PatBase - Search results 15 September 2020
Search query (3): FT=(system~ and lighting~ and structure~ and drilling~) and IC =(F21V)
Results: 1591

Search history

Search 1: FT=(system~ and lighting~ and structure~ or assembly~ and drilling~ equipmet~ ~) (Results 0)

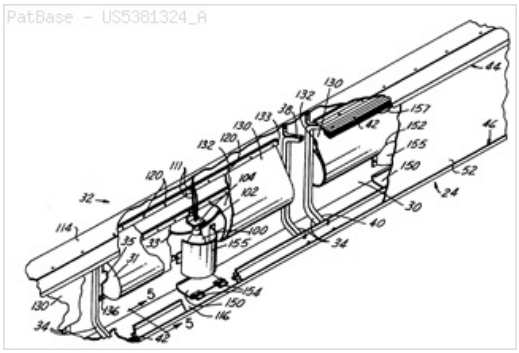
Search 2: FT=(system~ and lighting~ and structure~ and drilling~ and equipmet~) (Results 0)

Search 3: FT=(system~ and lighting~ and structure~ and drilling~) and IC =(F21V) (Results 1591)

1) Family number: 24044793 (US5381324 A)

Title: ILLUMINATED CANOPY **SYSTEM**

Abstract: A rear illuminated fascia apparatus for mounting on a surface is disclosed. The apparatus has a support **structure** comprising support brackets, top and bottom edge frame members, and corner members which tension and hold in place a flexible, translucent sheet material. Metal halide **lights** are used to illuminate the sheet material. A **light** dispersion member is positioned between the **lights** and the sheet material to uniformly distribute and disperse the **light** through the sheet material. Access members in the apparatus and access openings in the **light** dispersion member allow convenient changes of the **lights**.



Classifications:
International (IPC 8-9): F21S2/00 F21S4/00 F21S8/00 F21S8/02 F21S8/04 F21V13/00 F21V15/00 F21V19/04 F21V3/00 F21V5/00 F21V7/00 F21V9/00 F21W131/40 F21W131/405 F21Y101/00 F21Y103/00 F21Y113/02 F21Y113/20 G09F13/04 G09F13/08 G09F15/00
International (IPC 1-7): F21P1/00 F21P1/02 F21S1/00 F21S1/02 F21S2/00 F21V1/12 F21V11/00 F21V11/14 F21V13/00 F21V19/04 F21V5/00 G09F13/04 G09F13/08 G09F15/00
CPC: F21S2/00 F21S4/20 F21V19/04 F21V7/0091 F21W2131/10 G09F13/04 G09F15/0025 G09F2013/045 G09F2013/0472 G09F2013/0481 Y10S362/812 F21S8/033 F21V5/00
US: 362/145 362/240 362/242 362/243 362/246 362/248 362/249 362/249.01 362/278 362/320 362/351 362/355 362/362 362/374 362/375 362/812 40/577 40/603

Family:

Publication number	Publication date	Application number	Application date
AU199459861 A1	19940719	AU19940059861	19931223
AU199481262 A1	19960502	AU19940081262	19941027
AU671720 B2	19960905	AU19940059861	19931223
BRPI9307685 A	19990908	BR1993PI07685	19931223
CA2149416 AA	19950515	CA19932149416	19931223
CA2149416 C	19980818	CA19932149416	19931223
EP0746721 A1	19961211	EP19940905955	19931223
EP0746721 A4	19960717	EP19940905955	19931223
EP0781387 A1	19970702	EP19950900436	19941027
EP0781387 A4	20001206	EP19950900436	19941027
FI971400 A	19970526	FI19970001400	19970404
FI971400 A0	19970404	FI19970001400	19970404
JP10507032 T2	19980707	JP19960512549T	19941027
JP3289909 B2	20020610	JP19940515464T	19931223
JP8505260 T2	19960604	JP19940515464T	19931223
US5381324 A	19950110	US19920996103	19921223
US5537302 A	19960716	US19940341678	19941117
US5613763 A	19970325	US19950472319	19950607
US5713659 A	19980203	US19960712068	19960911
US5746503 A	19980505	US19940321045	19941005
US5931564 A	19990803	US19950532405	19950922
US5947589 A	19990907	US19970950629	19971015
USRE36039 E	19990112	US19950564738	19951129
WO9415141 A1	19940707	WO1993US12575	19931223
WO9611357 A1	19960418	WO1994US12285	19941027

Priority:

US19920996103 19921223 WO1993US12575 19931223 US19940321045 19941005
WO1994US12285 19941027 US19940341678 19941117 US19950472319 19950607
US19950532405 19950922 US19950564738 19951129 US19960712068 19960911
US19970950629 19971015

Probable Assignee: MARKETING DISPLAYS INC

Assignee(s): (std): MARKETING DISPLAYS INC

Assignee(s): HILLSTROM BRIAN J ; HILLSTROM DAVID U

Inventor(s): (std): HILLSTROM BRIAN J ; HILLSTROM DAVID U

Inventor(s): BRIAN J HILLSTROM ; DAVID U HILLSTROM ; ヒルストロム, デビッド ユー. ; ヒルストロム, ブライアン ジェイ. ; ヒルストローム, デビッド ユー. ; ヒルストローム, ブライアン ジェイ.

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; MACRAE AND CO

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU199459861 A1	19940719	LSPB	+	published / reissued	
AU199481262 A1	19960502	LSPB	+	published / reissued	
AU671720 B2	19960905	LSGT	+	granted /	

				extensions (spc, cpc, pte)	
AU671720 B2	20000727	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU671720 B2	20131223	PEXP		Calculated Patent Term Expiry	
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BRPI9307685 A	20000829	LSGT	+FF	DECISION: INTENTION TO GRANT	
BRPI9307685 A	20011120	LSRV	-FA11	DISMISSAL: DISMISSAL - ARTICLE 38, PAR. 2 OF INDUSTRIAL PROPERTY LAW	
BRPI9307685 A	20180327		B15K	OTHERS CONCERNING APPLICATIONS: ALTERATION OF CLASSIFICATION	ClassificationScheme: IPC ClassificationSymbol: F21S 2/00 (2016.01), F21S 4/20 (2016.0
CA2149416 AA	19950515	LSPB	+	published / reissued	
CA2149416 AA	19950616	LSES	+EEER	EXAMINATION REQUEST	
CA2149416 C	19980818	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2149416 C	20021223	LSLE	-MKLA	LAPSED	
CA2149416 C	20131223	PEXP		Calculated Patent Term Expiry	
EP0746721 A1	19961211	LSPB	+	published / reissued	
EP0746721 A1	19961211	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 19950724
EP0746721 A1	19961211		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: DE ES FR GB IT NL SE
EP0746721 A1	19981118	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 19981005
EP0746721 A1	20001108	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	Owner: MARKETING DISPLAYS, INC. PartyType: owner
EP0746721 A1	20020109	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20010703
EP0746721 A4	19960717	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	
EP0746721 A4	19960717		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A4 Country of Ref document: DE ES FR GB IT NL SE
EP0781387 A1	19970702	LSPB	+	published / reissued	
EP0781387 A1	19970702	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 19970403
EP0781387 A1	19970702		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: DE ES FR GB IT NL SE
EP0781387 A4	20001206	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20001019
EP0781387 A4	20001206		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A4 Country of Ref document: DE ES FR GB IT NL SE
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EP0781387 A4	20010425	LSWD	-18W	APPLICATION WITHDRAWN	Date Application Withdrawn: 20010222
FI971400 A	19970526	LSPB	+	published / reissued	

JP10507032 T2	19980707	LSPB	+	published / reissued	
JP3289909 B2	20020610	LSGT	+	granted / extensions (spc, cpc, pte)	
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JP8505260 T2	19960604	LSPB	+	published / reissued	
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US5381324 A	19941229	LSGT	PAT1	Patented Case	
US5381324 A	19941229	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US5381324 A	19950110	LSGT	+	granted / extensions (spc, cpc, pte)	
US5381324 A	19960220		RF	REISSUE APPLICATION FILED	Effective date: 19951129
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US5381324 A	20121223	PEXP		Calculated Patent Term Expiry	
US5537302 A	19960708	LSGT	PAT1	Patented Case	
US5537302 A	19960716	LSGT	+	granted / extensions (spc, cpc, pte)	
US5537302 A	19970826		-DC	DISCLAIMER FILED	Effective date: 19951214
US5537302 A	20000110	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
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US5537302 A	20040716	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5537302 A	20040914	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20040716
US5537302 A	20141117	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US5537302 A	20180125	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5537302 A	20180125	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US5613763 A	19970117	LSGT	PAT1	Patented Case	
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US5613763 A	20010529	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20010325
US5613763 A	20150607	PEXP		Calculated Patent Term Expiry	

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US5713659 A	19980203	LSGT	+	granted / extensions (spc, cpc, pte)	
US5713659 A	20010828		REMI	MAINTENANCE FEE REMINDER MAILED	
US5713659 A	20020204	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5713659 A	20020305	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5713659 A	20020305	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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US5713659 A	20160911	PEXP		Calculated Patent Term Expiry	
US5746503 A	19941005	LSAS	AS	ASSIGNMENT	Effective date: 19941005 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:HILLSTROM, DAVID U.;HILLSTROM, BRIAN J.;REEL/FRAME:007164/0410 Owner: MARKETING DISPLAYS, INC., MICHIGAN PartyType: owner
US5746503 A	19980505	LSGT	+	granted / extensions (spc, cpc, pte)	
US5746503 A	20011127		REMI	MAINTENANCE FEE REMINDER MAILED	
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US5746503 A	20020604	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
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US5746503 A	20020702	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20020505
US5746503 A	20150505	PEXP		Calculated Patent Term Expiry	
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US5931564 A	20030903	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
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US5947589 A	20030908	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5947589 A	20031008	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5947589 A	20031008	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US5947589 A	20031104	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20030907
US5947589 A	20171015	PEXP		Calculated Patent Term Expiry	
USRE36039 E	20070105	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
USRE36039 E	20070207	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
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WO9415141 A1	19940929		DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)	
WO9415141 A1	19941019		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO9415141 A1	19950515	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2149416 Country of Ref document: CA
WO9415141 A1	19950724	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 1994905955 Country of Ref document: EP
WO9415141 A1	19951019	LSWD	REG	REFERENCE TO NATIONAL CODE	Ref country code: DE Ref legal event code: 8642
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WO9415141 A1	20010703	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	Ref document number: 1994905955 Country of Ref document: EP
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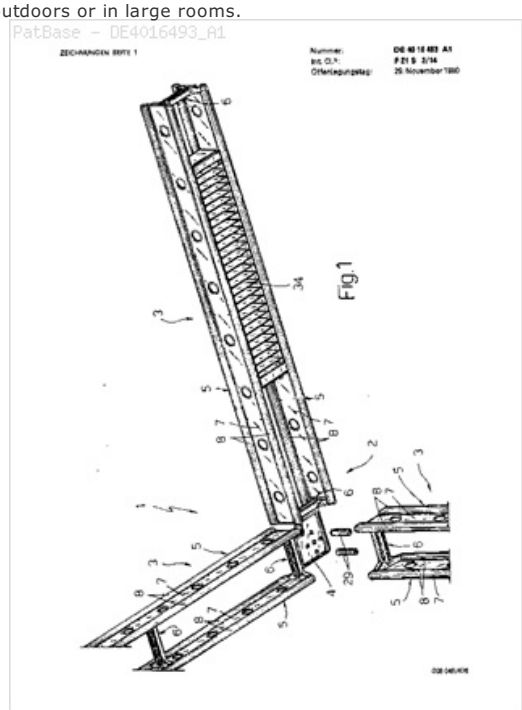
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WO9611357 A1	19970404	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 971400 Country of Ref document: FI
WO9611357 A1	19970702	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 1995900436 Country of Ref document: EP
WO9611357 A1	19970731	LSWD	REG	REFERENCE TO NATIONAL CODE	Ref country code: DE Ref legal event code: 8642
WO9611357 A1	19980605	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: CA
WO9611357 A1	20010222	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	Ref document number: 1995900436 Country of Ref document: EP

2) Family number: 7928608 (DE4016493 A1)

Title: MODULAR **LIGHTING SYSTEM** USING STRIP FRAMES - WITH FLUORESCENT TUBES THAT CAN BE COUPLED TO FORM SUSPENDED **LIGHTING** UNITS

Abstract: A modular **lighting system** is based on strip frames of H cross-section with side panels (7) that have tubular sections (8) for stiffening purposes and a bridging element (36') with inset tubes (18). The tubes are provided for the running of electrical cables (45) to suspended **lighting** units (34). The **lighting** units can be in the form of fluorescent tubes (37) located behind removable covers (36). Some of the modules can be coupled together to form different configurations. ADVANTAGE - Provides flexibility in lay-out of suspended **lighting**, outdoors or in large rooms.

Classifications:
International (IPC 8-9): F21S2/00
International (IPC 1-7): E04C2/52 F16S3/04 F21S3/14 F21V21/10 H01R33/08
CPC: F21S2/00 F21Y2103/00



Family:

Publication number	Publication date	Application number	Application date
DE4016493 A1	19901129	DE19904016493	19900522
IT1232101 A	19920123	IT19890067391	19890524
IT8967391 A0	19890524	IT19890067391	19890524

Priority:

IT19890067391 19890524

Probable Assignee: SAMES SPA

Assignee(s): (std): SAMES SPA

Assignee(s): S A M E S S P A PINEROLO IT

Inventor(s): (std): BARRIUSO DIEZ RAQUEL ; CARLA FRASSATI GUIDO VALVASSOR ; CARLA PAPA ; FRASSATI GUIDO ; GUIDO FRASSATI ; PAPA CARLA ; RAQUEL BARRIUSO DIEZ ; RICCARDO VALVASSORI ; VALVASSORI RICCARDO

Inventor(s): BARRIUSO DIEZ RAQUEL COLLEGNO IT ; FRASSATI GUIDO COLLEGNO IT ; FRASSATI GUIDO VALVASSORI RICCARDO PAPA CARLA ; PAPA CARLA TURIN TORINO IT

Legal status (INPADOC)

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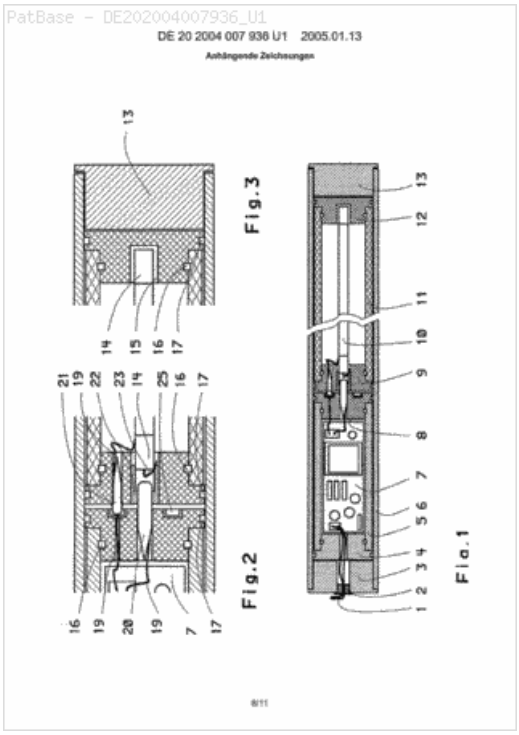
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IT1232101 A	19920123	LSGT	+	granted / extensions (spc, cpc, pte)	
IT1232101 A	20090524	PEXP		Calculated Patent Term Expiry	

3) Family number: 31461736 (DE202004007936 U1)

Title: **LIGHT** SOURCE CONTAINER **SYSTEM**, E.G. FOR ILLUMINATING DISPLAYS, SIGNS, LAMPS OR SIMILAR, IS OF MODULAR **STRUCTURE** WITH TUBULAR HOLDER IN WHICH INDIVIDUAL **LIGHT** SOURCE CONTAINER ELEMENTS CAN BE ARRANGED

Abstract: The **light** source container **system** is of modular construction with a tubular holder (6) in which individual **light** source container elements can be arranged. Current conducting elements arranged on the end surfaces of container stoppers (8,9) and/or contact covers and/or socket covers enable sequential connection with the elements inserted in the container **system**.

Classifications:
International (IPC 8-9): A45C15/00 A45C15/06 F21V27/00 F21V27/02 G09F13/04
International (IPC 1-7): A45B3/02 F21L4/00 F21S9/03 F21V33/00
CPC: A45C15/06 F21V27/02 F21V31/005 F21Y2115/10 G09F13/04



Family:

Publication number	Publication date	Application number	Application date
DE202004007936 U1	20041209	DE200420007936U	20040514

Priority:
DE200420007936U 20040514

Probable Assignee: KUSCH LOTHAR SIEGFRIED

Assignee(s): (std): KUSCH LOTHAR SIEGFRIED ; SCHMIDT EDGAR

Legal status (INPADOC)

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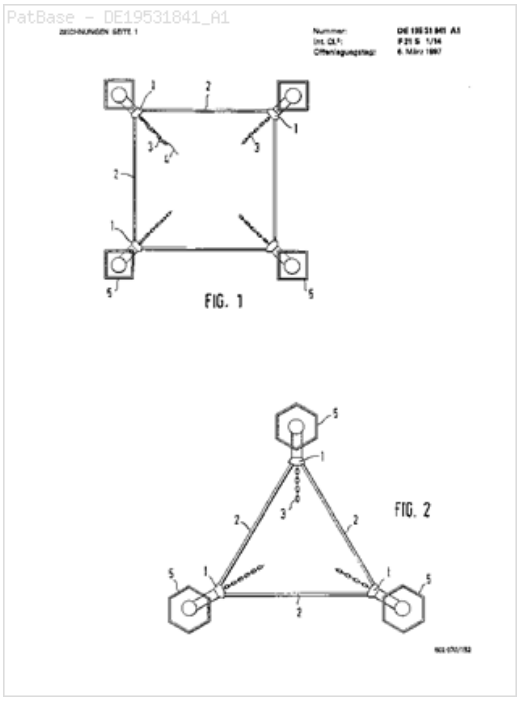
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DE202004007936 U1	20050113	LSGT	R207	UTILITY MODEL SPECIFICATION	Effective date: 20050113
DE202004007936 U1	20080327	LSLE	-R156	LAPSE OF IP RIGHT AFTER 3 YEARS	Effective date: 20071201
DE202004007936 U1	20140514	PEXP		Calculated Patent Term Expiry	

4) Family number: 12546211 (DE19531841 A1)

Title: ILLUMINATION **SYSTEM** FOR FIXING AT **STRUCTURAL** PARTS ESP. AT ROOF OR COLUMN OR MAST

Abstract: The illumination **system** has a frame **structure** with junction elements (1), which are connected one under the other across detachably fitted rod elements (2), and respectively carry one or more **light** sources and/or lamps (5). The junction elements are designed with one or more holders for the detachable fitting of the **light** sources or lamps of a different type and/or shape. A suspension can be achieved e.g. using four chain strands. The junction elements are designed with one or more mounting elements, for the detachable plugging-in or the screwing-in of rod elements of different type and shape. The junction and rod elements can be fitted detachably to each other. The junction elements and the **light** sources or lamps can be detachably mounted to each other.

Classifications:
International (IPC 8-9): F21S2/00
International (IPC 1-7): F21S1/14 F21S2/00 F21V21/10 F21V21/116
CPC: F21S2/00



Family:

Publication number	Publication date	Application number	Application date
DE19531841 A1	19970306	DE19951031841	19950829
DE19531841 C2	20000720	DE19951031841	19950829

Priority:

DE19951031841 19950829

Probable Assignee: GLASWERKSTAETTE ROTHKEGEL

Assignee(s): (std): GLASWERKSTAETTE AND LEUCHTENMANU ; GLASWERKSTAETTE ROTHKEGEL

Assignee(s): GLASWERKSTAETTE AND LEUCHTENMANUFAKTUR M ROTHKEGEL ; GLASWERKSTAETTE AND LEUCHTENMANUFAKTUR M ROTHKEGEL OHG ; GLASWERKSTAETTE ROTHKEGEL 97072 WUERZBURG DE

Inventor(s): (std): LEITL FLORIAN ; LEITL FLORIAN DIPL ING ; ROTHKEGEL MATTHIAS

Inventor(s): ROTHKEGEL MATTHIAS 97072 WUERZBURG DE

Legal status (INPADOC)

View legal status timeline

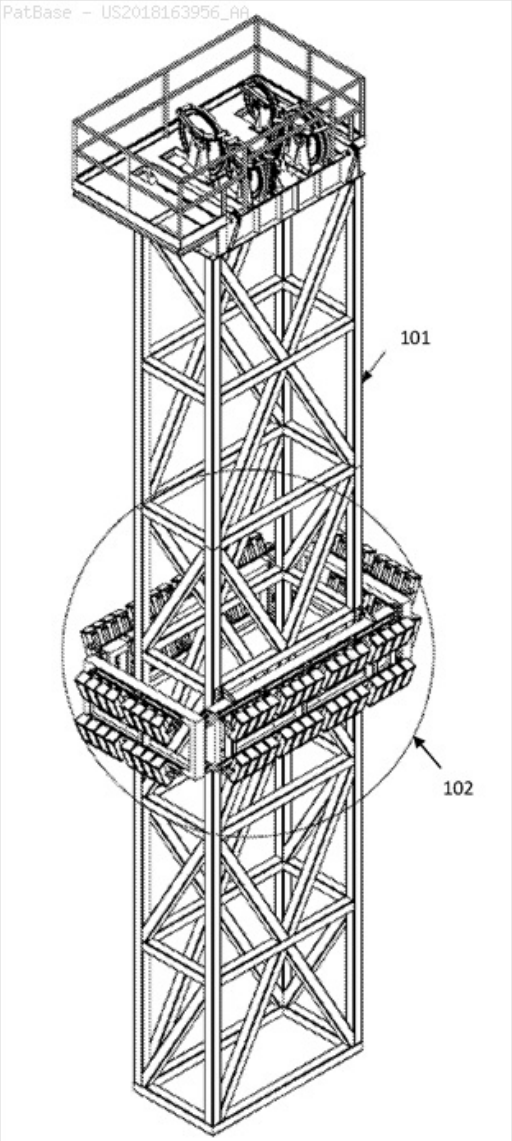
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DE19531841 A1	19970306	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE19531841 A1	20000420	LSAS	8127	NEW PERSON/NAME/ADDRESS OF THE APPLICANT	Owner: GLASWERKSTAETTE & LEUCHTENMANUFAKTUR M. ROTHKEGEL PartyType: owner
DE19531841 C2	20000720	LSGT	+	granted / extensions (spc, cpc, pte)	
DE19531841 C2	20000720	LSGT	+D2	GRANT AFTER EXAMINATION	
DE19531841 C2	20010118	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE19531841 C2	20020926	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE19531841 C2	20150829	PEXP		Calculated Patent Term Expiry	

5) Family number: 64824939 (US2018163956 AA)

Title: ATTACHABLE **LIGHTING** **SYSTEM**

Abstract: An attachable **lighting** **system** for a tower **structure** such as a **drilling** rig. A **lighting** **system** is described for a tower **structure** having at least one side. A **lighting** frame is attached to at least one side of the tower **structure**, the **lighting** frame including at least one **light** support bracket attached to the **lighting** frame for holding at least one **lighting** fixture. The **system** is attachable at any level of the tower, high or low.

Classifications:
International (IPC 8-9): E21B12/00 E21B41/00 F21V21/00 F21V21/116 F21V21/14 F21V21/30
CPC: E21B41/00 F21S2/00 F21V21/00 F21V21/116 F21V21/30 F21W2131/10 F21W2131/1005
US: 1/1 362/145



Family:

Publication number	Publication date	Application number	Application date
CA2993419 AA	20180123	CA20162993419	20160720
US2018163956 AA	20180614	US20160736156	20160720
WO17017565 A1	20170202	WO2016IB54329	20160720

Priority:
US20150196556P 20150724 WO2016IB54329 20160720 US20160736156 20160720

Probable Assignee: APOLLO ENERGY SERVICES CORP
Assignee(s): (std): APOLLO ENERGY SERVICES CORP
Assignee(s): GOWANLOCK MATTHEW
Inventor(s): (std): GOWANLOCK MATTHEW
Agent(s): BORDEN LADNER GERVAIS LLP
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

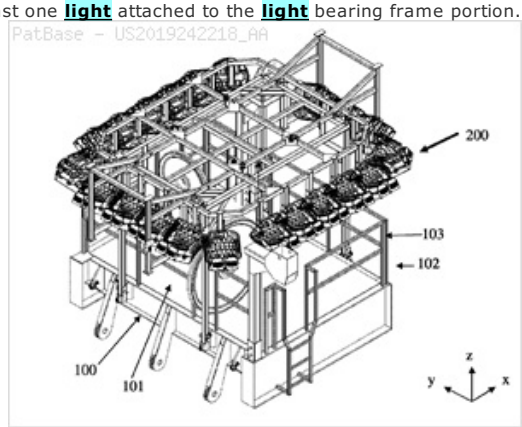
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US2018163956 AA	20171222	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:GOWANLOCK, MATTHEW;REEL/FRAME:044472/0150 Owner: APOLLO ENERGY SERVICES CORP., CANADA Effective date: 20171207
US2018163956 AA	20180312		RFE1	Docketed New Case - Ready for Examination	
US2018163956 AA	20180614	LSPB	+	published / reissued	
US2018163956 AA	20180829	LSES	NFA1	Non Final Action Mailed	
US2018163956 AA	20190317		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018163956 AA	20190317		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018163956 AA	20190418	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018163956 AA	20190418		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018163956 AA	20190806	LSWD	ABD2	Abandoned -- Failure to Pay Issue Fee	
US2018163956 AA	20190806		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO PAY ISSUE FEE
WO17017565 A1	20170202	LSPB	+	published / reissued	
WO17017565 A1	20170315		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 16829925 Country of Ref document: EP
WO17017565 A1	20171213	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 15736156 Country of Ref document: US
WO17017565 A1	20180123	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2993419 Country of Ref document: CA
WO17017565 A1	20180125	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO17017565 A1	20180822	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 16829925 Kind code of Ref document: A1 Country of Ref document: EP

6) Family number: 68421676 (US2019242218 AA)

Title: ATTACHABLE **LIGHTING** **SYSTEM** FOR **DRILLING** RIG

Abstract: A **lighting** **system** for a **drilling** rig including a **lighting** frame attachable to a crown of the **drilling** rig, wherein the **lighting** frame includes a fixed or adjustable frame portion attached to the crown of the **drilling** rig and a **light** bearing frame portion supported by the frame portion. Also provided is at least one **light** attached to the **light** bearing frame portion.

Classifications:
International (IPC 8-9): E21B41/00 F21S8/00 F21S8/04 F21V21/116 F21V21/30
CPC: E21B41/0021 F21S8/046 F21V21/116 F21V21/30 F21V33/00 F21V33/006 F21W2131/10



Family:

Publication number	Publication date	Application number	Application date
CA3031864 AA	20190124	CA20173031864	20170724
US2019242218 AA	20190808	US20170320122	20170724
WO18020400 A1	20180201	WO2017IB54478	20170724

Priority:
US20160366377P 20160725 WO2017IB54478 20170724 US20170320122 20170724

Probable Assignee: APOLLO ENERGY SERVICES CORP
Assignee(s): (std): APOLLO ENERGY SERVICES CORP
Assignee(s): GOWANLOCK MATTHEW
Inventor(s): (std): GOWANLOCK MATTHEW
Agent(s): BORDEN LADNER GERVAIS LLP
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
CA3031864 AA	20190124	LSPB	+	published / reissued	
US2019242218 AA	20190709		RFE1	Docketed New Case - Ready for Examination	
US2019242218 AA	20190709		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2019242218 AA	20190808	LSPB	+	published / reissued	
US2019242218 AA	20191206	LSES	NFA1	Non Final Action Mailed	
US2019242218 AA	20191206		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019242218 AA	20200721	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2019242218 AA	20200721		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
WO18020400 A1	20180201	LSPB	+	published / reissued	
WO18020400 A1	20181128		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 17833671 Country of Ref document: EP
WO18020400 A1	20190124	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 3031864 Country of Ref document: CA

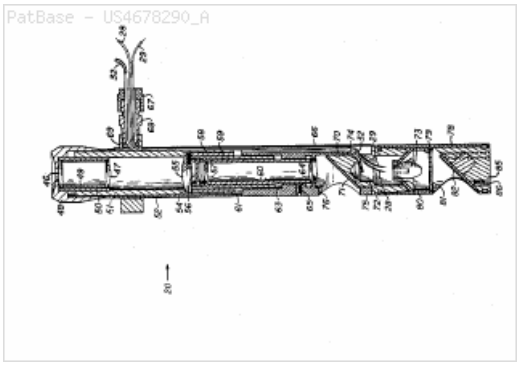
WO18020400 A1	20190126	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18020400 A1	20190821	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 17833671 Kind code of Ref document: A1 Country of Ref document: EP

7) Family number: 5320846 (US4678290 A)

Title: Apparatus for visual inspection of closed machinery

Abstract: For use in inspecting the interior pipelines and other machinery subjected to risk of explosive gasses, an improved explosive proof apparatus is disclosed. The apparatus includes a periscope assembly having an optical **system** and lamp sealed therein for viewing a specified area subject to illumination by the lamp. Moreover, a separate battery pack is included. A flow of nitrogen gas is delivered to the battery pack and periscope to surround the electrical components to thereby prevent explosion.

Classifications:
International (IPC 8-9): G02B23/24
International (IPC 1-7): A61B1/00 F21L7/00 F21V29/00 G02B23/00
CPC: G02B23/2476
US: 359/367 362/158 362/267



Family:

Publication number	Publication date	Application number	Application date
US4678290 A	19870707	US19850771349	19850830

Priority:

US19850771349 19850830

Probable Assignee: WELKER ENG

Assignee(s): (std): WELKER ENG

Assignee(s): FIRST NATIONAL BANK OF MISSOURI CITY ; WELKER ENGINEERING CO ; WELKER ENGINEERING COMPANY

Inventor(s): (std): WELKER ROBERT H

Legal status (INPADOC)

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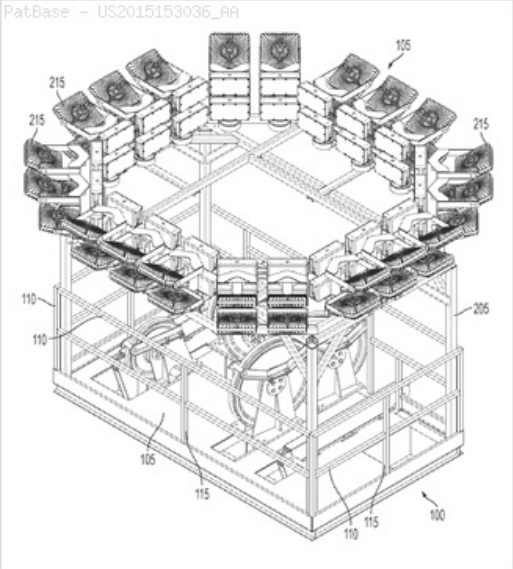
Patent	Date recorded	Event group	Code	Event	Details
US4678290 A	19850830	LSAS	AS	ASSIGNMENT	Effective date: 19850826 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:WELKER, ROBERT H.;REEL/FRAME:004452/0622 Owner: WELKER ENGINEERING COMPANY, POST OFFICE BOX 1406,
US4678290 A	19870506	LSGT	PAT1	Patented Case	
US4678290 A	19870506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US4678290 A	19870707	LSGT	+	granted / extensions (spc, cpc, pte)	
US4678290 A	19901228	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US4678290 A	19930611	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:WELKER ENGINEERING COMPANY;REEL/FRAME:006633/0576 PartyType: owner Owner: FIRST NATIONAL BANK OF MISSOURI CITY Effective date: 19930603
US4678290 A	19941220	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US4678290 A	19970616	LSAS	AS	ASSIGNMENT	Effective date: 19970609 OldParty: SECURITY INTEREST;ASSIGNOR:WELKER ENGINEERING COMPANY;REEL/FRAME:008559/0808 PartyType: owner Owner: FIRST NATIONAL BANK OF MISSOURI CITY, TEXAS
US4678290 A	19990104	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US4678290 A	19990126		REMI	MAINTENANCE FEE REMINDER MAILED	

8) Family number: 59400978 (US2015153036 AA)

Title: **LIGHTING** **SYSTEM** FOR **DRILLING** RIG

Abstract: A **lighting** **system** for a **drilling** rig including a **lighting** frame attached to a crown of the **drilling** rig, wherein the **lighting** frame includes an adjustable frame portion attached to the crown of the **drilling** rig and a **light** bearing frame portion supported by the adjustable frame portion. Also provided is at least one **light** support post attached to the **light** bearing frame portion for holding a **lighting** fixture and at least one **lighting** fixture attached to each **light** support post.

Classifications:
International (IPC 8-9): E21B15/00 E21B41/00 F21S8/08 F21V14/02 F21V21/00 F21V21/02 F21V21/116 F21V21/22 F21V21/30 F21V33/00 F21W131/10 F21W131/402 F21W131/403
CPC: E21B15/00 F21S8/085 F21S8/088 F21V21/116 F21V21/22 F21V33/00 F21W2131/10 F21W2131/1005 F21W2131/402 F21W2131/403 F21V21/025 F21V21/30
US: 1/1 362/249.01 362/249.07 362/249.1 362/430



Family:

Publication number	Publication date	Application number	Application date
CA2928251 AA	20160421	CA20142928251	20140717
CA2928251 C	20180424	CA20142928251	20140717
CN105829635 A	20160803	CN201480064226	20140717
CN105829635 B	20180608	CN201480064226	20140717
IN201617017642 A	20160831	IN201617017642	20160523
MX2016005056 A1	20161215	MX20160005056	20140717
RU2016125743 A	20180109	RU20160125743	20140717
RU2016125743 A3	20180226	RU20160125743	20140717
RU2652514 C2	20180426	RU20160125743	20140717
US10125935 BB	20181113	US20140100140	20140717
US10145544 BB	20181204	US20150632592	20150226
US2015153036 AA	20150604	US20130093097	20131129
US2015184840 AA	20150702	US20150632592	20150226
US2017023195 AA	20170126	US20140100140	20140717
US9316390 BB	20160419	US20130093097	20131129
WO15077871 A1	20150604	WO2014CA50681	20140717

Priority:

US20130093097 20131129 WO2014CA50681 20140717 RU20160125743 20140717
US20140100140 20140717 US20150632592 20150226

Probable Assignee: APOLLO ENERGY SERVICES CORP

Assignee(s): (std): AITHRA PROJECTS INC ; APOLLO ENERDZHI SERVISEZ KORP ; APOLLO ENERGY SERVICES CORP

Assignee(s): AITHRA PROJECTS INCT ; DUPUIS DARCY K ; GOWANLOCK MATTHEW ; АПОЛЛО ЭНЕРДЖИ СЕРВИСЕЗ КОРП ; 阿波罗能源服务公司

Inventor(s): (std): DARCY K DUPUIS ; DUPUIS DARCY K ; DYUPYUI DARSI K ; GOUANLOK METTYU ; GOWANLOCK MATTHEW ; MATTHEW GOWANLOCK

Inventor(s): D K 迪皮伊 ; D·K·迪皮伊 ; M 古瓦洛克 ; M·古瓦洛克 ; ГОУАНЛОК МЭТТЬЮ ; ГОУАНЛОК МЭТТЮ ; ДЮПЮИ ДАРСИ К

Agent(s): BERESKIN AND PARR LLP SENCRL SRL; BORDEN LADNER GERVAIS LLP; GREENBLUM AND BERNSTEIN PLC; MCMILLAN LLP ET AL; OOO YURIDICHESKAYA GORODISSKIJ I PARTNERY FA; OOO ЮРИДИЧЕСКАЯ ФИРМА ГОРОДИССКИЙ И ПАРТНЕРЫ; 北京博思佳知识产权代理有限公司 11415; 林祥

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
CA2928251 AA	20160421	LSPB	+	published / reissued	
CA2928251 AA	20170516	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20170421

CA2928251 C	20180424	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2928251 C	20340717	PEXP		Calculated Patent Term Expiry	
CN105829635 A	20160803	LSPB	+	published / reissued	
CN105829635 A	20160803	LSPB	+C06	PUBLICATION	
CN105829635 A	20160803	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN105829635 A	20161109		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN105829635 A	20161109		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN105829635 B	20180608	LSGT	+	granted / extensions (spc, cpc, pte)	
CN105829635 B	20180608	LSGT	+GR01	PATENT GRANT	
CN105829635 B	20180608	LSGT	+GR01	授权	Text: 授权 (Authorization)
CN105829635 B	20200710	LSLE	-CF01	TERMINATION OF PATENT RIGHT DUE TO NON-PAYMENT OF ANNUAL FEE	
CN105829635 B	20200710	LSLE	-CF01	未缴年费专利权终止	Effective date: 20190717 Text: 专利权的终止 (Termination of Patent Right)
CN105829635 B	20340717	PEXP		Calculated Patent Term Expiry	
IN201617017642 A	20160831	LSPB	+	published / reissued	
MX2016005056 A1	20161215	LSPB	+	published / reissued	
RU2016125743 A	20180109	LSPB	+	published / reissued	
RU2652514 C2	20180426	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2652514 C2	20200605	LSLE	-MM4A	THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES	Effective date: 20190718
RU2652514 C2	20340717	PEXP		Calculated Patent Term Expiry	
US10125935 BB	20160907	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GOWANLOCK, MATTHEW;DUPUIS, DARCY K.;REEL/FRAME:039657/0782 Effective date: 20160520 Owner: APOLLO ENERGY SERVICES CORP., CANADA PartyType: owner
US10125935 BB	20181024	LSGT	PAT1	Patented Case	
US10125935 BB	20181113	LSGT	+	granted / extensions (spc, cpc, pte)	
US10125935 BB	20350118	PEXP		Calculated Patent Term Expiry (PTA 185 days)	
US10145544 BB	20150415	LSAS	AS	ASSIGNMENT	Owner: APOLLO ENERGY SERVICES CORP., CANADA PartyType: owner Effective date: 20150408 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GOWANLOCK, MATTHEW;DUPUIS, DARCY K.;REEL/FRAME:035413/0078
US10145544 BB	20181114	LSGT	PAT1	Patented Case	
US10145544 BB	20181204	LSGT	+	granted / extensions (spc, cpc, pte)	

US10145544 BB	20350812	PEXP		Calculated Patent Term Expiry (PTA 167 days)	
US2015153036 AA	20150604	LSPB	+	published / reissued	
US2015153036 AA	20160330	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2015184840 AA	20150413		RFE1	Docketed New Case - Ready for Examination	
US2015184840 AA	20150702	LSPB	+	published / reissued	
US2015184840 AA	20170221		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2015184840 AA	20170530		FRM1	Final Rejection Mailed	
US2015184840 AA	20170722		RSP1	Response after Final Action Forwarded to Examiner	
US2015184840 AA	20170803	LSES	ADV1	Advisory Action Mailed	
US2015184840 AA	20171018		RFE1	Docketed New Case - Ready for Examination	
US2015184840 AA	20171115	LSES	NFA1	Non Final Action Mailed	
US2015184840 AA	20180130		FRM1	Final Rejection Mailed	
US2015184840 AA	20180717	LSES	ALW2	Allowed -- Notice of Allowance Not Yet Mailed	
US2015184840 AA	20180724	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2015184840 AA	20181114	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2017023195 AA	20161115		RFE1	Docketed New Case - Ready for Examination	
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US2017023195 AA	20180130	LSES	NFA1	Non Final Action Mailed	
US2017023195 AA	20180711	LSES	ALW2	Allowed -- Notice of Allowance Not Yet Mailed	
US2017023195 AA	20180711	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017023195 AA	20181024	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US9316390 BB	20141024	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DUPUIS, DARCY;GOWANLOCK, MATTHEW;SIGNING DATES FROM 20140815 TO 20140825;REEL/FRAME:034025/0769 Owner: AITHRA PROJECTS INCT, CANADA PartyType: owner

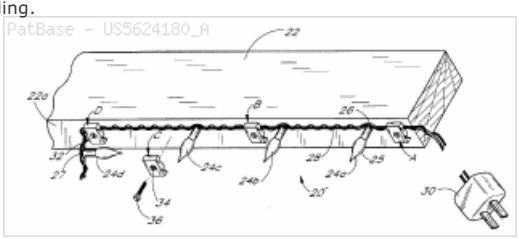
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US9316390 BB	20150729	LSES	NFA1	Non Final Action Mailed	
US9316390 BB	20151102		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US9316390 BB	20160314	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US9316390 BB	20160330	LSGT	PAT1	Patented Case	
US9316390 BB	20160419	LSGT	+	granted / extensions (spc, cpc, pte)	
US9316390 BB	20191209	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US9316390 BB	20340531	PEXP		Calculated Patent Term Expiry (PTA 183 days)	
WO15077871 A1	20150604	LSPB	+	published / reissued	
WO15077871 A1	20150715		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 14865442 Country of Ref document: EP
WO15077871 A1	20160419	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: MX/A/2016/005056 Country of Ref document: MX
WO15077871 A1	20160421	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2928251 Country of Ref document: CA
WO15077871 A1	20160527	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 15100140 Country of Ref document: US
WO15077871 A1	20160530	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO15077871 A1	20160629	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A Ref document number: 2016125743 Country of Ref document: RU
WO15077871 A1	20161221	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 14865442 Country of Ref document: EP
WO15077871 A1	20200830	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 516371047 Country of Ref document: SA

9) Family number: 13342305 (US5624180 A)

Title: **LIGHT** STRING MOUNTING BRACKET

Abstract: A bracket for mounting wire, especially strings of **lights**, to interior or exterior **structures**. The bracket has a body with a counterbored fastener throughbore. The body extends out from the throughbore on either side and includes at least two differently-sized channels for receiving wire. The channels are formed in a face of the body held flush against the **structure** by the fastener. The throughbore thus extends perpendicular to the channels through the body. A number of brackets clamp portions of the wire close to each **light** to the **structure** enabling uniform orientation of the **lights** therefrom. The bracket is made of clear material to be less conspicuous. The material is preferably acrylic to extend the life of the bracket from exposure when installed on the exterior of a building.

Classifications:
International (IPC 8-9): B44C5/00 F21S4/00 F21V21/08 F21V21/088
International (IPC 1-7): F21V21/00
CPC: B44C5/00 F21S4/20 F21V21/0808 F21V21/088 Y10S362/806
US: 248/68.1 248/681 248/73 362/249 362/249.01 362/249.11 362/249.16 362/250 362/391 362/396 362/806



Family:

Publication number	Publication date	Application number	Application date
US5624180 A	19970429	US19950415346	19950403
US5695273 A	19971209	US19950563396	19951128

Priority:
US19950415346 19950403 US19950563396 19951128

Probable Assignee: LANNING WILLIAM C
Assignee(s): LANNING WILLIAM C
Inventor(s): (std): LANNING WILLIAM C

Legal status (INPADOC)

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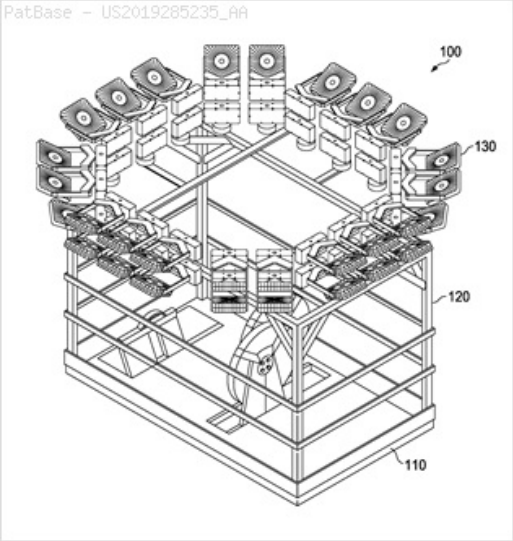
Patent	Date recorded	Event group	Code	Event	Details
US5624180 A	19970429	LSGT	+	granted / extensions (spc, cpc, pte)	
US5624180 A	20001030	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5624180 A	20041019	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5624180 A	20081103		REMI	MAINTENANCE FEE REMINDER MAILED	
US5624180 A	20090429	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5624180 A	20090525	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5624180 A	20090525	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US5624180 A	20090616	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20090429
US5624180 A	20150403	PEXP		Calculated Patent Term Expiry	
US5695273 A	19971209	LSGT	+	granted / extensions (spc, cpc, pte)	
US5695273 A	20010605	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5695273 A	20050330	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5695273 A	20090615		REMI	MAINTENANCE FEE REMINDER MAILED	
US5695273 A	20091209	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5695273 A	20100104	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5695273 A	20100104	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US5695273 A	20100126	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20091209
US5695273 A	20151128	PEXP		Calculated Patent Term Expiry	

10) Family number: 75907251 (US2019285235 AA)

Title: ELEVATED **STRUCTURE** -MOUNTED **LIGHTING** **SYSTEM**

Abstract: An improved elevated **structure** -mounted **lighting** **system** is disclosed. The **lighting** **system** may be used on **drilling** rigs, or with other applications, including for **drilling**, production, refineries, frac sites, construction, and other industrial applications that may use tower/mast type equipment. The improved elevated **structure** -mounted **lighting** **system** may accommodate any style or design of crown section of a **drilling** rig and may be mounted on a pole or independent mount **system**.

