115	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : SURCHARGE FOR LATE PAYMENT, SMALL ENTITY (ORIGINAL EVENT CODE: M2554); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US8892219 BB	20181115	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8892219 BB	20321105	PEXP		Calculated Patent Term Expiry	
US9513744 BB	20161206	LSGT	+	granted / extensions (spc, cpc, pte)	
US9513744 BB	20140618	LSAL	APL5	On Appeal -- Awaiting Decision by the Board of Appeals	
US9513744 BB	20161116	LSGT	PAT1	Patented Case	
US9513744 BB	20301217	PEXP		Calculated Patent Term Expiry (PTA 1143 days)	
US9758042 BB	20170912	LSGT	+	granted / extensions (spc, cpc, pte)	
US9758042 BB	20170823	LSGT	PAT1	Patented Case	
US9758042 BB	20331215	PEXP		Calculated Patent Term Expiry (PTA 457 days)	
WO04091956 A2	20041028	LSPB	+	published / reissued	
WO04091956 A2	20050923	LSNP	+WWE	WIPO	REF DOCUMENT NUMBER :

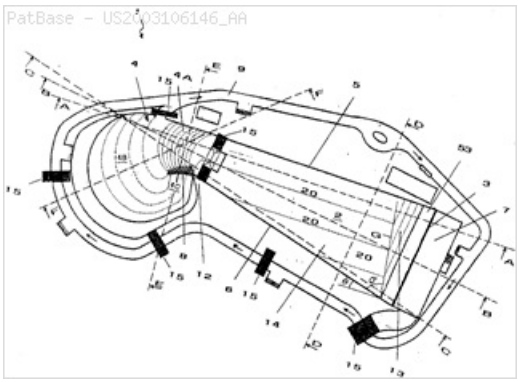
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WO04091956 A2	20051001	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO04091956 A2	20060222	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2004759053 COUNTRY OF REF DOCUMENT : EP
WO04091956 A2	20070910	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 11852690 COUNTRY OF REF DOCUMENT : US
WO10135478 A2	20101125	LSPB	+	published / reissued	
WO10135478 A2	20100519	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 201080028358.5 COUNTRY OF REF DOCUMENT : CN
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WO10135478 A3	20111219	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010249515 COUNTRY OF REF DOCUMENT : AU
WO10135478 A3	20111219	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010725928 COUNTRY OF REF DOCUMENT : EP
WO10135478 A3	20120119	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010249515 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20100519 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

75) Family number: 29456480 (US2003106146A)

Title: WAVE **POOL** CONSTRUCTION

Abstract: A wave **pool** 1 is provided suitable for modifying the characteristics of waves propagating therethrough, the wave **pool** 1 including at least one waterway 2 having opposing first and second ends 3, 4; opposing first and second side walls 5, 6 extending along at least a portion of the waterway 2; and a waterway floor extending between the side walls 5, 6; wherein the side walls mutually converge towards the second end of the waterway. Also provided is a wave **pool** 1, wherein the waterway floor includes a first floor surface 14 oriented so as to have a predetermined slope, wherein in use, the nominal depth of water contained within the waterway of the wave **pool** is greater towards the second side wall. The wave **pool** 1 may also include a second floor surface 13 adjacent to and mutually exclusive to the first floor surface 14 and located towards the first end 3 of the waterway.

Classifications:
International (IPC 8-9): E04H4/00 E04H4/12 E04H4/14 G01M10/00 (Advanced/Invention); G01M10/00 (Advanced/Non-invention); E04H4/00 G01M10/00 (Core/Invention)
International (IPC 1-7): A47K3/10 E04H E04H4/00 E04H4/12 E04H4/14 G01M10/00
CPC: E04H4/0006
European: E04H4/00A
US: 4/491 44/91
Locarno class: 44/91



Family:

Publication number	Publication date	Application number	Application date
AT331861 E	20060715	AT20000987853T	20001213
AU200124129 A1	20010618	AU20010024129	20001213
AU200124129 A5	20010618	AU20010024129D	20001213
AU783465 B2	20051027	AU20010024129	20001213
BRPI0016362 A	20020910	BR2000PI16362	20001213
BRPI0016362 B1	20090113	BR2000PI16362	20001213
CA2393485 AA	20020605	CA20002393485	20001213
CA2393485 C	20090616	CA20002393485	20001213
DE60029133 D1	20060810	DE20006029133	20001213
DE60029133 D1	20060810	DE20006029133T	20001213
DE60029133 T2	20070111	DE20006029133T	20001213
DK1242703 T3	20061030	DK20000987853T	20001213
EP1242703 A1	20020925	EP20000987853	20001213
EP1242703 A4	20030813	EP20000987853	20001213
EP1242703 B1	20060628	EP20000987853	20001213
ES2267598 T3	20070316	ES20000987853T	20001213
JP2003516551 T2	20030513	JP20010544451T	20001213
NZ519568 A	20040227	NZ20000519568	20001213
PT1242703 T	20061031	PT20000987853T	20001213
US2003106146 AA	20030612	US20020149920	20021009
US6912738 BB	20050705	US20000149920	20001213
WO0142592 A1	20010614	WO2000NZ00250	20001213
ZA200205059 A	20030925	ZA20020005059	20020624