Classifications:
International (IPC 8-9): E21B41/00 F21S8/08 F21S9/04 F21V21/00 F21V21/116 F21V21/22 F21V21/26 F21V21/30 F21V33/00 F21W131/10 F21W131/402 F21W131/403
CPC: E21B41/00 F21S8/088 F21V21/08 F21V21/116 F21V21/26 F21V33/006 F21W2131/1005 F21W2131/402 F21V33/00 F21W2131/403



Family:

Publication number	Publication date	Application number	Application date
AU2018413296 AA	20190919	AU20180413296	20180719
CA3058473 AA	20190927	CA20183058473	20180719
CO20190009681 A2	20191009	CO20190009681	20190906
US10473282 BB	20191112	US20180138723	20180921
US10711961 BB	20200714	US20180009032	20180614
US2019285235 AA	20190919	US20180009032	20180614
US2019285236 AA	20190919	US20180138723	20180921
US2020011496 AA	20200109	US20190571527	20190916
WO19177653 A1	20190919	WO2018US42795	20180719

Priority:

US20180643663P 20180315 US20180009032 20180614 WO2018US42795 20180719
US20180138723 20180921 US20190571527 20190916

Probable Assignee: C AND M OILFIELD RENTALS LLC

Assignee(s): (std): C AND M OILFIELD RENTALS LLC ; JCA RENTALS LLC

Assignee(s): ALLISON JOSHUA C ; HAALAND JOSH ; IVANOFF JESSICA

Inventor(s): (std): ALLISON JOSHUA C ; HAALAND JOSH ; IVANOFF JESSICA

Agent(s): FPA PATENT ATTORNEYS PTY LTD; GOWLING WLG CANADA LLP; HAWES ERIK C ET AL; MORGAN LEWIS AND BOCKIUS LLP

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
AU2018413296 AA	20190919	LSPB	+	published / reissued	
CA3058473 AA	20190927	LSPB	+	published / reissued	
CA3058473 AA	20191107	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20191018
CO20190009681 A2	20191009	LSPB	+	published / reissued	
US10473282 BB	20180921	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10473282 BB	20180925	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ALLISON, JOSHUA C;HAALAND, JOSH;IVANOFF,

					JESSICA;REEL/FRAME:046960/0139 Owner: JCA RENTALS, LLC, WYOMING PartyType: owner Effective date: 20180924
US10473282 BB	20181015	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10473282 BB	20191112	LSGT	+	granted / extensions (spc, cpc, pte)	
US10473282 BB	20200226	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20200225 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:JCA RENTALS, LLC;REEL/FRAME:051933/0824 Owner: C&M OILFIELD RENTALS, LLC, WYOMING
US10473282 BB	20380921	PEXP		Calculated Patent Term Expiry	
US10711961 BB	20180614	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10711961 BB	20180703	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10711961 BB	20180710	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: JCA RENTALS, LLC, WYOMING OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ALLISON, JOSHUA C;HAALAND, JOSH;IVANOFF, JESSICA;SIGNING DATES FROM 20180614 TO 20180701;REEL/FRAME:046308/0148
US10711961 BB	20180710	LSAS	AS	ASSIGNMENT	Owner: JCA RENTALS, LLC, WYOMING PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ALLISON, JOSHUA C;HAALAND, JOSH;IVANOFF, JESSICA;SIGNING DATES FROM 20180614 TO 20180701;REEL/FRAME:046308/0075
US10711961 BB	20190819		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US10711961 BB	20200624	LSGT	PAT1	Patented Case	
US10711961 BB	20200714	LSGT	+	granted / extensions (spc, cpc, pte)	
US10711961 BB	20380614	PEXP		Calculated Patent Term Expiry	
US2019285235 AA	20190819	LSES	NFA1	Non Final Action Mailed	
US2019285235 AA	20190919	LSPB	+	published / reissued	
US2019285235 AA	20200220		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019285235 AA	20200220		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019285235 AA	20200226	LSAS	AS	ASSIGNMENT	Effective date: 20200225 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:JCA RENTALS, LLC;REEL/FRAME:051933/0824 Owner: C&M OILFIELD RENTALS, LLC, WYOMING PartyType: owner

US2019285235 AA	20200611	LSFE	AWA3	Awaiting TC Resp, Issue Fee Payment Verified	
US2019285235 AA	20200611		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: AWAITING TC RESP, ISSUE FEE PAYMENT VERIFIED
US2019285235 AA	20200624	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2019285236 AA	20190919	LSPB	+	published / reissued	
US2019285236 AA	20191004	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2019285236 AA	20191004		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2019285236 AA	20191023	LSGT	PAT1	Patented Case	
US2019285236 AA	20191023	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2020011496 AA	20190927		APP1	Application Dispatched from Preexam, Not Yet Docketed	
US2020011496 AA	20190927		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: APPLICATION DISPATCHED FROM PREEXAM, NOT YET DOCKETED
US2020011496 AA	20200109	LSPB	+	published / reissued	
US2020011496 AA	20200226	LSAS	AS	ASSIGNMENT	Effective date: 20200225 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:JCA RENTALS, LLC;REEL/FRAME:051933/0824 Owner: C&M OILFIELD RENTALS, LLC, WYOMING PartyType: owner
US2020011496 AA	20200702		RFE1	Docketed New Case - Ready for Examination	
US2020011496 AA	20200702		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
WO19177653 A1	20190919	LSPB	+	published / reissued	
WO19177653 A1	20190927	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 3058473 Country of Ref document: CA
WO19177653 A1	20191030		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18909737 Country of Ref document: EP

11) Family number: 76112336 (WO19191843 A1)

Title: LIGHTWEIGHT LED **LIGHTING** **SYSTEMS** FOR PERMANENT AND SEMI-PERMANENT MOUNTING ON ELEVATED **STRUCTURES** HAVING INTEGRATED SUPPORT AND THERMAL TRANSFER FEATURES

Abstract: The invention relates to lightweight LED **lighting** **systems** for permanent and semi-permanent mounting on elevated **structures**, the **lighting** **systems** having integrated support and thermal transfer features. The **systems** are particularly suited for elevated mast **systems** and specifically for mast **systems** that are repeatedly lifted and lowered such as **drilling** and service rig masts. Specifically, the invention improves a) the weight/lumen ratios of LED lamp assemblies and LED **lighting** **systems**, b) the net added weight of LED **lighting** **systems**, c) the footprint of LED **light** **systems** and/or d) obviates the need for removing LED **lighting** **systems** or their sub-assemblies when transporting mast **systems**.

Classifications:
International (IPC 8-9): E21B15/00 F21K9/00 F21V29/60 F21V29/61 F21V29/70 F21V29/74
CPC: F21V29/673 F21V29/76 F21V7/0083 F21W2131/1005 F21W2131/402 F21Y2105/16 F21Y2115/10

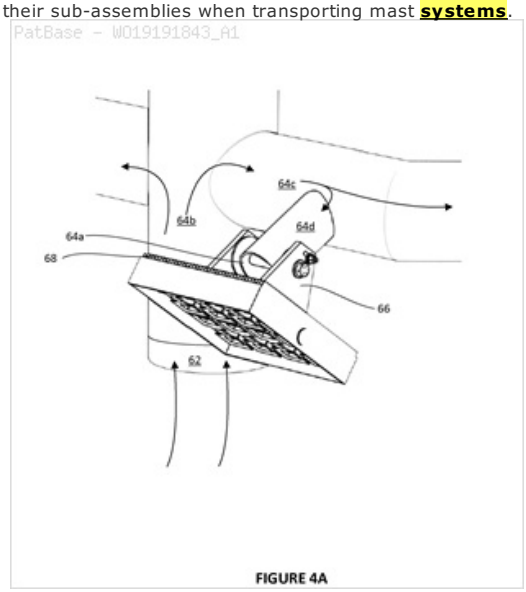


FIGURE 4A

Family:

Publication number	Publication date	Application number	Application date
WO19191843 A1	20191010	WO2019CA50410	20190404

Priority:
US20180652747P 20180404 US20180669852P 20180510 US20180673440P 20180518

Probable Assignee: CLEANTEK IND INC
Assignee(s): (std): CLEANTEK IND INC
Inventor(s): (std): CURLETT JOSHUA ; WANLIN HUGUES
Agent(s): HICKS ANDREW
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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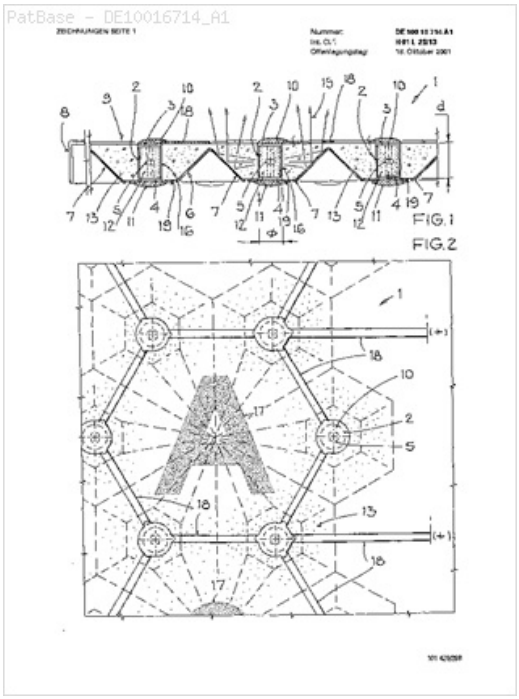
Patent	Date recorded	Event group	Code	Event	Details
WO19191843 A1	20191010	LSPB	+	published / reissued	
WO19191843 A1	20191120		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 19782122 Kind code of Ref document: A1 Country of Ref document: EP

12) Family number: 15784798 (DE10016714 A1)

Title: DEVICE FOR EMITTING RADIATION E.G. FOR **LIGHTING** UP NUMBERS, LETTERING AND SYMBOLS, USES **LIGHT** CONDUCTORS, LEDS AND RADIATION EMITTING ENCASED DIODES MOUNTED ON A PRINTED CIRCUIT BOARD

Abstract: The diodes are mounted on a printed circuit board and a fiber-optic **light** guide (1) is positioned on the **structure** of this printed circuit board. Two-pole diodes are used in a MELF casing and molded in between the front and rear sides of the fiber-optic **light** guide. One pole (3) of the radiation emitter can be seen on the front side of a radiation waveguide and the other (4) seen on the rear side of the radiation waveguide.

Classifications:
International (IPC 8-9): B60Q1/26 B60Q1/30 B60Q1/56 F21V8/00 G02B6/00 G09F13/22 G09F9/33 H01L25/075 H01L33/00 H01L33/50 H01L33/60 H01L33/62
International (IPC 1-7): F21S2/00 F21V13/02 F21V19/00 F21V27/00 F21V7/04 F21V7/22 F21V8/00 F21W111/00 F21W131/30 F21W131/403 F21Y101/02 G09F13/00 G09F9/305 G09F9/33 G09F9/35 H01L23/02 H01L25/13
CPC: B60Q1/302 B60Q1/56 G02B6/0021 G02B6/0041 G02B6/0043 G02B6/0046 G02B6/0055 G02B6/0065 G09F13/22 G09F9/33 H01L25/0753 H01L2924/0002 H01L33/50 H01L33/60 H01L33/62



Family:

Publication number	Publication date	Application number	Application date
DE10016714 A1	20011018	DE20001016714	20000404
DE10016714 C2	20030327	DE20001016714	20000404

Priority:
DE20001016714 20000404

Probable Assignee: VISHAY SEMICONDUCTOR GMBH
Assignee(s): (std): VISHAY SEMICONDUCTOR GMBH
Inventor(s): (std): BRAUN MATTHIAS ; VIEHMANN KURT RAINER

Legal status (INPADOC)

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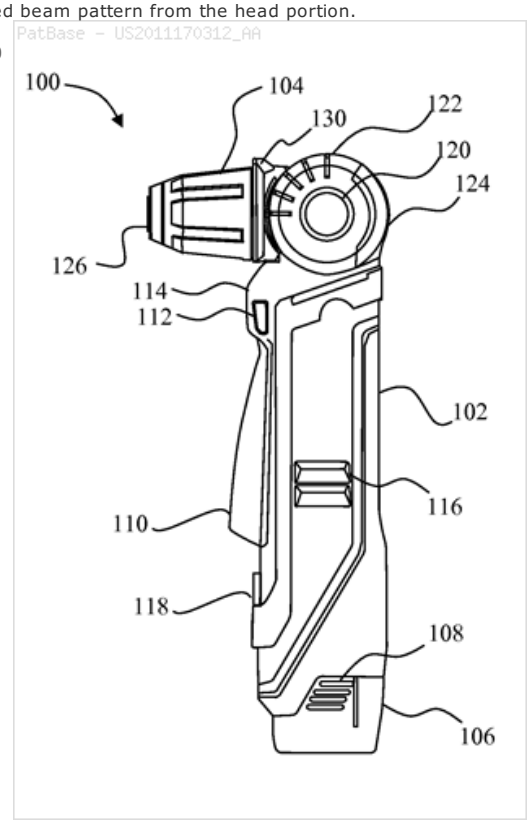
Patent	Date recorded	Event group	Code	Event	Details
DE10016714 A1	20011018	LSPB	+	published / reissued	
DE10016714 A1	20011018	LSES	+OM8	SEARCH REPORT AVAILABLE AS TO PARAGRAPH 43 LIT. 1 SENTENCE 1 PATENT LAW	
DE10016714 A1	20011018	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE10016714 C2	20030327	LSGT	+	granted / extensions (spc, cpc, pte)	
DE10016714 C2	20030327	LSGT	+8304	GRANT AFTER EXAMINATION PROCEDURE	
DE10016714 C2	20030925	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE10016714 C2	20200404	PEXP		Calculated Patent Term Expiry	
DE10016714 C2	20200404	LSLE	-R071	EXPIRY OF RIGHT	
DE10016714 C2	20200404	LSLE	-R071	EXPIRY OF RIGHT	

13) Family number: 49243891 (US2011170312 AA)

Title: ARTICULATING **DRILL** WITH ILLUMINATION

Abstract: The present invention is an articulating hand power tool which in one embodiment includes a head portion including a head housing configured to articulate with a main housing, a bit holder rotatably positioned within the head housing, and a **lighting** assembly configured to emit a first elongated beam pattern from the head portion.

Classifications:
International (IPC 8-9): B23P15/32 B25B23/18 B25F5/02 F21V33/00 F21V8/00
CPC: B25F5/021 F21V2200/13 F21V33/0084 G02B6/0005 Y10T408/21
US: 362/109 362/119 362/119S 362/120 362/253 362/257 362/317 362/577 362/577P 362/578 408/16



Family:

Publication number	Publication date	Application number	Application date
US2011170312 AA	20110714	US20100701783	20100208
US2012163016 AA	20120628	US20120411822	20120305
US2014098561 AA	20140410	US20130101559	20131210
US8128250 BB	20120306	US20100701783	20100208
US8602582 BB	20131210	US20120411822	20120305
US8851698 BB	20141007	US20130101559	20131210

Priority:
US20100294059P 20100111 US20100701783 20100208 US20120411822 20120305 US20130101559 20131210

Probable Assignee: ROBERT BOSCH GMBH
Assignee(s): (std): BOSCH GMBH ROBERT ; BOSCH TOOL CORP ; CREDO TECH CORP ; PARRINELLO JON
Assignee(s): CREDO TECHNOLOGY CORP ; CREDO TECHNOLOGY CORPORATION ; ROBERT BOSCH GMBH ; ROBERT BOSCH TOOL CORP ; ROBERT BOSCH TOOL CORPORATION
Inventor(s): (std): PARRINELLO JON
Agent(s): MAGINOT MOORE AND BECK

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2011170312 AA	20110714	LSPB	+	published / reissued	
US2011170312 AA	20120215	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012163016 AA	20120628	LSPB	+	published / reissued	
US2012163016 AA	20131120	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014098561 AA	20140410	LSPB	+	published / reissued	
US2014098561 AA	20140415	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20140320

					Owner: ROBERT BOSCH GMBH, GERMANY OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:PARRINELLO, JON;REEL/FRAME:032673/0353
US2014098561 AA	20140415	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:PARRINELLO, JON;REEL/FRAME:032673/0353 Effective date: 20140320 PartyType: owner Owner: ROBERT BOSCH TOOL CORPORATION, ILLINOIS
US2014098561 AA	20140917	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US8128250 BB	20100208	LSAS	AS	ASSIGNMENT	Owner: CREDO TECHNOLOGY CORPORATION, ILLINOIS PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:PARRINELLO, JON;REEL/FRAME:023910/0001 Effective date: 20100204
US8128250 BB	20100208	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:PARRINELLO, JON;REEL/FRAME:023910/0001 PartyType: owner Owner: ROBERT BOSCH GMBH, GERMANY Effective date: 20100204
US8128250 BB	20100429	LSAS	AS	ASSIGNMENT	Owner: ROBERT BOSCH TOOL CORPORATION, ILLINOIS PartyType: owner Effective date: 20100429 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:PARRINELLO, JON;REEL/FRAME:024307/0871
US8128250 BB	20100429	LSAS	AS	ASSIGNMENT	Effective date: 20100429 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:PARRINELLO, JON;REEL/FRAME:024307/0871 Owner: ROBERT BOSCH GMBH, GERMANY PartyType: owner
US8128250 BB	20120215	LSGT	PAT1	Patented Case	
US8128250 BB	20120306	LSGT	+	granted / extensions (spc, cpc, pte)	
US8128250 BB	20150831	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8128250 BB	20190902	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 8
US8128250 BB	20300208	PEXP		Calculated Patent Term Expiry	
US8602582 BB	20120306	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: ROBERT BOSCH TOOL CORPORATION, ILLINOIS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:PARRINELLO, JON;REEL/FRAME:027810/0819 Effective date: 20100429
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US8602582 BB	20131120	LSGT	PAT1	Patented Case	
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US8602582 BB	20320305	PEXP		Calculated Patent Term Expiry	
US8851698 BB	20140917	LSGT	PAT1	Patented Case	
US8851698 BB	20141007	LSGT	+	granted / extensions (spc, cpc, pte)	
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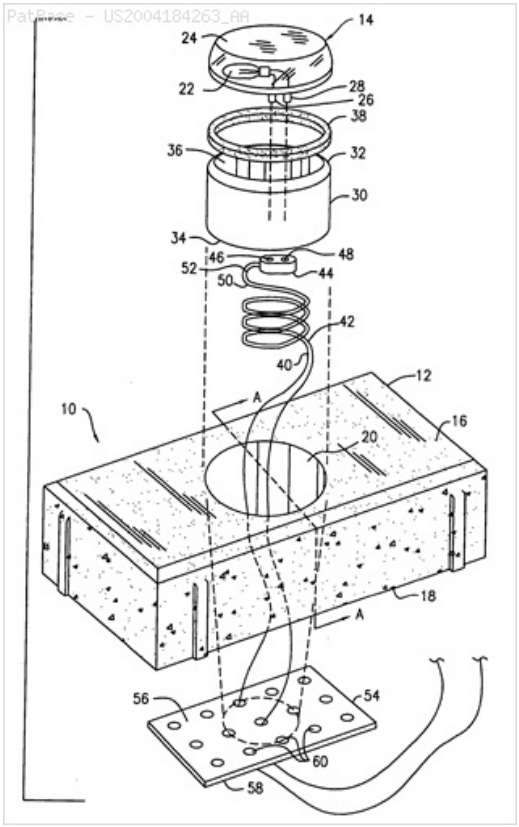
		Term Expiry (a terminal disclaimer has been filed)

14) Family number: 30974137 (US2004184263 AA)

Title: PAVER **LIGHT**

Abstract: A paver **light** having a masonry **structure** with an aperture that has a substantially constant diameter from an exterior surface to an interior surface of the masonry **structure**, and a **lighting** fixture positioned within the aperture of the masonry **structure**. The **lighting** fixture includes a support member with an internal cavity, an electrical socket removably received within the cavity of the support member, and a modular **light** assembly removably mounted to the support member. The modular **light** assembly is releasably connected to the socket such that the socket is removed from the cavity of the support member as the modular **light** assembly is removed from the support member. Upon removal of the modular **light** assembly from the support member, the modular **light** assembly can be disconnected from the socket for the purposes of repair or replacement externally of the masonry **structure**.

Classifications:
International (IPC 8-9): E01C17/00 E01F9/00 E01F9/04 E01F9/06 E01F9/50 F21S8/02 F21V21/02 F21V21/04 F21V33/00 F21V9/00 F21V9/08
International (IPC 1-7): F21S8/00 F21S8/02 F21V21/04
CPC: E01C17/00 E04F2290/026 F21S8/022 F21V21/04 F21V31/00 F21V33/006 F21V9/08 F21W2131/103 F21Y2115/10 E01F9/559 E04H4/141 E04H4/148 F21V31/005 F21W2111/02 F21W2131/10
US: 362/145 362/145P 362/153 362/153.1 362/153.100P 362/650 362/650S 404/24



Family:

Publication number	Publication date	Application number	Application date
CA2491501 AA	20050715	CA20042491501	20041224
CA2491501 C	20080415	CA20042491501	20041224
CA2591736 AA	20071216	CA20072591736	20070615
CA2591736 C	20140506	CA20072591736	20070615
US2004184263 AA	20040923	US20040757952	20040115
US2006291197 AA	20061228	US20060454754	20060616
US7070294 BB	20060704	US20040757952	20040115
US7556394 BB	20090707	US20060454754	20060616

Priority:

US20030440457P 20030116 US20040757952 20040115 CA20042491501 20041224
US20060454754 20060616 CA20072591736 20070615

Probable Assignee: PATTI ANTHONY
Assignee(s): (std): PATTI ANTHONY
Inventor(s): (std): PATTI ANTHONY
Inventor(s): ANTHONY PATTI
Agent(s): BORDEN LADNER GERVAIS LLP; GREENBERG TRAURIG LLP; MCCARTER AND ENGLISH LLP

Legal status (INPADOC)

View legal status timeline

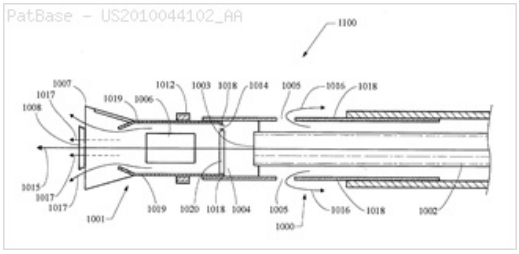
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CA2591736 C	20270615	PEXP		Calculated Patent Term Expiry	
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US2004184263 AA	20060614	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2006291197 AA	20061228	LSPB	+	published / reissued	
US2006291197 AA	20090617	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
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US7070294 BB	20131204	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US7070294 BB	20171221	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 12
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US7556394 BB	20090617	LSGT	PAT1	Patented Case	
US7556394 BB	20090707	LSGT	+	granted / extensions (spc, cpc, pte)	
US7556394 BB	20121212	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7556394 BB	20161222	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US7556394 BB	20261014	PEXP		Calculated Patent Term Expiry (PTA 120 days)	

15) Family number: 44432240 (US2010044102 AA)

Title: METHODS AND APPARATUS FOR REMOVAL AND CONTROL OF MATERIAL IN LASER **DRILLING** OF A BOREHOLE

Abstract: There is provided a **system**, apparatus and methods for removal of material for the path of a laser beam during laser **drilling** of a borehole and for removal of displaced borehole material from the borehole during laser **drilling**. In particular, there are provided paths, dynamics and parameters of fluid flows, and apparatus for obtaining such, for use in conjunction with a laser bottom hole assembly.



Classifications:

International (IPC 8-9): A61K48/00 B01J19/12 B08B7/00 B08B9/02 B08B9/023 B08B9/027 B08B9/043 B08B9/055 B23K101/04 B23K103/00 B23K103/10 B23K26/00 B23K26/04 B23K26/046 B23K26/06 B23K26/064 B23K26/073 B23K26/08 B23K26/10 B23K26/12 B23K26/122 B23K26/14 B23K26/146 B23K26/16 B23K26/24 B23K26/352 B23K26/36 B23K26/38 B23K26/382 B23K26/40 B23K26/402 B23K26/70 B23K37/02 B23P11/00 B60P1/54 B63B17/00 B63B19/00 B63B21/00 B63B35/00 B63B35/28 B63C11/40 B63C11/44 B63C11/48 B63G8/00 B63G8/08 B65H55/00 B65H59/00 B66C23/36 E01C23/08 E01C23/12 E02B17/00 E02D17/00 E21B10/00 E21B10/50 E21B10/54 E21B10/60 E21B15/00 E21B17/00 E21B17/20 E21B19/00 E21B19/22 E21B21/00 E21B21/08 E21B21/10 E21B21/14 E21B21/16 E21B23/00 E21B23/14 E21B29/00 E21B29/02 E21B29/06 E21B29/08 E21B29/12 E21B33/00 E21B33/038 E21B33/06 E21B33/064 E21B33/12 E21B33/13 E21B34/04 E21B36/04 E21B37/00 E21B37/08 E21B4/02 E21B4/04 E21B41/00 E21B41/04 E21B43/00 E21B43/01 E21B43/11 E21B43/114 E21B43/116 E21B43/119 E21B43/16 E21B43/24 E21B43/26 E21B43/267 E21B44/00 E21B47/00 E21B47/113 E21B47/12 E21B49/00 E21B7/00 E21B7/04 E21B7/12 E21B7/14 E21B7/15 E21B7/16 E21C25/64 E21C27/24 E21C35/00 E21C37/16 E21C37/18 E21C41/00 E21D9/10 F16L23/00 F21V15/01 F21V15/06 F21V29/00 F21V29/15 F21V8/00 G01J1/04 G01M11/00 G01M5/00 G02B23/24 G02B26/08 G02B27/14 G02B27/20 G02B6/02 G02B6/14 G02B6/26 G02B6/28 G02B6/32 G02B6/36 G02B6/38 G02B6/42 G02B6/44 G02B6/50 G21C17/017 H01J27/24 H01J40/14 H01L21/00 H01L31/00 H01L31/02 H01L31/0224 H01L31/0304 H01L31/05 H01L31/054 H01L31/055 H01S3/00 H01S3/04 H01S3/042 H01S3/067 H01S3/08 H01S3/094 H01S3/0941 H01S3/109 H01S3/16 H01S3/23 H01S3/30 H01S5/00 H01S5/022 H01S5/024 H01S5/042 H01S5/40 H02G1/08 H04B10/079 H04B10/80 H05K7/20

International (IPC 1-7): E21B29/08

CPC: E21B10/60 E21B21/00 E21B21/08 E21B21/103 E21B29/00 E21B43/11 E21B7/14 E21B7/15 E21B19/004 E21B29/12 E21B33/038 E21B33/06 E21B7/12 F16L23/003 E21B33/063 E21B33/064 E21B34/045 B23K26/106 B23K26/24 G02B6/4402 G02B6/4413 G02B6/4415 G02B6/443 G02B6/4458 Y10T29/49826 E21B29/02 E21B37/00 E21B41/00 G02B6/44 H01S3/04 B23K26/38 F16L23/00 E21B43/119 E21B43/26 E21B17/00 G02B6/02395 G02B6/4296 G02B6/4436 G02B6/4492 B08B7/0042 B23K2103/10 B23K26/064 B23K26/0652 B23K26/1224 B23K26/127 B23K26/146 B23K26/1464 B63G8/001 H01L25/041 H01L2924/00011 H01L2924/00014 H01L2924/01015 H01L2924/01047 H01L31/0201 H01L31/022433 H01L31/03046 H01L31/0508 H01L31/054 H04B10/00 H04B10/807 Y02E10/52 Y02E10/544 G02B2006/4297 G02B6/262 G02B6/3624 G02B6/3813 G02B6/3814 G02B6/3818 G02B6/4427 H01S3/0064 H01S3/042 E02B2017/0052 E02B2017/0095 B23K26/00 B23K26/1462 B23K26/06 B23K26/382 H01S3/0675 H01S3/094007 H01S3/094015 H01S3/094042 H01S3/094046 H01S3/094092 H01S3/094096 H01S3/09415 H01S3/109 H01S3/1603 H01S3/1616 H01S3/1693 H01S3/1695 H01S3/2383 H01S3/302 B23K2103/50 B23K2103/52 B23K26/0093 B23K26/0626 B23K26/40 B23K37/0288 E01C23/08 E21C25/64 E21C27/24 E21C37/18 E21D9/1073 G02B23/2492 G02B6/32 H01S3/005 H01S3/094003 H01S3/1608 H01S5/02423 B08B9/043 E21B36/04 E21B37/08 E21B43/00 E21B43/01 G21C17/017 B23K26/0096 B23K26/046 B23K26/0608 B23K26/0869 B23K26/703 G02B6/4417 H01S5/0071 H01S5/02296 H01S5/042 H01S5/4025 B23K2101/04 B60P1/5423 B66C23/36 H01S3/0071 G02B6/14 E21B43/162 E21B49/00 E21B33/1204 E21B33/13 E21B17/203 E21B21/12 E21B21/16 E21B4/18 E21B44/00 B08B9/02 B08B9/055 F16L41/004 F16L55/26 F16L55/46 G02B6/502 B08B7/0071 B08B9/023 B08B9/027 B63C11/52 B63G2008/007 E21B41/04 B23K2103/30 B23K26/0648 B23K26/10 E21B2023/008 E21B23/001 E21B4/04 G01M11/35 G01M5/0025 G01M5/0033 G01M5/0091 B23K26/14 B23K26/142 G02B26/0875 G02B6/42 G02B6/2817 G02B6/3604 G02B6/3871 G02B6/3897 H01S3/08 B23K26/282 E21B23/00 B23K26/04 B23K26/12 B63B17/00 B63B19/00 B63B21/00 B63B35/00 B63B35/28 E02D17/00 E21B19/002 B23K26/0732 B23K26/0736 B23K26/402 H01S3/06733 H01S3/0941 B23K2101/06 B23K2103/04 B23K26/03 B23K26/0622 B23K26/1476 B23K37/02 E02B17/027 B23K26/073 B23K26/384 B23K26/386 B23K26/0604 B23K26/0676 B23K37/0294 E01C23/088 E01C23/12 E01C23/128 E21C25/66 E21C37/16 E21D9/08 E21B4/02 H01L25/16 B08B9/04 B08B9/0436 E21B33/076 E21B36/00 F17D5/00 B23K26/36 E01C23/127 E21C25/00 B82Y20/00 G02B6/0229 H01S3/02

US: 1/1 114/26 114/312 114/313 114/337 134/1.1 166/242.2 166/250.1 166/280.1 166/288 166/297 166/298 166/304 166/336 166/338 166/341 166/341S 166/358 166/358S 166/361 166/361S 166/363 166/363S 166/364 166/376 166/379 166/379S 166/381 166/381S 166/384 166/385 166/55 166/55.1 166/55.2 166/55.6 166/65.1 166/65.100S 166/66 166/75.11 166/75.110S 166/77.1 166/77.2 175/107 175/11 175/15 175/15P 175/16 175/162 175/16P 175/16S 175/40 175/424 175/5 175/57 175/5S 175/6 175/65 175/65S 175/6S 175/92 175/92S 219/121.61 219/121.67 219/121.670S 219/121.7 219/121.72 219/121.720P 219/121.84 219/60R 219/61 242/159 242/159S 250/215 250/227.11 250/492.1 250/492.100P 254/134.3FT 254/134.3R 254/134.4 29/428 29/428S 299/14 299/29 359/226.2 362/259 362/317 362/553 362/553S 372/14 372/4 372/9 385/100 385/102 385/104 385/109 385/109P 385/111 385/12 385/13 385/134 385/26 385/88 385/89 385/92 385/93 385/94

Family:

Publication number	Publication date	Application number	Application date
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Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2009340454 AA	20100826	LSPB	+	published / reissued	
AU2009340454 AA	20170323	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
AU2012222154 AA	20120830	LSPB	+	published / reissued	
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				LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED
AU2012259435 AA	20121129	LSPB	+	published / reissued
AU2012259435 AA	20170119	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2012259435 BB	20160922	LSGT	+	granted / extensions (spc, cpc, pte)
AU2012259435 BB	20320224	PEXP		Calculated Patent Term Expiry
AU2012259443 AA	20121129	LSPB	+	published / reissued
AU2012259443 AA	20170504	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED
AU2014228980 AA	20151008	LSPB	+	published / reissued
AU2014228980 BB	20180222	LSGT	+	granted / extensions (spc, cpc, pte)
AU2014228980 BB	20180621	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2014228980 BB	20340314	PEXP		Calculated Patent Term Expiry
BR112013001512 A2	20181226		B06F	OBJECTIONS, DOCUMENTS AND/OR TRANSLATIONS NEEDED AFTER AN EXAMINATION REQUEST ACCORDING ART. 34 INDUSTRIAL PROPERTY LAW
BR112013001512 A2	20200609		B06U	PRELIMINARY REQUIREMENT: REQUESTS WITH SEARCHES PERFORMED BY OTHER PATENT OFFICES: SUSPENSION OF THE PATENT APPLICATION PROCEDURE
BR112013021478 A2	20181218		B06F	OBJECTIONS, DOCUMENTS AND/OR TRANSLATIONS NEEDED AFTER AN EXAMINATION REQUEST ACCORDING ART. 34 INDUSTRIAL PROPERTY LAW
BR112013021478 A2	20191029		B06U	PRELIMINARY REQUIREMENT: REQUESTS WITH SEARCHES PERFORMED BY OTHER PATENT OFFICES: SUSPENSION OF THE PATENT APPLICATION PROCEDURE
BR112013021478 A2	20200218	LSRV	-B11B	DISMISSAL ACC. ART. 36, PAR 1 OF IPL - NO REPLY WITHIN 90 DAYS TO FULLFIL THE NECESSARY REQUIREMENTS
BR112013021480 A2	20181218		B06F	OBJECTIONS, DOCUMENTS AND/OR TRANSLATIONS NEEDED AFTER AN

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BR112015004458 A8	20200211		B06U	PRELIMINARY REQUIREMENT: REQUESTS WITH SEARCHES PERFORMED BY OTHER PATENT OFFICES: SUSPENSION OF THE PATENT APPLICATION PROCEDURE	
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BRPI0918403 A2	20190129	LSRV	B09B	DECISION: REFUSAL	
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CA2734492 C	20290819	PEXP		Calculated Patent Term Expiry	
CA2805437 AA	20130114	LSPB	+	published / reissued	
CA2805437 AA	20130224	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20130114
CA2805437 C	20160906	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2805437 C	20310719	PEXP		Calculated Patent Term Expiry	
CA2808214 AA	20130212	LSPB	+	published / reissued	
CA2808214 AA	20130321	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20130212
CA2808214 C	20160223	LSGT	+	granted / extensions (spc, cpc, pte)	

CA2808214 C	20310816	PEXP		Calculated Patent Term Expiry	
CA2823922 AA	20100826	LSPB	+	published / reissued	
CA2823922 AA	20130925	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20130819
CA2823922 AA	20180220	LSLE	-FZDE	DEAD	Effective date: 20180109
CA2827958 AA	20130821	LSPB	+	published / reissued	
CA2827958 AA	20180409	LSLE	-FZDE	DEAD	Effective date: 20180226
CA2827963 AA	20130821	LSPB	+	published / reissued	
CA2827963 AA	20180409	LSLE	-FZDE	DEAD	Effective date: 20180226
CA2827979 AA	20130821	LSPB	+	published / reissued	
CA2827979 AA	20180409	LSLE	-FZDE	DEAD	Effective date: 20180226
CA2891500 AA	20150513	LSPB	+	published / reissued	
CA2891500 AA	20180703	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20180626
CA2906738 AA	20150914	LSPB	+	published / reissued	
CA2906738 AA	20190205	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20190131
CN102187046 A	20110914	LSPB	+	published / reissued	
CN102187046 A	20110914	LSPB	+C06	PUBLICATION	
CN102187046 A	20111102		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN102187046 B	20150429	LSGT	+	granted / extensions (spc, cpc, pte)	
CN102187046 B	20150429	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102187046 B	20290819	PEXP		Calculated Patent Term Expiry	
CN103492668 A	20140101	LSPB	+	published / reissued	
CN103492668 A	20140101	LSPB	+C06	PUBLICATION	
CN103492668 A	20140205		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN103492668 A	20170215	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103492668 B	20170215	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103492668 B	20320224	PEXP		Calculated Patent Term Expiry	
CN103492669 A	20140101	LSPB	+	published / reissued	
CN103492669 A	20140101	LSPB	+C06	PUBLICATION	
CN103492669 A	20160824	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CN103502564 A	20140108	LSPB	+	published / reissued	
CN103502564 A	20140108	LSPB	+C06	PUBLICATION	
CN103502564 A	20140212		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN103502564 A	20160706	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW	

				2001)	
DK2678519 T3	20190805	LSGT	+	granted / extensions (spc, cpc, pte)	
DK2678519 T3	20320224	PEXP		Calculated Patent Term Expiry	
EP2315904 A1	20110504	LSPB	+	published / reissued	
EP2315904 A1	20110504	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20110218
EP2315904 A1	20110504		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
EP2315904 A1	20110504		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL BA RS
EP2315904 A1	20110518		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: MOXLEY, JOEL, F.
EP2315904 A1	20110518		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: LAND, MARK, S. PartyType: inventor
EP2315904 A1	20110518		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: RINZLER, CHARLES, C. PartyType: inventor
EP2315904 A1	20110518		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: FAIRCLOTH, BRIAN, O.
EP2315904 A1	20110518		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: KOBLICK, YESHAYA PartyType: inventor
EP2315904 A1	20110518		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: ZEDIKER, MARK, S.
EP2315904 A1	20111123		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2315904 A1	20111123		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: MOXLEY, JOEL, F.
EP2315904 A1	20111123		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: LAND, MARK, S.
EP2315904 A1	20111123		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: RINZLER, CHARLES, C.
EP2315904 A1	20111123		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: FAIRCLOTH, BRIAN, O. PartyType: inventor
EP2315904 A1	20111123		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: KOBLICK, YESHAYA
EP2315904 A1	20111123		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: ZEDIKER, MARK, S.
EP2315904 A4	20160420	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	Effective date: 20160321
EP2315904 A4	20160420		RIC1	INFORMATION	ClassificationSymbol: E21B 7/15

				PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	20060101AFI20160315BHEP ClassificationScheme: IPC
EP2315904 A4	20170301	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20170130
EP2315904 A4	20181212	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20181116
EP2315904 B1	20190206	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2315904 B1	20190206		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
EP2315904 B1	20190206	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: GB
EP2315904 B1	20190215	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: EP Ref country code: CH
EP2315904 B1	20190215	LSNP	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20190215 Ref country code: AT Ref legal event code: REF Ref document number: 1095022 Kind code of Ref document: T Country of Ref document: AT
EP2315904 B1	20190306	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: FG4D
EP2315904 B1	20190307	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref legal event code: R096 Ref document number: 602009056961 Country of Ref document: DE
EP2315904 B1	20190513	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: NO Ref legal event code: T2 Effective date: 20190206
EP2315904 B1	20190625	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MG4D Ref country code: LT
EP2315904 B1	20190626		REG	REFERENCE TO A NATIONAL CODE	Effective date: 20190206 Ref country code: NL Ref legal event code: MP
EP2315904 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: FI
EP2315904 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: SE
EP2315904 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190606 Country of Ref document: PT
EP2315904 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: NL
EP2315904 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: LT
EP2315904 B1	20190815	LSRV	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Ref legal event code: MK05 Ref country code: AT Effective date: 20190206 Ref document number: 1095022 Country of Ref document: AT
EP2315904 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: HR

EP2315904 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190506 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: BG
EP2315904 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190507 Country of Ref document: GR
EP2315904 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: LV
EP2315904 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190606 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IS
EP2315904 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: EE
EP2315904 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190206 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SK
EP2315904 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190206 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IT
EP2315904 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: DK
EP2315904 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190206 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: CZ
EP2315904 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: RO
EP2315904 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190206 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: ES
EP2315904 B1	20191031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20190815 Year of fee payment: 11 Country of Ref document: NO
EP2315904 B1	20191107	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref legal event code: R097 Ref document number: 602009056961 Country of Ref document: DE
EP2315904 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: SM

EP2315904 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: PL
EP2315904 B1	20191231	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: AT
EP2315904 B1	20191231	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20190715 Year of fee payment: 11 Country of Ref document: GB
EP2315904 B1	20200115	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20191107
EP2315904 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: SI
EP2315904 B1	20200303	LSDW	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 602009056961 Ref legal event code: R119 Ref country code: DE Country of Ref document: DE
EP2315904 B1	20200331	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190206 Country of Ref document: TR
EP2315904 B1	20200529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190819 Country of Ref document: LU
EP2315904 B1	20200529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190206 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: MC
EP2315904 B1	20200529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190831 Country of Ref document: LI
EP2315904 B1	20200529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190831 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: CH
EP2315904 B1	20200529		REG	REFERENCE TO A NATIONAL CODE	Ref country code: BE Ref legal event code: MM Effective date: 20190831
EP2315904 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190819 Country of Ref document: IE
EP2315904 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190831 Country of Ref document: FR
EP2315904 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20200303 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: DE

EP2315904 B1	20290819	PEXP		Calculated Patent Term Expiry	
EP2399155 A1	20111228	LSPB	+	published / reissued	
EP2399155 A1	20111228	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20110919
EP2399155 A1	20111228		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
EP2399155 A1	20120523		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2399155 A4	20140709	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20140610
EP2399155 A4	20140709		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 6/44 20060101AFI20140603BHEP
EP2399155 A4	20150408	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20150304
EP2399155 A4	20151216	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20150715
EP2596395 A2	20130529	LSPB	+	published / reissued	
EP2596395 A2	20130529	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130218
EP2596395 A2	20130529		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2596395 A2	20131030		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2596395 A4	20171227	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20171129
EP2596395 A4	20171227		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 6/44 20060101ALI20171123BHEP
EP2596395 A4	20171227		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 6/36 20060101AFI20171123BHEP
EP2596395 A4	20200325	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20200225
EP2606201 A1	20130626	LSPB	+	published / reissued	
EP2606201 A1	20130626	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130314
EP2606201 A1	20130626		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2606201 A1	20131120		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2606201 A4	20180307	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	Effective date: 20180207
EP2606201 A4	20180307		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21C 37/16 20060101AFI20180201BHEP ClassificationScheme: IPC
EP2606201 A4	20200108	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20191210

EP2611566 A1	20130710	LSPB	+	published / reissued	
EP2611566 A1	20130710	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130325
EP2611566 A1	20130710		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2611566 A1	20131204		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2611566 A4	20171108	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	Effective date: 20171009
EP2611566 A4	20171108		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/30 20060101AFI20171002BHEP ClassificationScheme: IPC
EP2611566 A4	20171108		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: E21B 7/14 20060101ALI20171002BHEP
EP2611566 A4	20171108		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: G02B 6/38 20060101ALI20171002BHEP ClassificationScheme: IPC
EP2611566 A4	20171108		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: G02B 6/42 20060101ALI20171002BHEP ClassificationScheme: IPC
EP2611566 A4	20180808	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20180301
EP2664010 A2	20131120	LSPB	+	published / reissued	
EP2664010 A2	20131120	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130730
EP2664010 A2	20131120		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2664010 A2	20140416		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2664010 A2	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01L 31/02 20060101ALI20180219BHEP
EP2664010 A2	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B63G 8/00 20060101AFI20180219BHEP
EP2664010 A2	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01L 31/05 20140101ALI20180219BHEP
EP2664010 A2	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H04B 10/80 20130101ALI20180219BHEP ClassificationScheme: IPC
EP2664010 A2	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01L 31/0304 20060101ALI20180219BHEP
EP2664010 A2	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01L 31/054 20140101ALI20180219BHEP ClassificationScheme: IPC
EP2664010 A2	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01L 31/055 20140101ALI20180219BHEP ClassificationScheme: IPC
EP2664010 A2	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01L 31/0224 20060101ALI20180219BHEP ClassificationScheme: IPC
EP2664010 A4	20180627	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20180528

EP2664010 A4	20180627		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01L 31/054 20140101ALI20180522BHEP
EP2664010 A4	20180627		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01L 31/02 20060101ALI20180522BHEP ClassificationScheme: IPC
EP2664010 A4	20180627		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01L 31/0224 20060101ALI20180522BHEP
EP2664010 A4	20180627		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01L 31/0304 20060101ALI20180522BHEP
EP2664010 A4	20180627		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B63G 8/00 20060101AFI20180522BHEP ClassificationScheme: IPC
EP2664010 A4	20180627		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01L 31/055 20060101ALI20180522BHEP ClassificationScheme: IPC
EP2664010 A4	20180627		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H04B 10/80 20130101ALI20180522BHEP ClassificationScheme: IPC
EP2664010 A4	20180627		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01L 31/05 20060101ALI20180522BHEP ClassificationScheme: IPC
EP2678512 A1	20140101	LSPB	+	published / reissued	
EP2678512 A1	20140101	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130920
EP2678512 A1	20140101		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2678512 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: FAIRCLOTH, BRIAN, O. PartyType: inventor
EP2678512 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ALLEN, ERIK, C. PartyType: inventor
EP2678512 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ZEDIKER, MARK, S. PartyType: inventor
EP2678512 A1	20140528		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2678512 A4	20170614	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	Effective date: 20170517
EP2678512 A4	20170614		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: E21B 7/15 20060101AFI20170511BHEP
EP2678512 A4	20180627	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20171213
EP2678519 A1	20140101	LSPB	+	published / reissued	
EP2678519 A1	20140101	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130920
EP2678519 A1	20140101		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2678519 A1	20140528		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2678519 A4	20170823	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND	Effective date: 20170725

				DESPATCHED (CORRECTED)	
EP2678519 A4	20170823		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 29/12 20060101ALI20170719BHEP ClassificationScheme: IPC
EP2678519 A4	20170823		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 33/06 20060101AFI20170719BHEP ClassificationScheme: IPC
EP2678519 A4	20190313		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 33/06 20060101AFI20190207BHEP ClassificationScheme: IPC
EP2678519 A4	20190313		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 29/12 20060101ALI20190207BHEP ClassificationScheme: IPC
EP2678519 A4	20190327	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20190227
EP2678519 A4	20190327	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	Owner: CHEVRON U.S.A. INC. PartyType: owner
EP2678519 A4	20190327	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	Owner: FORO ENERGY INC. PartyType: owner
EP2678519 A4	20190327		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: CLARK, PHILIP, V.
EP2678519 A4	20190327		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: MOXLEY, JOEL, F. PartyType: inventor
EP2678519 A4	20190327		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: BERGERON, HENRY, A.
EP2678519 A4	20190327		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: DEUTCH, PAUL, D.
EP2678519 A4	20190327		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ZEDIKER, MARK, S. PartyType: inventor
EP2678519 A4	20190327		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: RINZLER, CHARLES, C. PartyType: inventor
EP2678519 A4	20190327		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: FAIRCLOTH, BRIAN, O.
EP2678519 A4	20190508	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	Owner: FORO ENERGY INC. PartyType: owner
EP2678519 B1	20190626	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2678519 B1	20190626		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2678519 B1	20190626	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: GB
EP2678519 B1	20190628	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP2678519 B1	20190715	LSNP	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Ref document number: 1148496 Effective date: 20190715 Ref country code: AT Ref legal event code: REF Country of Ref document: AT
EP2678519 B1	20190718	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 602012061424 Ref legal event code: R096 Ref country code: DE Country of Ref document: DE

EP2678519 B1	20190724	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: IE
EP2678519 B1	20190805		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: T3 Effective date: 20190731 Ref country code: DK
EP2678519 B1	20190807		REG	REFERENCE TO A NATIONAL CODE	Ref country code: NL Ref legal event code: FP
EP2678519 B1	20190916	LSNP	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20190626 Ref legal event code: T2 Ref country code: NO
EP2678519 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: HR
EP2678519 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: LT
EP2678519 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: FI
EP2678519 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: SE
EP2678519 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AL
EP2678519 B1	20191111	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref country code: LT Ref legal event code: MG4D
EP2678519 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190927 Country of Ref document: GR
EP2678519 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: BG
EP2678519 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: RS
EP2678519 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: LV
EP2678519 B1	20200115	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref country code: AT Ref document number: 1148496 Effective date: 20190626 Ref legal event code: MK05 Kind code of Ref document: T Country of Ref document: AT
EP2678519 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: EE
EP2678519 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT	Lapsed date: 20190626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION

				INFORMATION FROM NATIONAL OFFICE TO EPO]	OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AT
EP2678519 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SK
EP2678519 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: CZ
EP2678519 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RO
EP2678519 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20191028 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: PT
EP2678519 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20191026 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IS
EP2678519 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SM
EP2678519 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IT
EP2678519 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: ES
EP2678519 B1	20200331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: TR
EP2678519 B1	20200501	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190626 Country of Ref document: PL
EP2678519 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 9 Payment date: 20200130 Country of Ref document: GB
EP2678519 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 9 Payment date: 20200127 Country of Ref document: DK
EP2678519 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 9 Payment date: 20200124 Country of Ref document: NL
EP2678519 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM	Year of fee payment: 9 Payment date: 20200207 Country of Ref document: NO

				NATIONAL OFFICE TO EPO]	
EP2678519 B1	20200529	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20200224 Country of Ref document: IS
EP2678519 B1	20200603	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref document number: 602012061424 Ref legal event code: R097 Country of Ref document: DE
EP2678519 B1	20200730		PG2D	INFORMATION ON LAPSE IN CONTRACTING STATE DELETED	
EP2678519 B1	20200812	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20200603
EP2678519 B1	20320224	PEXP		Calculated Patent Term Expiry	
EP2678520 A1	20140101	LSPB	+	published / reissued	
EP2678520 A1	20140101	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130920
EP2678520 A1	20140101		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2678520 A1	20140528		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2678520 A4	20180328	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	Effective date: 20180222
EP2678520 A4	20180328		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 33/06 20060101AFI20180217BHEP ClassificationScheme: IPC
EP2678520 A4	20180530	LSWD	-18W	APPLICATION WITHDRAWN	Effective date: 20180423
EP2678521 A1	20140101	LSPB	+	published / reissued	
EP2678521 A1	20140101	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130920
EP2678521 A1	20140101		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: DEUTCH, PAUL, D.
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: DE WITT, RONALD, A. PartyType: inventor
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: KOLACHALAM, SHARATH, K. PartyType: inventor
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: CLARK, PHILIP, V. PartyType: inventor
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: ZEDIKER, MARK, S.
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: GRUBB, DARYL, L. PartyType: inventor
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE	PartyType: inventor Inventor: RINZLER, CHARLES, C.

				GRANT (CORRECTED)	
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: UNDERWOOD, LANCE, D. PartyType: inventor
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: MOXLEY, JOEL, F.
EP2678521 A1	20140219		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: BERGERON, HENRY, A. PartyType: inventor
EP2678521 A1	20140528		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2678521 A4	20180307	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	Effective date: 20180207
EP2678521 A4	20180307		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 33/06 20060101AFI20180201BHEP ClassificationScheme: IPC
EP2678521 A4	20190213	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20180901
EP2715887 A1	20140409	LSPB	+	published / reissued	
EP2715887 A1	20140409	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20131219
EP2715887 A1	20140409		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2715887 A1	20140910		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2715887 A1	20160525		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 6/38 20060101ALI20160415BHEP
EP2715887 A1	20160525		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/30 20060101AFI20160415BHEP ClassificationScheme: IPC
EP2715887 A1	20160525		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 6/42 20060101ALI20160415BHEP
EP2715887 A4	20161123	LSES	+RA4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	Effective date: 20161020
EP2715887 A4	20161123		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/30 20060101AFI20161014BHEP ClassificationScheme: IPC
EP2715887 A4	20161123		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 6/42 20060101ALI20161014BHEP
EP2715887 A4	20161123		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 6/38 20060101ALI20161014BHEP
EP2715887 A4	20171115	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20170519
EP2739429 A2	20140611	LSPB	+	published / reissued	
EP2739429 A2	20140611	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20140228
EP2739429 A2	20140611		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV

					MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2739429 A2	20141105		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2739429 A2	20160615		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: E21B 29/02 20060101ALI20160512BHEP
EP2739429 A2	20160615		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B23K 26/00 20140101AFI20160512BHEP
EP2739429 A2	20160615		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E02B 17/00 20060101ALI20160512BHEP ClassificationScheme: IPC
EP2739429 A4	20161102	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20161006
EP2739429 A4	20161102		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 29/02 20060101ALI20160929BHEP ClassificationScheme: IPC
EP2739429 A4	20161102		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B23K 26/00 20140101AFI20160929BHEP
EP2739429 A4	20161102		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: E02B 17/00 20060101ALI20160929BHEP
EP2739429 A4	20171004	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20170904
EP2739429 A4	20180711	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20180615
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: DEUTCH, PAUL D.
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: SCHROIT, SAM N.
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: MARSHALL, SCOTT A. PartyType: inventor
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: ZEDIKER, MARK S.
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: MOXLEY, JOEL F.
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: GRUBB, DARYL L.
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: DE WITT, RONALD A. PartyType: inventor
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: KOLACHALAM, SHARATH K.
EP2739429 A4	20180711		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: LINYAEV, EUGENE J. PartyType: inventor
EP2739429 A4	20180822		INTC	INTENTION TO GRANT ANNOUNCED (DELETED)	

EP2739429 A4	20190814	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20190719
EP2739429 B1	20200212	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2739429 B1	20200212		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2739429 B1	20200212	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: GB
EP2739429 B1	20200214	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP2739429 B1	20200215	LSNP	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Ref legal event code: REF Ref document number: 1231453 Ref country code: AT Effective date: 20200215 Country of Ref document: AT
EP2739429 B1	20200227	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 602012067757 Ref country code: DE Ref legal event code: R096 Country of Ref document: DE
EP2739429 B1	20200304	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: IE
EP2739429 B1	20200513		REG	REFERENCE TO A NATIONAL CODE	Ref country code: NL Ref legal event code: FP
EP2739429 B1	20200713	LSNP	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20200212 Ref legal event code: T2 Ref country code: NO
EP2739429 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20200212 Country of Ref document: FI
EP2739429 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20200212 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RS
EP2739429 B1	20200810	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MG4D Ref country code: LT
EP2739429 B1	20320802	PEXP		Calculated Patent Term Expiry	
EP2820466 A1	20150107	LSPB	+	published / reissued	
EP2820466 A1	20150107	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20141001
EP2820466 A1	20150107		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2820466 A1	20150107		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2820466 A1	20150121		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: GRUBB, DARYL, L. PartyType: inventor
EP2820466 A1	20150121		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: KOLACHALAM, SHARATH, K. PartyType: inventor
EP2820466 A1	20150121		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ZEDIKER, MARK, S. PartyType: inventor
EP2820466 A1	20150121		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: FAIRCLOTH, BRIAN, O. PartyType: inventor
EP2820466 A1	20150610		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2820466 A4	20160330	LSES	+RA4	SUPPLEMENTARY	Effective date: 20160229

				SEARCH REPORT DRAWN UP AND DESPATCHED (CORRECTED)	
EP2820466 A4	20160330		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B23K 26/00 20140101ALI20160223BHEP
EP2820466 A4	20160330		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 27/14 20060101AFI20160223BHEP
EP2820466 A4	20160330		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 7/15 20060101ALI20160223BHEP ClassificationScheme: IPC
EP2820466 A4	20180829	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20180803
EP2820466 A4	20180829		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: KOLACHALAM, SHARATH K. PartyType: inventor
EP2820466 A4	20180829		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: GRUBB, DARYL L.
EP2820466 A4	20180829		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ZEDIKER, MARK S. PartyType: inventor
EP2820466 A4	20180829		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: FAIRCLOTH, BRIAN O.
EP2820466 B1	20181010	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2820466 B1	20181010		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2820466 B1	20181010	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: GB
EP2820466 B1	20181015	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: EP Ref country code: CH
EP2820466 B1	20181015	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: REF Ref country code: AT Ref document number: 1051920 Effective date: 20181015 Kind code of Ref document: T Country of Ref document: AT
EP2820466 B1	20181031	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: FG4D
EP2820466 B1	20181108	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref legal event code: R096 Ref document number: 602013044874 Country of Ref document: DE
EP2820466 B1	20190213		REG	REFERENCE TO A NATIONAL CODE	Effective date: 20181010 Ref country code: NL Ref legal event code: MP
EP2820466 B1	20190225	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MG4D Ref country code: LT
EP2820466 B1	20190315	LSRV	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20181010 Ref document number: 1051920 Ref legal event code: MK05 Kind code of Ref document: T Ref country code: AT Country of Ref document: AT
EP2820466 B1	20190329	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: NL
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: LT

EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190210 Country of Ref document: IS
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190110 Country of Ref document: NO
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: LV
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: ES
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: HR
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: PL
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190110 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: BG
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AT
EP2820466 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: FI
EP2820466 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20190312 Year of fee payment: 7 Country of Ref document: DE
EP2820466 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 7 Payment date: 20190118 Country of Ref document: GB
EP2820466 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190111 Country of Ref document: GR
EP2820466 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RS
EP2820466 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: AL

EP2820466 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SE
EP2820466 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190210 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: PT
EP2820466 B1	20190711	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref legal event code: R097 Ref document number: 602013044874 Country of Ref document: DE
EP2820466 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IT
EP2820466 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: DK
EP2820466 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: CZ
EP2820466 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: SK
EP2820466 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: RO
EP2820466 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: EE
EP2820466 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: SM
EP2820466 B1	20190918	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20190711
EP2820466 B1	20190930	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: PL Ref country code: CH
EP2820466 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: SI
EP2820466 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190219 Country of Ref document: LU
EP2820466 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181010 Country of Ref document: MC

EP2820466 B1	20191120		REG	REFERENCE TO A NATIONAL CODE	Ref country code: BE Ref legal event code: MM Effective date: 20190228
EP2820466 B1	20191127	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MM4A Ref country code: IE
EP2820466 B1	20191231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190228 Country of Ref document: CH
EP2820466 B1	20191231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190228 Country of Ref document: LI
EP2820466 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190219 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: IE
EP2820466 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190228 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: BE
EP2820466 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190228 Country of Ref document: FR
EP2820466 B1	20200331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181010 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: TR
EP2820466 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20200124 Year of fee payment: 8 Country of Ref document: DE
EP2820466 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 8 Payment date: 20200130 Country of Ref document: GB
EP2820466 B1	20200630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190219 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: MT
EP2820466 B1	20330219	PEXP		Calculated Patent Term Expiry	
EP2890859 A2	20150708	LSPB	+	published / reissued	
EP2890859 A2	20150708	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20150331
EP2890859 A2	20150708		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2890859 A2	20150708		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2890859 A2	20150930		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: GRUBB, DARYL, L. PartyType: inventor
EP2890859 A2	20150930		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: KOLACHALAM, SHARATH, K.

EP2890859 A2	20150930		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: DEUTCH, PAUL, D. PartyType: inventor
EP2890859 A2	20150930		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: WOLFE, DANIEL, L.
EP2890859 A2	20150930		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: BAILEY, ANDYLE, G.
EP2890859 A2	20150930		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ZEDIKER, MARK, S. PartyType: inventor
EP2890859 A2	20151209		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2890859 A2	20160706		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 29/02 20060101AFI20160602BHEP ClassificationScheme: IPC
EP2890859 A2	20160706		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: E21B 33/06 20060101ALI20160602BHEP
EP2890859 A4	20161102	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20161006
EP2890859 A4	20161102		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: E21B 29/02 20060101AFI20160929BHEP
EP2890859 A4	20161102		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: E21B 33/06 20060101ALI20160929BHEP
EP2890859 A4	20171115	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20170505
EP2929602 A2	20151014	LSPB	+	published / reissued	
EP2929602 A2	20151014	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20150707
EP2929602 A2	20151014		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2929602 A2	20151014		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2929602 A2	20160316		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/094 20060101ALN20160801BHEP ClassificationScheme: IPC
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B23K 26/06 20060101ALI20160801BHEP
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01S 3/0941 20060101ALI20160801BHEP
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B23K 26/382 20140101ALI20160801BHEP ClassificationScheme: IPC
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B23K 26/38 20140101ALI20160801BHEP ClassificationScheme: IPC
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 7/14 20060101ALI20160801BHEP ClassificationScheme: IPC

EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01S 3/067 20060101ALI20160801BHEP
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/16 20060101ALI20160801BHEP ClassificationScheme: IPC
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01S 3/23 20060101ALI20160801BHEP
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01S 3/00 20060101AFI20160801BHEP
EP2929602 A2	20160907		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01S 3/30 20060101ALI20160801BHEP
EP2929602 A4	20161221	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20161123
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B23K 26/38 20140101ALI20161117BHEP ClassificationScheme: IPC
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/30 20060101ALI20161117BHEP ClassificationScheme: IPC
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/067 20060101ALI20161117BHEP ClassificationScheme: IPC
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01S 3/23 20060101ALI20161117BHEP
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01S 3/0941 20060101ALI20161117BHEP
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B23K 26/06 20060101ALI20161117BHEP ClassificationScheme: IPC
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01S 3/00 20060101AFI20161117BHEP
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: E21B 7/14 20060101ALI20161117BHEP ClassificationScheme: IPC
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/094 20060101ALN20161117BHEP ClassificationScheme: IPC
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H01S 3/16 20060101ALI20161117BHEP ClassificationScheme: IPC
EP2929602 A4	20161221		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B23K 26/382 20140101ALI20161117BHEP ClassificationScheme: IPC
EP2929602 A4	20190710	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20190605
EP3683904 A2	20200722	LSPB	+	published / reissued	
EP3683904 A2	20200722		AC	DIVISIONAL APPLICATION: REFERENCE TO EARLIER APPLICATION	Ref document number: 2739429 Kind code of Ref document: P Country of Ref document: EP
EP3683904 A2	20200722		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
GC3576 A	20150604	LSGT	+	granted / extensions (spc, cpc, pte)	
GC3576 A	20291031	PEXP		Calculated Patent	

GC5934 A	20170716	LSGT	+	Term Expiry granted / extensions (spc, cpc, pte)	
GC5934 A	20330302	PEXP		Calculated Patent Term Expiry	
JP2012500350 T2	20120105	LSPB	+	published / reissued	
JP2012500350 T2	20120821	LSRE	A521	WRITTEN AMENDMENT	Effective date: 20120820 Text: JAPANESE INTERMEDIATE CODE: A523
JP2012500350 T2	20120821	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	Effective date: 20120820 Text: JAPANESE INTERMEDIATE CODE: A621
JP2012500350 T2	20120904	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20120903
JP2012500350 T2	20130621		A977	REPORT ON RETRIEVAL	Effective date: 20130621 Text: JAPANESE INTERMEDIATE CODE: A971007
JP2012500350 T2	20130828	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20130827
JP2012500350 T2	20131128		A601	WRITTEN REQUEST FOR EXTENSION OF TIME	Effective date: 20131127 Text: JAPANESE INTERMEDIATE CODE: A601
JP2012500350 T2	20131205		A602	WRITTEN PERMISSION OF EXTENSION OF TIME	Effective date: 20131204 Text: JAPANESE INTERMEDIATE CODE: A602
JP2012500350 T2	20131228		A601	WRITTEN REQUEST FOR EXTENSION OF TIME	Text: JAPANESE INTERMEDIATE CODE: A601 Effective date: 20131227
JP2012500350 T2	20140114		A602	WRITTEN PERMISSION OF EXTENSION OF TIME	Text: JAPANESE INTERMEDIATE CODE: A602 Effective date: 20140110
JP2012500350 T2	20140128		A601	WRITTEN REQUEST FOR EXTENSION OF TIME	Text: JAPANESE INTERMEDIATE CODE: A601 Effective date: 20140127
JP2012500350 T2	20140204		A602	WRITTEN PERMISSION OF EXTENSION OF TIME	Effective date: 20140203 Text: JAPANESE INTERMEDIATE CODE: A602
JP2012500350 T2	20140227	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20140226
JP2012500350 T2	20140521	LSRV	-A02	DECISION OF REFUSAL	Effective date: 20140520 Text: JAPANESE INTERMEDIATE CODE: A02
JP2012518210 T2	20120809	LSPB	+	published / reissued	
JP2012518210 T2	20130216	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20130215
JP2012518210 T2	20130216	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	Text: JAPANESE INTERMEDIATE CODE: A621 Effective date: 20130215
JP2012518210 T2	20130912		A977	REPORT ON RETRIEVAL	Text: JAPANESE INTERMEDIATE CODE: A971007 Effective date: 20130912
JP2012518210 T2	20130918	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20130917
JP2012518210 T2	20131218		A601	WRITTEN REQUEST FOR EXTENSION OF TIME	Effective date: 20131217 Text: JAPANESE INTERMEDIATE CODE: A601
JP2012518210 T2	20131226		A602	WRITTEN PERMISSION OF EXTENSION OF TIME	Text: JAPANESE INTERMEDIATE CODE: A602 Effective date: 20131225
JP2012518210 T2	20140118		A601	WRITTEN REQUEST FOR EXTENSION OF TIME	Text: JAPANESE INTERMEDIATE CODE: A601 Effective date: 20140117
JP2012518210 T2	20140127		A602	WRITTEN PERMISSION OF EXTENSION OF TIME	Effective date: 20140124 Text: JAPANESE INTERMEDIATE CODE: A602
JP2012518210 T2	20140218		A601	WRITTEN REQUEST FOR EXTENSION OF TIME	Effective date: 20140217 Text: JAPANESE INTERMEDIATE CODE: A601
JP2012518210 T2	20140225		A602	WRITTEN	Effective date: 20140224

				PERMISSION OF EXTENSION OF TIME	Text: JAPANESE INTERMEDIATE CODE: A602
JP2012518210 T2	20140318	LSRE	A524	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)	Text: JAPANESE INTERMEDIATE CODE: A524 Effective date: 20140317
JP2012518210 T2	20140910	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Effective date: 20140909 Text: JAPANESE INTERMEDIATE CODE: A131
JP2012518210 T2	20141202	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20141201
JP2012518210 T2	20141212	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2012518210 T2	20150107	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	Effective date: 20150106 Text: JAPANESE INTERMEDIATE CODE: A01
JP2012518210 T2	20150122	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	Effective date: 20150114 Text: JAPANESE INTERMEDIATE CODE: A61
JP2015017498 A2	20150129	LSPB	+	published / reissued	
JP2015017498 A2	20150701		A977	REPORT ON RETRIEVAL	Text: JAPANESE INTERMEDIATE CODE: A971007 Effective date: 20150630
JP2015017498 A2	20150708	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Effective date: 20150707 Text: JAPANESE INTERMEDIATE CODE: A131
JP2015017498 A2	20151001	LSRE	A521	WRITTEN AMENDMENT	Effective date: 20151001 Text: JAPANESE INTERMEDIATE CODE: A523
JP2015017498 A2	20151105	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2015017498 A2	20151112	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	Text: JAPANESE INTERMEDIATE CODE: A01 Effective date: 20151111
JP2015017498 A2	20151126	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	Effective date: 20151119 Text: JAPANESE INTERMEDIATE CODE: A61
JP5684151 B2	20150108	LSGT	+A01	特許査定書	
JP5684151 B2	20150120	LSFE	R100	特許料納付書	
JP5684151 B2	20150123	LSGT	+R150	特許証	
JP5684151 B2	20150311	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5684151 B2	20180125	LSFE	R20	特許料納付書	
JP5684151 B2	20180130	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP5684151 B2	20180130	LSFE	+R250	年金領収書, 年金領収書(分納)	
JP5684151 B2	20181227	LSFE	R20	特許料納付書	
JP5684151 B2	20190108	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP5684151 B2	20190108	LSFE	+R250	年金領収書, 年金領収書(分納)	
JP5684151 B2	20200110	LSFE	R20	特許料納付書	Effective date: 20200109
JP5684151 B2	20200114	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP5684151 B2	20200114	LSFE	+R250	年金領収書, 年金領収書(分納)	Effective date: 20200131
JP5684151 B2	20300217	PEXP		Calculated Patent Term Expiry	
JP5844868 B2	20151119	LSGT	+A01	特許査定書	
JP5844868 B2	20151124	LSFE	R100	特許料納付書	
JP5844868 B2	20151127	LSGT	+R150	特許証	

JP5844868 B2	20160120	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5844868 B2	20181011	LSFE	R20	特許料納付書	
JP5844868 B2	20181016	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP5844868 B2	20181016	LSFE	+R250	年金領収書, 年金領収書(分納)	
JP5844868 B2	20191031	LSFE	R20	特許料納付書	Effective date: 20191024
JP5844868 B2	20191105	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP5844868 B2	20191105	LSFE	+R250	年金領収書, 年金領収書(分納)	Effective date: 20191115
JP5844868 B2	20340919	PEXP		Calculated Patent Term Expiry	
MX2011001908 A1	20110620	LSPB	+	published / reissued	
MX2011001908 A1	20180425	LSGT	+FG	GRANT OR REGISTRATION	
MX355677 B	20180425	LSGT	+	granted / extensions (spc, cpc, pte)	
MX355677 B	20290819	PEXP		Calculated Patent Term Expiry	
RU2011110388 A	20120927	LSPB	+	published / reissued	
RU2011138270 A	20130327	LSPB	+	published / reissued	
RU2522016 C2	20140710	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2522016 C2	20290819	PEXP		Calculated Patent Term Expiry	
RU2551392 C2	20150520	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2551392 C2	20300217	PEXP		Calculated Patent Term Expiry	
SG192915 A1	20130930	LSPB	+	published / reissued	
SG192916 A1	20130930	LSPB	+	published / reissued	
SG192918 A1	20130930	LSPB	+	published / reissued	
US10001612 BB	20180619	LSGT	+	granted / extensions (spc, cpc, pte)	
US10001612 BB	20360513	PEXP		Calculated Patent Term Expiry	
US10036232 BB	20140106	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEWITT, RONALD A.;ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20111107 TO 20111202;REEL/FRAME:031900/0416
US10036232 BB	20180711	LSGT	PAT1	Patented Case	
US10036232 BB	20180731	LSGT	+	granted / extensions (spc, cpc, pte)	
US10036232 BB	20301129	PEXP		Calculated Patent Term Expiry (PTA 467 days and a terminal disclaimer has been filed)	
US10042123 BB	20160728	LSAS	AS	ASSIGNMENT	Effective date: 20120919 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RINZLER, CHARLES C;GRAY, WILLIAM C;FRAZE, JASON D;AND OTHERS;REEL/FRAME:039284/0712 Owner: FORO ENERGY INC., COLORADO
US10042123 BB	20180718	LSGT	PAT1	Patented Case	

US10042123 BB	20180807	LSGT	+	granted / extensions (spc, cpc, pte)	
US10042123 BB	20360505	PEXP		Calculated Patent Term Expiry	
US10053967 BB	20140815	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEUTCH, PAUL D.;DE WITT, RONALD A.;KELLERMANN, FRED C.;AND OTHERS;SIGNING DATES FROM 20140204 TO 20140209;REEL/FRAME:033545/0460 Owner: FORO ENERGY, INC., COLORADO
US10053967 BB	20180801	LSGT	PAT1	Patented Case	
US10053967 BB	20180821	LSGT	+	granted / extensions (spc, cpc, pte)	
US10053967 BB	20310107	PEXP		Calculated Patent Term Expiry (PTA 506 days)	
US10195687 BB	20140814	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:LAND, MARK S.;VOLKMAR, JOHN F.;ZEDIKER, MARK S.;AND OTHERS;SIGNING DATES FROM 20140203 TO 20140725;REEL/FRAME:033535/0209 Owner: FORO ENERGY, INC., COLORADO PartyType: owner
US10195687 BB	20190116	LSGT	PAT1	Patented Case	
US10195687 BB	20190205	LSGT	+	granted / extensions (spc, cpc, pte)	
US10195687 BB	20310807	PEXP		Calculated Patent Term Expiry (PTA 718 days)	
US10199798 BB	20190116	LSGT	PAT1	Patented Case	
US10199798 BB	20190205	LSGT	+	granted / extensions (spc, cpc, pte)	
US10199798 BB	20351226	PEXP		Calculated Patent Term Expiry (PTA 23 days)	
US10301912 BB	20160622	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEWITT, RONALD A;NEHLSEN, JAMES P;MOXLEY, JOEL F;AND OTHERS;SIGNING DATES FROM 20160421 TO 20160610;REEL/FRAME:038980/0071 Owner: FORO ENERGY, INC., TEXAS PartyType: owner
US10301912 BB	20190508	LSGT	PAT1	Patented Case	
US10301912 BB	20190528	LSGT	+	granted / extensions (spc, cpc, pte)	
US10301912 BB	20320509	PEXP		Calculated Patent Term Expiry (PTA 994 days)	
US10323460 BB	20171122	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10323460 BB	20171227	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10323460 BB	20190618	LSGT	+	granted / extensions (spc, cpc, pte)	
US10323460 BB	20371122	PEXP		Calculated Patent Term Expiry	
US10337273 BB	20190702	LSGT	+	granted / extensions (spc, cpc, pte)	
US10337273 BB	20330818	PEXP		Calculated Patent Term Expiry (PTA 381 days)	
US10481339 BB	20171019	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF

					PATENT OWNER: SMALL ENTITY
US10481339 BB	20171101	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10481339 BB	20191119	LSGT	+	granted / extensions (spc, cpc, pte)	
US10481339 BB	20320608	PEXP		Calculated Patent Term Expiry (PTA 7 days)	
US10683703 BB	20200616	LSGT	+	granted / extensions (spc, cpc, pte)	
US10683703 BB	20290819	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US10711580 BB	20200624	LSGT	PAT1	Patented Case	
US10711580 BB	20200714	LSGT	+	granted / extensions (spc, cpc, pte)	
US10711580 BB	20290922	PEXP		Calculated Patent Term Expiry (PTA 34 days and a terminal disclaimer has been filed)	
US2010044102 AA	20100225	LSPB	+	published / reissued	
US2010044102 AA	20140108	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2010044103 AA	20100225	LSPB	+	published / reissued	
US2010044103 AA	20140820	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2010044104 AA	20100225	LSPB	+	published / reissued	
US2010044104 AA	20140813	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2010044105 AA	20100225	LSPB	+	published / reissued	
US2010044105 AA	20130403	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2010044106 AA	20100225	LSPB	+	published / reissued	
US2010044106 AA	20130307	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;RINZLER, CHARLES C.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:029938/0294 Owner: FORO ENERGY INC., COLORADO PartyType: owner
US2010044106 AA	20130731	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2010215326 AA	20100826	LSPB	+	published / reissued	
US2010215326 AA	20110304	LSAS	AS	ASSIGNMENT	Effective date: 20110213 Owner: FORO ENERGY INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:KOBLICK, YESHAYA;REEL/FRAME:025900/0904 PartyType: owner
US2010215326 AA	20160504	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012020631 AA	20120126	LSPB	+	published / reissued	
US2012020631 AA	20131009	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012067643 AA	20111206	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO

					OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEWITT, RON A.;ZEDIKER, MARK S.;RINZLER, CHARLES S.;AND OTHERS;SIGNING DATES FROM 20111110 TO 20111202;REEL/FRAME:027340/0897 PartyType: owner
US2012067643 AA	20120322	LSPB	+	published / reissued	
US2012067643 AA	20150928		FRM1	Final Rejection Mailed	
US2012067643 AA	20160909		FRM1	Final Rejection Mailed	
US2012067643 AA	20170405	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012067643 AA	20170405		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2012068086 AA	20120322	LSPB	+	published / reissued	
US2012068086 AA	20140106	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEWITT, RONALD A.;ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20111107 TO 20111202;REEL/FRAME:031900/0416 Owner: FORO ENERGY INC., COLORADO PartyType: owner
US2012068086 AA	20140212	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012074110 AA	20111215	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;GRUBB, DARYL L.;KOLACHALAM, SHARATH K.;AND OTHERS;SIGNING DATES FROM 20111107 TO 20111201;REEL/FRAME:027391/0191
US2012074110 AA	20120329	LSPB	+	published / reissued	
US2012074110 AA	20150706	LSES	NFA1	Non Final Action Mailed	
US2012074110 AA	20161121	LSES	NFA1	Non Final Action Mailed	
US2012074110 AA	20170731	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012074110 AA	20170731		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2012217015 AA	20120830	LSPB	+	published / reissued	
US2012217015 AA	20140702	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012217018 AA	20120830	LSPB	+	published / reissued	
US2012217018 AA	20140702	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012217019 AA	20120830	LSPB	+	published / reissued	
US2012217019 AA	20140312	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012248078 AA	20121004	LSPB	+	published / reissued	
US2012248078 AA	20150422	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012255774 AA	20121011	LSPB	+	published / reissued	
US2012255774 AA	20170118	LSGT	STCF	INFORMATION ON STATUS: PATENT	Text: PATENTED CASE

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US2012255933 AA	20121011	LSPB	+	published / reissued	
US2012255933 AA	20150902	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012261188 AA	20120706	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;ALLEN, ERIK C.;SIGNING DATES FROM 20120517 TO 20120605;REEL/FRAME:028497/0831 PartyType: owner
US2012261188 AA	20121018	LSPB	+	published / reissued	
US2012261188 AA	20151024		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2012261188 AA	20161102	LSES	NFA1	Non Final Action Mailed	
US2012261188 AA	20170508		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2012261188 AA	20170824	LSES	NFA1	Non Final Action Mailed	
US2012261188 AA	20180409		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2012261188 AA	20180411	LSES	NFA1	Non Final Action Mailed	
US2012261188 AA	20180808		FRM2	Final Rejection Counted, Not Yet Mailed	
US2012261188 AA	20180810		FRM1	Final Rejection Mailed	
US2012261188 AA	20190219	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012261188 AA	20190219		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2012266803 AA	20121025	LSPB	+	published / reissued	
US2012266803 AA	20150624	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012267168 AA	20121025	LSPB	+	published / reissued	
US2012267168 AA	20150617	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012273269 AA	20121101	LSPB	+	published / reissued	
US2012273269 AA	20160203	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2012273470 AA	20120713	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY INC., COLORADO Effective date: 20120517 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;REEL/FRAME:028541/0978
US2012273470 AA	20121101	LSPB	+	published / reissued	
US2012273470 AA	20150916		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2012273470 AA	20170307	LSWD	ABD3	Abandoned -- Failure to Respond	

				to an Office Action	
US2012273470 AA	20170307		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2012275159 AA	20121101	LSPB	+	published / reissued	
US2012275159 AA	20160518	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013011102 AA	20130110	LSPB	+	published / reissued	
US2013011102 AA	20160518	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013175090 AA	20130711	LSPB	+	published / reissued	
US2013175090 AA	20150220	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S., MR.;RINZLER, CHARLES C., MR.;FAIRCLOTH, BRIAN O., MR.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:034999/0249 PartyType: owner Owner: FORO ENERGY INC., COLORADO
US2013175090 AA	20150318	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013192893 AA	20130801	LSPB	+	published / reissued	
US2013192893 AA	20140402	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013192894 AA	20130801	LSPB	+	published / reissued	
US2013192894 AA	20140509	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., COLORADO PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;RINZLER, CHARLES C.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:032861/0013
US2013192894 AA	20140604	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013220626 AA	20130829	LSPB	+	published / reissued	
US2013220626 AA	20140327	LSAS	AS	ASSIGNMENT	Owner: CHEVRON U.S.A. INC., TEXAS PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;BERGERON, HENRY A.;CLARK, PHILIP V.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:032542/0127
US2013220626 AA	20140327	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., COLORADO PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;BERGERON, HENRY A.;CLARK, PHILIP V.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:032542/0127
US2013220626 AA	20140423	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013228372 AA	20130905	LSPB	+	published / reissued	
US2013228372 AA	20160125	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:LINYAEV, EUGENE J.;ZEDIKER, MARK S.;GRUBB, DARYL L.;AND OTHERS;SIGNING DATES FROM 20150120 TO 20150602;REEL/FRAME:037575/0336 PartyType: owner

US2013228372 AA	20160125	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY, INC., TEXAS OldParty: EMPLOYEE AGREEMENT;ASSIGNOR:SCHROIT, SAM;REEL/FRAME:037590/0976 Effective date: 20100322
US2013228372 AA	20161115		EQA1	Ex parte Quayle Action Mailed	
US2013228372 AA	20170523		RSP3	Response to Ex parte Quayle Action Entered and Forwarded to Examiner	
US2013228372 AA	20170525	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2013228372 AA	20170623	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2013228372 AA	20170626	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2013228557 AA	20130905	LSPB	+	published / reissued	
US2013228557 AA	20150522	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;KOLACHALAM, SHARATH K.;AND OTHERS;SIGNING DATES FROM 20150420 TO 20150422;REEL/FRAME:035702/0220 PartyType: owner
US2013228557 AA	20160106	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013266031 AA	20131010	LSPB	+	published / reissued	
US2013266031 AA	20141018	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:NORTON, RYAN J.;MCKAY, RYAN P.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20140909 TO 20140915;REEL/FRAME:033976/0255
US2013266031 AA	20160106	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013319984 AA	20131205	LSPB	+	published / reissued	
US2013319984 AA	20140806	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:LINYAEV, EUGENE J.;MARSHALL, SCOTT A.;GRUBB, DARYL L.;AND OTHERS;SIGNING DATES FROM 20140203 TO 20140207;REEL/FRAME:033474/0049 PartyType: owner
US2013319984 AA	20170427	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2013319984 AA	20170517	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014000902 AA	20140102	LSPB	+	published / reissued	
US2014000902 AA	20150515	LSAS	AS	ASSIGNMENT	Owner: CHEVRON U.S.A. INC., TEXAS PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:WOLFE, DANIEL L.;GRUBB, DARYL L.;DEUTCH, PAUL D.;AND OTHERS;SIGNING DATES FROM 20150420 TO 20150427;REEL/FRAME:035652/0351
US2014000902 AA	20150515	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:WOLFE, DANIEL L.;GRUBB, DARYL L.;DEUTCH, PAUL D.;AND OTHERS;SIGNING DATES

					FROM 20150420 TO 20150427;REEL/FRAME:035652/0351
US2014000902 AA	20170321	LSES	NFA1	Non Final Action Mailed	
US2014000902 AA	20170616	LSAS	AS	ASSIGNMENT	Effective date: 20170117 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CHEVRON, U.S.A. INC.,;REEL/FRAME:042734/0962 PartyType: owner Owner: FORO ENERGY, INC., TEXAS
US2014000902 AA	20170715		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2014000902 AA	20170810	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2014000902 AA	20171113	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2014000902 AA	20171114	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2014000902 AA	20171129	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014060802 AA	20140306	LSPB	+	published / reissued	
US2014060802 AA	20140723	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;RINZLER, CHARLES C.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:033373/0862 Owner: FORO ENERGY, INC., COLORADO
US2014060802 AA	20141008	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014060930 AA	20140306	LSPB	+	published / reissued	
US2014060930 AA	20140722	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;RINZLER, CHARLES C.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:033364/0486
US2014060930 AA	20141230	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014090846 AA	20140403	LSPB	+	published / reissued	
US2014090846 AA	20140814	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEUTCH, PAUL D.;MARSHALL, SCOTT A.;GRUBB, DARYL L.;AND OTHERS;SIGNING DATES FROM 20140812 TO 20140813;REEL/FRAME:033536/0434 Owner: FORO ENERGY, INC., TEXAS PartyType: owner
US2014090846 AA	20170510	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014190949 AA	20140710	LSPB	+	published / reissued	
US2014190949 AA	20140827	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;GRUBB, DARYL L.;AND OTHERS;SIGNING DATES FROM 20140815 TO 20140818;REEL/FRAME:033621/0769 Owner: FORO ENERGY, INC., TEXAS PartyType: owner
US2014190949 AA	20160705	LSGT	STCF	INFORMATION ON	Text: PATENTED CASE

				STATUS: PATENT GRANT	
US2014231085 AA	20140821	LSPB	+	published / reissued	
US2014231085 AA	20150708	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014231398 AA	20140527		RFE1	Docketed New Case - Ready for Examination	
US2014231398 AA	20140821	LSPB	+	published / reissued	
US2014231398 AA	20170424		FRM1	Final Rejection Mailed	
US2014231398 AA	20171027		RFE1	Docketed New Case - Ready for Examination	
US2014231398 AA	20180316	LSES	NFA1	Non Final Action Mailed	
US2014231398 AA	20190116	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014248025 AA	20140904	LSPB	+	published / reissued	
US2014248025 AA	20141015	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2015129203 AA	20150303		RFE1	Docketed New Case - Ready for Examination	
US2015129203 AA	20150514	LSPB	+	published / reissued	
US2015129203 AA	20150715	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: CONFIRMATORY LICENSE;ASSIGNOR:FORO ENERGY, INC.;REEL/FRAME:036109/0947 Owner: ENERGY, UNITED STATES DEPARTMENT OF, DISTRICT OF C Effective date: 20150323
US2015129203 AA	20170504		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2015129203 AA	20170518		FRM1	Final Rejection Mailed	
US2015129203 AA	20171207	LSES	NFA2	Non Final Action Counted, Not Yet Mailed	
US2015129203 AA	20171208	LSES	NFA1	Non Final Action Mailed	
US2015129203 AA	20180329		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2015129203 AA	20180421	LSFE	AWA4	Awaiting TC Resp., Issue Fee Not Paid	
US2015129203 AA	20180423	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2015129203 AA	20180428	LSFE	AWA4	Awaiting TC Resp., Issue Fee Not Paid	
US2015129203 AA	20180430	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2015129203 AA	20180717	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2015129203 AA	20180801	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2015307174 AA	20151029	LSPB	+	published / reissued	
US2015307174 AA	20151214	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;FAIRCLOTH, BRIAN

					O.;RINZLER, CHARLES C.;REEL/FRAME:037283/0491 Effective date: 20120706 Owner: FORO ENERGY, INC., TEXAS
US2015307174 AA	20160413	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2015308194 AA	20150130		RFE1	Docketed New Case - Ready for Examination	
US2015308194 AA	20150220	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MOXLEY, JOEL F., MR.;LAND, MARK S., MR.;RINZLER, CHARLES C., MR.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:034999/0661 Owner: FORO ENERGY INC., COLORADO
US2015308194 AA	20151029	LSPB	+	published / reissued	
US2015308194 AA	20170505	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2015308194 AA	20170505		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2015321290 AA	20151112	LSPB	+	published / reissued	
US2015321290 AA	20161003	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S;GRUBB, DARYL L;DE WITT, RONALD A;AND OTHERS;SIGNING DATES FROM 20121003 TO 20121005;REEL/FRAME:039924/0987 Owner: FORO ENERGY INC., COLORADO PartyType: owner
US2015321290 AA	20161026	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2015322738 AA	20151112	LSPB	+	published / reissued	
US2015322738 AA	20160128	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RINZLER, CHARLES C.;ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;AND OTHERS;REEL/FRAME:037614/0307 PartyType: owner Owner: FORO ENERGY, INC., TEXAS Effective date: 20090818
US2015322738 AA	20161116	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016017661 AA	20160121	LSPB	+	published / reissued	
US2016017661 AA	20161214	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016084008 AA	20160324	LSPB	+	published / reissued	
US2016084008 AA	20160401	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FAIRCLOTH, BRIAN O.;KOBLICK, YESHAYA;MOXLEY, JOEL F.;AND OTHERS;SIGNING DATES FROM 20160210 TO 20160401;REEL/FRAME:038176/0033 PartyType: owner Owner: FORO ENERGY, INC., TEXAS
US2016084008 AA	20170322	LSES	NFA1	Non Final Action Mailed	
US2016084008 AA	20170528		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2016084008 AA	20170906	LSES	NFA1	Non Final Action Mailed	
US2016084008 AA	20180329		RSP4	Response to Non-Final Office Action Entered and Forwarded to	

				Examiner	
US2016084008 AA	20180620		FRM2	Final Rejection Counted, Not Yet Mailed	
US2016084008 AA	20180622		FRM1	Final Rejection Mailed	
US2016084008 AA	20190116	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016090790 AA	20160331	LSPB	+	published / reissued	
US2016090790 AA	20190814	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US2016186497 AA	20160630	LSPB	+	published / reissued	
US2016186497 AA	20170322		FRM1	Final Rejection Mailed	
US2016186497 AA	20170526		RSP1	Response after Final Action Forwarded to Examiner	
US2016186497 AA	20170606	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016186497 AA	20170901	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2016186497 AA	20170920	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016186524 AA	20160524		RFE1	Docketed New Case - Ready for Examination	
US2016186524 AA	20160630	LSPB	+	published / reissued	
US2016186524 AA	20160805	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FAIRCLOTH, BRIAN O;ZEDIKER, MARK S;SIGNING DATES FROM 20160802 TO 20160803;REEL/FRAME:039359/0170 PartyType: owner
US2016186524 AA	20170616	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CHEVRON, U.S.A. INC.,;REEL/FRAME:042734/0962 Effective date: 20170117
US2016186524 AA	20170927	LSES	NFA2	Non Final Action Counted, Not Yet Mailed	
US2016186524 AA	20171002	LSES	NFA1	Non Final Action Mailed	
US2016186524 AA	20180402	LSES	NFA1	Non Final Action Mailed	
US2016186524 AA	20181203		FRM1	Final Rejection Mailed	
US2016186524 AA	20181203		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2016186524 AA	20190606		RFE1	Docketed New Case - Ready for Examination	
US2016186524 AA	20190606		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2016186524 AA	20190611	LSES	NFA1	Non Final Action Mailed	
US2016186524 AA	20190611		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2016186524 AA	20191117		RSP4	Response to Non-	

				Final Office Action Entered and Forwarded to Examiner	
US2016186524 AA	20191117		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2016186524 AA	20200128	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016186524 AA	20200128		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2016187588 AA	20160304	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:NORTON, RYAN J;MCKAY, RYAN P;FRAZE, JASON D;AND OTHERS;SIGNING DATES FROM 20140909 TO 20140915;REEL/FRAME:037897/0747 Owner: FORO ENERGY, INC., TEXAS
US2016187588 AA	20160630	LSPB	+	published / reissued	
US2016187588 AA	20170418	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2016187588 AA	20170418		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2016221125 AA	20160804	LSPB	+	published / reissued	
US2016221125 AA	20161228	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016222763 AA	20160804	LSPB	+	published / reissued	
US2016222763 AA	20170127		FRM1	Final Rejection Mailed	
US2016222763 AA	20170802		RFE1	Docketed New Case - Ready for Examination	
US2016222763 AA	20170807	LSES	NFA1	Non Final Action Mailed	
US2016222763 AA	20180305		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2016222763 AA	20180322	LSES	ALW2	Allowed -- Notice of Allowance Not Yet Mailed	
US2016222763 AA	20180323	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016222763 AA	20180403	LSFE	AWA4	Awaiting TC Resp., Issue Fee Not Paid	
US2016222763 AA	20180405	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016222763 AA	20180627	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2016222763 AA	20180628	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2016222763 AA	20180711	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016251940 AA	20160901	LSPB	+	published / reissued	
US2016251940 AA	20170220		RSP4	Response to Non-	