Priority:
NZ19990501764 19991213 NZ20000519568 20001213 WO2000NZ00250 20001213

Probable Assignee: BLACK KERRY PETER
Assignee(s): (std): BLACK KERRY PETER ; KERRY PETER BLACK
Inventor(s): (std): BLACK KERRY PETER ; KERRY PETER BLACK
Agent(s): SHELSTON IP PTY LTD; SHELSTON IP; GOWLING LAFLEUR HENDERSON LLP; JACOBSON HOLMAN PLLC
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 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 MZ 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)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AT331861 E	20060715	LSGT	+	granted / extensions (spc, cpc, pte)	
AT331861 E	20070615	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	REF DOCUMENT NUMBER : 1242703 COUNTRY OF REF DOCUMENT : EP
AT331861 E	20201213	PEXP		Calculated Patent Term Expiry	

AU200124129 A1	20010618	LSPB	+	published / reissued	
AU783465 B2	20051027	LSGT	+	granted / extensions (spc, cpc, pte)	
AU783465 B2	20180712	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU783465 B2	20201213	PEXP		Calculated Patent Term Expiry	
BRPI0016362 A	20020910	LSPB	+	published / reissued	
BRPI0016362 A	20070612	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0016362 A	20080304	LSGT	B09A	DECISION: INTENTION TO GRANT	
BRPI0016362 B1	20090113	LSGT	+B16A	PATENT OR CERTIFICATE OF ADDITION OF INVENTION GRANTED	TEXT : PRAZO DE VALIDADE: 20 (VINTE) ANOS CONTADOS A PARTIR DE 13/12/2000, OBSERVADAS AS CONDICOES LEGAIS.
BRPI0016362 B1	20121002	LSFE	B24C	PATENT ANNUAL FEE: REQUEST FOR FOR RESTORATION	TEXT : REFERENTE A 11A E 12A ANUIDADE(S), CONFORME ART. 87 DA LPI 9.279.
BRPI0016362 B1	20140422	LSLE	-B24H	LAPSE BECAUSE OF NON-PAYMENT OF ANNUAL FEES (DEFINITIVELY: ART 78 IV LPI)	
BRPI0016362 B1	20201213	PEXP		Calculated Patent Term Expiry	
CA2393485 AA	20020605	LSPB	+	published / reissued	
CA2393485 AA	20051116	LSES	+EEER	EXAMINATION REQUEST	
CA2393485 C	20090616	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2393485 C	20111213	LSLE	-MKLA	LAPSED	
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DE60029133 T2	20070111	LSGT	+	granted / extensions (spc, cpc, pte)	
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DE60029133 T2	20201213	PEXP		Calculated Patent Term Expiry	
DK1242703 T3	20061030	LSGT	+	granted / extensions (spc, cpc, pte)	
DK1242703 T3	20201213	PEXP		Calculated Patent Term Expiry	
EP1242703 A1	20020925	LSPB	+	published / reissued	
EP1242703 A1	20020925	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20020710
EP1242703 A4	20030813	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	EFFECTIVE DATE : 20030702
EP1242703 A4	20040310	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	EFFECTIVE DATE : 20040123
EP1242703 B1	20060628	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP1242703 B1	20060630	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP

EP1242703 B1	20060809	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1242703 B1	20061101	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20060403253 COUNTRY OF REF DOCUMENT : GR
EP1242703 B1	20070316	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2267598 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) :
EP1242703 B1	20070606	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20070329
EP1242703 B1	20080731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20060628
EP1242703 B1	20100129	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20091215 YEAR OF FEE PAYMENT : 10
EP1242703 B1	20100129	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20091211 YEAR OF FEE PAYMENT : 10
EP1242703 B1	20100129	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FI PAYMENT DATE : 20091214 YEAR OF FEE PAYMENT : 10
EP1242703 B1	20100129	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20091215 YEAR OF FEE PAYMENT : 10
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EP1242703 B1	20100430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20100113 YEAR OF FEE PAYMENT : 10
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EP1242703 B1	20110713	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : V1 EFFECTIVE DATE : 20110701
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EP1242703 B1	20110815	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP
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EP1242703 B1	20110930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20101231
EP1242703 B1	20110930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20101214
EP1242703 B1	20111031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20101213
EP1242703 B1	20111031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20101231
EP1242703 B1	20111031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE	COUNTRY OF REF DOCUMENT : CH