				Final Office Action Entered and Forwarded to Examiner	
US2016251940 AA	20170530		FRM1	Final Rejection Mailed	
US2016251940 AA	20171220	LSES	NFA2	Non Final Action Counted, Not Yet Mailed	
US2016251940 AA	20171227	LSES	NFA1	Non Final Action Mailed	
US2016251940 AA	20180424		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2016251940 AA	20180611		FRM2	Final Rejection Counted, Not Yet Mailed	
US2016251940 AA	20190103	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2016251940 AA	20190103		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2016251940 AA	20190508	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016299304 AA	20161013	LSPB	+	published / reissued	
US2016299304 AA	20161214	LSES	NFA1	Non Final Action Mailed	
US2016299304 AA	20170523		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2016299304 AA	20170801		FRM1	Final Rejection Mailed	
US2016299304 AA	20180222	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016299304 AA	20180306	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC, COLORADO PartyType: owner Effective date: 20100504 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S;RINZLER, CHARLES C;FAIRCLOTH, BRIAN O;AND OTHERS;REEL/FRAME:045117/0305
US2016299304 AA	20180530	LSGT	PAT1	Patented Case	
US2016299304 AA	20180530	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016341906 AA	20160901		RFE1	Docketed New Case - Ready for Examination	
US2016341906 AA	20161124	LSPB	+	published / reissued	
US2016341906 AA	20170731	LSES	NFA1	Non Final Action Mailed	
US2016341906 AA	20171219		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2016341906 AA	20180325	LSES	ALW2	Allowed -- Notice of Allowance Not Yet Mailed	
US2016341906 AA	20180326	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016341906 AA	20180627	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2016341906 AA	20180628	LSFE	PPV1	Publications --	

				Issue Fee Payment Verified	
US2016341906 AA	20180718	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2017016299 AA	20161004	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FAIRCLOTH, BRIAN O;GRUBB, DARYL;MARSHALL, SCOTT A;AND OTHERS;SIGNING DATES FROM 20160810 TO 20160829;REEL/FRAME:039929/0822 Owner: FORO ENERGY INC, TEXAS PartyType: owner
US2017016299 AA	20170119	LSPB	+	published / reissued	
US2017016299 AA	20170213		RFE1	Docketed New Case - Ready for Examination	
US2017016299 AA	20190110		RFE1	Docketed New Case - Ready for Examination	
US2017016299 AA	20190208	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017016299 AA	20190208		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2017016299 AA	20190513	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2017016299 AA	20190513		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2017016299 AA	20190612	LSGT	PAT1	Patented Case	
US2017016299 AA	20190612	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2017059854 AA	20160518		RFE1	Docketed New Case - Ready for Examination	
US2017059854 AA	20160805	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FRAZE, JASON D;FAIRCLOTH, BRIAN O;ZEDIKER, MARK S;SIGNING DATES FROM 20160802 TO 20160803;REEL/FRAME:039359/0122 Owner: FORO ENERGY, INC., TEXAS PartyType: owner
US2017059854 AA	20170302	LSPB	+	published / reissued	
US2017059854 AA	20170818	LSES	NFA1	Non Final Action Mailed	
US2017059854 AA	20171228	LSES	NFA2	Non Final Action Counted, Not Yet Mailed	
US2017059854 AA	20180104	LSES	NFA1	Non Final Action Mailed	
US2017059854 AA	20180730	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2017059854 AA	20180730		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2017183913 A9	20170712	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2017191314 AA	20170510		RFE1	Docketed New Case - Ready for Examination	
US2017191314 AA	20170530	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY, INC., TEXAS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FAIRCLOTH, BRIAN O;ZEDIKER, MARK S;LAND,

					MARK S;AND OTHERS;SIGNING DATES FROM 20170424 TO 20170523;REEL/FRAME:042525/0352
US2017191314 AA	20170706	LSPB	+	published / reissued	
US2017191314 AA	20180605	LSES	NFA2	Non Final Action Counted, Not Yet Mailed	
US2017191314 AA	20180606	LSES	NFA1	Non Final Action Mailed	
US2017191314 AA	20190110		FRM1	Final Rejection Mailed	
US2017191314 AA	20190110		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2017191314 AA	20190702		RFE1	Docketed New Case - Ready for Examination	
US2017191314 AA	20190702		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2017191314 AA	20190801		FRM1	Final Rejection Mailed	
US2017191314 AA	20190801		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2017191314 AA	20200407	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2017191314 AA	20200407		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2017214213 AA	20140813	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;RINZLER, CHARLES C.;SIGNING DATES FROM 20140210 TO 20140812;REEL/FRAME:033525/0747 PartyType: owner Owner: FORO ENERGY, INC., COLORADO
US2017214213 AA	20170510		APP1	Application Dispatched from Preexam, Not Yet Docketed	
US2017214213 AA	20170719		RFE1	Docketed New Case - Ready for Examination	
US2017214213 AA	20170727	LSPB	+	published / reissued	
US2017214213 AA	20170907	LSES	NFA1	Non Final Action Mailed	
US2017214213 AA	20180130	LSES	NFA1	Non Final Action Mailed	
US2017214213 AA	20180424		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017214213 AA	20180904	LSES	NFA1	Non Final Action Mailed	
US2017214213 AA	20190214		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017214213 AA	20190214		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2017214213 AA	20190430		FRM1	Final Rejection Mailed	
US2017214213 AA	20190430		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED

US2017214213 AA	20191106		RFE1	Docketed New Case - Ready for Examination	
US2017214213 AA	20191106		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2017214213 AA	20191125	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017214213 AA	20191125		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2017214213 AA	20200115	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017214213 AA	20200115		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2017214213 AA	20200227		RFE1	Docketed New Case - Ready for Examination	
US2017214213 AA	20200227		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2017214213 AA	20200317	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017214213 AA	20200317		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2017252858 AA	20170628	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;GRUBB, DARYL L.;DEWITT, RONALD A.;AND OTHERS;SIGNING DATES FROM 20121003 TO 20121005;REEL/FRAME:043019/0860 Owner: FORO ENERGY INC., COLORADO PartyType: owner
US2017252858 AA	20170830		RFE1	Docketed New Case - Ready for Examination	
US2017252858 AA	20170907	LSPB	+	published / reissued	
US2017252858 AA	20190329	LSES	NFA1	Non Final Action Mailed	
US2017252858 AA	20190329		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2017252858 AA	20190611		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017252858 AA	20190611		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2017252858 AA	20190705	LSES	NFA1	Non Final Action Mailed	
US2017252858 AA	20190705		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING	Text: NON FINAL ACTION MAILED

				PROCEDURE IN GENERAL	
US2017252858 AA	20200113		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017252858 AA	20200113		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2017266760 AA	20170613		APP1	Application Dispatched from Preexam, Not Yet Docketed	
US2017266760 AA	20170921	LSPB	+	published / reissued	
US2017266760 AA	20170928		RFE1	Docketed New Case - Ready for Examination	
US2017266760 AA	20170928		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2017266760 AA	20191127	LSES	NFA1	Non Final Action Mailed	
US2017266760 AA	20191127		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2017266760 AA	20200812	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2017321486 AA	20171022		RFE1	Docketed New Case - Ready for Examination	
US2017321486 AA	20171109	LSPB	+	published / reissued	
US2017321486 AA	20181219	LSES	NFA1	Non Final Action Mailed	
US2017321486 AA	20181219		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2017321486 AA	20190702		FRM1	Final Rejection Mailed	
US2017321486 AA	20190702		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2017321486 AA	20190926	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS PartyType: owner OldParty: EMPLOYEE AGREEMENT;ASSIGNOR:SCHROIT, SAM;REEL/FRAME:050494/0520 Effective date: 20100322
US2017321486 AA	20190926	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:LINYAEV, EUGENE J;ZEDIKER, MARK S;GRUBB, DARYL L;AND OTHERS;SIGNING DATES FROM 20150120 TO 20150602;REEL/FRAME:050494/0472 PartyType: owner
US2017321486 AA	20200127	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017321486 AA	20200127		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2017321486 AA	20200429	LSFE	PPV1	Publications -- Issue Fee Payment Verified	

US2017321486 AA	20200527	LSGT	PAT1	Patented Case	
US2018045024 AA	20180212		RFE1	Docketed New Case - Ready for Examination	
US2018045024 AA	20180215	LSPB	+	published / reissued	
US2018045024 AA	20181212	LSES	NFA1	Non Final Action Mailed	
US2018045024 AA	20181212		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018045024 AA	20190618		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018045024 AA	20190621		FRM1	Final Rejection Mailed	
US2018045024 AA	20190621		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2018045024 AA	20190826	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEUTCH, PAUL D.;MARSHALL, SCOTT A.;GRUB, DARYL L.;AND OTHERS;SIGNING DATES FROM 20140812 TO 20140813;REEL/FRAME:050173/0353 PartyType: owner Owner: FORO ENERGY, INC., TEXAS
US2018045024 AA	20190830	LSES	ADV1	Advisory Action Mailed	
US2018045024 AA	20190830		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: ADVISORY ACTION MAILED
US2018045024 AA	20190925	LSAL	NAF1	Notice of Appeal Filed	
US2018045024 AA	20190925	LSAL	STCV	INFORMATION ON STATUS: APPEAL PROCEDURE	Text: NOTICE OF APPEAL FILED
US2018045024 AA	20191118		FRM1	Final Rejection Mailed	
US2018045024 AA	20191118		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2018045024 AA	20200227		RFE1	Docketed New Case - Ready for Examination	
US2018045024 AA	20200227		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018045024 AA	20200302	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018045024 AA	20200606	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018045024 AA	20200606		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018045024 AA	20200624	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018045895 AA	20171213		RFE1	Docketed New Case - Ready for Examination	
US2018045895 AA	20180215	LSPB	+	published / reissued	
US2018045895 AA	20181207	LSES	NFA1	Non Final Action Mailed	

US2018045895 AA	20190311		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018045895 AA	20190311		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018045895 AA	20190716	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018045895 AA	20190716		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018045895 AA	20190927	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:LEE, IAN;FAIRCLOTH, BRIAN O;KUZNETSOV, ANDREY;SIGNING DATES FROM 20190808 TO 20190816;REEL/FRAME:050510/0897 Owner: FORO ENERGY, INC., TEXAS PartyType: owner
US2018045895 AA	20191030	LSGT	PAT1	Patented Case	
US2018045895 AA	20191030	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018163477 AA	20180614	LSPB	+	published / reissued	
US2018163477 AA	20181228		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018163477 AA	20190204	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018163477 AA	20190313	LSFE	AWA4	Awaiting TC Resp., Issue Fee Not Paid	
US2018163477 AA	20190313		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: AWAITING TC RESP., ISSUE FEE NOT PAID
US2018163477 AA	20190322	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018163477 AA	20190322		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018163477 AA	20190529	LSGT	PAT1	Patented Case	
US2018163477 AA	20190529	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018328150 AA	20181115	LSPB	+	published / reissued	
US2018328150 AA	20190115		RFE1	Docketed New Case - Ready for Examination	
US2018328150 AA	20190328	LSES	NFA1	Non Final Action Mailed	
US2018328150 AA	20190328		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018328150 AA	20190702	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC, COLORADO PartyType: owner OldParty: ASSIGNMENT OF

					ASSIGNORS INTEREST;ASSIGNORS:DEWITT, RONALD A;ZEDIKER, MARK S;FAIRCLOTH, BRIAN O;AND OTHERS;SIGNING DATES FROM 20111107 TO 20111202;REEL/FRAME:049659/0177
US2018328150 AA	20190711		FRM1	Final Rejection Mailed	
US2018328150 AA	20190711		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2018328150 AA	20191120		RFE1	Docketed New Case - Ready for Examination	
US2018328150 AA	20191120		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018328150 AA	20200115	LSES	NFA1	Non Final Action Mailed	
US2018328150 AA	20200115		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019040726 AA	20190115		RFE1	Docketed New Case - Ready for Examination	
US2019040726 AA	20190115		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2019040726 AA	20190207	LSPB	+	published / reissued	
US2019040726 AA	20191106	LSES	NFA1	Non Final Action Mailed	
US2019040726 AA	20191106		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019040726 AA	20200811	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2019178036 AA	20190411	LSES	NFA1	Non Final Action Mailed	
US2019178036 AA	20190411		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019178036 AA	20190613	LSPB	+	published / reissued	
US2019178036 AA	20190721		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019178036 AA	20190721		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019178036 AA	20190927		FRM1	Final Rejection Mailed	
US2019178036 AA	20190927		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2019178036 AA	20200505	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2019240770 AA	20190808	LSPB	+	published / reissued	
US2019309576 AA	20191010	LSPB	+	published / reissued	

US2019309576 AA	20191018		APP1	Application Dispatched from Preexam, Not Yet Docketed	
US2019309576 AA	20191018		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: APPLICATION DISPATCHED FROM PREEXAM, NOT YET DOCKETED
US2019309576 AA	20191106		RFE1	Docketed New Case - Ready for Examination	
US2019309576 AA	20191106		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2019309576 AA	20191202	LSES	NFA1	Non Final Action Mailed	
US2019309576 AA	20191202		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019309576 AA	20200707	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2019383120 AA	20191030	LSES	NFA1	Non Final Action Mailed	
US2019383120 AA	20191030		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019383120 AA	20191219	LSPB	+	published / reissued	
US2019383120 AA	20200812	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2020011145 AA	20191231		RFE1	Docketed New Case - Ready for Examination	
US2020011145 AA	20191231		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2020011145 AA	20200109	LSPB	+	published / reissued	
US2020232309 AA	20200210		APP3	Application Undergoing Preexam Processing	
US2020232309 AA	20200723	LSPB	+	published / reissued	
US2020232309 AA	20200821		RFE1	Docketed New Case - Ready for Examination	
US8424617 BB	20090821	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC.,COLORADO PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FAIRCLOTH, BRIAN O.;ZEDIKER, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023131/0563
US8424617 BB	20090821	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FAIRCLOTH, BRIAN O.;ZEDIKER, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023131/0563 PartyType: owner
US8424617 BB	20130403	LSGT	PAT1	Patented Case	
US8424617 BB	20130423	LSGT	+	granted / extensions (spc,	

				cpc, pte)	
US8424617 BB	20130709	LSRE	CC	CERTIFICATE OF CORRECTION	
US8424617 BB	20141230	LSRE	CC	CERTIFICATE OF CORRECTION	
US8424617 BB	20161024	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8424617 BB	20300303	PEXP		Calculated Patent Term Expiry (PTA 196 days)	
US8511401 BB	20090821	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC.,COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;RINZLER, CHARLES C.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023131/0870 PartyType: owner
US8511401 BB	20090821	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;RINZLER, CHARLES C.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023131/0870 Owner: FORO ENERGY INC., COLORADO PartyType: owner
US8511401 BB	20130731	LSGT	PAT1	Patented Case	
US8511401 BB	20130820	LSGT	+	granted / extensions (spc, cpc, pte)	
US8511401 BB	20170220	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8511401 BB	20310310	PEXP		Calculated Patent Term Expiry (PTA 568 days)	
US8571368 BB	20100727	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RINZLER, CHARLES C.;ZEDIKER, MARK S.;REEL/FRAME:024843/0221 Effective date: 20100721 Owner: FORO ENERGY INC., COLORADO
US8571368 BB	20131009	LSGT	PAT1	Patented Case	
US8571368 BB	20131029	LSGT	+	granted / extensions (spc, cpc, pte)	
US8571368 BB	20140311	LSRE	CC	CERTIFICATE OF CORRECTION	
US8571368 BB	20170501	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8571368 BB	20301024	PEXP		Calculated Patent Term Expiry (PTA 95 days)	
US8627901 BA	20101123	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:UNDERWOOD, LANCE D.;NORTON, RYAN J.;MCKAY, RYAN P.;AND OTHERS;REEL/FRAME:025308/0653 PartyType: owner Effective date: 20101116 Owner: FORO ENERGY INC., COLORADO
US8627901 BA	20131224	LSGT	PAT1	Patented Case	
US8627901 BA	20131224	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US8627901 BA	20140114	LSGT	+	granted / extensions (spc, cpc, pte)	
US8627901 BA	20170714	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8627901 BA	20311203	PEXP		Calculated Patent Term Expiry (PTA 428 days)	
US8636085 BB	20090821	LSAS	AS	ASSIGNMENT	Effective date: 20090818 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RINZLER, CHARLES C.;ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;AND OTHERS;REEL/FRAME:023131/0725

					PartyType: owner Owner: FORO ENERGY INC.,COLORADO
US8636085 BB	20090821	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20090818 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RINZLER, CHARLES C.;ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;AND OTHERS;REEL/FRAME:023131/0725 Owner: FORO ENERGY INC., COLORADO
US8636085 BB	20140108	LSGT	PAT1	Patented Case	
US8636085 BB	20140128	LSGT	+	granted / extensions (spc, cpc, pte)	
US8636085 BB	20170728	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8636085 BB	20320117	PEXP		Calculated Patent Term Expiry (PTA 881 days)	
US8662160 BB	20140212	LSGT	PAT1	Patented Case	
US8662160 BB	20140304	LSGT	+	granted / extensions (spc, cpc, pte)	
US8662160 BB	20140715	LSRE	CC	CERTIFICATE OF CORRECTION	
US8662160 BB	20170831	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8662160 BB	20300804	PEXP		Calculated Patent Term Expiry (PTA 350 days)	
US8684088 BB	20110826	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY, INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S., MR.;BERGERON, HENRY A., MR.;CLARK, PHILIP V., MR.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:026815/0380
US8684088 BB	20110826	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S., MR.;BERGERON, HENRY A., MR.;CLARK, PHILIP V., MR.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:026815/0380 PartyType: owner Owner: CHEVRON U.S.A. INC., TEXAS
US8684088 BB	20140312	LSGT	PAT1	Patented Case	
US8684088 BB	20140401	LSGT	+	granted / extensions (spc, cpc, pte)	
US8684088 BB	20170616	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CHEVRON, U.S.A. INC.,;REEL/FRAME:042734/0962 Effective date: 20170117 Owner: FORO ENERGY, INC., TEXAS PartyType: owner
US8684088 BB	20170831	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL)
US8684088 BB	20170831	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8684088 BB	20310404	PEXP		Calculated Patent Term Expiry (PTA 39 days)	
US8701794 BB	20140402	LSGT	PAT1	Patented Case	
US8701794 BB	20140422	LSGT	+	granted / extensions (spc, cpc, pte)	
US8701794 BB	20160824	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S;RINZLER, CHARLES C;FAIRCLOTH, BRIAN O;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:039520/0954

US8701794 BB	20171010	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8701794 BB	20330313	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8720575 BB	20140423	LSGT	PAT1	Patented Case	
US8720575 BB	20140513	LSGT	+	granted / extensions (spc, cpc, pte)	
US8720575 BB	20170616	LSAS	AS	ASSIGNMENT	Effective date: 20170117 PartyType: owner Owner: FORO ENERGY, INC., TEXAS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CHEVRON, U.S.A. INC.,;REEL/FRAME:042734/0962
US8720575 BB	20171010	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL)
US8720575 BB	20171010	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8720575 BB	20330501	PEXP		Calculated Patent Term Expiry (PTA 37 days)	
US8757292 BB	20140604	LSGT	PAT1	Patented Case	
US8757292 BB	20140624	LSGT	+	granted / extensions (spc, cpc, pte)	
US8757292 BB	20171110	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8757292 BB	20330313	PEXP		Calculated Patent Term Expiry	
US8783360 BB	20110826	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S., MR.;BERNERON, HENRY A., MR.;CLARK, PHILIP V., MR.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:026812/0890 Owner: FORO ENERGY, INC., COLORADO
US8783360 BB	20110826	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S., MR.;BERNERON, HENRY A., MR.;CLARK, PHILIP V., MR.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:026812/0890 Owner: CHEVRON U.S.A. INC., TEXAS
US8783360 BB	20140702	LSGT	PAT1	Patented Case	
US8783360 BB	20140722	LSGT	+	granted / extensions (spc, cpc, pte)	
US8783360 BB	20170616	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY, INC., TEXAS Effective date: 20170117 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CHEVRON, U.S.A. INC.,;REEL/FRAME:042734/0962
US8783360 BB	20171224	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL)
US8783360 BB	20180110	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8783360 BB	20321019	PEXP		Calculated Patent Term Expiry (PTA 603 days)	
US8783361 BB	20110825	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S., MR.;BERGERON, HENRY A., MR.;CLARK, PHILIP V., MR.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:026806/0781 Owner: FORO ENERGY, INC., COLORADO PartyType: owner
US8783361 BB	20110825	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER,

					MARK S., MR.;BERGERON, HENRY A., MR.;CLARK, PHILIP V., MR.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:026806/0781 PartyType: owner Owner: CHEVRON U.S.A. INC., TEXAS
US8783361 BB	20110913	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO OldParty: CORRECTIVE ASSIGNMENT TO CORRECT THE OMISSION OF PAUL D. DEUTCH AS AN ASSIGNOR TO PREVIOUSLY MAILED NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT PREVIOUSLY RECORDED ON REEL 026806 FRAME 0781. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT OF U.S. APPLN. 13/034,175 TO CHEVRON U.S.A. INC. AND FORO ENERGY INC.;ASSIGNORS:ZEDIKER, MARK S., MR.;BERGERON, HENRY A., MR.;CLARK, PHILIP V., MR.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:026893/0644 PartyType: owner
US8783361 BB	20110913	LSAS	AS	ASSIGNMENT	Owner: CHEVRON U.S.A. INC., TEXAS PartyType: owner OldParty: CORRECTIVE ASSIGNMENT TO CORRECT THE OMISSION OF PAUL D. DEUTCH AS AN ASSIGNOR TO PREVIOUSLY MAILED NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT PREVIOUSLY RECORDED ON REEL 026806 FRAME 0781. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT OF U.S. APPLN. 13/034,175 TO CHEVRON U.S.A. INC. AND FORO ENERGY INC.;ASSIGNORS:ZEDIKER, MARK S., MR.;BERGERON, HENRY A., MR.;CLARK, PHILIP V., MR.;AND OTHERS;SIGNING DATES FROM 20110713 TO 20110817;REEL/FRAME:026893/0644
US8783361 BB	20140702	LSGT	PAT1	Patented Case	
US8783361 BB	20140722	LSGT	+	granted / extensions (spc, cpc, pte)	
US8783361 BB	20170616	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY, INC., TEXAS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CHEVRON, U.S.A. INC.,;REEL/FRAME:042734/0962 Effective date: 20170117 PartyType: owner
US8783361 BB	20171224	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL)
US8783361 BB	20180110	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8783361 BB	20321021	PEXP		Calculated Patent Term Expiry (PTA 605 days)	
US8820434 BB	20090821	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY INC.,COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;LAND, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023131/0922
US8820434 BB	20090821	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;LAND, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023131/0922 PartyType: owner
US8820434 BB	20140813	LSGT	PAT1	Patented Case	
US8820434 BB	20140902	LSGT	+	granted / extensions (spc, cpc, pte)	
US8820434 BB	20180221	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8820434 BB	20320720	PEXP		Calculated Patent Term Expiry (PTA 1066 days)	

US8826973 BB	20090821	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MOXLEY, JOEL F.;LAND, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023640/0326 Owner: FORO ENERGY INC.,COLORADO
US8826973 BB	20090821	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MOXLEY, JOEL F.;LAND, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023640/0326 Owner: FORO ENERGY INC., COLORADO
US8826973 BB	20090821		XAS	NOT ANY MORE IN US ASSIGNMENT DATABASE	Text: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MOXLEY, JOEL F.;LAND, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:023131/0023
US8826973 BB	20140820	LSGT	PAT1	Patented Case	
US8826973 BB	20140909	LSGT	+	granted / extensions (spc, cpc, pte)	
US8826973 BB	20180221	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8826973 BB	20310726	PEXP		Calculated Patent Term Expiry (PTA 706 days)	
US8869914 BB	20141008	LSGT	PAT1	Patented Case	
US8869914 BB	20141028	LSGT	+	granted / extensions (spc, cpc, pte)	
US8869914 BB	20180314	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8869914 BB	20290819	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8879876 BB	20140728	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY, INC., COLORADO Effective date: 20100721 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RINZLER, CHARLES C.;ZEDIKER, MARK S.;REEL/FRAME:033400/0559
US8879876 BB	20141015	LSGT	PAT1	Patented Case	
US8879876 BB	20141104	LSGT	+	granted / extensions (spc, cpc, pte)	
US8879876 BB	20180424	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8879876 BB	20331018	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8936108 BB	20141230	LSGT	PAT1	Patented Case	
US8936108 BB	20150120	LSGT	+	granted / extensions (spc, cpc, pte)	
US8936108 BB	20180628	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8936108 BB	20290819	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US8997894 BB	20150318	LSGT	PAT1	Patented Case	
US8997894 BB	20150407	LSGT	+	granted / extensions (spc, cpc, pte)	
US8997894 BB	20180912	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8997894 BB	20330226	PEXP		Calculated Patent Term Expiry	
US9027668 BB	20120621	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO

					OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;MAKKI, SIAMAK;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20120517 TO 20120614;REEL/FRAME:028419/0715 PartyType: owner
US9027668 BB	20150422	LSGT	PAT1	Patented Case	
US9027668 BB	20150512	LSGT	+	granted / extensions (spc, cpc, pte)	
US9027668 BB	20181017	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9027668 BB	20330310	PEXP		Calculated Patent Term Expiry (PTA 381 days)	
US9074422 BB	20120710	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GRUBB, DARYL L.;FAIRCLOTH, BRIAN O.;ZEDIKER, MARK S.;SIGNING DATES FROM 20120516 TO 20120517;REEL/FRAME:028523/0749 PartyType: owner Owner: FORO ENERGY INC., COLORADO
US9074422 BB	20150617	LSGT	PAT1	Patented Case	
US9074422 BB	20150707	LSGT	+	granted / extensions (spc, cpc, pte)	
US9074422 BB	20151009	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY, INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GRUBB, DARYL L.;ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;SIGNING DATES FROM 20120516 TO 20120517;REEL/FRAME:036769/0244
US9074422 BB	20181210	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9074422 BB	20330106	PEXP		Calculated Patent Term Expiry (PTA 509 days)	
US9080425 BB	20120709	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC.,, COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;JONES-ALBERTUS, REBECCA;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20120706 TO 20120708;REEL/FRAME:028515/0625 PartyType: owner
US9080425 BB	20150624	LSGT	PAT1	Patented Case	
US9080425 BB	20150714	LSGT	+	granted / extensions (spc, cpc, pte)	
US9080425 BB	20151002	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY, INC., COLORADO Effective date: 20120706 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;JONES-ALBERTUS, REBECCA;FAIRCLOTH, BRIAN O.;AND OTHERS;REEL/FRAME:036715/0504
US9080425 BB	20181217	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9080425 BB	20300829	PEXP		Calculated Patent Term Expiry (PTA 375 days)	
US9089928 BB	20121016	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;GRUBB, DARYL L.;DE WITT, RONALD A.;AND OTHERS;SIGNING DATES FROM 20121003 TO 20121005;REEL/FRAME:029135/0702 PartyType: owner Owner: FORO ENERGY INC., COLORADO
US9089928 BB	20150708	LSGT	PAT1	Patented Case	
US9089928 BB	20150728	LSGT	+	granted / extensions (spc, cpc, pte)	

US9089928 BB	20181218	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9089928 BB	20300429	PEXP		Calculated Patent Term Expiry (PTA 253 days)	
US9138786 BB	20120629	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MCKAY, RYAN P.;RINZLER, CHARLES C.;MOXLEY, JOEL F.;AND OTHERS;SIGNING DATES FROM 20120516 TO 20120614;REEL/FRAME:028467/0757
US9138786 BB	20150902	LSGT	PAT1	Patented Case	
US9138786 BB	20150922	LSGT	+	granted / extensions (spc, cpc, pte)	
US9138786 BB	20190222	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9138786 BB	20321206	PEXP		Calculated Patent Term Expiry (PTA 304 days)	
US9242309 BB	20151027	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US9242309 BB	20151216	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US9242309 BB	20151222	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US9242309 BB	20160106	LSGT	PAT1	Patented Case	
US9242309 BB	20160126	LSGT	+	granted / extensions (spc, cpc, pte)	
US9242309 BB	20190626	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9242309 BB	20331117	PEXP		Calculated Patent Term Expiry (PTA 275 days)	
US9244235 BB	20151029	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US9244235 BB	20151113	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US9244235 BB	20151218	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US9244235 BB	20160106	LSGT	PAT1	Patented Case	
US9244235 BB	20160126	LSGT	+	granted / extensions (spc, cpc, pte)	
US9244235 BB	20190626	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9244235 BB	20300525	PEXP		Calculated Patent Term Expiry (PTA 279 days)	
US9267330 BB	20120716	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RINZLER, CHARLES C.;GRAY, WILLIAM C.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20120516 TO 20120517;REEL/FRAME:028554/0242 PartyType: owner Owner: FORO ENERGY INC., COLORADO
US9267330 BB	20151216		RSP1	Response after Final Action Forwarded to Examiner	
US9267330 BB	20151221	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	

US9267330 BB	20160203	LSGT	PAT1	Patented Case	
US9267330 BB	20160223	LSGT	+	granted / extensions (spc, cpc, pte)	
US9267330 BB	20190814	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9267330 BB	20300204	PEXP		Calculated Patent Term Expiry (PTA 169 days)	
US9284783 BA	20140815	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FAIRCLOTH, BRIAN O.;ZEDIKER, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:033542/0310 Owner: FORO ENERGY, INC., COLORADO PartyType: owner
US9284783 BA	20160224	LSGT	PAT1	Patented Case	
US9284783 BA	20160224	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US9284783 BA	20160315	LSGT	+	granted / extensions (spc, cpc, pte)	
US9284783 BA	20300329	PEXP		Calculated Patent Term Expiry (PTA 222 days)	
US9327810 BB	20150824	LSES	NFA1	Non Final Action Mailed	
US9327810 BB	20160210		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US9327810 BB	20160413	LSGT	PAT1	Patented Case	
US9327810 BB	20160503	LSGT	+	granted / extensions (spc, cpc, pte)	
US9327810 BB	20191008	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9327810 BB	20290819	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US9347271 BB	20100507	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY INC., COLORADO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;RINZLER, CHARLES C.;FAIRCLOTH, BRIAN O.;AND OTHERS;REEL/FRAME:024384/0594 Effective date: 20100504
US9347271 BB	20150731		FRM1	Final Rejection Mailed	
US9347271 BB	20160420	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US9347271 BB	20160504	LSGT	PAT1	Patented Case	
US9347271 BB	20160524	LSGT	+	granted / extensions (spc, cpc, pte)	
US9347271 BB	20191015	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9347271 BB	20310609	PEXP		Calculated Patent Term Expiry (PTA 659 days)	
US9360631 BB	20120713	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FRAZE, JASON D.;FAIRCLOTH, BRIAN O.;ZEDIKER, MARK S.;SIGNING DATES FROM 20120516 TO 20120517;REEL/FRAME:028542/0338 PartyType: owner Owner: FORO ENERGY INC., COLORADO
US9360631 BB	20151127	LSES	NFA1	Non Final Action Mailed	
US9360631 BB	20160518	LSGT	PAT1	Patented Case	

US9360631 BB	20160607	LSGT	+	granted / extensions (spc, cpc, pte)	
US9360631 BB	20191107	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9360631 BB	20320825	PEXP		Calculated Patent Term Expiry (PTA 1102 days)	
US9360643 BB	20120926	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RINZLER, CHARLES C.;GRAY, WILLIAM C.;FRAZE, JASON D.;AND OTHERS;REEL/FRAME:029029/0609 Effective date: 20120919 Owner: FORO ENERGY INC., COLORADO
US9360643 BB	20150925	LSES	NFA1	Non Final Action Mailed	
US9360643 BB	20160518	LSGT	PAT1	Patented Case	
US9360643 BB	20160607	LSGT	+	granted / extensions (spc, cpc, pte)	
US9360643 BB	20191107	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9360643 BB	20330509	PEXP		Calculated Patent Term Expiry (PTA 342 days)	
US9399269 BB	20141003		RFE1	Docketed New Case - Ready for Examination	
US9399269 BB	20160705	LSGT	PAT1	Patented Case	
US9399269 BB	20160726	LSGT	+	granted / extensions (spc, cpc, pte)	
US9399269 BB	20191216	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9399269 BB	20330601	PEXP		Calculated Patent Term Expiry (PTA 303 days)	
US9492885 BB	20150813		RFE1	Docketed New Case - Ready for Examination	
US9492885 BB	20161026	LSGT	PAT1	Patented Case	
US9492885 BB	20161115	LSGT	+	granted / extensions (spc, cpc, pte)	
US9492885 BB	20200423	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9492885 BB	20350720	PEXP		Calculated Patent Term Expiry	
US9512679 BB	20151207	LSES	NFA1	Non Final Action Mailed	
US9512679 BB	20161116	LSGT	PAT1	Patented Case	
US9512679 BB	20161206	LSGT	+	granted / extensions (spc, cpc, pte)	
US9512679 BB	20200427	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9512679 BB	20300422	PEXP		Calculated Patent Term Expiry (PTA 246 days)	
US9534447 BB	20151202	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: FORO ENERGY, INC., TEXAS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ZEDIKER, MARK S.;LAND, MARK S.;RINZLER, CHARLES C.;AND OTHERS;SIGNING DATES FROM 20090818 TO 20090819;REEL/FRAME:037193/0679
US9534447 BB	20161214	LSGT	PAT1	Patented Case	
US9534447 BB	20170103	LSGT	+	granted / extensions (spc, cpc, pte)	
US9534447 BB	20200623	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9534447 BB	20300303	PEXP		Calculated Patent Term Expiry (PTA	

				196 days)	
US9545692 BB	20140814	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FAIRCLOTH, BRIAN O.;ZEDIKER, MARK S.;KOLACHALAM, SHARATH K.;AND OTHERS;SIGNING DATES FROM 20140203 TO 20140207;REEL/FRAME:033536/0573 Owner: FORO ENERGY, INC., COLORADO
US9545692 BB	20161228	LSGT	PAT1	Patented Case	
US9545692 BB	20170117	LSGT	+	granted / extensions (spc, cpc, pte)	
US9545692 BB	20200623	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9545692 BB	20310523	PEXP		Calculated Patent Term Expiry (PTA 642 days)	
US9562395 BB	20120625	LSAS	AS	ASSIGNMENT	Owner: FORO ENERGY INC., COLORADO PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GRUBB, DARYL L.;KOLACHALAM, SHARATH K.;FAIRCLOTH, BRIAN O.;AND OTHERS;SIGNING DATES FROM 20120516 TO 20120611;REEL/FRAME:028433/0832
US9562395 BB	20151127		FRM1	Final Rejection Mailed	
US9562395 BB	20170118	LSGT	PAT1	Patented Case	
US9562395 BB	20170207	LSGT	+	granted / extensions (spc, cpc, pte)	
US9562395 BB	20200714	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9562395 BB	20341231	PEXP		Calculated Patent Term Expiry (PTA 1042 days)	
US9664012 BB	20140617		RFE1	Docketed New Case - Ready for Examination	
US9664012 BB	20170510	LSGT	PAT1	Patented Case	
US9664012 BB	20170530	LSGT	+	granted / extensions (spc, cpc, pte)	
US9664012 BB	20301030	PEXP		Calculated Patent Term Expiry (PTA 437 days)	
US9669492 BB	20130916		RFE1	Docketed New Case - Ready for Examination	
US9669492 BB	20170517	LSGT	PAT1	Patented Case	
US9669492 BB	20170606	LSGT	+	granted / extensions (spc, cpc, pte)	
US9669492 BB	20320316	PEXP		Calculated Patent Term Expiry (PTA 940 days)	
US9719302 BB	20151123	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US9719302 BB	20170712	LSGT	PAT1	Patented Case	
US9719302 BB	20170801	LSGT	+	granted / extensions (spc, cpc, pte)	
US9719302 BB	20300316	PEXP		Calculated Patent Term Expiry (PTA 411 days)	
US9784037 BB	20151014	LSAS	AS	ASSIGNMENT	OldParty: CORRECTIVE ASSIGNMENT TO CORRECT THE APPLICATION SERIAL 13/403,287 PREVIOUSLY RECORDED ON REEL 036769 FRAME 0244. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT;ASSIGNORS:GRUBB, DARYL L.;ZEDIKER, MARK S.;FAIRCLOTH, BRIAN O.;SIGNING

					DATES FROM 20120516 TO 20120517;REEL/FRAME:036955/0440 PartyType: owner Owner: FORO ENERGY, INC., COLORADO
US9784037 BB	20170920	LSGT	PAT1	Patented Case	
US9784037 BB	20171010	LSGT	+	granted / extensions (spc, cpc, pte)	
US9784037 BB	20310816	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US9845652 BB	20131106		RFE1	Docketed New Case - Ready for Examination	
US9845652 BB	20171129	LSGT	PAT1	Patented Case	
US9845652 BB	20171219	LSGT	+	granted / extensions (spc, cpc, pte)	
US9845652 BB	20350402	PEXP		Calculated Patent Term Expiry (PTA 580 days and a terminal disclaimer has been filed)	
WO10096086 A1	20090819	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 200980141304.7 Country of Ref document: CN
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WO10096086 A1	20101020		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 09840554 Country of Ref document: EP
WO10096086 A1	20110210	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2009340454 Country of Ref document: AU
WO10096086 A1	20110216	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2734492 Country of Ref document: CA
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WO10096086 A1	20110221	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2011523959 Kind code of Ref document: A Country of Ref document: JP
WO10096086 A1	20110222	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO10096086 A1	20110303	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A Date of Ref document: 20090819 Ref document number: 2009340454 Country of Ref document: AU
WO10096086 A1	20110316	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 1983/DELNP/2011 Country of Ref document: IN
WO10096086 A1	20110321	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2011110388 Country of Ref document: RU
WO10096086 A1	20151124	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20110221 Kind code of Ref document: A2 Ref document number: PI0918403 Country of Ref document: BR
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WO10144160 A1	20110209		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 10786516 Kind code of Ref document: A1 Country of Ref document: EP
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WO10144160 A1	20120816	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
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WO12012436 A3	20130121	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
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WO12024285 A1	20120223	LSPB	+	published / reissued	
WO12024285 A1	20120411		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 11818657 Country of Ref document: EP
WO12024285 A1	20130212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2808214 Country of Ref document: CA
WO12024285 A1	20130214	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2011818657 Country of Ref document: EP
WO12024285 A1	20130218	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
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WO12096966 A2	20120719	LSPB	+	published / reissued	
WO12096966 A2	20120905		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 12734537 Kind code of Ref document: A2 Country of Ref document: EP
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WO12096966 A3	20130711	LSNE	NENP	NON-ENTRY INTO THE NATIONAL	Ref country code: DE

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WO12116148 A1	20140114		REG	REFERENCE TO NATIONAL CODE	Ref legal event code: B01A Ref document number: 112013021478 Ref country code: BR Country of Ref document: BR
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WO12116153 A1	20120830	LSPB	+	published / reissued	
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WO12116153 A1	20130826	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
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WO12116155 A1	20120830	LSPB	+	published / reissued	
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WO12116284 A1	20121017		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 12749039 Country of Ref document: EP
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WO12116284 A1	20130826	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO12116284 A1	20130912	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2012222154 Kind code of Ref document: A Date of Ref document: 20120224 Country of Ref document: AU
WO12116284 A1	20140114		REG	REFERENCE TO NATIONAL CODE	Ref document number: 112013021480 Ref country code: BR Ref legal event code: B01A Country of Ref document: BR
WO12116284 A1	20161011	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20130822 Kind code of Ref document: A2 Ref document number: 112013021480 Country of Ref document: BR

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WO12161797 A1	20130826	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
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WO12161797 A1	20130912	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2012259443 Date of Ref document: 20120224 Kind code of Ref document: A Country of Ref document: AU
WO12161797 A1	20140513		REG	REFERENCE TO NATIONAL CODE	Ref legal event code: B01A Ref document number: 112013021521 Ref country code: BR Country of Ref document: BR
WO12167102 A1	20121206	LSPB	+	published / reissued	
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WO12167102 A1	20131203	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
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WO13019959 A2	20130327		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A2 Ref document number: 12820743 Country of Ref document: EP
WO13019959 A3	20140203	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO13019959 A3	20140221	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2012820743 Country of Ref document: EP
WO13130302 A1	20130906	LSPB	+	published / reissued	
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WO13130302 A1	20140901	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
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WO14036430 A2	20140423		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A2 Ref document number: 13833557 Country of Ref document: EP
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WO14078663 A2	20140709		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 13855812 Kind code of Ref document: A2 Country of Ref document: EP
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WO14144591 A2	20141105		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 14764013 Kind code of Ref document: A2 Country of Ref document: EP
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WO14144591 A3	20151008	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A Ref document number: 2014228980 Date of Ref document: 20140314 Country of Ref document: AU
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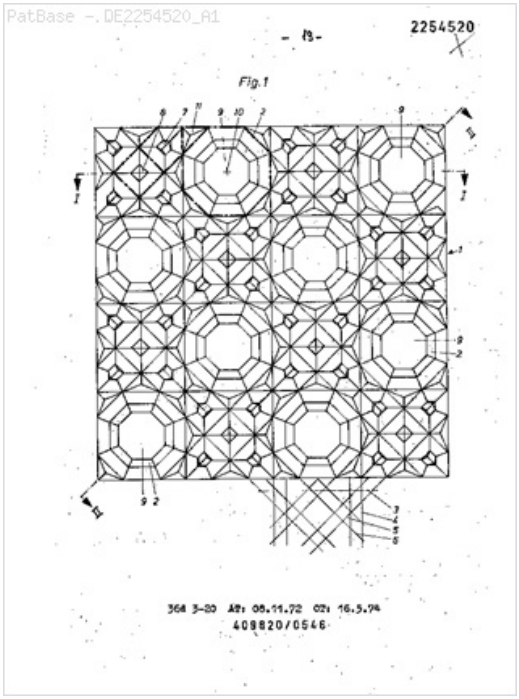
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WO14149114 A2	20140925	LSPB	+	published / reissued	
WO14149114 A2	20141119		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 13879091 Kind code of Ref document: A2 Country of Ref document: EP
WO14149114 A3	20160120	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 13879091 Kind code of Ref document: A2 Country of Ref document: EP
WO18075799 A1	20180426	LSPB	+	published / reissued	
WO18075799 A1	20181128		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 17861440 Country of Ref document: EP
WO18075799 A1	20190424	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18075799 A1	20191113	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 17861440 Kind code of Ref document: A1 Country of Ref document: EP

16) Family number: 1942431 (DE2254520 A1)

Title: TRANSPARENT COVER PLATE FOR EXHAUST AIR **LIGHTS** (Machine translation)

Abstract: Source: DE2254520 A1 **Machine translation:** Patentaaspruche transparency cover plate marked by **light** - steering and/or **light** strewing Sttikturelenienten in multiple arrangement for exhaust air **lights**, thereby that in the Strmturelementell (2,21,31,41,51,61,71) **drillings** or breaking through (9,22,32,42,52,62,72) are intended, their centroids with the emphasis of the surface area of the **structural** component coincide in each case, whereby contents aired surface of such a **structural** component at the most the cold weather of contents in same level of the lying, did not air surface of the **structural** component corresponds 2.

Classifications:
International (IPC 8-9): F21S11/00 F24F13/06 F24F13/078
International (IPC 1-7): F21V5/02 F21V5/04 F24F13/00 F24F13/02 F24F13/078
CPC: F21S11/00 F21V33/0088 F24F13/078



Family:

Publication number	Publication date	Application number	Application date
DE2254520 A1	19740516	DE19722254520	19721108
DE2254520 C2	19811203	DE19722254520	19721108

Priority:

DE19722254520 19721108

Probable Assignee: TRILUX LENZE GMBH AND CO KG

Assignee(s): (std): TRILUX LENZE GMBH AND CO KG ; TRILUX LENZE KG

Assignee(s): TRILUX LENZE GMBH AND CO KG 5760 ARNSBERG DE ; TRILUX LENZE KG 5760 NEHEIMHUESTEN

Inventor(s): (std): CLOSTERMANN FRIEDRICH DIPL ING ; RICHTER HANS JOACHIM DIPL ING

Legal status (INPADOC)

View legal status timeline

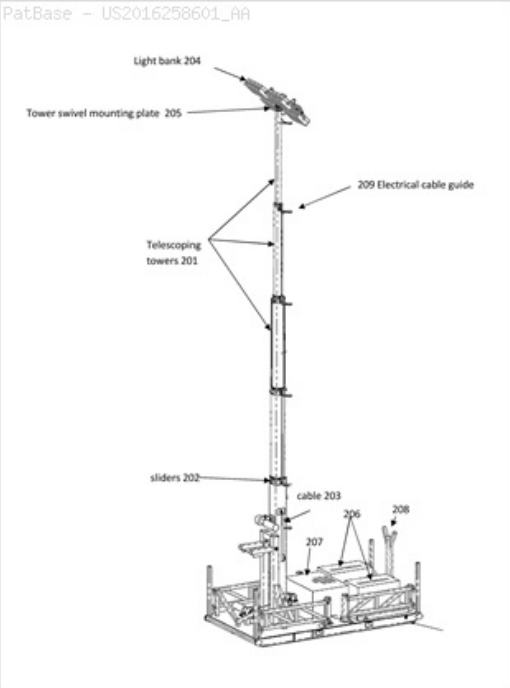
Patent	Date recorded	Event group	Code	Event	Details
DE2254520 A1	19740516	LSPB	+	published / reissued	
DE2254520 A1	19780727	LSES	+OD	REQUEST FOR EXAMINATION	
DE2254520 C2	19811203	LSGT	+	granted / extensions (spc, cpc, pte)	
DE2254520 C2	19811203	LSGT	+D2	GRANT AFTER EXAMINATION	
DE2254520 C2	19820909		AG	HAS ADDITION NO.	Ref document number: 2357269 Country of Ref document: DE
DE2254520 C2	19841108	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	

17) Family number: 63469492 (US2016258601 AA)

Title: TRANSPORTABLE **LIGHTING** **SYSTEM**

Abstract: A portable **lighting** **system** for a **drilling** rig. The **lighting** **system** is designed to withstand the difficult and extreme weather conditions typically experienced in **drilling** rig environments. The pulley and slider arraignments are designed for minimal friction. The overall pulley design for the lifting of the unit (for, example, the way the cables are orientated) is extremely robust. The outrigger design include fold out and lock in place. The power source can run a duel transfer switch setup powered by an external supply (like the rig power) or from its own 100 percent backed up generator. **Lighting** is the lightest and brightest available. Tower is skid mounted and mobile with the use of a truck. Top **light** banks swivel and tilt.

Classifications:
International (IPC 8-9): F21L13/00 F21L2/00 F21V15/04 F21V21/14 F21V21/22 F21V21/30
CPC: F21L13/00 F21L14/00 F21V21/22 F21V21/30 F21V23/001 F21W2131/1005
US: 1/1 362/249.09



Family:

Publication number	Publication date	Application number	Application date
US2016258601 AA	20160908	US20160057661	20160301

Priority:

US20150127020P 20150302 US20160057661 20160301

Probable Assignee: APOLLO ENERGY SERVICES CORP

Assignee(s): (std): APOLLO ENERGY SERVICES CORP

Inventor(s): (std): GOWANLOCK MATTHEW

Legal status (INPADOC)

View legal status timeline

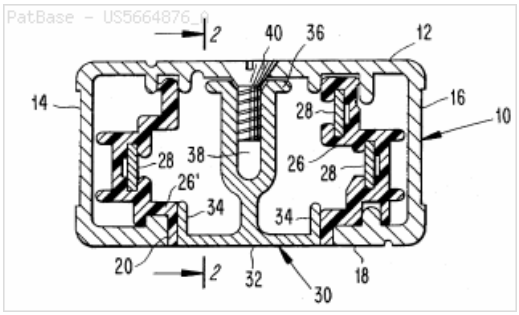
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US2016258601 AA	20160416		RFE1	Docketed New Case - Ready for Examination	
US2016258601 AA	20160908	LSPB	+	published / reissued	
US2016258601 AA	20170530	LSES	NFA1	Non Final Action Mailed	
US2016258601 AA	20171223	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2016258601 AA	20171223		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION

18) Family number: 13214186 (US5664876 A)

Title: TAMPER RESISTANT COVER FOR TRACK **LIGHTING**

Abstract: A track **lighting** assembly includes a track mounted to a support, the track carrying electrical conductor strips and including a slot for receiving lampholders. Tamper-proof cover members are mounted to the track to cover the portions of the slot disposed between lampholders in order to prevent additional lampholders from being installed. The cover members are attached to a back wall of the track by screws, so that the cover members can be removed only when the track is detached from the support.

Classifications:
International (IPC 8-9): F21V21/34 H01R13/44 H01R13/447 H01R25/00 H01R25/14
International (IPC 1-7): F21S1/02 F21V21/34
CPC: F21V21/35 H01R13/447 H01R25/14
US: 362/147 362/249 362/249.01 362/404 439/110 439/113



Family:

Publication number	Publication date	Application number	Application date
US5664876 A	19970909	US19960661745	19960611

Priority:
US19960661745 19960611

Probable Assignee: COOPER TECHNOLOGIES CO
Assignee(s): (std): COOPER IND INC
Assignee(s): COOPER IND ; COOPER INDUSTRIES INC ; COOPER TECHNOLOGIES CO
Inventor(s): (std): MARTORANO SAM ; VAFAI JAMES

Legal status (INPADOC)

View legal status timeline

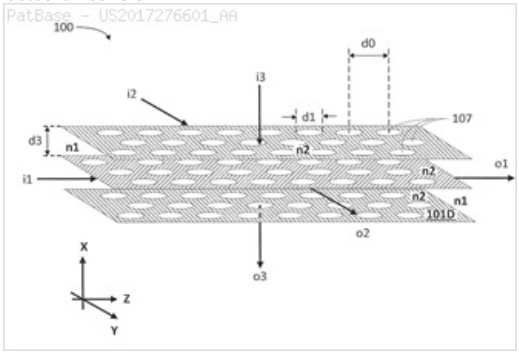
Patent	Date recorded	Event group	Code	Event	Details
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US5664876 A	19970707	LSGT	PAT1	Patented Case	
US5664876 A	19970707	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US5664876 A	19970909	LSGT	+	granted / extensions (spc, cpc, pte)	
US5664876 A	19980122	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:COOPER INDUSTRIES, INC.;REEL/FRAME:008920/0255 PartyType: owner Effective date: 19980101 Owner: COOPER TECHNOLOGIES COMPANY, TEXAS
US5664876 A	20010226	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5664876 A	20041203	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5664876 A	20090224	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US5664876 A	20160611	PEXP		Calculated Patent Term Expiry	

19) Family number: 64288523 (US2017276601 AA)

Title: METHODS AND **SYSTEMS** USING PHOTONIC CRYSTAL-BASED INTEGRATED COMPUTATIONAL ELEMENTS

Abstract: A method of fabricating an optical computing device using a photonic crystal-based integrated computational element is provided. The method includes selecting a photonic crystal **structure** with a design suite stored in a non-transitory, computer-readable medium and obtaining a transmission spectrum for the selected photonic crystal. Further, the method includes determining a predictive power of a photonic crystal-based integrated computational element for a characteristic of a sample using the transmission spectrum and a spectral database. And adjusting the transmission spectrum to improve a predictive power of the photonic crystal-based integrated computational element for measuring a characteristic of a sample being analyzed. Also, fabricating the photonic crystal **structure** for the photonic crystal-based integrated computational element when the predictive power surpasses a pre-selected threshold.

Classifications:
International (IPC 8-9): B82Y20/00 E21B47/00 E21B49/00 F21V9/04 G01J3/00 G01J3/02 G01J3/28 G01J3/36 G01J3/46 G01N21/00 G01N21/01 G01N21/31 G02B5/28 G02B6/10 G02C7/10 H01K1/50
CPC: B82Y20/00 F21V9/04 G01J3/0205 G01J3/28 G01J3/36 G01J3/46 G01N21/31 G02B5/28 G02B6/10 G02C7/10 H01K1/50
US: 1/1 359/342



Family:

Publication number	Publication date	Application number	Application date
BR112017023036 A2	20180703	BR20171123036	20150604
DE112015006387 T5	20180104	DE201511006387T	20150604
FR3037144 A1	20161209	FR20160053486	20160420
GB201717075 A0	20171129	GB20170017075	20150604
GB2554236 A1	20180328	GB20170017075	20150604
MX2017013804 A1	20180315	MX20170013804	20150604
US10466167 BB	20191105	US20150505070	20150604
US2017276601 AA	20170928	US20150505070	20150604
WO16195693 A1	20161208	WO2015US34265	20150604

Priority:

WO2015US34265 20150604 US20150505070 20150604

Probable Assignee: HALLIBURTON CO

Assignee(s): (std): HALLIBURTO ENERGY SERVICES INC ; HALLIBURTON CO ; HALLIBURTON ENERGY SERVICES INC

Inventor(s): (std): ADITYA B NAYAK ; DAVID L PERKINS ; JAMES M PRICE ; NAYAK ADITYA B ; PERKINS DAVID L ; PRICE JAMES M

Agent(s): GEVERS AND ORES; GILLIAM IP PLLC; KAISER IONA ET AL

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

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
BR112017023036 A2	20200728		B06U	PRELIMINARY REQUIREMENT: REQUESTS WITH SEARCHES PERFORMED BY OTHER PATENT OFFICES: SUSPENSION OF THE PATENT APPLICATION PROCEDURE	
DE112015006387 T5	20171026	LSES	+R012	REQUEST FOR EXAMINATION VALIDLY FILED	
DE112015006387 T5	20171127		R083	AMENDMENT OF/ADDITIONS TO INVENTOR(S)	
DE112015006387 T5	20180104	LSPB	+	published / reissued	
DE112015006387 T5	20190403		R082	CHANGE OF REPRESENTATIVE	PartyType: representative Representative: WITHERS & ROGERS LLP, DE
FR3037144 A1	20161209	LSPB	+	published / reissued	

FR3037144 A1	20170412	LSFE	+PLFP	Fee Payement	Payment date: 20170412 Year of fee payment: 2
FR3037144 A1	20170412	LSFE	+PLFP	FEE PAYMENT	Year of fee payment: 2
FR3037144 A1	20180502	LSLE	-ST	NOTIFICATION OF LAPSE	
GB2554236 A1	20180328	LSPB	+	published / reissued	
GB2554236 A1	20200219	LSWD	-WAP	APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	
MX2017013804 A1	20180315	LSPB	+	published / reissued	
US10466167 BB	20170320	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:NAYAK, ADITYA B.;PRICE, JAMES M.;PERKINS, DAVID L.;SIGNING DATES FROM 20150122 TO 20150220;REEL/FRAME:041649/0471 Owner: HALLIBURTON ENERGY SERVICES, INC., TEXAS
US10466167 BB	20191105	LSGT	+	granted / extensions (spc, cpc, pte)	
US10466167 BB	20360701	PEXP		Calculated Patent Term Expiry (PTA 393 days)	
US2017276601 AA	20170717		APP1	Application Dispatched from Preexam, Not Yet Docketed	
US2017276601 AA	20170928	LSPB	+	published / reissued	
US2017276601 AA	20180921		RFE1	Docketed New Case - Ready for Examination	
US2017276601 AA	20180921		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2017276601 AA	20190513	LSES	NFA1	Non Final Action Mailed	
US2017276601 AA	20190513		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2017276601 AA	20190623		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017276601 AA	20190623		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2017276601 AA	20190826	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017276601 AA	20190826		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2017276601 AA	20190928	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2017276601 AA	20190928		STPP	INFORMATION	Text: PUBLICATIONS -- ISSUE FEE

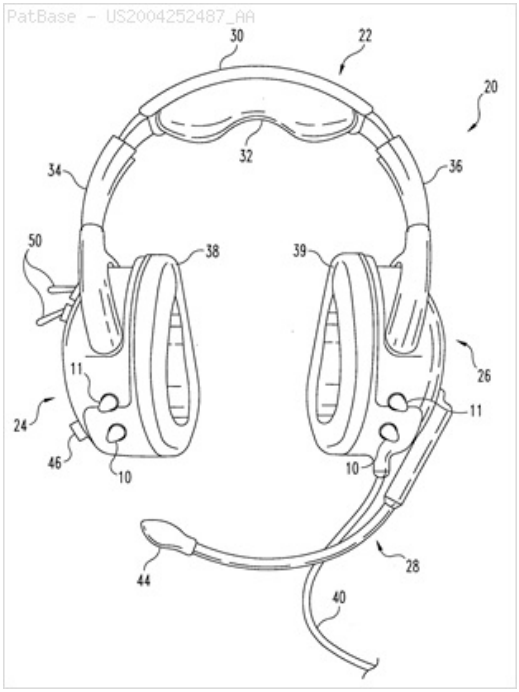
				ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	PAYMENT VERIFIED
US2017276601 AA	20191016	LSGT	PAT1	Patented Case	
US2017276601 AA	20191016	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
WO16195693 A1	20161208	LSPB	+	published / reissued	
WO16195693 A1	20170118		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 15894459 Country of Ref document: EP
WO16195693 A1	20170217	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 15505070 Country of Ref document: US
WO16195693 A1	20171018	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Text: PCT FILING DATE = 20150604 Kind code of Ref document: A Ref document number: 201717075 Country of Ref document: GB
WO16195693 A1	20171026	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: MX/A/2017/013804 Country of Ref document: MX
WO16195693 A1	20171026	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 112015006387 Country of Ref document: DE
WO16195693 A1	20171107		REG	REFERENCE TO NATIONAL CODE	Ref country code: BR Ref legal event code: B01A Ref document number: 112017023036 Country of Ref document: BR
WO16195693 A1	20180627	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 15894459 Country of Ref document: EP
WO16195693 A1	20180703	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20171025 Ref document number: 112017023036 Kind code of Ref document: A2 Country of Ref document: BR
WO16195693 A1	20200129	LSNE	-ENPC	CORRECTION TO FORMER ANNOUNCEMENT OF ENTRY INTO NATIONAL PHASE, PCT APPLICATION DID NOT ENTER INTO THE NATIONAL PHASE	Ref country code: GB

20) Family number: 31394823 (US2004252487 AA)

Title: ILLUMINATION **SYSTEMS** AND METHODS OF USE

Abstract: The present invention provides a high-intensity LED as a **light** source for use in hands-free illumination devices. In one embodiment, one or more high-intensity LEDs are incorporated in, or added to, headgear, such as an aircraft headset. The LEDs may be powered by a battery, an external power source, or both. Also provided is a kit and method of installation for retrofitting existing headgear with LEDs.

Classifications:
International (IPC 8-9): F21V21/08 F21V21/084 F21V33/00 H04M1/04 H04M1/05 H04M1/60 H04R1/10 H04R31/00
International (IPC 1-7): F21V21/084 H04M1/22
CPC: F21V33/0056 F21Y2115/10 H04M1/05 H04M1/6033 Y10S362/80
US: 362/105 362/231 362/800 362/86 381/370 381/74



Family:

Publication number	Publication date	Application number	Application date
US2004252487 AA	20041216	US20030622600	20030718
US7114823 BB	20061003	US20030622600	20030718

Priority:
US20020397363P 20020719 US20030622600 20030718

Probable Assignee: MAGEE BRYAN E
Assignee(s): (std): LYKINS MATTHEW ; MAGEE BRYAN ; MAGEE BRYAN E ; MCCULLOUGH WAYNE
Inventor(s): (std): LYKINS MATTHEW ; MAGEE BRYAN ; MAGEE BRYAN E ; MCCULLOUGH WAYNE
Inventor(s): BRYAN E MAGEE ; MATTHEW LYKINS ; WAYNE MCCULLOUGH
Agent(s): WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2004252487 AA	20041216	LSPB	+	published / reissued	
US7114823 BB	20061003	LSGT	+	granted / extensions (spc, cpc, pte)	
US7114823 BB	20100510		REMI	MAINTENANCE FEE REMINDER MAILED	
US7114823 BB	20101004	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7114823 BB	20101004		+SULP	SURCHARGE FOR LATE PAYMENT	
US7114823 BB	20140516		REMI	MAINTENANCE FEE REMINDER MAILED	
US7114823 BB	20141003	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7114823 BB	20141103	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7114823 BB	20141103	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7114823 BB	20141125	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20141003

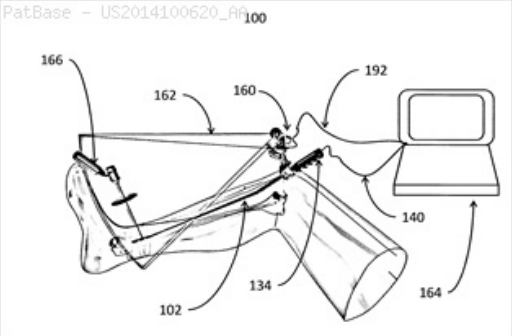
US7114823 BB	20231031	PEXP	Calculated Patent Term Expiry (PTA 105 days)

21) Family number: 56195532 (US2014100620 AA)

Title: LASER PROJECTED DISPLAY FOR IMPLANT ORIENTATION AND PLACEMENT

Abstract: A Laser projection **system** for identifying a point in space includes a Laser projector capable of generating more than one beam of **light**. A **system** is configured to define the location of a point or collection of points either through the intersection of the beams of **light** in three-dimensional space or the intersections of the beams of **light** with a known surface topology in order to define a position and pose in three dimensional space.

Classifications:
International (IPC 8-9): A61B17/17 A61B17/56 A61B17/88 A61B19/00 A61F2/46 F21V33/00
CPC: A61B17/1725 A61B17/88 A61B2090/3937 A61B2090/395 A61B90/11 A61B90/13 A61F2/46 A61B2034/2055 A61B2034/2065 A61B34/20
US: 600/424 606/86R



Family:

Publication number	Publication date	Application number	Application date
US2014100620 AA	20140410	US20130044382	20131002
US2014276000 AA	20140918	US20140208742	20140313
WO14055654 A2	20140410	WO2013US63078	20131002
WO14055654 A3	20140710	WO2013US63078	20131002
WO14144117 A1	20140918	WO2014US28397	20140314

Priority:

US20120708820P 20121002 US20130793645P 20130315 US20130044382 20131002 US20140208742 20140313

Probable Assignee: VECTOR SIGHT INC

Assignee(s): (std): VECTOR SIGHT INC

Inventor(s): (std): AUSTIN WILLIAM BRIAN ; MARTENS TODD A ; MILLER STEPHEN T ; MULLANEY MICHAEL W

Agent(s): JOHNSON DUSTIN ET AL

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

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2014100620 AA	20131108	LSAS	AS	ASSIGNMENT	Owner: VECTOR SIGHT INC., TENNESSEE Effective date: 20131104 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:MULLANEY, MICHAEL W.;REEL/FRAME:031565/0644
US2014100620 AA	20140205		RFE1	Docketed New Case - Ready for Examination	
US2014100620 AA	20140410	LSPB	+	published / reissued	
US2014100620 AA	20160816	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2014100620 AA	20160816		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2014276000 AA	20140611	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: VECTOR SIGHT INC., TENNESSEE OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MULLANEY, MICHAEL W.;MILLER, STEPHEN T.;AUSTIN, WILLIAM BRIAN;AND OTHERS;REEL/FRAME:033080/0547 Effective date: 20140416
US2014276000 AA	20140918	LSPB	+	published / reissued	

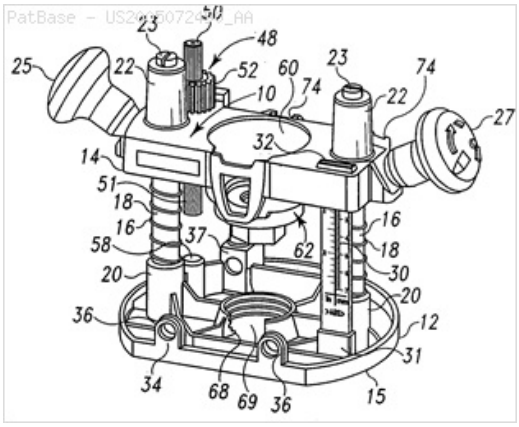
US2014276000 AA	20150930	LSES	NFA1	Non Final Action Mailed	
US2014276000 AA	20160623	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2014276000 AA	20160623		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
WO14055654 A2	20140410	LSPB	+	published / reissued	
WO14055654 A2	20140528		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 13779465 Kind code of Ref document: A2 Country of Ref document: EP
WO14055654 A3	20151028	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 13779465 Kind code of Ref document: A2 Country of Ref document: EP
WO14144117 A1	20140918	LSPB	+	published / reissued	
WO14144117 A1	20141105		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 14762824 Country of Ref document: EP
WO14144117 A1	20150915	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO14144117 A1	20160406	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 14762824 Kind code of Ref document: A1 Country of Ref document: EP

22) Family number: 31797575 (US2005072490 AA)

Title: POWER TOOL SUPPORT FIXTURE

Abstract: A support fixture for a hand-held power tool includes a base plate and a guide plate assembly supported for movement relative to the base plate to bring the working end of the power tool into contact with a workpiece on which the base plate is supported. The guide plate assembly includes a tool support housing configured for supporting the body of the power tool, and an overthrow nut assembly for threaded engagement with a threaded portion of the power tool adjacent the working end of the tool. The fixture includes a guide bushing that is top-loaded into a bushing collar defined in the base plate, in which the guide bushing is configured to engage a template supported on the workpiece. A threaded plug holds the guide bushing within the bushing collar.

Classifications:
International (IPC 8-9): B23Q11/00 B23Q16/00 B23Q17/22 B23Q17/24 B23Q35/00 B23Q35/10 B23Q9/00 B25F5/00 B25F5/02 B25H1/00 B25H3/00 B27C5/00 B27C5/10 B27C9/00 B27M3/00 F21L4/00 F21L4/06 F21S9/00 F21S9/02 F21V21/08 F21V21/088 F21V21/14 F21V21/32 F21V33/00
International (IPC 1-7): B23B51/00 B23D77/00 B23G5/00 B23Q11/00 B23Q16/00 B23Q17/22 B23Q17/24 B23Q35/10 B23Q9/00 B25F5/00 B25F5/02 B25H1/00 B25H3/00 B27C1/00 B27C5/00 B27C5/10 B27C9/00 F21V21/32 H04M1/22
CPC: B25F5/021 B25F5/029 B27C5/10 B27C9/005 F21L4/06 F21S9/02 F21V21/088 F21V21/32 F21V33/0084 F21Y2115/10 Y10T409/306496 Y10T409/306608 Y10T408/85985
US: 144/114.1 144/135.2 144/136.95 144/154.5 144/48.5 144/48.6 362/109 362/191 362/197 362/396 408/182 409/180 409/182



Family:

Publication number	Publication date	Application number	Application date
AU2005233966 AA	20051027	AU20050233966	20050401
BRPI0509841 A	20071016	BR2005PI09841	20050401
CA2562423 AA	20061010	CA20052562423	20050401
DE602004004027 D1	20070215	DE200460004027T	20041007
DE602004004027 T2	20070621	DE200460004027T	20041007
DE602004007591 D1	20070830	DE200460007591T	20041007
DE602004007591 T2	20080417	DE200460007591T	20041007
EP1522389 A1	20050413	EP20040023981	20041007
EP1522389 B1	20070103	EP20040023981	20041007
EP1522393 A2	20050413	EP20040023914	20041007
EP1522393 A3	20051012	EP20040023914	20041007
EP1522393 B1	20070718	EP20040023914	20041007
EP1735566 A1	20061227	EP20050732053	20050401
MXPA06011758 A1	20070116	MX2006PA11758	20050401
US2005072490 AA	20050407	US20030680513	20031007
US2005072491 AA	20050407	US20030680632	20031007
US2005073836 AA	20050407	US20040822622	20040412
US7101058 BB	20060905	US20040822622	20040412
US7273080 BB	20070925	US20030680632	20031007
US7290574 BB	20071106	US20030680513	20031007
WO05100851 A1	20051027	WO2005US11364	20050401

Priority:

US20030680513 20031007 US20030680632 20031007 US20030509360P 20031007
US20040822622 20040412 WO2005US11364 20050401

Probable Assignee: CREDO TECHNOLOGY CORP

Assignee(s): (std): ALLEMANN MARKUS ; BABER BRAD M ; BERNARDI WALTER ; BOSCH GMBH ROBERT ; CREDO TECH CORP ; CREDO TECHNOLOGY CORP ; LEUNG FRANKIE ; PRELL EDWARD T

Assignee(s): CREDO TECHNOLOGY CORPORATION ; ROBERT BOSCH GMBH

Inventor(s): (std): ALLEMANN MARKUS ; BABER BRAD M ; BERNARDI WALTER ; LEUNG FRANKIE ; PRELL EDWARD T

Inventor(s): BABER BRAD ; BRAD M BABER ; EDWARD T PRELL ; FRANKIE LEUNG ; MARKUS ALLEMANN ; PRELL EDWARD ; WALTER BERNARDI

Agent(s): BORDEN LADNER GERVAIS LLP; CALLINANS; FISHER ADAMS KELLY CALLINANS; MAGINOT MOORE AND BECK; PAUL J MAGINOT MAGINOT MOORE AND BECK; SPRUSON AND FERGUSON

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL 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
AU2005233966 AA	20051027	LSPB	+	published / reissued	
AU2005233966 AA	20101028	LSLE	-MK4	APPLICATION LAPSED SECTION	

				142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
BRPI0509841 A	20071016	LSPB	+	published / reissued	
BRPI0509841 A	20120515	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	Text: REFERENTE AS 6A E 7A ANUIDADES.
BRPI0509841 A	20121009	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)	Text: REFERENTE AO DESPACHO 8.6 PUBLICADO NA RPI 2158 DE 15/05/2012.
CA2562423 AA	20061010	LSPB	+	published / reissued	
CA2562423 AA	20110401	LSLE	-FZDE	DEAD	
DE602004004027 T2	20070621	LSGT	+	granted / extensions (spc, cpc, pte)	
DE602004004027 T2	20080124	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE602004004027 T2	20100819	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE602004004027 T2	20241007	PEXP		Calculated Patent Term Expiry	
DE602004007591 T2	20080417	LSGT	+	granted / extensions (spc, cpc, pte)	
DE602004007591 T2	20080807	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE602004007591 T2	20241007	PEXP		Calculated Patent Term Expiry	
EP1522389 A1	20050413	LSPB	+	published / reissued	
EP1522389 A1	20050413		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: 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
EP1522389 A1	20050413		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL HR LT LV MK
EP1522389 A1	20050921	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20050726
EP1522389 A1	20060104	LSFE	+AKX	DESIGNATION FEES PAID	Country of Ref document: DE FR GB IT
EP1522389 B1	20070103	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1522389 B1	20070103		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: DE FR GB IT
EP1522389 B1	20070103	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP1522389 B1	20070215		REF	CORRESPONDS TO:	Ref document number: 602004004027 Kind code of Ref document: P Date of Ref document: 20070215 Country of Ref document: DE
EP1522389 B1	20070525		+ET	FR: TRANSLATION FILED	
EP1522389 B1	20071212	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20071005
EP1522389 B1	20090331	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20081025 Year of fee payment: 5 Country of Ref document: IT
EP1522389 B1	20090430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20081021 Year of fee payment: 5 Country of Ref document: FR

EP1522389 B1	20090529	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20081222 Country of Ref document: DE
EP1522389 B1	20100630	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20100224 Year of fee payment: 6 Country of Ref document: GB
EP1522389 B1	20100723	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: ST Ref country code: FR Effective date: 20100630
EP1522389 B1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20100501 Country of Ref document: DE
EP1522389 B1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20091102 Country of Ref document: FR
EP1522389 B1	20110331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20091007 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: IT
EP1522389 B1	20110629	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	Effective date: 20101007 Ref country code: EP
EP1522389 B1	20110831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20101007 Country of Ref document: GB
EP1522389 B1	20241007	PEXP		Calculated Patent Term Expiry	
EP1522393 A2	20050413	LSPB	+	published / reissued	
EP1522393 A2	20050413		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: 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
EP1522393 A2	20050413		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL HR LT LV MK
EP1522393 A2	20170131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20161213 Year of fee payment: 13 Country of Ref document: DE
EP1522393 A3	20051012		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A3 Country of Ref document: 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
EP1522393 A3	20051012		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL HR LT LV MK
EP1522393 A3	20060412	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20060213
EP1522393 A3	20060621	LSFE	+AKX	DESIGNATION FEES PAID	Country of Ref document: DE FR GB IT
EP1522393 A3	20061004	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20060904
EP1522393 B1	20070718	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1522393 B1	20070718		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: DE FR GB IT
EP1522393 B1	20070718	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: GB

EP1522393 B1	20070830		REF	CORRESPONDS TO:	Kind code of Ref document: P Date of Ref document: 20070830 Ref document number: 602004007591 Country of Ref document: DE
EP1522393 B1	20080111		+ET	FR: TRANSLATION FILED	
EP1522393 B1	20080625	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20080421
EP1522393 B1	20090331	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20081025 Country of Ref document: IT
EP1522393 B1	20090430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20081021 Year of fee payment: 5 Country of Ref document: FR
EP1522393 B1	20100723	LSLE	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20100630 Ref legal event code: ST Ref country code: FR
EP1522393 B1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20091102 Country of Ref document: FR
EP1522393 B1	20110331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20091007 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: IT
EP1522393 B1	20170131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 13 Payment date: 20161025 Country of Ref document: GB
EP1522393 B1	20180131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 14 Payment date: 20171206 Country of Ref document: DE
EP1522393 B1	20180228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 14 Payment date: 20171024 Country of Ref document: GB
EP1522393 B1	20190131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 15 Payment date: 20181206 Country of Ref document: DE
EP1522393 B1	20190228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 15 Payment date: 20181025 Country of Ref document: GB
EP1522393 B1	20200131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 16 Payment date: 20191212 Country of Ref document: DE
EP1522393 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191023 Year of fee payment: 16 Country of Ref document: GB
EP1522393 B1	20241007	PEXP		Calculated Patent Term Expiry	
EP1735566 A1	20061227	LSPB	+	published / reissued	
EP1735566 A1	20061227	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20061010
EP1735566 A1	20061227		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC

					NL PL PT RO SE SI SK TR
EP1735566 A1	20070516		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: PRELL, EDWARD, T. PartyType: inventor
EP1735566 A1	20070516		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: BABER, BRAD, M.
EP1735566 A1	20070516		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: LEUNG, FRANKIE PartyType: inventor
EP1735566 A1	20070516		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ALLEMANN, MARKUS PartyType: inventor
EP1735566 A1	20070516		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: BERNARDI, WALTER
EP1735566 A1	20070718		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP1735566 A1	20080430	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20080331
EP1735566 A1	20100428	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20091030
MXPA06011758 A1	20070116	LSPB	+	published / reissued	
MXPA06011758 A1	20081008	LSGT	+FG	GRANT OR REGISTRATION	
US2005072490 AA	20050407	LSPB	+	published / reissued	
US2005072491 AA	20050407	LSPB	+	published / reissued	
US2005072491 AA	20070905	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2005073836 AA	20050407	LSPB	+	published / reissued	
US7101058 BB	20040412	LSAS	AS	ASSIGNMENT	Effective date: 20040405 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PRELL, EDWARD T.;BABER, BRAD M.;LEUNG, FRANKIE;AND OTHERS;REEL/FRAME:015212/0150 Owner: CREDO TECHNOLOGY CORPORATION, ILLINOIS
US7101058 BB	20050314	LSAS	AS	ASSIGNMENT	Effective date: 20040405 PartyType: owner Owner: CREDO TECHNOLOGY CORPORATION, ILLINOIS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PRELL, EDWARD T.;BABER, BRAD M.;LEUNG, FRANKIE;AND OTHERS;REEL/FRAME:016355/0750
US7101058 BB	20050314	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PRELL, EDWARD T.;BABER, BRAD M.;LEUNG, FRANKIE;AND OTHERS;REEL/FRAME:016355/0750 Owner: ROBERT BOSCH GMBH, GERMANY Effective date: 20040405 PartyType: owner
US7101058 BB	20060905	LSGT	+	granted / extensions (spc, cpc, pte)	
US7101058 BB	20100412		REMI	MAINTENANCE FEE REMINDER MAILED	
US7101058 BB	20100905	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	

US7101058 BB	20101004	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7101058 BB	20101004	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7101058 BB	20101026	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20100905
US7101058 BB	20240829	PEXP		Calculated Patent Term Expiry (PTA 139 days)	
US7273080 BB	20031007	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: CREDO TECHNOLOGY CORPORATION, ILLINOIS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:BABER, BRAD M.;REEL/FRAME:014595/0437 Effective date: 20031007
US7273080 BB	20070905	LSGT	PAT1	Patented Case	
US7273080 BB	20070925	LSGT	+	granted / extensions (spc, cpc, pte)	
US7273080 BB	20110317	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7273080 BB	20150320	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US7273080 BB	20190320	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 12
US7273080 BB	20240630	PEXP		Calculated Patent Term Expiry (PTA 267 days)	
US7290574 BB	20031007	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:BABER, BRAD M.;REEL/FRAME:014598/0979 PartyType: owner Owner: CREDO TECHNOLOGY CORPORATION, ILLINOIS Effective date: 20031007
US7290574 BB	20071106	LSGT	+	granted / extensions (spc, cpc, pte)	
US7290574 BB	20110613		REMI	MAINTENANCE FEE REMINDER MAILED	
US7290574 BB	20111106	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7290574 BB	20111205	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7290574 BB	20111205	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7290574 BB	20111227	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20111106
US7290574 BB	20240820	PEXP		Calculated Patent Term Expiry (PTA 318 days)	
WO05100851 A1	20051027	LSPB	+	published / reissued	
WO05100851 A1	20051027		+AK	DESIGNATED STATES	Kind code of Ref document: A1 Country of Ref document: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
WO05100851 A1	20051027		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AM AT AZ BE BF BG BJ BW BY CF CG CH CI CM CY CZ DE DK EE ES FI FR GA GB GH GM GN GQ GR GW HU IE IS IT KE KG KZ LS LT LU MC MD ML MR MW MZ NA NE NL PL PT RO RU SD SE SI SK SL SN SZ TD TG TJ TM TR TZ UG ZM ZW
WO05100851 A1	20051221		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO05100851 A1	20061010	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2562423 Country of Ref document: CA

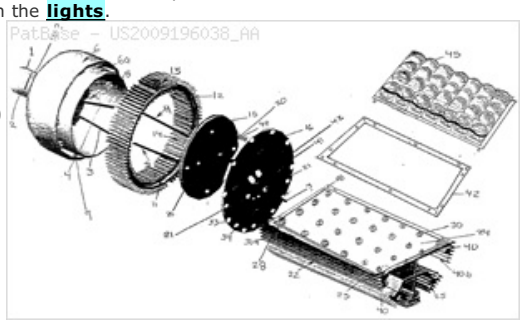
WO05100851 A1	20061010	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2005732053 Country of Ref document: EP
WO05100851 A1	20061011	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: PA/a/2006/011758 Country of Ref document: MX
WO05100851 A1	20061013	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO05100851 A1	20061013	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	Text: DE
WO05100851 A1	20061103	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2005233966 Country of Ref document: AU
WO05100851 A1	20061106	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 551092 Country of Ref document: NZ
WO05100851 A1	20061130	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2005233966 Kind code of Ref document: A Date of Ref document: 20050401 Country of Ref document: AU
WO05100851 A1	20061130	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 2005233966 Country of Ref document: AU
WO05100851 A1	20061227	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 2005732053 Country of Ref document: EP
WO05100851 A1	20071016	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: PI0509841 Country of Ref document: BR

23) Family number: 42110138 (US2009196038 AA)

Title: LED LAMP FOR STREET **LIGHTING**

Abstract: The present invention refers to a lamp for public **lighting** **system** that works with high power LEDs, for the direct substitution of the present sodium vapour or metal halides lamps, using the same **light** fixtures OV type and/or similar with an integrated power supply and a standard socket Mogul-39 or Edison-39. And that improves substantially my previous invention WO2008100124 as far as the cost of manufacture and easiness of assembly, better luminance distribution; lower operating temperature and more lumens per watt, besides to be prepared for the new generations of LEDs. Characterized by having a standard electrical connector that allows the lamp to be coupled any type of street **light** fixtures or luminaries; a base within it has a connector to couple it into a dissipating ring that has external and internal teeth to dissipate the heat generated by a power supply used to regulate and to convert the originating electrical energy of the network; a cover to close to the dissipating ring and to protect the electronic board. The Lamp of high power LEDs has a heat dissipating platform equipped with heads with external and internal teeth, and wall-bases that also are used to dissipate the heat generated by the high power LEDs when they operate; finally the lamp of high power LEDs has a single protective lens to direct the **light** emitted by the LEDs in a distribution very similar to the type I that is considered to be optimum for the illumination of streets and avenues giving therefore a greater pole to pole distance between the **lights**.

Classifications:
International (IPC 8-9): F21K7/00 F21K99/00 F21S8/00 F21V14/00 F21V14/02 F21V21/00 F21V29/00 F21V33/00
International (IPC 1-7): F21K7/00
CPC: F21K9/23 F21V29/507 F21V29/777 F21W2131/103 F21Y2105/10 F21Y2115/10
US: 313/45 313/45S 362/234 362/234S 362/249.03 362/249.030P



Family:

Publication number	Publication date	Application number	Application date
EP2172687 A1	20100407	EP20070709112	20070212
MX2009005846 A1	20090703	MX20090005846	20090603
US2009196038 AA	20090806	US20070294366	20070212
WO08100124 A1	20080821	WO2007MX00012	20070212

Priority:
WO2007MX00012 20070212 MX20090005846 20090603

Probable Assignee: LED LUMINA USA

Assignee(s): (std): MACIEL LAURA PATRICIA VARGAS ; VARGAS MACIEL LAURA PATRICIA ; VARGAS MACLEL LAURA PATRICIA

Assignee(s): LAURA PATRICIA VARGAS MACIEL ; LED LUMINA USA

Inventor(s): (std): MACIEL LAURA PATRICIA VARGAS ; VARGAS MACIEL LAURA PATRICIA ; VARGAS MACLEL LAURA PATRICIA

Inventor(s): LAURA PATRICIA VARGAS MACIEL

Agent(s): CHARLES W HANOR PC; DIAZ DE BUSTAMANTE Y TERMINEL ISIDRO

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 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 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
EP2172687 A1	20100407	LSPB	+	published / reissued	
EP2172687 A1	20100407	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20090911
EP2172687 A1	20100407		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: 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
EP2172687 A1	20100407		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL BA HR MK RS
EP2172687 A1	20100519		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2172687 A1	20110504	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20100901
MX2009005846 A1	20090703	LSPB	+	published / reissued	
MX2009005846 A1	20161031	LSWD	-FA	ABANDONMENT OR WITHDRAWAL	

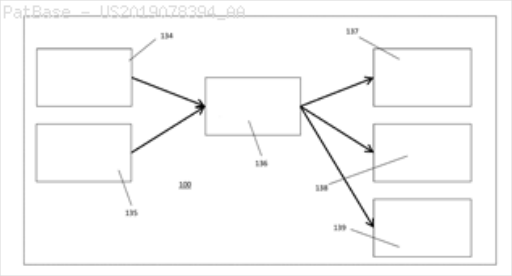
US2009196038 AA	20080924	LSAS	AS	ASSIGNMENT	Effective date: 20080919 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:VARGAS MACIEL, LAURA PATRICIA;REEL/FRAME:021580/0854 Owner: LED LUMINA USA, NEW YORK
US2009196038 AA	20090806	LSPB	+	published / reissued	
US2009196038 AA	20110509	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2009196038 AA	20110509		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
WO08100124 A1	20080821	LSPB	+	published / reissued	
WO08100124 A1	20080924	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 12294366 Country of Ref document: US
WO08100124 A1	20081008		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 07709112 Country of Ref document: EP
WO08100124 A1	20090603	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: MX/A/2009/005846 Country of Ref document: MX
WO08100124 A1	20090813	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO08100124 A1	20090911	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2007709112 Country of Ref document: EP

24) Family number: 73499969 (US2019078394 AA)

Title: **SYSTEM** AND METHOD FOR NOISE, VIBRATION, AND **LIGHT** POLLUTION MANAGEMENT ON RIG **SYSTEMS**

Abstract: A **system** including a rig site with at least one pollution control **system** located on the rig site. The pollution control **system** is configured to modify an output of **light**, noise, or vibrations from the rig site to an environment surrounding the rig site. Additionally, the pollution control **system** may include at least one active noise cancellation device, at least one active vibration cancellation device, and/or at least one active **light** control **system** to modify the **light**, noise, or vibrations.

Classifications:
International (IPC 8-9): E21B15/00 E21B41/00 F21V7/00 G01H11/00 G10K11/00 G10K11/178 H05B47/10
CPC: E21B15/00 E21B41/00 F21V7/0016 G01H11/00 G10K11/002 G10K11/17857 G10K11/17861 G10K11/17881 G10K2210/121 G10K2210/129 G10K2210/1291 G10K2210/3216 G10K2210/3226 H05B47/10
US: 1/1



Family:

Publication number	Publication date	Application number	Application date
US10669783 BB	20200602	US20170701675	20170912
US2019078394 AA	20190314	US20170701675	20170912
WO19055241 A1	20190321	WO2018US49297	20180903
WO19055241 A9	20190801	WO2018US49297	20180903

Priority:
US20170701675 20170912

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): SCHLUMBERGER CA LTD ; SCHLUMBERGER TECHNOLOGY BV ; SCHLUMBERGER TECHNOLOGY CORP ; SERVICES PETROLIERS SCHLUMBERGER

Assignee(s): SCHLUMBERGER CANADA LTD

Inventor(s): (std): CAMACHO CARDENAS ALEJANDRO

Agent(s): GREENE RACHEL E; GREENE RACHEL 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 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)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US10669783 BB	20170912	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10669783 BB	20171024	LSAS	AS	ASSIGNMENT	Effective date: 20171019 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CAMACHO CARDENAS, ALEJANDRO;REEL/FRAME:043934/0388 Owner: SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS PartyType: owner
US10669783 BB	20171025		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US10669783 BB	20200602	LSGT	+	granted / extensions (spc, cpc, pte)	
US10669783 BB	20380103	PEXP		Calculated Patent Term Expiry (PTA 113 days)	
US2019078394 AA	20171025		RFE1	Docketed New Case - Ready for Examination	
US2019078394 AA	20190314	LSPB	+	published / reissued	
US2019078394 AA	20190502	LSES	NFA1	Non Final Action Mailed	
US2019078394 AA	20190502		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND	Text: NON FINAL ACTION MAILED

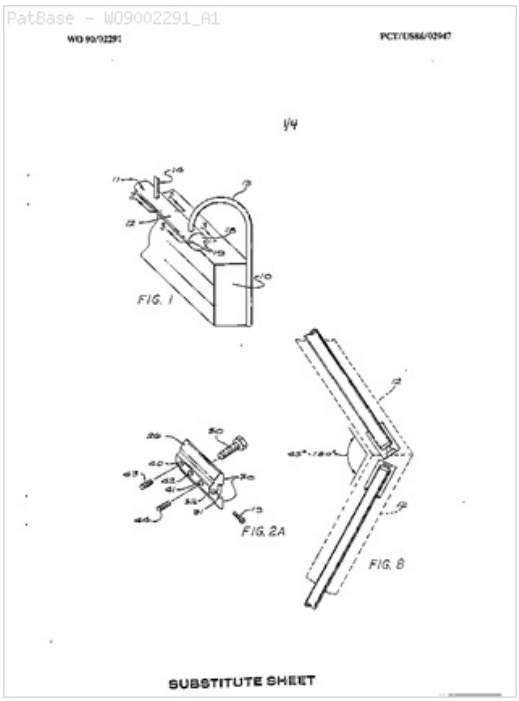
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US2019078394 AA	20191011		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019078394 AA	20191011		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019078394 AA	20191031		FRM1	Final Rejection Mailed	
US2019078394 AA	20191031		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2019078394 AA	20200122	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2019078394 AA	20200122		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2019078394 AA	20200427	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2019078394 AA	20200427		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2019078394 AA	20200513	LSGT	PAT1	Patented Case	
US2019078394 AA	20200513	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
WO19055241 A1	20190321	LSPB	+	published / reissued	
WO19055241 A1	20190501		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18856221 Country of Ref document: EP
WO19055241 A9	20200313	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE

25) Family number: 5383663 (WO9002291 A1)

Title: UNIVERSAL CIRCULAR ENCLOSURE FOR STANDARD STRIP FLUORESCENT FIXTURES

Abstract: A fluorescent **lighting** enclosure **system** (11) is disclosed which is designed to receive standard fluorescent strip **lights** (24) of one or multiple lamp configuration and to support and enclose the fixtures in a readily adaptable form. The enclosure (11) is in the form of continuous extrusions having internal tracks (23, 33, 34) extending longitudinally along the full length of the extrusion. A novel spline (25, 27) is designed to fit in the tracks and act as a mount for the enclosure itself and for the fluorescent strips as well as to join the ends of enclosure sections and hold an end plate (18) in place. The enclosure (11) may be mounted with its **light** emitting opening directed in any direction including inverted. Perimeter **lighting**, grid and handrail **lighting** are all possible employing this invention with virtual 100 percent linear coverage using standard fluorescent fixtures (24).