				[ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20101231
EP1242703 B1	20111130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110704
EP1242703 B1	20111230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20110701
EP1242703 B1	20111230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20101213
EP1242703 B1	20120305	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20120305
EP1242703 B1	20120430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20101214
EP1242703 B1	20120928	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20101213
EP1242703 B1	20140131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20131211 YEAR OF FEE PAYMENT : 14
EP1242703 B1	20140131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20131126 YEAR OF FEE PAYMENT : 14
EP1242703 B1	20140131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20131211 YEAR OF FEE PAYMENT : 14
EP1242703 B1	20150701	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60029133 COUNTRY OF REF DOCUMENT : DE
EP1242703 B1	20150815	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MM01 REF DOCUMENT NUMBER : 331861 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20141213
EP1242703 B1	20150826	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20141213
EP1242703 B1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20141213
EP1242703 B1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM	COUNTRY OF REF DOCUMENT : DE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES

				NATIONAL OFFICE TO EPO]	LAPSED DATE : 20150701
EP1242703 B1	20151110	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 16
EP1242703 B1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20141213
EP1242703 B1	20160229	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20151110 YEAR OF FEE PAYMENT : 16
EP1242703 B1	20170929	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20170831
EP1242703 B1	20171031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	COUNTRY OF REF DOCUMENT : FR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20170102
EP1242703 B1	20201213	PEXP		Calculated Patent Term Expiry	
ES2267598 T3	20070316	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2267598 T3	20201213	PEXP		Calculated Patent Term Expiry	
JP2003516551 T2	20030513	LSPB	+	published / reissued	
JP2003516551 T2	20070720	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070719
JP2003516551 T2	20100120	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100119
JP2003516551 T2	20100623	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20100622
NZ519568 A	20040227	LSPB	+	published / reissued	
NZ519568 A	20040625	LSGT	+PSEA	PATENT SEALED	
NZ519568 A	20050128	LSFE	+RENW	RENEWAL (RENEWAL FEES ACCEPTED)	
NZ519568 A	20071221	LSFE	+RENW	RENEWAL (RENEWAL FEES ACCEPTED)	
PT1242703 T	20061031	LSGT	+	granted / extensions (spc, cpc, pte)	
PT1242703 T	20201213	PEXP		Calculated Patent Term Expiry	
US2003106146 AA	20030612	LSPB	+	published / reissued	
US2003106146 AA	20050615	LSGT	PAT1	Patented Case	
US6912738 BB	20050705	LSGT	+	granted / extensions (spc, cpc, pte)	
US6912738 BB	20050615	LSGT	PAT1	Patented Case	
US6912738 BB	20090204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6912738 BB	20121205	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6912738 BB	20170705	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6912738 BB	20170731	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6912738 BB	20170731	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	TEXT : PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

US6912738 BB	20170822	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170705
US6912738 BB	20210205	PEXP		Calculated Patent Term Expiry (PTA 54 days)	
WO0142592 A1	20010614	LSPB	+	published / reissued	
WO0142592 A1	20020605	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2393485 COUNTRY OF REF DOCUMENT : CA
WO0142592 A1	20020612	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2001 544451 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO0142592 A1	20020612	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PA/A/2002/005833 COUNTRY OF REF DOCUMENT : MX
WO0142592 A1	20020613	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 519568 COUNTRY OF REF DOCUMENT : NZ
WO0142592 A1	20020619	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 24129/01 COUNTRY OF REF DOCUMENT : AU
WO0142592 A1	20020624	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200205059 COUNTRY OF REF DOCUMENT : ZA
WO0142592 A1	20020624	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002/05059 COUNTRY OF REF DOCUMENT : ZA
WO0142592 A1	20020710	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2000987853 COUNTRY OF REF DOCUMENT : EP
WO0142592 A1	20020925	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2000987853 COUNTRY OF REF DOCUMENT : EP
WO0142592 A1	20021009	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10149920 COUNTRY OF REF DOCUMENT : US
WO0142592 A1	20021121	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0142592 A1	20040227	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 519568 COUNTRY OF REF DOCUMENT : NZ
WO0142592 A1	20040608	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 519568 COUNTRY OF REF DOCUMENT : NZ
WO0142592 A1	20060209	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 24129/01 COUNTRY OF REF DOCUMENT : AU
WO0142592 A1	20060628	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2000987853 COUNTRY OF REF DOCUMENT : EP
ZA200205059 A	20030925	LSGT	+	granted / extensions (spc, cpc, pte)	
ZA200205059 A	20220623	PEXP		Calculated Patent Term Expiry	