Classifications:
International (IPC 8-9): E04F11/18 F21S4/00 F21S8/00 F21V21/005 F21V21/10 F21V21/116 F21V5/00 F21V5/02 F21Y103/00
International (IPC 1-7): F21S3/00 F21V21/00
CPC: E04F2011/1872 F21S4/20 F21S8/00 F21S8/06 F21V15/013 F21V5/02 F21W2111/08 F21W2131/405 F21Y2103/00 F21Y2113/00



Family:

Publication number	Publication date	Application number	Application date
EP0382798 A1	19900822	EP19890903020	19880825
EP0382798 A4	19901212	EP19890903020	19880825
WO9002291 A1	19900308	WO1988US02947	19880825

Priority:
WO1988US02947 19880825

Probable Assignee: HARTSHORN GARY
Assignee(s): (std): HARTSHORN GARY ; VANDE SANDE LEE
Inventor(s): (std): HARTSHORN GARY ; VANDE SANDE LEE
Designated states: AT BE CH DE FR GB IT JP KR LU NL SE US

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
EP0382798 A1	19900822	LSPB	+	published / reissued	
EP0382798 A1	19900822		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: DE FR GB SE
EP0382798 A1	19901031	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 19900901
EP0382798 A4	19901212	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 19901023
EP0382798 A4	19901212		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A4 Country of Ref document: DE FR GB SE
EP0382798 A4	19920520	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 19920402
EP0382798 A4	19951213	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 19950613
WO9002291 A1	19900308	LSPB	+	published / reissued	

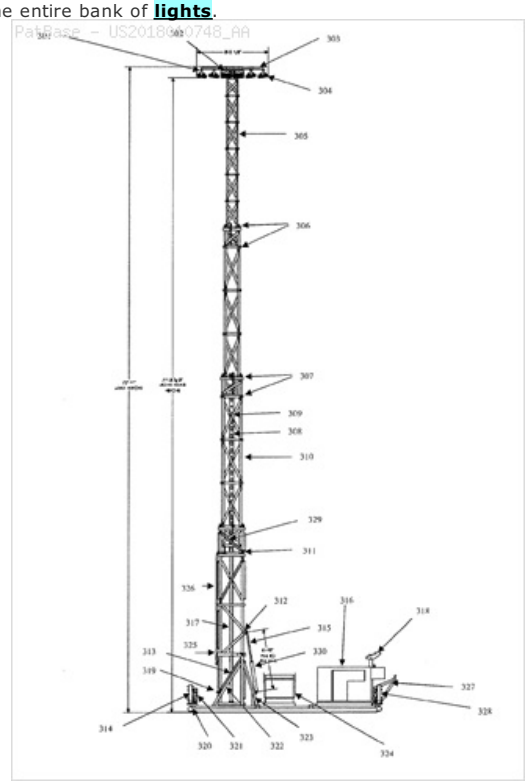
WO9002291 A1	19900308		+AK	DESIGNATED STATES	Kind code of Ref document: A1 Country of Ref document: JP KR US
WO9002291 A1	19900308		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AT BE CH DE FR GB IT LU NL SE
WO9002291 A1	19900424	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 1989903020 Country of Ref document: EP
WO9002291 A1	19900822	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 1989903020 Country of Ref document: EP
WO9002291 A1	19950613	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	Ref document number: 1989903020 Country of Ref document: EP

26) Family number: 63048292 (US2018010748 AA)

Title: TRANSPORTABLE **LIGHTING** **SYSTEM**

Abstract: A transportable **lighting** **system**. The **lighting** **system** is designed to withstand the difficult and extreme weather conditions typically experienced in outdoor work sites such as **drilling** rig environments. The pulley and roller arraignments are designed for minimal friction. The overall pulley and roller design for the lifting of the unit (including the way the cables are orientated) is extremely robust. The outrigger includes fold out and lock in place design. The power source can run a duel transfer switch setup powered by an external supply (like **drilling** rig power) or from its own 100 percent back-up generator. **Lighting** used is typically **light** in weight and bright. Towers are skid mounted and mobile, e.g., with the use of a truck. Individual **lights** can swivel and tilt as can the entire bank of **lights**.

Classifications:
International (IPC 8-9): E04H12/00 E04H12/18 E04H12/34 E21B41/00 F21L13/00 F21L2/00 F21S8/08 F21S9/04 F21V14/02 F21V21/22 F21W131/10
CPC: E04H12/182 E04H12/187 E04H12/345 E21B41/00 F21L13/00 F21L2/00 F21S8/085 F21S9/04 F21V14/02 F21V21/22 F21W2131/10 F21W2131/1005
US: 1/1 362/249.07



Family:

Publication number	Publication date	Application number	Application date
CA2974194 AA	20170718	CA20152974194	20151217
US2018010748 AA	20180111	US20150546862	20151217
WO16120699 A1	20160804	WO2015IB59745	20151217

Priority:
US20150109966P 20150130 WO2015IB59745 20151217 US20150546862 20151217

Probable Assignee: APOLLO ENERGY SERVICES CORP
Assignee(s): (std): APOLLO ENERGY SERVICES CORP
Assignee(s): GOWANLOCK MATTHEW
Inventor(s): (std): GOWANLOCK MATTHEW
Agent(s): BORDEN LADNER GERVAIS LLP
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
CA2974194 AA	20170718	LSPB	+	published / reissued	
US2018010748 AA	20171024		RFE1	Docketed New Case - Ready for Examination	
US2018010748 AA	20180110	LSAS	AS	ASSIGNMENT	Owner: APOLLO ENERGY SERVICES CORP., CANADA PartyType: owner Effective date: 20170726 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:GOWANLOCK, MATTHEW;REEL/FRAME:044588/0048
US2018010748 AA	20180111	LSPB	+	published /	

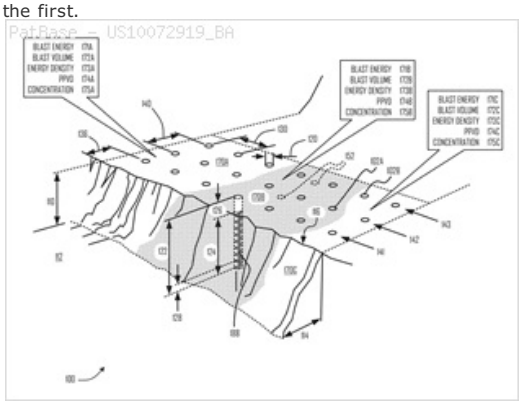
				reissued	
US2018010748 AA	20180417	LSES	NFA1	Non Final Action Mailed	
US2018010748 AA	20181022	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2018010748 AA	20181022		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
WO16120699 A1	20160804	LSPB	+	published / reissued	
WO16120699 A1	20160914		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 15879798 Kind code of Ref document: A1 Country of Ref document: EP
WO16120699 A1	20170718	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2974194 Country of Ref document: CA
WO16120699 A1	20170727	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 15546862 Country of Ref document: US
WO16120699 A1	20170801	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO16120699 A1	20180516		-32PN	EP: PUBLIC NOTIFICATION IN THE EP BULLETIN AS ADDRESS OF THE ADRESSEE CANNOT BE ESTABLISHED	Text: NOTING OF LOSS OF RIGHTS PURSUANT TO RULE 112(1) EPC (EPO FORM 1205A DATED 22/01/2018)
WO16120699 A1	20181010	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 15879798 Country of Ref document: EP

27) Family number: 71079853 (US10072919 BA)

Title: EFFICIENT BLAST DESIGN FACILITATION **SYSTEMS** AND METHODS

Abstract: Respective embodiments disclosed herein include methods and apparatuses (1) for surveying a mine bench or other material body using at least seismic data obtained via geophone and measurement module data synchronized via a wireless link; (2) for generating hyperspectral panoramic imaging data of a blast hole or other borehole; or (3) for allowing a neural network to facilitate a differential blast design that targets a first bench part more weakly than the differential blast design targets a second bench part (along the same mine bench) at least partly based on data indicative of a much higher concentration of a valuable material in the second bench part than in the first.

Classifications:
International (IPC 8-9): E21B41/00 E21B47/00 E21B47/01 E21B47/02 E21B47/022 E21B47/09 E21B47/12 E21B49/00 F21V7/04 F21V7/06 F42D3/06 G01V1/16 G01V1/18 G01V1/24 G01V1/28 G01V1/30 G01V1/34 G01V1/50 G01V8/02 G01V99/00 G06N3/02 G06N3/04 H04N5/225 H04N5/232 H04N5/33
CPC: E21B41/0092 E21B47/002 E21B47/01 E21B47/092 E21B47/13 E21B49/00 E21B49/003 E21B49/005 E21C47/10 F21V7/041 F21V7/06 F42D3/06 G01V1/164 G01V1/181 G01V1/247 G01V1/282 G01V1/50 G01V11/00 G01V2200/12 G01V2200/16 G01V2210/66 G01V8/02 G01V99/005 G06N3/02 G06N3/04 H04N2005/2255 H04N5/2256 H04N5/23238 H04N5/33 E21B47/0002 E21B47/122
US: 1/1 102/312



Family:

Publication number	Publication date	Application number	Application date
AU2018313298 AA	20200305	AU20180313298	20180810
CA3072594 AA	20200210	CA20183072594	20180810
US10072919 BA	20180911	US20170674473	20170810
US10101486 BA	20181016	US20170674459	20170810
US2019048708 AA	20190214	US20170674464	20170810
US2020217194 AA	20200709	US20180638103	20180810
WO19033048 A1	20190214	WO2018US46339	20180810
WO19033067 A1	20190214	WO2018US46362	20180810

Priority:

US20170674459 20170810 US20170674473 20170810 US20170674464 20170810
WO2018US46362 20180810 US20180638103 20180810

Probable Assignee: DATACLOUD INT INC

Assignee(s): (std): DATACLOUD INT INC

Assignee(s): PALMER DANIEL ; SRINIVASAN KRISHNA

Inventor(s): (std): PALMER DANIEL ; SRINIVASAN KRISHNA

Agent(s): AEON LAW PLLC; GIRL FRIDAY IP PTY LTD; MBM INTELLECTUAL PROPERTY LAW LLP; OLSON JONATHAN E; PHILIPP ADAM L K; PHILIPP ADAM LK

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
AU2018313298 AA	20200305	LSPB	+	published / reissued	
CA3072594 AA	20200210	LSPB	+	published / reissued	
CA3072594 AA	20200227	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20200225
CA3072594 AA	20200311	LSES	+EEER	EXAMINATION REQUEST	Effective date: 20200225
US10072919 BA	20180823	LSGT	PAT1	Patented Case	
US10072919 BA	20180823	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US10072919 BA	20180911	LSGT	+	granted / extensions (spc, cpc, pte)	
US10072919 BA	20370810	PEXP		Calculated Patent Term Expiry	
US10101486 BA	20180926	LSGT	PAT1	Patented Case	
US10101486 BA	20180926	LSGT	STCF	INFORMATION ON STATUS: PATENT	Text: PATENTED CASE

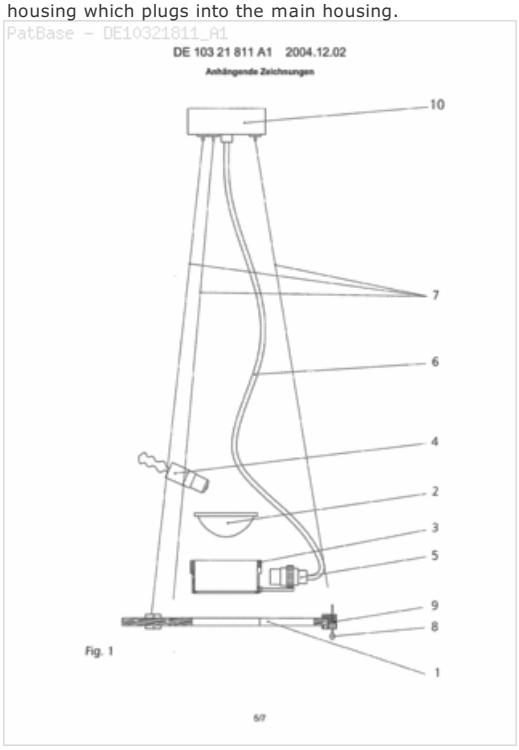
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US10101486 BA	20181016	LSGT	+	granted / extensions (spc, cpc, pte)	
US10101486 BA	20370810	PEXP		Calculated Patent Term Expiry	
US2019048708 AA	20170817	LSAS	AS	ASSIGNMENT	Effective date: 20170815 Owner: DATACLOUD INTERNATIONAL, INC., WASHINGTON PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PALMER, DANIEL;SRINIVASAN, KRISHNA;REEL/FRAME:043322/0895
US2019048708 AA	20190122	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2019048708 AA	20190122		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2019048708 AA	20190214	LSPB	+	published / reissued	
US2020217194 AA	20200320	LSAS	AS	ASSIGNMENT	Effective date: 20170815 Owner: DATACLOUD INTERNATIONAL, INC., WASHINGTON PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SRINIVASAN, KRISHNA;PALMER, DANIEL;REEL/FRAME:052182/0144
US2020217194 AA	20200504		RFE1	Docketed New Case - Ready for Examination	
US2020217194 AA	20200709	LSPB	+	published / reissued	
WO19033048 A1	20190214	LSPB	+	published / reissued	
WO19033048 A1	20190327		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18844541 Kind code of Ref document: A1 Country of Ref document: EP
WO19033048 A1	20200211	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO19033048 A1	20200819	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18844541 Country of Ref document: EP
WO19033067 A1	20190214	LSPB	+	published / reissued	
WO19033067 A1	20190327		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18843352 Country of Ref document: EP
WO19033067 A1	20200210	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 3072594 Country of Ref document: CA
WO19033067 A1	20200211	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO19033067 A1	20200305	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A Ref document number: 2018313298 Date of Ref document: 20180810 Country of Ref document: AU
WO19033067 A1	20200819	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18843352 Country of Ref document: EP

28) Family number: 31369751 (DE10321811 A1)

Title: WALL OR CEILING **LIGHT** HAS COMPONENTS IN MODULAR PLUG FORM INCLUDING **LIGHT** AND **LIGHT** HOLDER LENS **SYSTEM** AND A HOUSING

Abstract: A device comprises at least one lens (2) and a **light** holder (5) with a **light** (4) and a housing (1). The lens and housing are formed as a plug **system**. Preferably there is also a lens housing which plugs into the main housing.

Classifications:
International (IPC 8-9): F21S2/00 F21S8/04 F21S8/06 F21V15/00 F21V15/01 F21V17/00 F21V17/10 F21V17/12 F21V17/14 F21V21/10 F21V21/112 F21V21/14 F21V21/16
International (IPC 1-7): F21S2/00 F21V15/01 F21V17/10 F21V21/16
CPC: F21S8/06 F21V17/12 F21V17/14 F21V21/112



Family:

Publication number	Publication date	Application number	Application date
DE10321811 A1	20041202	DE20031021811	20030515

Priority:
DE20031021811 20030515

Probable Assignee: LICHT IM RAUM DINNENBIER GMBH
Assignee(s): (std): LICHT IM RAUM DINNENBIER GMBH
Inventor(s): (std): GRIGULL BERTHOLD ; KLAGES DANIEL

Legal status (INPADOC)

View legal status timeline

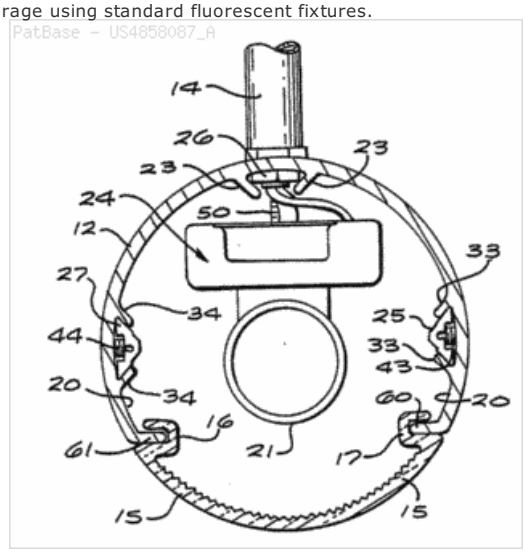
Patent	Date recorded	Event group	Code	Event	Details
DE10321811 A1	20041202	LSPB	+	published / reissued	
DE10321811 A1	20100812	LSLE	-8141	DISPOSAL/NO REQUEST FOR EXAMINATION	

29) Family number: 3129877 (US4858087 A)

Title: UNIVERSAL CIRCULAR ENCLOSURE FOR STANDARD STRIP FLUORESCENT FIXTURE

Abstract: A fluorescent **lighting** enclosure **system** is disclosed which is designed to receive standard fluorescent strip **lights** of one or multiple lamp configuration and to support and enclose the fixtures in a readily adaptable form. The enclosure is in the form of continuous extrusions having internal tracks extending longitudinally along the full length of the extrusion. A novel spline is designed to fit in the tracks and act as a mount for the enclosure itself and for the fluorescent strips as well as to join the ends of enclosure sections and hold an end plate in place. The enclosure may be mounted with its **light** emitting opening directed in any direction including inverted. Perimeter **lighting**, grid and handrail **lighting** are all possible employing this invention with virtual 100 percent linear coverage using standard fluorescent fixtures.

Classifications:
International (IPC 8-9): E04F11/18 F21S2/00 F21S8/00 F21S8/04 F21S8/06 F21V15/00 F21V15/01 F21V17/00 F21V17/10 F21V17/16 F21V21/00 F21V21/10 F21V21/112 F21V5/00
International (IPC 1-7): F21S3/00 F21V21/00
CPC: E04F2011/1872 F21S2/00 F21S8/043 F21V15/013 F21V17/104 F21V17/164 F21V21/112 F21V5/00 F21W2111/08 F21W2131/405 F21Y2103/00 F21Y2113/00
US: 362/125 362/219 362/225 362/260



Family:

Publication number	Publication date	Application number	Application date
US4858087 A	19890815	US19870044966	19870501

Priority:
US19870044966 19870501

Probable Assignee: SANDE LEE VANDE
Assignee(s): (std): VANDE SANDE LEE
Assignee(s): SANDE LEE VANDE
Inventor(s): (std): HARTSHORN GARY

Legal status (INPADOC)

View legal status timeline

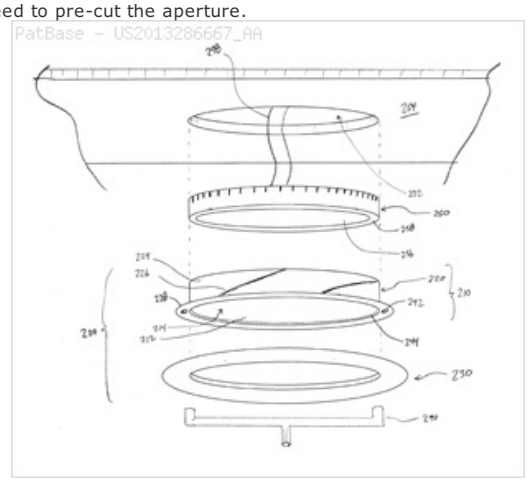
Patent	Date recorded	Event group	Code	Event	Details
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US4858087 A	19870501	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:HARTSHORN, GARY;REEL/FRAME:004730/0478 Effective date: 19870501 Owner: SANDE, LEE, VANDE,CALIFORNIA
US4858087 A	19890630	LSGT	PAT1	Patented Case	
US4858087 A	19890630	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US4858087 A	19890815	LSGT	+	granted / extensions (spc, cpc, pte)	
US4858087 A	19930203	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US4858087 A	19970214	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US4858087 A	20010215	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US4858087 A	20010306		REMI	MAINTENANCE FEE REMINDER MAILED	
US4858087 A	20070501	PEXP		Calculated Patent Term Expiry	

30) Family number: 55060048 (US2013286667 AA)

Title: **LIGHT** FIXTURES AND INSTALLATION METHODS THEREOF

Abstract: This disclosure provides **systems**, methods and apparatus for securing a **light** fixture in place. In one aspect, the **light** fixture can be configured to retain an LED-based **light** engine, which may be thinner and/or lighter than conventional **light** engines. In another aspect, the **light** fixture can be configured to be installed in a pre-cut aperture in a **structural** member, such as a ceiling, soffit, or wall. In another aspect, the **light** fixture may include a serrated upper edge configured to cut into a **structural** member to form an aperture, without the need to pre-cut the aperture.

Classifications:
International (IPC 8-9): F21S8/02 F21S8/04 F21V21/00 F21V21/04 F21V23/00 F21V23/06 F21V8/00 F21Y101/02 H02G13/00
CPC: B23B51/0406 F21S8/026 F21S8/04 F21V21/041 F21V23/001 F21V23/06 F21Y2115/10 G02B6/0018 G02B6/0038
US: 362/368 52/741.1



Family:

Publication number	Publication date	Application number	Application date
US2013286667 AA	20131031	US20120460516	20120430
WO13165798 A2	20131107	WO2013US38144	20130425
WO13165798 A3	20140103	WO2013US38144	20130425

Priority:
US20120460516 20120430

Probable Assignee: SNAPTRACK INC

Assignee(s): (std): HOLMAN ROBERT L ; QUALCOMM MEMS TECHNOLOGIES INC ; SAMPSELL JEFFREY B ; SAMPSELL MATTHEW B

Assignee(s): SNAPTRACK INC

Inventor(s): (std): HOLMAN ROBERT L ; SAMPSELL JEFFREY B ; SAMPSELL MATTHEW B

Agent(s): ABUMERI MARK M

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 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
US2013286667 AA	20120716	LSAS	AS	ASSIGNMENT	Effective date: 20120713 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SAMPSELL, JEFFREY B;HOLMAN, ROBERT L;SAMPSELL, MATTHEW B;REEL/FRAME:028559/0058 Owner: QUALCOMM MEMS TECHNOLOGIES, INC., CALIFORNIA
US2013286667 AA	20131031	LSPB	+	published / reissued	
US2013286667 AA	20150623	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2013286667 AA	20150623		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2013286667 AA	20160831	LSAS	AS	ASSIGNMENT	Effective date: 20160830 Owner: SNAPTRACK, INC., CALIFORNIA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:QUALCOMM MEMS TECHNOLOGIES, INC.;REEL/FRAME:039891/0001 PartyType: owner

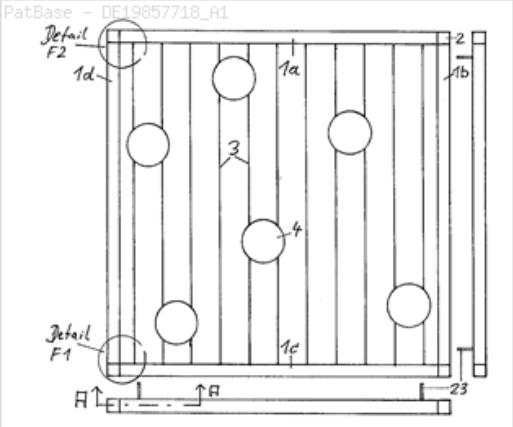
WO13165798 A2	20131107	LSPB	+	published / reissued	
WO13165798 A2	20131225		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A2 Ref document number: 13721215 Country of Ref document: EP
WO13165798 A3	20150610	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A2 Ref document number: 13721215 Country of Ref document: EP

31) Family number: 29961537 (DE19857718 A1)

Title: LOW-VOLTAGE **LIGHTING** **SYSTEM**

Abstract: The **lighting** **system** consists of individual, plug-in frame elements which consist of rectangular and/or round reeds and matching plug connectors. The frame elements can be plugged together to form any two- or three dimensional **structure**, whereby spacer reeds can be used, if necessary. Various plug **lights**, equipped with halogen- or other low-voltage lamps, can be plugged on the frame elements. Cables for the connection of the **lights** are led within the hollow frame elements.

Classifications:
International (IPC 8-9): F21S2/00 F21V23/00 F21V23/06
International (IPC 1-7): F21S1/14 F21S2/00 F21V21/10 F21V21/116 F21V21/12 F21V23/00 F21V23/02 F21V27/00 H01R25/14
CPC: F21S2/00 F21V23/06



Family:

Publication number	Publication date	Application number	Application date
DE19857718 A1	19990701	DE19981057718	19981215
DE19857718 C2	20020711	DE19981057718	19981215
DE29814642 U1	19990218	DE19982014642U	19980814

Priority:
DE19972022405U 19971218 DE19982014642U 19980814 DE19981057718 19981215

Probable Assignee: EICHHORN WOLFGANG
Assignee(s): (std): EICHHORN WOLFGANG ; POLLMANN CARMEN KATJA
Assignee(s): EICHHORN WOLFGANG 45721 HALTERN DE ; POLLMANN CARMEN KATJA 45721 HALTERN DE
Inventor(s): (std): EICHHORN WOLFGANG ; POLLMANN CARMEN KATJA
Inventor(s): EICHHORN WOLFGANG 45721 HALTERN DE ; POLLMANN CARMEN KATJA 45721 HALTERN DE

Legal status (INPADOC)

View legal status timeline

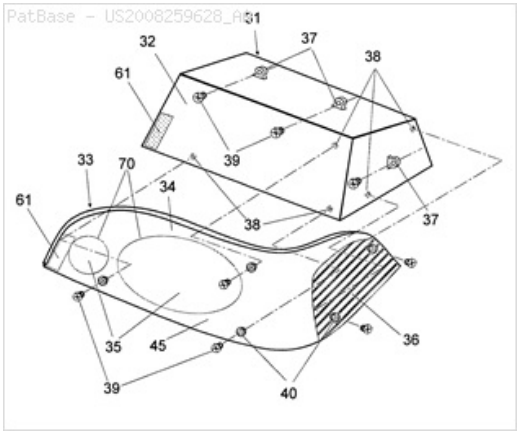
Patent	Date recorded	Event group	Code	Event	Details
DE19857718 A1	19990701	LSPB	+	published / reissued	
DE19857718 A1	19990701	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE19857718 C2	20020711	LSGT	+	granted / extensions (spc, cpc, pte)	
DE19857718 C2	20020711	LSGT	+D2	GRANT AFTER EXAMINATION	
DE19857718 C2	20030116	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE19857718 C2	20051013	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE19857718 C2	20181215	PEXP		Calculated Patent Term Expiry	
DE29814642 U1	19990218	LSGT	+	granted / extensions (spc, cpc, pte)	
DE29814642 U1	19990218	LSGT	R207	UTILITY MODEL SPECIFICATION	Effective date: 19990218
DE29814642 U1	20020926	LSLE	-R156	LAPSE OF IP RIGHT AFTER 3 YEARS	Effective date: 20020501
DE29814642 U1	20080814	PEXP		Calculated Patent Term Expiry	

32) Family number: 42410739 (US2008259628 AA)

Title: MODULAR **LIGHT** **SYSTEM** FOR AUTOMOBILES

Abstract: An automotive modular **light** **system**, comprising a common base **light** device and a multitude of exchangeable lens cover means of which each has significantly distinct automotive **light** styling features, is invented here as a cost-effective way of customizing the exterior styling of motored vehicles. The common base **light** device of simple construction can be used for multiple vehicle models to provide the **lighting** function at a low cost. An exchangeable lens cover means, which provides the styling features of the modular **light** **system**, is removably installed to the common base **light** device. Each exchangeable lens cover means has a simple construction so that it can be cost-effectively manufactured. Therefore a multitude of exchangeable lens cover means of significantly distinct styling features may be offered to customers with different styling tastes at very affordable prices.

Classifications:
International (IPC 8-9): F21V11/00 F21V5/00
CPC: B60Q1/2623 B60Q1/2626 B60Q1/263 F21S41/28 F21S41/29 F21S43/26 F21S43/51
US: 362/487 362/508 362/520 362/520P 362/549



Family:

Publication number	Publication date	Application number	Application date
US2008259628 AA	20081023	US20070788803	20070423
US7798687 BB	20100921	US20070788803	20070423

Priority:
US20070788803 20070423

Probable Assignee: LIN MEIYIN
Assignee(s): (std): LIN MEIYIN
Inventor(s): (std): LIN MEIYIN
Agent(s): MEIYIN LIN

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2008259628 AA	20081023	LSPB	+	published / reissued	
US7798687 BB	20100921	LSGT	+	granted / extensions (spc, cpc, pte)	
US7798687 BB	20140502		REMI	MAINTENANCE FEE REMINDER MAILED	
US7798687 BB	20140921	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7798687 BB	20141020	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7798687 BB	20141020	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7798687 BB	20141111	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20140921
US7798687 BB	20280322	PEXP		Calculated Patent Term Expiry (PTA 334 days)	

33) Family number: 3872288 (CA1307510 A1)

Title: UNIVERSAL CIRCULAR ENCLOSURE FOR STANDARD STRIP FLUORESCENT FIXTURES

Abstract: ABSTRACT OF THE DISCLOSURE A fluorescent **lighting** enclosure **system** (11) is disclosed which is designed to receive standard fluorescent strip **lights** (24) of one or multiple lamp configuration and to support and enclose the fixtures in a readily adaptable form. The enclosure (11) is in the form of continuous extrusions having internal tracks (23, 33, 34) extending longitudinally along the full length of the extrusion. A novel spline (25, 27) is designed to fit in the tracks and act as a mount for the enclosure itself and for the fluorescent strips as well as to join the ends of enclosure sections and hold an end plate (18) in place. The enclosure (11) may be mounted with its **light** emitting opening directed in any direction including inverted. Perimeter **lighting**, grid and handrail **lighting** are all possible employing this invention with virtual 100 percent linear coverage using standard fluorescent fixtures 24. Various shapes of the enclosure may be used such as circular (11), ovoid (130), rectangular or square (140) or handrail shaped (150).

Classifications:
International (IPC 8-9): F21V15/01 F21V21/00
International (IPC 1-7): F21S3/00 F21V21/00

Family:

Publication number	Publication date	Application number	Application date
CA1307510 A1	19920915	CA19880576517	19880906

Priority:

CA19880576517 19880906

Probable Assignee:	SANDE LEE V
Assignee(s): (std):	HARTSHORN GARY ; SANDE LEE V
Assignee(s):	SANDE LEE VANDE
Inventor(s): (std):	HARTSHORN GARY
Agent(s):	SMART AND BIGGAR

Legal status (INPADOC)

View legal status timeline

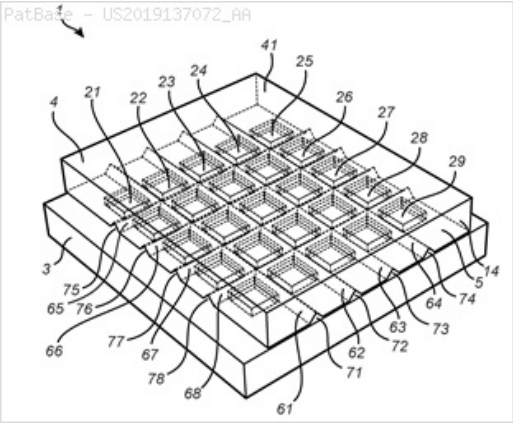
Patent	Date recorded	Event group	Code	Event	Details
CA1307510 A1	19920915	LSGT	+	granted / extensions (spc, cpc, pte)	
CA1307510 A1	20070917	LSLE	-MKLA	LAPSED	
CA1307510 A1	20090915	PEXP		Calculated Patent Term Expiry	

34) Family number: 67441423 (US2019137072 AA)

Title: A **LIGHT** EMITTING DEVICE

Abstract: A **light** emitting device (**1**) comprising a plurality of volume emitting LEDs (**21** -**29**) adapted for, in operation, emitting **light**, a substrate (**3**) on which said plurality of volume emitting LEDs is arranged, and an optical **structure** (**4**) comprising a surface (**41**) adapted for forming a **light** exit surface of the **light** emitting device, a first section (**5**) arranged such as to extend over said plurality of volume emitting LEDs opposite to the substrate, and a second section (**6**) comprising a plurality of **light** redirecting elements (**61** -**68**) adapted for redirecting **light** emitted by the plurality of volume emitting LEDs towards said surface of the optical **structure** by means of total internal reflection (TIR), the plurality of **light** redirecting elements (**61** -**68**) extending between adjacent volume emitting LEDs of the plurality of volume emitting LEDs and terminating adjacent to the substrate (**3**).

Classifications:
International (IPC 8-9): F21V5/00 F21V7/00 F21V8/00 F21Y105/10 F21Y115/10 G02B19/00 G02B6/00
CPC: F21V5/007 F21V7/0091 F21Y2105/10 F21Y2115/10 G02B19/0066 G02B6/0016 G02B6/0021 G02B6/0073
US: 1/1



Family:

Publication number	Publication date	Application number	Application date
CN109073194 A	20181221	CN201780027729	20170425
EP3452754 A1	20190313	EP20170719574	20170425
EP3452754 B1	20200624	EP20170719574	20170425
IN201847043077 A	20181123	IN201847043077	20181115
US2019137072 AA	20190509	US20170096009	20170425
WO17190983 A1	20171109	WO2017EP59757	20170425

Priority:

EP20160167890 20160502 WO2017EP59757 20170425

Probable Assignee: SIGNIFY HOLDING BV

Assignee(s): (std): PHILIPS LIGHTING HOLDING BV ; SIGNIFY HOLDING BV

Assignee(s): 飞利浦照明控股有限公司

Inventor(s): (std): DE GRAAF JAN ; ONUSHKIN GRIGORY ALEXANDROVICH ; STIL LAMBERT JOHANNES ; VISSENBERG MICHEL CORNELIS JOSEPHUS MARIE

Inventor(s): G A 奥纳什金 ; G·A·奥纳什金 ; J 德格拉夫 ; J·德格拉夫 ; L J 斯蒂尔 ; L·J·斯蒂尔 ; M C J M 维森伯格 ; M·C·J·M·维森伯格

Agent(s): VERWEIJ PETRONELLA DANIELLE; VERWEIJ PETRONELLA DANIELLE ET AL; 北京市金杜律师事务所 11256; 郑立柱

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 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
CN109073194 A	20181221	LSPB	+	published / reissued	
CN109073194 A	20181221	LSPB	PB01	PUBLICATION	
CN109073194 A	20181221	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN109073194 A	20190524		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN109073194 A	20190524		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN109073194 A	20200731	LSAS	CB02	CHANGE OF APPLICANT INFORMATION	
CN109073194 A	20200731	LSAS	CB02	申请人信息变更	Assignee After Change: 昕诺飞控股有限公司 (XIN CONNAUGHT FLY HOLDINGS LTD) Assignee Before Change: 飞利浦照明控股有限公司 (PHILIPS LIGHTING HOLDING BV)

					Text: 著录事项变更 (The bibliographic data)
EP3452754 A1	20190313	LSPB	+	published / reissued	
EP3452754 A1	20190313	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20181203
EP3452754 A1	20190313		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3452754 A1	20190313		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: MA MD
EP3452754 A1	20190313		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3452754 A1	20190807		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3452754 A1	20190807		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3452754 A1	20200226	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20200129
EP3452754 B1	20200624	LSGT	+	granted / extensions (spc, cpc, pte)	
EP3452754 B1	20200624		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3452754 B1	20200624	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP3452754 B1	20200630	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: EP Ref country code: CH
EP3452754 B1	20200715	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: AT Ref legal event code: REF Kind code of Ref document: T Ref document number: 1284247 Effective date: 20200715 Country of Ref document: AT
EP3452754 B1	20200716	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: R096 Ref country code: DE Ref document number: 602017018678 Country of Ref document: DE
EP3452754 B1	20200722	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: FG4D
EP3452754 B1	20370425	PEXP		Calculated Patent Term Expiry	
IN201847043077 A	20181123	LSPB	+	published / reissued	
US2019137072 AA	20181024	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VISSENBERG, MICHEL CORNELIS JOSEPHUS MARIE;DE GRAAF, JAN;ONUSHKIN, GRIGORY ALEXANDROVICH;AND OTHERS;SIGNING DATES FROM 20170425 TO 20180828;REEL/FRAME:047291/0770 PartyType: owner Owner: PHILIPS LIGHTING HOLDING B.V.., NETHERLANDS
US2019137072 AA	20190209		RFE1	Docketed New Case - Ready for Examination	
US2019137072 AA	20190509	LSPB	+	published / reissued	
US2019137072 AA	20190723	LSES	NFA1	Non Final Action Mailed	
US2019137072 AA	20190723		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019137072 AA	20191018		RSP4	Response to Non-Final Office Action Entered and Forwarded to	

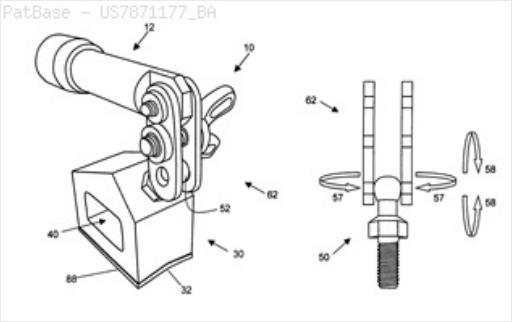
				Examiner	
US2019137072 AA	20191018		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019137072 AA	20191206		FRM1	Final Rejection Mailed	
US2019137072 AA	20191206		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2019137072 AA	20200220	LSAS	AS	ASSIGNMENT	Effective date: 20190201 OldParty: CHANGE OF NAME;ASSIGNOR:PHILIPS LIGHTING HOLDING B.V.;REEL/FRAME:051974/0509 PartyType: owner Owner: SIGNIFY HOLDING B.V., NETHERLANDS
US2019137072 AA	20200222		RFE1	Docketed New Case - Ready for Examination	
US2019137072 AA	20200222		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2019137072 AA	20200228	LSES	NFA1	Non Final Action Mailed	
US2019137072 AA	20200228		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019137072 AA	20200612		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019137072 AA	20200612		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019137072 AA	20200807		FRM1	Final Rejection Mailed	
WO17190983 A1	20171109	LSPB	+	published / reissued	
WO17190983 A1	20181103	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO17190983 A1	20181128		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 17719574 Kind code of Ref document: A1 Country of Ref document: EP
WO17190983 A1	20181207	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2017719574 Effective date: 20181203 Country of Ref document: EP

35) Family number: 48151979 (US7871177 BA)

Title: **LIGHT** MOUNTING APPARATUS

Abstract: A **light** mounting apparatus is being proposed herein. The **light** mounting apparatus is formed to as to allow for versatile usage, in connection with a wide variety of tools, **structures**, and surfaces. Furthermore, the **light** mounting apparatus includes suitable connection **structures** to a **light** source in order to provide multiple degrees of freedom, thereby allowing a user to easily direct **light** beams to a desired location.

Classifications:
International (IPC 8-9): F21V33/00
CPC: B25B23/18 B25F5/021 F21V21/0885 F21V33/0084 F21L4/005 F21V17/02 F21V21/145
US: 362/119 362/190 362/191



Family:

Publication number	Publication date	Application number	Application date
US7871177 BA	20110118	US20080290780	20081103
US8360597 BA	20130129	US20100982792	20101230

Priority:

US20070001512P 20071101 US20080290780 20081103 US20100982792 20101230

Probable Assignee: HANCHETT NEVILLE BLAKE

Assignee(s): (std): HANCHETT NEVILLE BLAKE

Inventor(s): (std): HANCHETT NEVILLE BLAKE

Legal status (INPADOC)

View legal status timeline

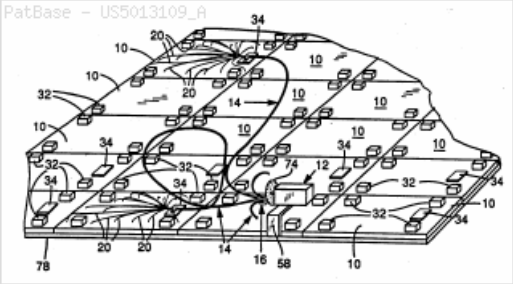
Patent	Date recorded	Event group	Code	Event	Details
US7871177 BA	20110118	LSGT	+	granted / extensions (spc, cpc, pte)	
US7871177 BA	20140829		REMI	MAINTENANCE FEE REMINDER MAILED	
US7871177 BA	20150118	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7871177 BA	20150216	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7871177 BA	20150216	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7871177 BA	20150310	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20150118
US7871177 BA	20290325	PEXP		Calculated Patent Term Expiry (PTA 142 days)	
US8360597 BA	20130109	LSGT	PAT1	Patented Case	
US8360597 BA	20130109	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US8360597 BA	20130129	LSGT	+	granted / extensions (spc, cpc, pte)	
US8360597 BA	20160909		REMI	MAINTENANCE FEE REMINDER MAILED	
US8360597 BA	20170125	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8360597 BA	20170125		+SULP	SURCHARGE FOR LATE PAYMENT	
US8360597 BA	20310420	PEXP		Calculated Patent Term Expiry (PTA 111 days)	

36) Family number: 4572189 (US5013109 A)

Title: Modular **system** for decorative **lighting**

Abstract: A modular arrangement of a single **light** source providing **light** points to multiple panels by **light** transmitting fiber strands. Each panel has a pattern of **drilled** holes and is pre-assembled with a fiber strand secured in each hole. The fiber strands of each panel are bundled and encased into cords for ease of handling and installation of the panel. Fittings on the end of each cord attach the cord of each panel to the **light** source.

Classifications:
International (IPC 8-9): F21V8/00 G02B26/02 G02B26/04
International (IPC 1-7): G02B6/00
CPC: E04B9/32 F21V33/006 G02B26/04 G02B6/0005
US: 350/96.1 350/96.24 362/32 362/554 362/565 385/115



Family:

Publication number	Publication date	Application number	Application date
US5013109 A	19910507	US19890431927	19891106

Priority:
US19890431927 19891106

Probable Assignee: FIBER TECH INC
Assignee(s): (std): FIBER TECH INC
Inventor(s): (std): DUBAY WILLIAM G ; ZELAN DONALD J

Legal status (INPADOC)

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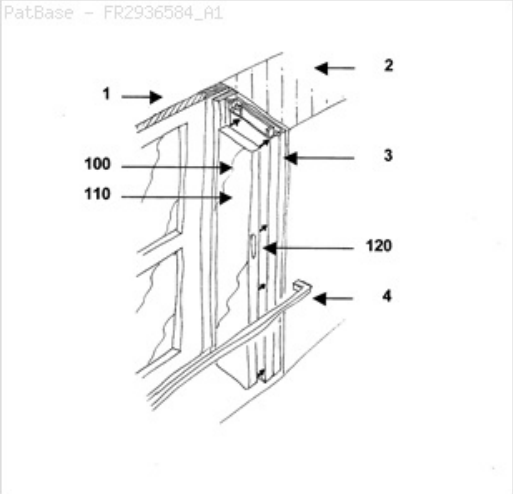
Patent	Date recorded	Event group	Code	Event	Details
US5013109 A	19891106	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 19891025 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNORS:ZELEN, DONALD J.;DUBAY, WILLIAM G.;REEL/FRAME:005180/0487 Owner: FIBER TECH, INC., OREGON
US5013109 A	19910306	LSGT	PAT1	Patented Case	
US5013109 A	19910507	LSGT	+	granted / extensions (spc, cpc, pte)	
US5013109 A	19941107	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5013109 A	19981201		REMI	MAINTENANCE FEE REMINDER MAILED	
US5013109 A	19990509	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5013109 A	19990706	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 19990507
US5013109 A	20091106	PEXP		Calculated Patent Term Expiry	
US5013109 A	20180128	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5013109 A	20180128	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

37) Family number: 44859537 (FR2936584 A1)

Title: **LIGHT** DEFLECTOR **SYSTEM** FOR E.G. PICTURE WINDOW OF BUILDING, HAS SELF-SUPPORTING **STRUCTURE**, REFLECTING SURFACE, HANDLES AND PERMANENT OR DETACHABLE FIXATION DEVICE PERMITTING PLACEMENT OF **SYSTEM** ON BUILDING AT WHICH OPENINGS ARE PROVIDED

Abstract: The **system** (100) has a self-supporting **structure**, a reflecting surface (110), handles (120) and a permanent or detachable fixation device permitting placement of the **system** on a building (2) at which openings are provided. A **light** deflector arrangement positions the **system** on an apparent surface of a metallic shutter (3) in a folded position by using the handles and fixes the **system** on the apparent surface. Photovoltaic solar panels are provided on the reflecting surface to recharge a battery or accumulator that is integrated or unintegrated inside a body of the **system**. Independent claims are also included for the following: (1) a method for fabricating a **light** deflector **system** from stainless steel sheet (2) a method for implementing a **light** deflector **system**.

Classifications:
International (IPC 8-9): F21S11/00 F21V7/00 F21V7/05
CPC: E06B7/28 F21S11/00 F21S9/037 F21V7/05 Y02B10/10



Family:

Publication number	Publication date	Application number	Application date
FR2936584 A1	20100402	FR20080005428	20081001
FR2936584 B1	20151002	FR20080005428	20081001

Priority:
FR20080005428 20081001

Probable Assignee:	HERVE ALEXI
Assignee(s): (std):	HERVE ALEXI
Assignee(s):	ALEXI HERVE
Inventor(s): (std):	HERVE ALEXI
Inventor(s):	ALEXI HERVE
Agent(s):	ALEXI HERVE; CABINET REGIMBEAU

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
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FR2936584 A1	20100402		SC	SEARCH COMPLETED	
FR2936584 A1	20100402		SC	SEARCH COMPLETED	BOPI Date: 2010-13
FR2936584 A1	20120309		CA	Changement d'adresse du titulaire	
FR2936584 A1	20120309		CA	Changement d'adresse du titulaire	BOPI Date: 2012-15 Registered Number: 0188730
FR2936584 A1	20120413		CA	CHANGE OF ADDRESS	Effective date: 20120309
FR2936584 A1	20130522		TO	Transmission totale de propriété	
FR2936584 A1	20130522		TO	Transmission totale de propriété	BOPI Date: 2013-25 Registered Number: 0195203
FR2936584 A1	20130621	LSAS	TP	TRANSMISSION OF PROPERTY	Effective date: 20130522 Owner: ESPACIEL, FR PartyType: owner
FR2936584 B1	20151002	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2936584 B1	20151012	LSFE	+PLFP	FEE PAYMENT	Year of fee payment: 8
FR2936584 B1	20161027	LSFE	+PLFP	FEE PAYMENT	Year of fee payment: 9
FR2936584 B1	20171026	LSFE	+PLFP	Fee Payement	Year of fee payment: 10 Payment date:

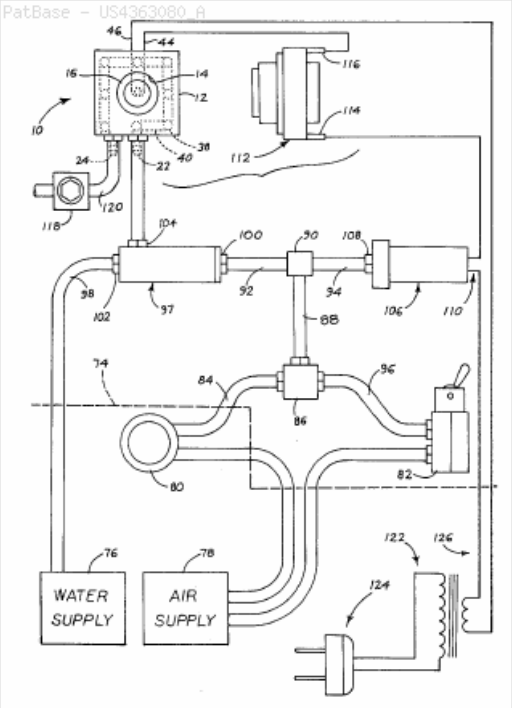
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FR2936584 B1	20171026	LSFE	+PLFP	FEE PAYMENT	Year of fee payment: 10
FR2936584 B1	20181031	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2936584 B1	20281001	PEXP		Calculated Patent Term Expiry	

38) Family number: 8659856 (US4363080 A)

Title: WATER-COOLED **LIGHT** SOURCE

Abstract: Apparatus for supplying a source of **light**, in a dental control unit, to an optical fiber for transmission of **light** from the source, along the fiber, into a patient's mouth. A heat sink is provided with a cavity for receiving a high intensity **light**. A duct leads from the **light** to the exterior of the heat sink to permit access of the fiber to the **light**. The block contains a fluid-conducting bore therethrough for conducting heat from the block to the fluid.

Classifications:
International (IPC 8-9): A61B1/24 A61C19/00 F21S8/00 F21V29/00 F21V29/02 F21V8/00
International (IPC 1-7): F21V7/04
CPC: A61B1/06 A61B1/0669 A61B1/24 A61C19/00 F21V29/56 F21W2131/202 G02B6/0006 Y10S362/804
US: 362/101 362/218 362/294 362/32 362/373 362/573 362/580 362/804 362/96



Family:

Publication number	Publication date	Application number	Application date
US4363080 A	19821207	US19800182975	19800902

Priority:
US19800182975 19800902

Probable Assignee: DENTEK SYSTEMS INC
Assignee(s): (std): DENTEK SYSTEMS INC
Inventor(s): (std): SYLVESTER DONALD D

Legal status (INPADOC)

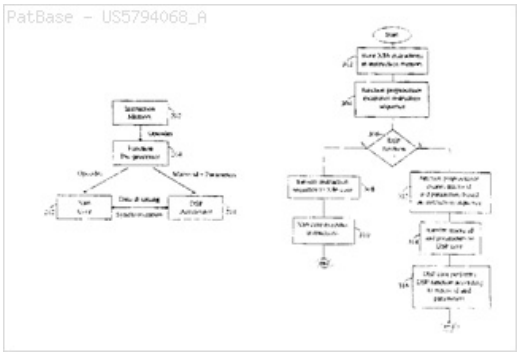
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Patent	Date recorded	Event group	Code	Event	Details
US4363080 A	19821207	LSGT	+	granted / extensions (spc, cpc, pte)	
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US4363080 A	19830302	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US4363080 A	20000902	PEXP		Calculated Patent Term Expiry	

39) Family number: 30350006 (US5794068 A)

Title: CPU WITH DSP HAVING FUNCTION PREPROCESSOR THAT CONVERTS INSTRUCTION SEQUENCES INTENDED TO PERFORM DSP FUNCTION INTO DSP FUNCTION IDENTIFIER

Abstract: A CPU or microprocessor which includes a general purpose CPU component, such as an X86 core, and also includes a DSP core. The CPU also includes an intelligent DSP function decoder or preprocessor which examines X86 opcode sequences and determines if a DSP function is being executed. If the DSP function decoder determines that a DSP function is being executed, the DSP function decoder converts or maps the opcodes to a DSP macro instruction that is provided to the DSP core. The DSP core executes one or more DSP instructions to implement the desired DSP function in response to the macro instruction. The DSP core implements or performs the DSP function using a lesser number of instructions and also in reduced number of clock cycles, thus increasing **system** performance. If the X86 opcodes in the instruction cache or instruction memory do not indicate or are not intended to perform a DSP-type function, the opcodes are provided to the X86 core as which occurs in current prior art computer **systems**. The X86 core and the DSP core are coupled to each other and communicate data and timing signals for synchronization purposes. Thus, the DSP core offloads these mathematical functions from the X86 core, thereby increasing **system** performance. The DSP core also operates in parallel with the X86 core, providing further performance benefits. The CPU of the present invention thus implements DSP functions more efficiently than X86 logic while requiring no additional X86 opcodes. The present invention also generates code that operates transparently on an X86 only CPU or a CPU according to the present invention which includes X86 and DSP cores. Thus the present invention is backwards compatible with existing software.



Classifications:
International (IPC 8-9): F21S2/00 F21V13/00 F21V13/04 F21V23/00 F21V5/00 F21V7/00 F21Y101/00 G02F1/13 G02F1/133 G03B21/00 G03B21/14 G03B21/20 G06F15/76 G06F15/78 G06F9/30 G06F9/318 G06F9/38 G08B5/36 G09F9/00 G09G3/34 H04N5/74 H04N9/31 H05B31/00 H05B31/04 H05B37/00 H05B37/02 H05B37/03 H05B41/16 H05B41/36
International (IPC 1-7): F21S2/00 F21V13/00 F21V13/04 F21V23/00 F21V5/00 F21V7/00 F21Y101/00 G02F1/133 G03B21/00 G03B21/14 G03B21/20 G03B21/26 G06F15/00 G06F15/163 G06F15/78 G06F9/30 G06F9/318 G06F9/38 G08B21/00 G09F9/00 H04N5/74 H04N9/31 H05B31/00 H05B31/04 H05B37/00 H05B37/02 H05B37/03 H05B41/16 H05B41/36
CPC: G06F15/7857 G06F9/3017 G06F9/30174 G06F9/30189 G06F9/30196 G06F9/382 G06F9/3822 G06F9/3836 G06F9/384 G06F9/3855 G06F9/3857 G06F9/3877 G06F9/3879 G06F9/3885 G03B21/20 G03B21/2053 G09G3/3406 H04N9/3141 H04N9/315 H04N9/3155 H05B41/36 H05B47/20 Y02B20/40 H04N9/3197 H05B37/03
US: 324/403 324/403S 340/458 340/458S 340/638 340/641 340/641P 340/642 340/642S 340/643 340/815.73 340/815.74 340/815.75 348/E05.143 348/E09.027 348/E5.143 348/E9.027 353/30 353/30P 395/379 395/384 395/800.35 712/203 712/207 712/208 712/213 712/23 712/35 712/E09.035 712/E09.037 712/E09.049 712/E09.067 712/E09.069 712/E09.071 712/E09.072 712/E9.035 712/E9.037 712/E9.049 712/E9.067 712/E9.069 712/E9.071 712/E9.072 712/E90.35 712/E90.37 712/E90.49 712/E90.67 712/E90.69 712/E90.71 712/E90.72

Family:

Publication number	Publication date	Application number	Application date
DE69724771 D1	20031016	DE19976024771T	19970123
DE69724771 T2	20040715	DE19976024771T	19970123
DE69733390 D1	20050707	DE19976033390T	19970327
DE69733390 T2	20051013	DE19976033390T	19970327
DE69736023 D1	20060706	DE19976036023T	19970327
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JP2001502448 T2	20010220	JP19970533451T	19970123
JP2004006360 A2	20040108	JP20030141933	20030520
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JP3951051 B2	20070801	JP20030141933	20030520
JP4003234 B1	20071107	JP19970534260T	19970327
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KR100464101 B1	20050617	KR19980705419	19980715
KR20000064518 A	20001106	KR19980705419	19970123
US2001005172 AA	20010628	US20010772934	20010131
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WO9926134 A1	19990527	WO1998US10175	19980518

Priority:

US19960618243 19960318
JP19960088463 19960410
JP19960088463 19960419
JP19960109020 19960430
WO1997US01067 19970123
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EP19970908535 19970327
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WO1998US10175 19980518
US20010772934 20010131
JP20030141933 20030520

US20030683266 20031014

Probable Assignee: SEIKO EPSON CORP

Assignee(s): (std): ADVANCED MICRO DEVICES INC ; ADVANCED MICRO DEVICES INCS ; ADVNCED MICRO DEVICES INC ; HABA SHINJI ; MIYASHITA KIYOSHI ; SEIKO EPSON ; SEIKO EPSON CORP ; SHINOHARA KAZUTO ; USHIYAMA TOMIYOSHI ; YAJIMA AKITAKA

Assignee(s): ADVANCED MICRO DEVICES INC AUSTIN ; INTELLECTUAL VENTURES I LLC ; KMB CAPITAL FUND LLC ; LEGERITY HOLDINGS INC ; LEGERITY INC ; LEGERITY INT INC ; MORGAN STANLEY AND CO INC ; MORGAN STANLEY AND CO INC FACILITY COLLATERAL AGEN ; MORGAN STANLEY AND CO INC FACILITY COLLATERAL AGENT AS ; SAXON IP ASSETS LLC ; SEIKO EPSON CORP TOKIO TOKYO ; セイコーエプソン株式会社 ; 아드밴스트 마이크로 디이바이시스 인코포레이티드

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Agent(s): OLIFF AND BERRIDGE PLC; 上柳 雅誉; 須澤 修; 박장원

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT JP KR LU MC NL PT SE US

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE69724771 D1	20041007	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
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EP0833548 A1	19980610	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 19980409
EP0833548 A1	20010103	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20001116
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EP0833548 A1	20060524	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20060302
EP0833548 A1	20160208	LSFE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: PLFP Ref country code: FR Year of fee payment: 20 Country of Ref document: FR
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EP0888584 A1	19990107	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 19980311
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EP1036358 A1	20000920	LSPB	+	published / reissued	
EP1036358 A1	20000920	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20000320
EP1036358 A1	20000920		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: DE GB
EP1036358 A1	20040609	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20031202
EP1395092 A2	20040303	LSPB	+	published / reissued	
EP1395092 A2	20040303	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20031007
EP1395092 A2	20040303		AC	DIVISIONAL APPLICATION: REFERENCE TO EARLIER APPLICATION	Ref document number: 0833548 Kind code of Ref document: P Country of Ref document: EP
EP1395092 A2	20040303		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: DE FR GB NL
EP1395092 A2	20040512		+AK	DESIGNATED	Kind code of Ref document: A3

				CONTRACTING STATES	Country of Ref document: DE FR GB NL
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: 7H 05B 37/00 A ClassificationScheme: IPC
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: 7G 03B 21/20 B ClassificationScheme: IPC
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: 7F 21V 5/00 B
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: 7F 21V 13/00 B
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: 7H 05B 31/00 B ClassificationScheme: IPC
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: 7H 04N 5/74 B ClassificationScheme: IPC
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: 7H 04N 9/31 B ClassificationScheme: IPC
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: 7F 21V 13/04 B ClassificationScheme: IPC
EP1395092 A2	20040512		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: 7H 05B 31/04 B ClassificationScheme: IPC
EP1395092 A2	20050202	LSFE	+AKX	DESIGNATION FEES PAID	Country of Ref document: DE FR GB NL
EP1395092 A2	20050608	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20050426
EP1395092 A2	20060531		AC	DIVISIONAL APPLICATION: REFERENCE TO EARLIER APPLICATION	Kind code of Ref document: P Ref document number: 0833548 Country of Ref document: EP
EP1395092 A2	20060531		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: DE FR GB NL
EP1395092 A2	20060531	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP1395092 A2	20060706		REF	CORRESPONDS TO:	Ref document number: 69736023 Kind code of Ref document: P Date of Ref document: 20060706 Country of Ref document: DE
EP1395092 A2	20061229		+ET	FR: TRANSLATION FILED	
EP1395092 A2	20070509	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20070301
EP1395092 A2	20160208	LSFE	REG	REFERENCE TO A NATIONAL CODE	Year of fee payment: 20 Ref country code: FR Ref legal event code: PLFP Country of Ref document: FR
EP1395092 A2	20160429	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 20 Payment date: 20160322 Country of Ref document: DE
EP1395092 A2	20160531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 20 Payment date: 20160208 Country of Ref document: FR
EP1395092 A2	20160531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 20 Payment date: 20160210 Country of Ref document: NL
EP1395092 A2	20160531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL	Year of fee payment: 20 Payment date: 20160323

				OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Country of Ref document: GB
EP1395092 A2	20170327	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 69736023 Ref country code: DE Ref legal event code: R071 Country of Ref document: DE
EP1395092 A2	20170329		REG	REFERENCE TO A NATIONAL CODE	Ref country code: NL Ref legal event code: MK Effective date: 20170326
EP1395092 A2	20170419	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: PE20 Expiry date: 20170326
EP1395092 A2	20170531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20170326 NotificationOfLapse: LAPSE BECAUSE OF EXPIRATION OF PROTECTION Country of Ref document: GB
EP1395092 B1	20060531	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1395092 B1	20170326	PEXP		Calculated Patent Term Expiry	
EP1395092 B1	20170327	PEXP		Calculated Patent Term Expiry	
JP2001502448 T2	20010220	LSPB	+	published / reissued	
JP2001502448 T2	20040129	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20040109
JP2001502448 T2	20040129	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	Text: JAPANESE INTERMEDIATE CODE: A621 Effective date: 20040109
JP2001502448 T2	20050301	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2001502448 T2	20050308	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	Text: JAPANESE INTERMEDIATE CODE: A01 Effective date: 20050308
JP2001502448 T2	20050331	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	Effective date: 20050323 Text: JAPANESE INTERMEDIATE CODE: A61
JP2004006360 A2	20040108	LSPB	+	published / reissued	
JP3662258 B2	20050310	LSGT	+A01	特許査定書	
JP3662258 B2	20050329	LSFE	R100	特許料納付書	
JP3662258 B2	20050401	LSGT	+R150	特許証	
JP3662258 B2	20050622	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3662258 B2	20080327	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 3
JP3662258 B2	20080327	LSFE	R20	特許料納付書	
JP3662258 B2	20080401	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 4
JP3662258 B2	20080401	LSFE	+R250	年金領収書, 年金領収書(分納)	
JP3662258 B2	20090402	LSFE	R20	特許料納付書	
JP3662258 B2	20090407	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 5
JP3662258 B2	20090407	LSFE	+R250	年金領収書, 年金領収書(分納)	
JP3662258 B2	20100325	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 5

JP3662258 B2	20100325	LSFE	R20	特許料納付書	
JP3662258 B2	20100406	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 6
JP3662258 B2	20100406	LSFE	+R250	年金領収書, 年金領収書 (分納)	
JP3662258 B2	20110324	LSFE	R20	特許料納付書	
JP3662258 B2	20110329	LSFE	+R250	年金領収書, 年金領収書 (分納)	
JP3662258 B2	20120405	LSFE	R20	特許料納付書	
JP3662258 B2	20120410	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 8
JP3662258 B2	20120410	LSFE	+R250	年金領収書, 年金領収書 (分納)	
JP3662258 B2	20130404	LSFE	R20	特許料納付書	
JP3662258 B2	20130409	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 9
JP3662258 B2	20130409	LSFE	+R250	年金領収書, 年金領収書 (分納)	
JP3662258 B2	20140403	LSFE	R20	特許料納付書	
JP3662258 B2	20140408	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP3662258 B2	20140408	LSFE	+R250	年金領収書, 年金領収書 (分納)	
JP3662258 B2	20150402	LSFE	R20	特許料納付書	
JP3662258 B2	20150407	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP3662258 B2	20150407	LSFE	+R250	年金領収書, 年金領収書 (分納)	
JP3662258 B2	20160407	LSFE	R20	特許料納付書	
JP3662258 B2	20160412	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP3662258 B2	20160412	LSFE	+R250	年金領収書, 年金領収書 (分納)	
JP3662258 B2	20170123	PEXP		Calculated Patent Term Expiry	
JP3662258 B2	20170123	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP3951051 B2	20060405	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Effective date: 20060404 Text: JAPANESE INTERMEDIATE CODE: A131
JP3951051 B2	20060603	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20060602
JP3951051 B2	20070117	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Effective date: 20070116 Text: JAPANESE INTERMEDIATE CODE: A131
JP3951051 B2	20070228	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20070227
JP3951051 B2	20070320	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP3951051 B2	20070328	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	Text: JAPANESE INTERMEDIATE CODE: A01 Effective date: 20070327
JP3951051 B2	20070329	LSGT	+A01	特許査定書	
JP3951051 B2	20070329	LSFE	R1001	特許料納付書 (包括納付)	
JP3951051 B2	20070404		RD04	NOTIFICATION OF RESIGNATION OF POWER OF ATTORNEY	Text: JAPANESE INTERMEDIATE CODE: A7424 Effective date: 20070403
JP3951051 B2	20070511	LSGT	+R150	CERTIFICATE OF PATENT OR	Text: JAPANESE INTERMEDIATE CODE: R150

				REGISTRATION OF UTILITY MODEL	
JP3951051 B2	20070511	LSGT	+R150	特許証	
JP3951051 B2	20070801	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3951051 B2	20100401	LSFE	R20	特許料納付書	
JP3951051 B2	20100406	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 4
JP3951051 B2	20100406	LSFE	R2501	年金領収書 (一括)	
JP3951051 B2	20110331	LSFE	R20	特許料納付書	
JP3951051 B2	20110426	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 5
JP3951051 B2	20110426	LSFE	R2501	年金領収書 (一括)	
JP3951051 B2	20120405	LSFE	R20	特許料納付書	
JP3951051 B2	20120410	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 6
JP3951051 B2	20120410	LSFE	R2501	年金領収書 (一括)	
JP3951051 B2	20130404	LSFE	R20	特許料納付書	
JP3951051 B2	20130409	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 7
JP3951051 B2	20130409	LSFE	R2501	年金領収書 (一括)	
JP3951051 B2	20140403	LSFE	R20	特許料納付書	
JP3951051 B2	20140408	LSFE	R2501	年金領収書 (一括)	
JP3951051 B2	20150402	LSFE	R20	特許料納付書	
JP3951051 B2	20160406		S531	WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF DOMICILE	Text: JAPANESE INTERMEDIATE CODE: R313531
JP3951051 B2	20160414	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	Text: JAPANESE INTERMEDIATE CODE: R350
JP3951051 B2	20170327	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP3951051 B2	20230520	PEXP		Calculated Patent Term Expiry	
JP4003234 B1	20070802	LSGT	+A01	特許査定書	
JP4003234 B1	20070802	LSFE	R1001	特許料納付書 (包括納付)	
JP4003234 B1	20070831	LSGT	+R150	特許証	
JP4003234 B1	20071107	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4003234 B1	20100805	LSFE	R20	特許料納付書	
JP4003234 B1	20100810	LSFE	R2501	年金領収書 (一括)	
JP4003234 B1	20110707	LSFE	R20	特許料納付書	
JP4003234 B1	20110712	LSFE	R2501	年金領収書 (一括)	
JP4003234 B1	20120705	LSFE	R20	特許料納付書	
JP4003234 B1	20120710	LSFE	R2501	年金領収書 (一括)	
JP4003234 B1	20130704	LSFE	R20	特許料納付書	
JP4003234 B1	20130709	LSFE	R2501	年金領収書 (一括)	
JP4003234 B1	20140626	LSFE	R20	特許料納付書	
JP4003234 B1	20140701	LSFE	R2501	年金領収書 (一括)	
JP4003234 B1	20150702	LSFE	R20	特許料納付書	
JP4003234 B1	20150707	LSFE	R2501	年金領収書 (一括)	

JP4003234 B1	20160415	LSRE	R313531	表示変更登録申請書 (住所)	
JP4003234 B1	20160425	LSAS	R350	移転登録済通知書	
JP4003234 B1	20160630	LSFE	R20	特許料納付書	
JP4003234 B1	20160705	LSFE	R2501	年金領収書 (一括)	
JP4003234 B1	20170327	PEXP		Calculated Patent Term Expiry	
JP4003234 B2	20060411	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20060411
JP4003234 B2	20060706	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20060612
JP4003234 B2	20070116	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20070116
JP4003234 B2	20070322	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20070227
JP4003234 B2	20070720	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4003234 B2	20070731	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	Text: JAPANESE INTERMEDIATE CODE: A01 Effective date: 20070731
JP4003234 B2	20070831	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	Text: JAPANESE INTERMEDIATE CODE: R150
JP4003234 B2	20070903	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 3
JP4003234 B2	20071107	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4003234 B2	20100805	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 3
JP4003234 B2	20100810	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 4
JP4003234 B2	20110712	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 5
JP4003234 B2	20120710	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 6
JP4003234 B2	20160415		S531	WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF DOMICILE	Text: JAPANESE INTERMEDIATE CODE: R313531
JP4003234 B2	20160425	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	Text: JAPANESE INTERMEDIATE CODE: R350
JP4003234 B2	20170327	PEXP		Calculated Patent Term Expiry	
JP4003234 B2	20170327	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
KR100464101 B1	20020122	LSES	A201	REQUEST FOR EXAMINATION	
KR100464101 B1	20040528	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR100464101 B1	20041116	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	

KR100464101 B1	20041220	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100464101 B1	20050617	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100464101 B1	20121129	LSFE	FPAY	ANNUAL FEE PAYMENT	Payment date: 20121129 Year of fee payment: 9
KR100464101 B1	20131129	LSFE	FPAY	ANNUAL FEE PAYMENT	Year of fee payment: 10 Payment date: 20131129
KR100464101 B1	20141201	LSFE	FPAY	ANNUAL FEE PAYMENT	Year of fee payment: 11 Payment date: 20141201
KR100464101 B1	20151118	LSFE	FPAY	ANNUAL FEE PAYMENT	Year of fee payment: 12 Payment date: 20151118
KR100464101 B1	20161123	LSFE	FPAY	ANNUAL FEE PAYMENT	Payment date: 20161123 Year of fee payment: 13
KR100464101 B1	20170124	LSLE	-EXPY	EXPIRATION OF TERM	
KR100464101 B1	20180715	PEXP		Calculated Patent Term Expiry	
KR20000064518 A	20001106	LSPB	+	published / reissued	
US2001005172 AA	20010628	LSPB	+	published / reissued	
US2001005172 AA	20040122	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2004080715 AA	20040429	LSPB	+	published / reissued	
US5794068 A	19960318	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BARTKOWIAK, JOHN G.;ASGRAR, SAF;IRETON, MARK;REEL/FRAME:007930/0251;SIGNING DATES FROM 19960314 TO 19960318 Owner: ADVANCED MICRO DEVICES, INC., CALIFORNIA
US5794068 A	19980806	LSGT	PAT1	Patented Case	
US5794068 A	19980806	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US5794068 A	19980811	LSGT	+	granted / extensions (spc, cpc, pte)	
US5794068 A	20011228	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5794068 A	20051228	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5794068 A	20100122	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US5794068 A	20160318	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US6032247 A	19971114	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: ADVANCED MICRO DEVICES, INC., CALIFORNIA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ASGHAR, SAF;MILLS, ANDREW;REEL/FRAME:008882/0699;SIGNING DATES FROM 19971029 TO 19971109
US6032247 A	20000217	LSGT	PAT1	Patented Case	
US6032247 A	20000217	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US6032247 A	20000229	LSGT	+	granted / extensions (spc, cpc, pte)	
US6032247 A	20001114	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:LEGERITY, INC.;REEL/FRAME:011601/0539 Owner: MORGAN STANLEY & CO. INCORPORATED, NEW YORK Effective date: 20000804
US6032247 A	20010423	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: LEGERITY, INC., TEXAS Effective date: 20000731 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:ADVANCED MICRO DEVICES, INC.;REEL/FRAME:011700/0686
US6032247 A	20021021	LSAS	AS	ASSIGNMENT	Owner: MORGAN STANLEY & CO. INCORPORATED, AS FACILITY COL OldParty: SECURITY AGREEMENT;ASSIGNORS:LEGERITY, INC.;LEGERITY HOLDINGS, INC.;LEGERITY

					INTERNATIONAL, INC.;REEL/FRAME:013372/0063 Effective date: 20020930 PartyType: owner
US6032247 A	20030627	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US6032247 A	20050801	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:LEGERITY, INC.;REEL/FRAME:016323/0757 PartyType: owner Effective date: 20031222 Owner: KMB CAPITAL FUND LLC, CALIFORNIA
US6032247 A	20060427	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:LEGERITY, INC.;REEL/FRAME:017537/0307 PartyType: owner Effective date: 20060324 Owner: SAXON IP ASSETS LLC, TEXAS
US6032247 A	20070621	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US6032247 A	20101001	LSAS	AS	ASSIGNMENT	Owner: LEGERITY, INC., TEXAS OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS COLLATERAL AGENT;REEL/FRAME:025077/0178 PartyType: owner Effective date: 20040220
US6032247 A	20101001	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS COLLATERAL AGENT;REEL/FRAME:025077/0178 Owner: LEGERITY HOLDINGS, INC., TEXAS Effective date: 20040220
US6032247 A	20101001	LSAS	AS	ASSIGNMENT	OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS COLLATERAL AGENT;REEL/FRAME:025077/0178 PartyType: owner Effective date: 20040220 Owner: LEGERITY INTERNATIONAL, INC., TEXAS
US6032247 A	20101207	LSAS	AS	ASSIGNMENT	Owner: INTELLECTUAL VENTURES I LLC, DELAWARE Effective date: 20101207 OldParty: MERGER;ASSIGNOR:KMB CAPITAL FUND LLC;REEL/FRAME:025467/0123 PartyType: owner
US6032247 A	20101207	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS FACILITY COLLATERAL AGENT;REEL/FRAME:025461/0704 Owner: LEGERITY, INC., TEXAS Effective date: 20040213
US6032247 A	20101207	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20040213 OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS FACILITY COLLATERAL AGENT;REEL/FRAME:025461/0704 Owner: LEGERITY HOLDINGS, INC., TEXAS
US6032247 A	20101207	LSAS	AS	ASSIGNMENT	OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS FACILITY COLLATERAL AGENT;REEL/FRAME:025461/0704 Effective date: 20040213 Owner: LEGERITY INTERNATIONAL, INC., TEXAS PartyType: owner
US6032247 A	20110721	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US6032247 A	20171114	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US6085314 A	19971114	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: ADVANCED MICRO DEVICES, INC., CALIFORNIA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ASGHAR, SAF;MILLS, ANDREW;REEL/FRAME:008892/0450;SIGNING DATES FROM 19971029 TO 19971109
US6085314 A	20000704	LSGT	+	granted / extensions (spc, cpc, pte)	
US6085314 A	20001114	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:LEGERITY, INC.;REEL/FRAME:011601/0539 Owner: MORGAN STANLEY & CO. INCORPORATED, NEW YORK Effective date: 20000804
US6085314 A	20010423	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS

					INTEREST;ASSIGNOR:ADVANCED MICRO DEVICES, INC.;REEL/FRAME:011700/0686 Effective date: 20000731 Owner: LEGERITY, INC., TEXAS PartyType: owner
US6085314 A	20021021	LSAS	AS	ASSIGNMENT	OldParty: SECURITY AGREEMENT;ASSIGNORS:LEGERITY, INC.;LEGERITY HOLDINGS, INC.;LEGERITY INTERNATIONAL, INC.;REEL/FRAME:013372/0063 Effective date: 20020930 Owner: MORGAN STANLEY & CO. INCORPORATED, AS FACILITY COL PartyType: owner
US6085314 A	20031229	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US6085314 A	20050801	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:LEGERITY, INC.;REEL/FRAME:016323/0757 Owner: KMB CAPITAL FUND LLC, CALIFORNIA Effective date: 20031222
US6085314 A	20071219	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US6085314 A	20101001	LSAS	AS	ASSIGNMENT	Owner: LEGERITY, INC., TEXAS OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS COLLATERAL AGENT;REEL/FRAME:025077/0178 PartyType: owner Effective date: 20040220
US6085314 A	20101001	LSAS	AS	ASSIGNMENT	OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS COLLATERAL AGENT;REEL/FRAME:025077/0178 Effective date: 20040220 Owner: LEGERITY HOLDINGS, INC., TEXAS PartyType: owner
US6085314 A	20101001	LSAS	AS	ASSIGNMENT	Effective date: 20040220 PartyType: owner OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS COLLATERAL AGENT;REEL/FRAME:025077/0178 Owner: LEGERITY INTERNATIONAL, INC., TEXAS
US6085314 A	20101207	LSAS	AS	ASSIGNMENT	OldParty: MERGER;ASSIGNOR:KMB CAPITAL FUND LLC;REEL/FRAME:025467/0123 Effective date: 20101207 PartyType: owner Owner: INTELLECTUAL VENTURES I LLC, DELAWARE
US6085314 A	20101207	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS FACILITY COLLATERAL AGENT;REEL/FRAME:025461/0704 Owner: LEGERITY, INC., TEXAS Effective date: 20040213
US6085314 A	20101207	LSAS	AS	ASSIGNMENT	Owner: LEGERITY HOLDINGS, INC., TEXAS PartyType: owner Effective date: 20040213 OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS FACILITY COLLATERAL AGENT;REEL/FRAME:025461/0704
US6085314 A	20101207	LSAS	AS	ASSIGNMENT	Owner: LEGERITY INTERNATIONAL, INC., TEXAS PartyType: owner OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED, AS FACILITY COLLATERAL AGENT;REEL/FRAME:025461/0704 Effective date: 20040213
US6085314 A	20120213		REMI	MAINTENANCE FEE REMINDER MAILED	
US6085314 A	20120704	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6085314 A	20120730	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6085314 A	20120730	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6085314 A	20120821	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20120704
US6085314 A	20171114	PEXP		Calculated Patent Term Expiry (a terminal disclaimer	

				has been filed)	
US6268799 BA	19971210	LSAS	AS	ASSIGNMENT	Owner: SEIKO EPSON CORPORATION, JAPAN PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MIYASHITA, KIYOSHI;SHINOHARA, KAZUTO;HABA, SHINJI;AND OTHERS;REEL/FRAME:008966/0508;SIGNING DATES FROM 19971203 TO 19971204
US6268799 BA	20010716	LSGT	PAT1	Patented Case	
US6268799 BA	20010716	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US6268799 BA	20010731	LSGT	+	granted / extensions (spc, cpc, pte)	
US6268799 BA	20050104	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US6268799 BA	20081231	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US6268799 BA	20130103	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US6268799 BA	20171210	PEXP		Calculated Patent Term Expiry	
US6690282 BB	20040122	LSGT	PAT1	Patented Case	
US6690282 BB	20040210	LSGT	+	granted / extensions (spc, cpc, pte)	
US6690282 BB	20070713	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US6690282 BB	20110713	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US6690282 BB	20150729	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US6690282 BB	20211124	PEXP		Calculated Patent Term Expiry (PTA 297 days)	
US7006004 BB	20060208	LSGT	PAT1	Patented Case	
US7006004 BB	20060228	LSGT	+	granted / extensions (spc, cpc, pte)	
US7006004 BB	20090729	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7006004 BB	20130314	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US7006004 BB	20171009	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US7006004 BB	20180326	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	Text: PATENT EXPIRED FOR FAILURE TO PAY MAINTENANCE FEES (ORIGINAL EVENT CODE: EXP.)
US7006004 BB	20180326	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7006004 BB	20180326	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7006004 BB	20180417	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20180228
US7006004 BB	20231014	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
WO9735252 A1	19970925	LSPB	+	published / reissued	
WO9735252 A1	19970925		+AK	DESIGNATED STATES	Kind code of Ref document: A1 Country of Ref document: JP KR
WO9735252 A1	19970925		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
WO9735252 A1	19971210		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO9735252 A1	19980115		DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE	

				20040101)	
WO9735252 A1	19980311	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 1997903929 Country of Ref document: EP
WO9735252 A1	19980622	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 1997 533451 Kind code of Ref document: A Country of Ref document: JP
WO9735252 A1	19980715	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 1019980705419 Country of Ref document: KR
WO9735252 A1	19990107	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 1997903929 Country of Ref document: EP
WO9735252 A1	20001106	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 1019980705419 Country of Ref document: KR
WO9735252 A1	20030910	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	Ref document number: 1997903929 Country of Ref document: EP
WO9735252 A1	20041116	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	Ref document number: 1019980705419 Country of Ref document: KR
WO9738560 A1	19971016	LSPB	+	published / reissued	
WO9738560 A1	19971016		+AK	DESIGNATED STATES	Kind code of Ref document: A1 Country of Ref document: JP US
WO9738560 A1	19971016		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
WO9738560 A1	19971210	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 08981006 Country of Ref document: US
WO9738560 A1	19980107		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO9738560 A1	19980109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 1997908535 Country of Ref document: EP
WO9738560 A1	19980223	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A Ref document number: 1998 981006 Date of Ref document: 19980223 Country of Ref document: US
WO9738560 A1	19980401	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 1997908535 Country of Ref document: EP
WO9738560 A1	20050601	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	Ref document number: 1997908535 Country of Ref document: EP
WO9926134 A1	19990527	LSPB	+	published / reissued	
WO9926134 A1	19990527		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
WO9926134 A1	19990624		DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)	
WO9926134 A1	19990728		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO9926134 A1	20000320	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 1998923500 Country of Ref document: EP

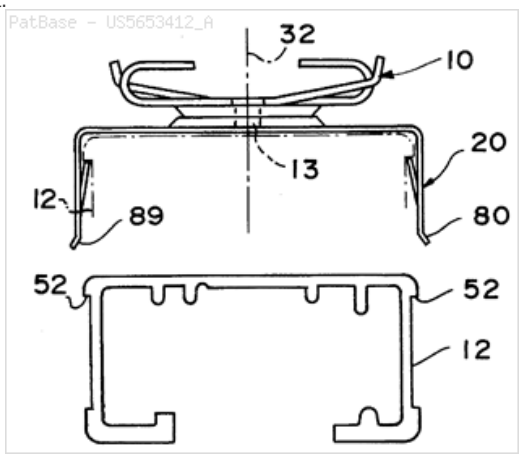
WO9926134 A1	20000920	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 1998923500 Country of Ref document: EP
WO9926134 A1	20031202	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	Ref document number: 1998923500 Country of Ref document: EP

40) Family number: 9459542 (US5653412 A)

Title: TRACK MOUNTING CLIP FOR A TRACK **LIGHTING** **SYSTEM**

Abstract: A track **lighting** **system** includes a track snap-on clip attached to a ceiling and forming a downwardly open channel into which a track member can be inserted by a snap action. The clip includes spring arms formed in opposite legs of the channel. When the track is pushed up into the channel, the spring arms are elastically displaced outwardly. When lateral shoulders of the track travel past respective spring arms, the spring arms snap inwardly to underlie the shoulders and support the track. The track snap-on clip can be mounted to the ceiling either directly by means of a fastener, or indirectly by means of another member, such as a T-bar clip or a pendant bracket.

Classifications:
International (IPC 8-9): F21V21/00 F21V21/02 F21V21/34 H02G3/08 H02G3/10
International (IPC 1-7): F21S1/04 F21V21/34
CPC: F21V21/025 F21V21/34 H02G3/105
US: 248/222.11 248/320 248/343 362/404 362/418



Family:

Publication number	Publication date	Application number	Application date
CA2161856 AA	19960515	CA19952161856	19951031
CA2161856 C	19990223	CA19952161856	19951031
US5653412 A	19970805	US19940339671	19941114

Priority:
US19940339671 19941114 CA19952161856 19951031

Probable Assignee: COOPER TECHNOLOGIES CO
Assignee(s): (std): COOPER IND INC
Assignee(s): COOPER IND ; COOPER INDUSTRIES INC ; COOPER TECHNOLOGIES CO ; MARTORANO SAM ; VAFAI JAMES
Inventor(s): (std): MARTORANO SAM ; VAFAI JAMES
Agent(s): SMART AND BIGGAR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2161856 AA	19951031	LSES	+EEER	EXAMINATION REQUEST	
CA2161856 AA	19960515	LSPB	+	published / reissued	
CA2161856 C	19990223	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2161856 C	20071031	LSLE	-MKLA	LAPSED	
CA2161856 C	20151031	PEXP		Calculated Patent Term Expiry	
US5653412 A	19941114	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MARTORANO, SAM;VAFAI, JAMES;REEL/FRAME:007196/0138 Effective date: 19941107 Owner: COOPER INDUSTRIES, INC., TEXAS PartyType: owner
US5653412 A	19970724	LSGT	PAT1	Patented Case	
US5653412 A	19970724	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US5653412 A	19970805	LSGT	+	granted / extensions (spc, cpc, pte)	
US5653412 A	19980122	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:COOPER

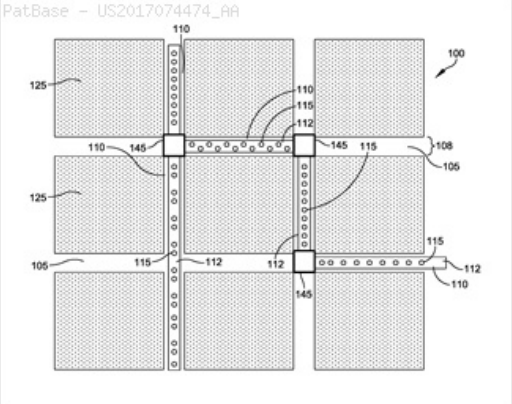
					INDUSTRIES, INC.;REEL/FRAME:008920/0255 Effective date: 19980101 PartyType: owner Owner: COOPER TECHNOLOGIES COMPANY, TEXAS
US5653412 A	20010202	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5653412 A	20041203	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5653412 A	20081229	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US5653412 A	20141114	PEXP		Calculated Patent Term Expiry	

41) Family number: 60748557 (US2017074474 AA)

Title: LED **LIGHTING** **SYSTEMS** AND METHODS OF INSTALLATION

Abstract: A **lighting** **system** for a grid ceiling that includes a plurality of T-bar sections interconnected at an intersection region of the grid ceiling, and includes a **lighting** module and a connection module. The **lighting** module and connection module are constructed and arranged to be disposed proximate a first T-bar section of the plurality of T-bar sections and the intersection region of the grid ceiling, respectively. The **lighting** module has a first end and a second end and includes at least one low voltage **light** source electrically connected to a conductive surface of a substrate and a connector disposed on the conductive surface of the substrate proximate the first end. The connection module includes a substrate and a connector disposed on a conductive surface of the substrate, and is configured to electrically and mechanically couple to the second end of the **lighting** module to transfer power to or from the **lighting** module.

Classifications:
International (IPC 8-9): E04B9/00 E04B9/06 E04B9/18 F21S2/00 F21S4/00 F21S4/28 F21S8/04 F21V15/015 F21V17/16 F21V19/00 F21V23/02 F21V23/06 F21V3/00 F21Y115/10
CPC: E04B2009/062 E04B9/006 E04B9/04 E04B9/067 E04B9/18 E04B9/183 E04B9/241 F21S2/005 F21S4/28 F21S8/04 F21V15/015 F21V17/16 F21V19/003 F21V23/02 F21V23/06 F21V3/00 F21Y2115/10
US: 1/1 362/148



Family:

Publication number	Publication date	Application number	Application date
CA2947996 AA	20161103	CA20152947996	20150508
US10371332 BB	20190806	US20160342522	20161103
US2017074474 AA	20170316	US20160342522	20161103
WO15172075 A1	20151112	WO2015US29976	20150508

Priority:
US20140990547P 20140508 WO2015US29976 20150508 US20160342522 20161103

Probable Assignee: BAILEY GEORGE R
Assignee(s): (std): BAILEY GEORGE R
Inventor(s): (std): BAILEY GEORGE R
Agent(s): LANDO AND ANASTASI LLP; RIDOUT AND MAYBEE LLP; ROUSH CAROLINE 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 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
CA2947996 AA	20161103	LSPB	+	published / reissued	
US10371332 BB	20190806	LSGT	+	granted / extensions (spc, cpc, pte)	
US10371332 BB	20370307	PEXP		Calculated Patent Term Expiry (PTA 124 days)	
US2017074474 AA	20161229		RFE1	Docketed New Case - Ready for Examination	
US2017074474 AA	20170316	LSPB	+	published / reissued	
US2017074474 AA	20180803	LSES	NFA2	Non Final Action Counted, Not Yet Mailed	
US2017074474 AA	20180807	LSES	NFA1	Non Final Action Mailed	
US2017074474 AA	20190223		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017074474 AA	20190327	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017074474 AA	20190327		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2017074474 AA	20190717	LSGT	PAT1	Patented Case	
US2017074474 AA	20190717	LSGT	STCF	INFORMATION ON	Text: PATENTED CASE

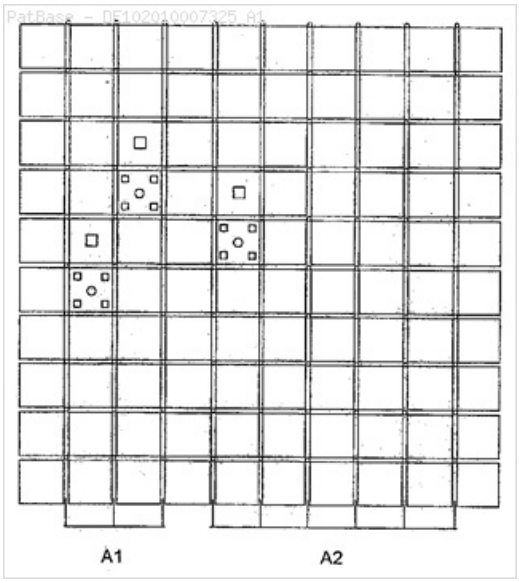
				STATUS: PATENT GRANT	
WO15172075 A1	20151112	LSPB	+	published / reissued	
WO15172075 A1	20151230		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 15788752 Country of Ref document: EP
WO15172075 A1	20161103	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2947996 Country of Ref document: CA
WO15172075 A1	20161108	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO15172075 A1	20170531	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 15788752 Country of Ref document: EP

42) Family number: 49391026 (DE102010007325 A1)

Title: **LIGHT** **SYSTEM** HAS **LIGHT** PLATE ELEMENT, DEVICE FOR CONNECTING MULTIPLE **LIGHT** PLATE ELEMENTS FOR PRESENTATION OF ELECTRICAL POWER AND INFORMATION SIGNALS AND COATING PLANE

Abstract: The **light** **system** has a **light** plate element, a device for connecting multiple **light** plate elements for presentation of electrical power and information signals and a coating plane. The **light** plate element has a metal plate with a **light** channel, a non electrical conductive plate or foil. A core to multi-layer printed circuit board is provided with an electrical or electronic component and a **light** body, where an electrical connection is provided. Two or multi-guard plane **system** are made of two vertical or horizontal planes conductive materials.

Classifications:
International (IPC 8-9): F21S10/00 F21S2/00 F21S8/02 F21V23/00 F21V33/00
CPC: E04F2290/026 F21S2/005 F21V23/006 F21V33/006 F21Y2105/00 F21Y2113/13 F21Y2115/10 F21Y2115/15 G02B6/0005 G09F13/04



Family:

Publication number	Publication date	Application number	Application date
DE102010007325 A1	20110811	DE201010007325	20100208

Priority:
DE201010007325 20100208

Probable Assignee: PAGENHARDT LUTZ
Assignee(s): (std): PAGENHARDT LUTZ
Assignee(s): PAGENHARDT
Inventor(s): ERFINDER WIRD SPAETER GENANNT WERDEN

Legal status (INPADOC)

View legal status timeline

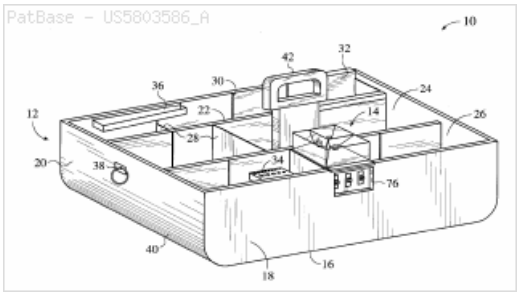
Patent	Date recorded	Event group	Code	Event	Details
DE102010007325 A1	20110811	LSPB	+	published / reissued	
DE102010007325 A1	20130528	LSRV	-R001	REFUSAL DECISION IN PRELIMINARY PROCEEDINGS	
DE102010007325 A1	20131107	LSRV	-R003	REFUSAL DECISION NOW FINAL	Effective date: 20130809

43) Family number: 11127607 (US5803586 A)

Title: Illuminated tool caddy

Abstract: An illuminated tool caddy (10) is provided for the carrying of tools and parts, and for illumination of work detail related thereto. The primary components of the illuminated tool caddy (10) are a tool carrier (12) and a lamp (14). The lamp (14) is situated within the tool carrier (12) and is of a height such that a bulb housing (44) extends above the side walls (18) of the tool carrier (12). Within the bulb housing (44) are five individual **lighting** compartments (48), each of which contains a **light** bulb (54). Reflector facets (56) within each **lighting** compartment (48) assist in reflecting and directing the **light** from the **light** bulbs (54) to give the lamp (14) a hands-free, multidirectional **lighting** ability. The lamp (14) is capable of simultaneously casting **light** in any direction, including not only to any side and upwardly, but to the ground and into the interior of the tool carrier (12) as well. The lamp (14) is also removable from the tool carrier for hand-held applications where that is desired. In the preferred embodiment, the tool carrier (12) includes end walls (20) with arcuately fashioned lower portions (40) which provide that the illuminated tool caddy (10) may be dragged or pulled along the ground surface within crawl spaces when it otherwise may not be lifted and carried.

Classifications:
International (IPC 1-7): F21V33/00
CPC: B25H3/02 B25H3/022 B25H3/06 F21L15/02 F21V33/0084
US: 206/372 362/154 362/234 362/240 362/241 362/247



Family:

Publication number	Publication date	Application number	Application date
US5803586 A	19980908	US19960600681	19960213

Priority:

US19960600681 19960213

Probable Assignee: RODRIGUEZ FILIBERTO

Assignee(s): RODRIGUEZ FILIBERTO ; RUIZ CARLOS A ; VELEZ SALVADOR A

Inventor(s): (std): RODRIGUEZ FILIBERTO ; RUIZ CARLOS A ; VELEZ SALVADOR A

Legal status (INPADOC)

View legal status timeline

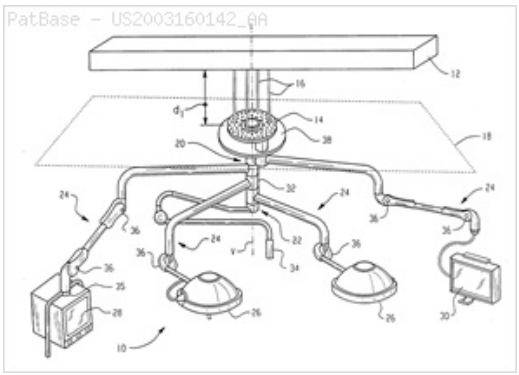
Patent	Date recorded	Event group	Code	Event	Details
US5803586 A	19980908	LSGT	+	granted / extensions (spc, cpc, pte)	
US5803586 A	20020301	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5803586 A	20060307	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5803586 A	20100412		REMI	MAINTENANCE FEE REMINDER MAILED	
US5803586 A	20100908	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5803586 A	20101004	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5803586 A	20101004	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US5803586 A	20101026	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20100908
US5803586 A	20160213	PEXP		Calculated Patent Term Expiry	

44) Family number: 29018745 (US2003160142 AA)

Title: SURGICAL SUSPENSION **SYSTEM**

Abstract: A suspension **system** is disclosed for suspending lightheads, monitors, cameras, or other medical apparatus from an overhead **structure** at a selectable height. A drop tube has a selected portion thereof surroundingly encompassed by a receiving element that has a variable inside diameter substantially conforming to a frustum of a cone. A mounting plate rigidly connects with the overhead **structure** and with the receiving element. The mounting plate has an opening through which an end of the drop tube passes. A wedge-shaped element has a variable outer diameter substantially conforming to a frustum of a cone. The wedge-shaped element compressively inserts into the receiving element and surroundingly encompasses the selected portion of the drop tube to effectuate a compressive clamping of the selected portion of the drop tube inside the receiving element.

Classifications:
International (IPC 8-9): A61B19/00 E04B9/00 F16M11/00 F16M11/02 F16M11/04 F16M11/06 F21S F21S8/00 F21V F21V21/00 F21V21/02 F21V21/03 F21V21/26 F21V8/00
International (IPC 1-7): A47H1/10 A61B19/00 E04B9/00 F16F9/34 F16M011/06 F16M11/06 F21S8/00 F21V021/03 F21V21/03
CPC: A61B90/05 E04B9/006 F16M11/08 F16M11/10 F16M11/2064 F16M11/24 F16M13/02 F16M13/027 F16M2200/065 F21V21/03 F21W2131/205
US: 248/317 248/317P 248/326 248/326P 248/327 248/327S 248/333 248/333S 248/342 248/342S



Family:

Publication number	Publication date	Application number	Application date
AT305114 E	20051015	AT20030711299T	20030225
AU2003213617 AA	20030909	AU20030213617	20030225
AU2003213617 BB	20050915	AU20030213617	20030225
CA2475262 AA	20040805	CA20032475262	20030225
CA2475262 C	20070116	CA20032475262	20030225
CN1639506 A	20050713	CN20038004480	20030225
DE60301665 D1	20060202	DE20036001665T	20030225
DE60301665 T2	20060622	DE20036001665T	20030225
DK1478876 T3	20060213	DK20030711299T	20030225
EP1478876 A1	20041124	EP20030711299	20030225
EP1478876 B1	20050921	EP20030711299	20030225
ES2250878 T3	20060416	ES20030711299T	20030225
HK1077620 A1	20060217	HK20050112058	20051228
HK1077620 A3	20060217	HK20050112058	20051228
IN00436MN2004 A	20050218	IN2004MN00436	20040809
IN208329 B	20081024	IN2004MN00436	20040809
JP2005518262 T2	20050623	JP20030571645T	20030225
JP4113974 B2	20080709	JP20030571645T	20030225
KR100602511 B1	20060719	KR20047013286	20030225
KR20040083460 A	20041001	KR20047013286	20030225
SI1478876 T1	20060630	SI20030030128T	20030225
US2003160142 AA	20030828	US20030373918	20030225
US2005242261 AA	20051103	US20050054170	20050209
WO03072996 A1	20030904	WO2003US06110	20030225

Priority:

US20020359518P 20020225 US20020359518 20020225 WO2003US06110 20030225
US20030373918 20030225 EP20030711299 20030225 US20050054170 20050209

Probable Assignee: AMERICAN STERILIZER CO

Assignee(s): (std): ONDAL INDUSTRIETECHNIK GMBH ; STERIS INC ; STERIS INC AND ONDAL INDUSTRIETE

Assignee(s): AMERICAN STERILIZER CO ; BRAHLER MANFRED ; HLEBOVY JAMES C ; STEGER KLAUS ; STERIS INC AND ONDAL INDUSTRIETECHNIK GMBH ; STERIS INC TEMECULA ; オンダール インドゥストリーテヒニーク ゲーエムベーハー ; ステリス インコーポレイテッド ; 斯特里斯公司 ; 斯特里斯公司 ; 昂戴尔工业技术有限责任公司 ; 昂戴爾工業技術有限責任公司 ; 스테리스 인코퍼레이티드 ; 온달 인두스트리테크니크 게엠베하

Inventor(s): (std): BRAHLER MANFRED ; HLEBOVY C ; HLEBOVY JAMES C ; KLAUS STEGER ; MANFRED BRAHLER ; STEGER KLAUS

Inventor(s): JAMES C HLEBOVY ; シュテガー クラウス ; シュテガー，クラウス ; ブラーラー マンフレッド ; ブラーラー，マンフレッド ; ヘレボヴィー ジェームス シー ; ヘレボヴィー，ジェームス シー． ; 克劳斯·施特格 ; 克勞斯 施特格 ; 曼弗雷德·布雷勒 ; 曼弗雷德 布雷勒 ; 詹姆士 C 赫列博維 ; 詹姆士·C·赫列博维 ; 르보비제임스씨 ; 브랄러만프레트 ; 스테거클라우스

Agent(s): HASTINGS AND CO; PIASETZKI AND NENNIGER LLP; PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; THOMAS E KOCOVSKY ESQ FAY SHARPE FAGAN MINNICH AND MCKEE LLP; 安村 高明; 山本 秀策; 森下 夏樹; 박종혁; 정진상

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

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details

AT305114 E	20051015	LSGT	+	granted / extensions (spc, cpc, pte)	
AT305114 E	20061015	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	Ref document number: 1478876 Country of Ref document: EP
AT305114 E	20081115	LSLE	-REN	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE	
AT305114 E	20230225	PEXP		Calculated Patent Term Expiry	
AU2003213617 AA	20030909	LSPB	+	published / reissued	
AU2003213617 BB	20050915	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2003213617 BB	20060119	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2003213617 BB	20070118	LSAS	PC	ASSIGNMENT REGISTERED	Owner: STERIS INC. PartyType: owner OldParty: FORMER OWNER WAS: ONDAL INDUSTRIETECHNIK GMBH; STERIS INC.
AU2003213617 BB	20080207	LSAS	PC	ASSIGNMENT REGISTERED	PartyType: owner Owner: AMERICAN STERILIZER COMPANY OldParty: FORMER OWNER WAS: STERIS INC.
AU2003213617 BB	20140918	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2003213617 BB	20230225	PEXP		Calculated Patent Term Expiry	
CA2475262 AA	20040805	LSPB	+	published / reissued	
CA2475262 AA	20040805	LSES	+EEER	EXAMINATION REQUEST	
CA2475262 C	20070116	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2475262 C	20150408	LSLE	-MKLA	LAPSED	Effective date: 20150225
CA2475262 C	20230225	PEXP		Calculated Patent Term Expiry	
CN1639506 A	20050713	LSPB	+	published / reissued	
CN1639506 A	20050713	LSPB	+C06	PUBLICATION	
CN1639506 A	20050907		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN1639506 A	20060217		REG	REFERENCE TO A NATIONAL CODE	Ref country code: HK Ref legal event code: DE Ref document number: 1077620 Country of Ref document: HK
CN1639506 A	20070314	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	Owner: STERIS INC. OldParty: FORMER OWNER: STERIS INC.; APPLICANT Effective date: 20070216 PartyType: owner
CN1639506 A	20070314	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
CN1639506 A	20091007	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
CN1639506 A	20111007		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: WD Ref document number: 1077620 Ref country code: HK Country of Ref document: HK
DE60301665 D1	20061012	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60301665 D1	20071129		8328	CHANGE IN THE PERSON/NAME/ADDRESS OF THE AGENT	Representative: EFFERT UND KOLLEGEN, 12487 BERLIN PartyType: representative
DE60301665 D1	20080827	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	Owner: ONDAL Industrietechnik GmbH, 36088 Hünfeld, DE OldParty: ONDAL Industrietechnik GmbH, 36088 Hünfeld, DE OldParty: Steris Inc., Temecula, Calif., US PartyType: Owner Owner: American Sterilizer Co.,

					Mentor, Ohio, US
DE60301665 D1	20081030	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	Owner: AMERICAN STERILIZER CO., MENTOR, OHIO, US PartyType: owner
DE60301665 D1	20081030	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	Owner: ONDAL INDUSTRIETECHNIK GMBH, 36088 HUENFELD, DE PartyType: owner
DE60301665 D1	20100408		8328	CHANGE IN THE PERSON/NAME/ADDRESS OF THE AGENT	PartyType: representative Representative: WABLAT-LANGE-KARTHAUS, 14129 BERLIN
DE60301665 T2	20060622	LSGT	+	granted / extensions (spc, cpc, pte)	
DE60301665 T2	20061012	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60301665 T2	20071129		8328	CHANGE IN THE PERSON/NAME/ADDRESS OF THE AGENT	Representative: EFFERT UND KOLLEGEN, 12487 BERLIN PartyType: representative
DE60301665 T2	20081030	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	PartyType: owner Owner: AMERICAN STERILIZER CO., MENTOR, OHIO, US
DE60301665 T2	20081030	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	Owner: ONDAL INDUSTRIETECHNIK GMBH, 36088 HUENFELD, DE PartyType: owner
DE60301665 T2	20100408		8328	CHANGE IN THE PERSON/NAME/ADDRESS OF THE AGENT	Representative: WABLAT-LANGE-KARTHAUS, 14129 BERLIN PartyType: representative
DE60301665 T2	20230225	PEXP		Calculated Patent Term Expiry	
DK1478876 T3	20060213	LSGT	+	granted / extensions (spc, cpc, pte)	
DK1478876 T3	20230225	PEXP		Calculated Patent Term Expiry	
EP1478876 A1	20041124	LSPB	+	published / reissued	
EP1478876 A1	20041124	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20040824
EP1478876 A1	20041124		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT SE SI SK TR
EP1478876 A1	20041124		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL LT LV MK RO
EP1478876 A1	20080530	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20070228 Year of fee payment: 5 Country of Ref document: GR
EP1478876 B1	20050921	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1478876 B1	20050921		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT SE SI SK TR
EP1478876 B1	20050921	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: GB
EP1478876 B1	20050930	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: EP Ref country code: CH
EP1478876 B1	20051019	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: IE
EP1478876 B1	20051027		REF	CORRESPONDS TO:	Kind code of Ref document: P Ref document number: 60301665 Date of Ref document: 20051027 Country of Ref document: DE
EP1478876 B1	20060110		REG	REFERENCE TO A NATIONAL CODE	Ref country code: SE Ref legal event code: TRGR
EP1478876 B1	20060202		REF	CORRESPONDS TO:	Kind code of Ref document: P Ref document number: 60301665 Date of Ref document: 20060202 Country of Ref document: DE
EP1478876 B1	20060213		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: T3 Ref country code: DK
EP1478876 B1	20060224	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: EP Ref country code: GR Ref document number: 20050403848 Country of Ref document: GR
EP1478876 B1	20060331		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: NV Representative: AMMANN

					PATENTANWAELTE AG BERN PartyType: representative Ref country code: CH
EP1478876 B1	20060416	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 2250878 Kind code of Ref document: T3 Ref legal event code: FG2A Ref country code: ES Country of Ref document: ES
EP1478876 B1	20060417		REG	REFERENCE TO A NATIONAL CODE	Effective date: 20051220 Ref document number: E000299 Ref legal event code: FG4A Ref country code: EE Country of Ref document: EE
EP1478876 B1	20060529	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref document number: E000288 Ref country code: HU Ref legal event code: AG4A Country of Ref document: HU
EP1478876 B1	20060616		+ET	FR: TRANSLATION FILED	
EP1478876 B1	20060830	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20060622
EP1478876 B1	20070201	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070201 Country of Ref document: AT
EP1478876 B1	20070201	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20070201 Year of fee payment: 5 Country of Ref document: EE
EP1478876 B1	20070201	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20070201 Year of fee payment: 5 Country of Ref document: MC
EP1478876 B1	20070206	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070206 Country of Ref document: SI
EP1478876 B1	20070207	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070207 Country of Ref document: PT
EP1478876 B1	20070209	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070209 Country of Ref document: CZ
EP1478876 B1	20070212	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20070212 Year of fee payment: 5 Country of Ref document: CY
EP1478876 B1	20070216	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20070216 Year of fee payment: 5 Country of Ref document: SK
EP1478876 B1	20070220	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070220 Country of Ref document: BG
EP1478876 B1	20070222	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070222 Country of Ref document: NL
EP1478876 B1	20070228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20070228 Year of fee payment: 5 Country of Ref document: DK
EP1478876 B1	20070305	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070305 Country of Ref document: LU
EP1478876 B1	20070306	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070306 Country of Ref document: HU
EP1478876 B1	20070330	LSAS	REG	REFERENCE TO A NATIONAL CODE	Owner: STERIS INC., US Ref legal event code: PC4A Ref country code: PT PartyType: owner Effective date: 20070321

EP1478876 B1	20070404		REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: 732E
EP1478876 B1	20070413		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: NV Ref country code: CH Representative: AMMANN PATENTANWAELTE AG BERN PartyType: representative
EP1478876 B1	20070413	LSAS	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH OldParty: ONDAL INDUSTRIETECHNIK GMBH#WELLASTRASSE 2-4#36085 HUNFELD (DE) $ STERIS INC.#43425 BUSINESS PARK DRIVE TEMECULA,#CALIFORNIA 92590 (US) -TRANSFER TO- STERIS INC.#43425 BUSINESS PARK DRIVE TEMECULA,#CALIFORNIA 92590 (US) $ STERIS, INC.#43425 BUSINESS PARK DRIVE#TEMECULA, CA 92590 (US) Owner: STERIS INC. Ref legal event code: PUE PartyType: owner
EP1478876 B1	20070413	LSRE	REG	REFERENCE TO A NATIONAL CODE	Text: CONCERNANT LA CESSION DU 07.03.2007 LE SEUL TITULAIRE ACTUEL EST STERIS, INC. Ref legal event code: PK Ref country code: CH
EP1478876 B1	20070416	LSAS	REG	REFERENCE TO A NATIONAL CODE	Ref document number: E000299 Ref legal event code: GB1A Ref country code: EE Country of Ref document: EE
EP1478876 B1	20070427	LSAS	REG	REFERENCE TO A NATIONAL CODE	Ref country code: FR Ref legal event code: TP
EP1478876 B1	20070430	LSAS	REG	REFERENCE TO A NATIONAL CODE	Owner: STERIS INC.; US Ref legal event code: SP73 Effective date: 20070316 PartyType: owner Ref country code: SI
EP1478876 B1	20070601	LSAS	NLS	NL: ASSIGNMENTS OF EP-PATENTS	PartyType: owner Effective date: 20070315 Owner: STERIS INC. Ref country code: EP
EP1478876 B1	20071231		BECA	BE: CHANGE OF HOLDER'S ADDRESS	Effective date: 20050921 PartyType: owner Owner: AMERICAN STERILIZER CY
EP1478876 B1	20071231		BECA	BE: CHANGE OF HOLDER'S ADDRESS	Owner: ONDAL INDUSTRIETECHNIK G.M.B.H.5960 HEISLEY ROAD, PartyType: owner Effective date: 20050921
EP1478876 B1	20071231		BECA	BE: CHANGE OF HOLDER'S ADDRESS	Owner: WELLASTRASSE 2-4, DE-36085 HUNFELD(DE) Effective date: 20050921 PartyType: owner
EP1478876 B1	20071231	LSAS	BECH	BE: CHANGE OF HOLDER	PartyType: owner Ref country code: EP Owner: AMERICAN STERILIZER CY Effective date: 20050921
EP1478876 B1	20071231	LSAS	BECH	BE: CHANGE OF HOLDER	Effective date: 20050921 PartyType: owner Owner: ONDAL INDUSTRIETECHNIK G.M.B.H. Ref country code: EP
EP1478876 B1	20080331	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20070228 Country of Ref document: GR
EP1478876 B1	20080401	LSAS	NLS	NL: ASSIGNMENTS OF EP-PATENTS	Owner: AMERICAN STERILIZER COMPANY Ref country code: EP Effective date: 20080130 PartyType: owner
EP1478876 B1	20080415	LSAS	REG	REFERENCE TO A NATIONAL CODE	Ref country code: EE Ref document number: E000299 Ref legal event code: GB1A Country of Ref document: EE
EP1478876 B1	20080430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 6 Payment date: 20080228 Country of Ref document: CH
EP1478876 B1	20080430	LSAS	REG	REFERENCE TO A NATIONAL CODE	Ref country code: SI Owner: AMERICAN STERILIZER COMPANY; US PartyType: owner Ref legal event code: SP73

					Effective date: 20080314
EP1478876 B1	20080530	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20080228 Year of fee payment: 6 Country of Ref document: FI
EP1478876 B1	20080530	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 6 Payment date: 20080227 Country of Ref document: IE
EP1478876 B1	20080530	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20080227 Year of fee payment: 6 Country of Ref document: SE
EP1478876 B1	20080829	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20080306 Year of fee payment: 6 Country of Ref document: BE
EP1478876 B1	20080905	LSLE	REG	REFERENCE TO A NATIONAL CODE	Text: LAPSE DUE TO NON-PAYMENT OF FEES Ref country code: PT Ref legal event code: MM4A Effective date: 20080825
EP1478876 B1	20080915	LSAS	REG	REFERENCE TO A NATIONAL CODE	Owner: AMERICAN STERILIZER COMPANY PartyType: owner Ref country code: CH Ref legal event code: PUE OldParty: STERIS, INC.#43425 BUSINESS PARK DRIVE#TEMECULA, CA 92590 (US) -TRANSFER TO- AMERICAN STERILIZER COMPANY#5960 HEISLEY ROAD#MENTOR, OH 44060 (US)
EP1478876 B1	20080929	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: EBP Ref country code: DK
EP1478876 B1	20080930	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20080205 Year of fee payment: 6 Country of Ref document: TR
EP1478876 B1	20081015	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: EE Ref document number: E000299 Ref legal event code: MM4A Effective date: 20080229 Country of Ref document: EE
EP1478876 B1	20081017	LSAS	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: TP Ref country code: FR
EP1478876 B1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20080831 Country of Ref document: BG
EP1478876 B1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20080229 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: EE
EP1478876 B1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20080228 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: MC
EP1478876 B1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20080825 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: PT
EP1478876 B1	20081031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20080225 Country of Ref document: SK
EP1478876 B1	20081103	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE	Effective date: 20080901 Ref country code: EP

EP1478876 B1	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20080225 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: AT
EP1478876 B1	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20080225 Country of Ref document: CY
EP1478876 B1	20081128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20080901 Country of Ref document: NL
EP1478876 B1	20081231	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: KO00 Ref country code: SI Effective date: 20081113
EP1478876 B1	20090130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20080229 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: DK
EP1478876 B1	20090130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20080226 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: HU
EP1478876 B1	20090227	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20080226 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: SI
EP1478876 B1	20090529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20080225 Country of Ref document: CZ
EP1478876 B1	20090630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20080903 Country of Ref document: GR
EP1478876 B1	20090831	LSLE	-BERE	BE: LAPSED	PartyType: owner Effective date: 20090228 Ref country code: EP Owner: AMERICAN STERILIZER CY
EP1478876 B1	20090831	LSLE	-BERE	BE: LAPSED	Ref country code: EP Effective date: 20090228 PartyType: owner Owner: ONDAL INDUSTRIETECHNIK G.M.B.H.
EP1478876 B1	20090930	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: PL Ref country code: CH
EP1478876 B1	20091013	LSLE	-EUG	SE: EUROPEAN PATENT HAS LAPSED	Ref country code: EP
EP1478876 B1	20091030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20090228 Country of Ref document: CH
EP1478876 B1	20091030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090225 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: FI
EP1478876 B1	20091030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO	Lapsed date: 20090228 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LI

				EPO]	
EP1478876 B1	20091125	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: MM4A
EP1478876 B1	20100129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090225 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: IE
EP1478876 B1	20100226	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20090228 Country of Ref document: BE
EP1478876 B1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20080225 Country of Ref document: LU
EP1478876 B1	20110531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20090226 Country of Ref document: SE
EP1478876 B1	20120629	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20120223 Year of fee payment: 10 Country of Ref document: IT
EP1478876 B1	20130131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20090225 Country of Ref document: TR
EP1478876 B1	20130430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20130226 Year of fee payment: 11 Country of Ref document: ES
EP1478876 B1	20130430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20130227 Year of fee payment: 11 Country of Ref document: GB
EP1478876 B1	20130430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20130311 Year of fee payment: 11 Country of Ref document: FR
EP1478876 B1	20141029	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	Ref country code: EP Effective date: 20140225
EP1478876 B1	20141121	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: ST Effective date: 20141031 Ref country code: FR
EP1478876 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20140225 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: GB
EP1478876 B1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20140228 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: FR
EP1478876 B1	20150529	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: ES Ref legal event code: FD2A Effective date: 20150529
EP1478876 B1	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20140226 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: ES
EP1478876 B1	20160630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES

				POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20140225 Country of Ref document: IT
EP1478876 B1	20170428	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20170227 Year of fee payment: 15 Country of Ref document: DE
EP1478876 B1	20180430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 16 Payment date: 20180227 Country of Ref document: DE
EP1478876 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20190227 Year of fee payment: 17 Country of Ref document: DE
EP1478876 B1	20190624		REG	REFERENCE TO A NATIONAL CODE	PartyType: representative Ref legal event code: R082 Ref country code: DE Representative: ETL WABLAT & KOLLEGEN PATENT- UND RECHTSANWALT, DE Ref document number: 60301665 Country of Ref document: DE
EP1478876 B1	20190624		REG	REFERENCE TO A NATIONAL CODE	Representative: ETL IP PATENT- UND RECHTSANWALTSGESELLSCHAFT M, DE PartyType: representative Ref country code: DE Ref document number: 60301665 Ref legal event code: R082 Country of Ref document: DE
EP1478876 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 18 Payment date: 20200227 Country of Ref document: DE
EP1478876 B1	20200705		REG	REFERENCE TO A NATIONAL CODE	PartyType: representative Representative: ETL IP PATENT- UND RECHTSANWALTSGESELLSCHAFT M, DE Ref legal event code: R082 Ref country code: DE Ref document number: 60301665 Country of Ref document: DE
EP1478876 B1	20230225	PEXP		Calculated Patent Term Expiry	
ES2250878 T3	20060416	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2250878 T3	20230225	PEXP		Calculated Patent Term Expiry	
HK1077620 A1	20060217	LSPB	+	published / reissued	
HK1077620 A3	20060217	LSPB	+	published / reissued	
IN00436MN2004 A	20050218	LSPB	+	published / reissued	
IN208329 B	20081024	LSGT	+	granted / extensions (spc, cpc, pte)	
IN208329 B	20240809	PEXP		Calculated Patent Term Expiry	
JP2005518262 T2	20050623	LSPB	+	published / reissued	
JP2005518262 T2	20071119	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20071116
JP2005518262 T2	20080215	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20080214
JP2005518262 T2	20080306	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2005518262 T2	20080312	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	Text: JAPANESE INTERMEDIATE CODE: A01 Effective date: 20080311
JP2005518262 T2	20080314	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	Effective date: 20080313 Text: JAPANESE INTERMEDIATE CODE: A711
JP2005518262 T2	20080327	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	Text: JAPANESE INTERMEDIATE CODE: A61 Effective date: 20080324
JP2005518262 T2	20080425	LSFE	+FPAY	RENEWAL FEE PAYMENT	Year of fee payment: 3

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JP2005518262 T2	20080428	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 3
JP4113974 B2	20080709	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4113974 B2	20100422	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 3
JP4113974 B2	20100422	LSAS	S111	REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP	Text: JAPANESE INTERMEDIATE CODE: R313113
JP4113974 B2	20100506	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 3
JP4113974 B2	20100506	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	Text: JAPANESE INTERMEDIATE CODE: R350
JP4113974 B2	20110414	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 3
JP4113974 B2	20110419	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 4
JP4113974 B2	20120412	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 4
JP4113974 B2	20120417	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 5
JP4113974 B2	20130411	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 5
JP4113974 B2	20130416	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	Year of fee payment: 6
JP4113974 B2	20140425	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4113974 B2	20230225	PEXP		Calculated Patent Term Expiry	
KR100602511 B1	20060719	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100602511 B1	20090712	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
KR100602511 B1	20230225	PEXP		Calculated Patent Term Expiry	
KR20040083460 A	20040825	LSES	A201	REQUEST FOR EXAMINATION	
KR20040083460 A	20041001	LSPB	+	published / reissued	
KR20040083460 A	20051212	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20040083460 A	20060525	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR20040083460 A	20060711	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
SI1478876 T1	20060630	LSGT	+	granted / extensions (spc, cpc, pte)	
SI1478876 T1	20230225	PEXP		Calculated Patent Term Expiry	
US2003160142 AA	20030225	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BRAHLER, MANFRED;STEGER, KLAUS;REEL/FRAME:013816/0735 Effective date: 20030218 PartyType: owner Owner: STERIS INC., CALIFORNIA
US2003160142 AA	20030225	LSAS	AS	ASSIGNMENT	PartyType: owner

					OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BRAHLER, MANFRED;STEGER, KLAUS;REEL/FRAME:013816/0735 Effective date: 20030218 Owner: ONDAL INDUSTRIETECHNIK GMBH, GERMANY
US2003160142 AA	20030828	LSPB	+	published / reissued	
US2003160142 AA	20031014	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:HLEBOVY, JAMES C.;REEL/FRAME:014590/0440 PartyType: owner Effective date: 20030821 Owner: STERIS INC., CALIFORNIA
US2003160142 AA	20061211	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:ONDAL INDUSTRIETECHNIK GMBH;REEL/FRAME:018617/0265 Owner: STERIS INC., CALIFORNIA Effective date: 20061211 PartyType: owner
US2003160142 AA	20071213	LSAS	AS	ASSIGNMENT	Effective date: 20071127 Owner: AMERICAN STERILIZER COMPANY, OHIO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STERIS INC.;REEL/FRAME:020234/0745 PartyType: owner
US2003160142 AA	20071213	LSAS	AS	ASSIGNMENT	Effective date: 20071127 Owner: AMERICAN STERILIZER COMPANY,OHIO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STERIS INC.;REEL/FRAME:020234/0745 PartyType: owner
US2003160142 AA	20080605	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2003160142 AA	20080605		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2005242261 AA	20050209	LSAS	AS	ASSIGNMENT	Effective date: 20050208 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BRAHLER, MANFRED;STEGER, KLAUS;REEL/FRAME:016250/0518 Owner: STERIS INC., CALIFORNIA PartyType: owner
US2005242261 AA	20050209	LSAS	AS	ASSIGNMENT	Owner: ONDAL INDUSTRIETECHNIK GMBH, GERMANY Effective date: 20050208 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BRAHLER, MANFRED;STEGER, KLAUS;REEL/FRAME:016250/0518
US2005242261 AA	20051103	LSPB	+	published / reissued	
US2005242261 AA	20061211	LSAS	AS	ASSIGNMENT	Effective date: 20051023 PartyType: owner Owner: STERIS INC., CALIFORNIA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:ONDAL INDUSTRIETECHNIK GMBH;REEL/FRAME:018623/0194
US2005242261 AA	20071213	LSAS	AS	ASSIGNMENT	Effective date: 20071127 Owner: AMERICAN STERILIZER COMPANY, OHIO OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STERIS INC.;REEL/FRAME:020234/0745 PartyType: owner
US2005242261 AA	20071213	LSAS	AS	ASSIGNMENT	Effective date: 20071127 Owner: AMERICAN STERILIZER COMPANY,OHIO PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STERIS INC.;REEL/FRAME:020234/0745
US2005242261 AA	20100119	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	

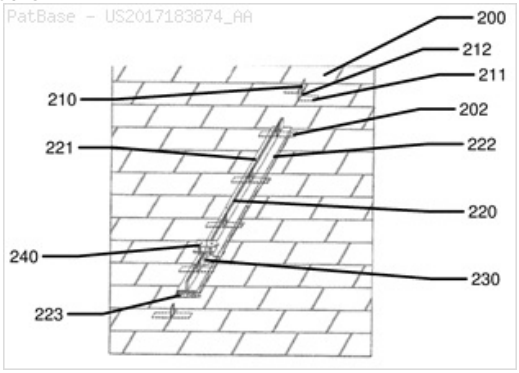
US2005242261 AA	20100119		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
WO03072996 A1	20030904	LSPB	+	published / reissued	
WO03072996 A1	20030904		+AK	DESIGNATED STATES	Kind code of Ref document: A1 Country of Ref document: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
WO03072996 A1	20030904		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AM AT AZ BE BF BG BJ BY CF CG CH CI CM CY CZ DE DK EE ES FI FR GA GB GH GM GN GQ GR GW HU IE IT KE KG KZ LS LU MC MD ML MR MW MZ NE NL PT RU SD SE SI SK SL SN SZ TD TG TJ TM TR TZ UG ZM ZW
WO03072996 A1	20031029		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO03072996 A1	20031030		DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)	
WO03072996 A1	20040805	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2475262 Country of Ref document: CA
WO03072996 A1	20040809	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 436/MUMNP/2004 Country of Ref document: IN
WO03072996 A1	20040810	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2003213617 Country of Ref document: AU
WO03072996 A1	20040818	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2003711299 Country of Ref document: EP
WO03072996 A1	20040824	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 20038044803 Country of Ref document: CN
WO03072996 A1	20040825	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 1020047013286 Country of Ref document: KR
WO03072996 A1	20040825	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2003571645 Country of Ref document: JP
WO03072996 A1	20041001	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 1020047013286 Country of Ref document: KR
WO03072996 A1	20041124	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 2003711299 Country of Ref document: EP
WO03072996 A1	20050921	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	Ref document number: 2003711299 Country of Ref document: EP
WO03072996 A1	20060106	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	Ref document number: 2003213617 Country of Ref document: AU
WO03072996 A1	20060525	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	Ref document number: 1020047013286 Country of Ref document: KR

45) Family number: 66206123 (US2017183874 AA)

Title: APPARATUS AND METHODS FOR SECURE, NON-INVASIVE AND NON-PERMANENT SURFACE ATTACHMENT **SYSTEMS**

Abstract: A non-slip roof attachment **system** for attaching **structures** to residential and commercial roofs without the use of penetrations to roofing shingles and sealing layers is described. The non-slip attachment **system** may be used to attach roof mounted **systems** such as solar panels. The non-slip attachment **system** also allows for the quick removal of such roof mounted **systems** rapidly and without the need for repair of penetrations.

Classifications:
International (IPC 8-9): E04D1/30 E04D1/34 E04D13/00 E04D13/072 E04D13/18 F21V21/00 F21W131/107 F24J2/46 F24J2/52 F24S25/00 F24S25/30 F24S25/40 F24S25/60 F24S25/61 F24S25/613 F24S25/65 F24S25/67 H02S20/23
CPC: E04D1/30 E04D13/00 F21V21/00 F21W2131/107 F24S2025/014 F24S2025/016 F24S2025/02 F24S2025/021 F24S2025/6004 F24S2025/6006 F24S2025/6009 F24S2025/601 F24S25/00 F24S25/30 F24S25/40 F24S25/60 F24S25/61 F24S25/613 F24S25/65 F24S25/67 H02S20/23 Y02B10/10 Y02B10/20 Y02B20/72 Y02E10/47 Y02E10/50 F24J2/52 F24J2/5203 F24J2/5247 F24J2002/4674 F24J2002/5281 F24J2002/5292 F24J2002/5294
US: 1/1 52/173.3



Family:

Publication number	Publication date	Application number	Application date
CA3016419 AA	20180831	CA20163016419	20161229
US10145116 BB	20181204	US20160394487	20161229
US10640981 BB	20200505	US20180174645	20181030
US2017183874 AA	20170629	US20160394487	20161229
US2019063068 AA	20190228	US20180174645	20181030
US2019316360 AA	20191017	US20190428012	20190531
US2020131776 AA	20200430	US20190725835	20191223
WO17117429 A1	20170706	WO2016US69283	20161229

Priority:

US20150387326P 20151229 US20150387325P 20151229 WO2016US69283 20161229
US20160394487 20161229 US20180174645 20181030 US20190428012 20190531
US20190725835 20191223

Probable Assignee: ARAYSTAYS CORP

Assignee(s): (std): ARAYSTAYS CORP ; HOLT JOHN ; HOLT JOHN GRANVILLE ; HOLT MARK ; HOLT MARK ANTHONY

Inventor(s): (std): HOLT JOHN ; HOLT JOHN GRANVILLE ; HOLT MARK ; HOLT MARK ANTHONY

Agent(s): KINCART JOSEPH; KINCART JOSEPH P; RIDOUT AND MAYBEE LLP; ROGERS TOWERS PA

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
CA3016419 AA	20180831	LSPB	+	published / reissued	
US10145116 BB	20170227	LSAS	AS	ASSIGNMENT	Effective date: 20170216 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:HOLT, JOHN GRANVILLE;HOLT, MARK ANTHONY;REEL/FRAME:041819/0727 Owner: ARAYSTAYS CORPORATION, MARYLAND PartyType: owner
US10145116 BB	20181114	LSGT	PAT1	Patented Case	
US10145116 BB	20181204	LSGT	+	granted / extensions (spc, cpc, pte)	
US10145116 BB	20361229	PEXP		Calculated Patent Term Expiry	
US10640981 BB	20181030	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: MICROENTITY
US10640981 BB	20181119	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO MICRO (ORIGINAL EVENT CODE: MICR); ENTITY STATUS OF PATENT OWNER: MICROENTITY
US10640981 BB	20200505	LSGT	+	granted / extensions (spc,	

				cpc, pte)	
US10640981 BB	20361229	PEXP		Calculated Patent Term Expiry	
US2017183874 AA	20170420		RFE1	Docketed New Case - Ready for Examination	
US2017183874 AA	20170629	LSPB	+	published / reissued	
US2017183874 AA	20171101	LSES	NFA1	Non Final Action Mailed	
US2017183874 AA	20180120		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017183874 AA	20180322	LSES	NFA1	Non Final Action Mailed	
US2017183874 AA	20180809	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017183874 AA	20181114	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2019063068 AA	20190228	LSPB	+	published / reissued	
US2019063068 AA	20190315		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019063068 AA	20190315		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019063068 AA	20190402	LSES	NFA1	Non Final Action Mailed	
US2019063068 AA	20190402		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019063068 AA	20191017		FRM1	Final Rejection Mailed	
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US2019063068 AA	20191215		RSP1	Response after Final Action Forwarded to Examiner	
US2019063068 AA	20191215		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE AFTER FINAL ACTION FORWARDED TO EXAMINER
US2019063068 AA	20200110	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2019063068 AA	20200110		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2019063068 AA	20200415	LSGT	PAT1	Patented Case	
US2019063068 AA	20200415	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2019316360 AA	20191017	LSPB	+	published / reissued	
US2019316360 AA	20191025		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019316360 AA	20191025		STPP	INFORMATION ON	Text: RESPONSE TO NON-FINAL

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US2019316360 AA	20191126	LSES	NFA1	Non Final Action Mailed	
US2019316360 AA	20191126		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019316360 AA	20200105		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019316360 AA	20200105		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
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US2019316360 AA	20200622	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2019316360 AA	20200622		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2020131776 AA	20200324	LSES	NFA1	Non Final Action Mailed	
US2020131776 AA	20200430	LSPB	+	published / reissued	
US2020131776 AA	20200612		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2020131776 AA	20200612		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2020131776 AA	20200626	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2020131776 AA	20200626		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
WO17117429 A1	20170706	LSPB	+	published / reissued	
WO17117429 A1	20170906		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 16882683 Kind code of Ref document: A1 Country of Ref document: EP
WO17117429 A1	20180630	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO17117429 A1	20180831	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 3016419 Country of Ref document: CA
WO17117429 A1	20190123	LSNE	-122	EP: PCT	Ref document number: 16882683

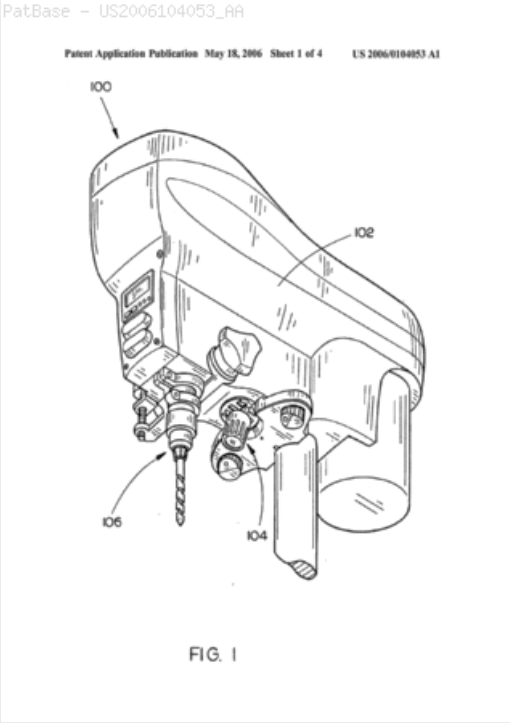
	APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Country of Ref document: EP

46) Family number: 33003715 (US2006104053 AA)

Title: POWER TOOL WORK **LIGHT**

Abstract: A work **light** for a power tool. In an exemplary embodiment, the work **light** includes a generally cylindrical housing constructed for receiving a **light** source. The housing includes a pin generally transverse to the housing and unitary with such housing. Further, an electrical coupling is configured to provide electricity to the **light** source from a power tool electrical source and is integrated with the electrical source. Additionally, a bracket including a flange with a plurality of apertures for receiving a series of fasteners for mounting the bracket to an external surface of the power tool is included. The bracket defines a recessed **structure** for receiving the pin and includes a pair of recesses spaced apart to retain a first end of the pin and a second end of the pin. The pin included within the housing permits linear positioning of the housing along an axis generally perpendicular to the pin.

Classifications:
International (IPC 8-9): B25B23/00 B25B23/18 F21V33/00
CPC: B25F5/021
US: 362/109 362/119 362/190 362/287 362/109P



Family:

Publication number	Publication date	Application number	Application date
US2006104053 AA	20060518	US20050122781	20050505
US7296905 BB	20071120	US20050122781	20050505

Priority:
US20040568355P 20040505 US20050122781 20050505

Probable Assignee: BLACK AND DECKER INC
Assignee(s): (std): BLACK AND DECKER INC ; ETTER MARK A ; STAFFORD BRENT
Inventor(s): (std): ETTER MARK A ; STAFFORD BRENT
Inventor(s): ETTER MARK
Agent(s): ADAN; BLACK AND DECKER CORP; CHARES; MEHUL R

Legal status (INPADOC)

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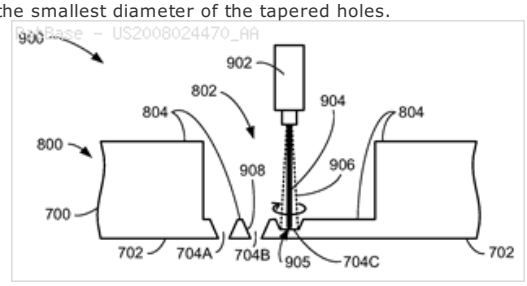
Patent	Date recorded	Event group	Code	Event	Details
US2006104053 AA	20060518	LSPB	+	published / reissued	
US2006104053 AA	20071031	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US7296905 BB	20050627	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ETTER, MARK A.;STAFFORD, BRENT;REEL/FRAME:016425/0905;SIGNING DATES FROM 20050606 TO 20050608 Owner: BLACK & DECKER INC., DELAWARE PartyType: owner
US7296905 BB	20071031	LSGT	PAT1	Patented Case	
US7296905 BB	20071120	LSGT	+	granted / extensions (spc, cpc, pte)	
US7296905 BB	20110520	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7296905 BB	20150520	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8

US7296905 BB	20190708	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US7296905 BB	20191223	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
US7296905 BB	20191223	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7296905 BB	20191223	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7296905 BB	20200114	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20191120
US7296905 BB	20250505	PEXP		Calculated Patent Term Expiry	

47) Family number: 41080865 (US2008024470 AA)

Title: INVISIBLE, **LIGHT** -TRANSMISSIVE DISPLAY **SYSTEM**

Abstract: An invisible, **light** -transmissive display **system** with a **light** resistant material is provided. Substantially invisible, tapered, **light** -transmissive holes are penetrated in a **light** -transmissive pattern through at least a portion of the **light** resistant material using a laser beam having a focal width less than the smallest diameter of the tapered holes.



Classifications:
International (IPC 8-9): B23P17/00 B29C35/08 F21V11/00 F21V23/00 F21V33/00 F21V7/00 F21V9/16 F21W111/10 G02F1/1335 G06F1/16 G06F3/033 G06F3/038 G08B5/36 G09F13/04 G09F13/06 G09F13/08 G09F9/30 G09G5/00 H01H13/83 H05B37/02 H05B47/10 H05K7/00
CPC: F21V23/003 F21V33/0052 F21V33/0056 F21W2111/10 G06F1/1616 G06F1/1635 G06F1/1662 G08B5/36 G09F13/04 G09F13/06 G09F13/08 G09F9/30 H01H13/83 H05B47/10 Y10T29/49 H05B37/0209
US: 1/1 250/227.11 250/227.26 264/400 264/400S 29/592 29/592S 315/130 315/152 315/152S 345/173 345/204 345/204P 349/61 349/61S 361/679.01 361/679.010P 361/679.09 361/679.26 361/679.55 362/23.02 362/23.03 362/23.2 362/235 362/235S 362/341 362/341S 362/351 362/351S 362/84 362/84S 40/541 40/541P 40/580 428/690

Family:

Publication number	Publication date	Application number	Application date
US10034349 BB	20180724	US20160181901	20160614
US10034350 BB	20180724	US20160219125	20160725
US10624173 BB	20200414	US20180038092	20180717
US10743387 BB	20200811	US20180038607	20180718
US2008024470 AA	20080131	US20060551988	20061023
US2008084404 AA	20080410	US20060456833	20060711
US2011119973 AA	20110526	US20100973627	20101220
US2011122560 AA	20110526	US20100973632	20101220
US2014321098 AA	20141030	US20140280987	20140519
US2015192964 AA	20150709	US20140281536	20140519
US2016290626 AA	20161006	US20160181901	20160614
US2017006689 AA	20170105	US20160219125	20160725
US2018324927 AA	20181108	US20180038092	20180717
US2018324928 AA	20181108	US20180038607	20180718
US7880131 BB	20110201	US20060551988	20061023
US7884315 BB	20110208	US20060456833	20060711
US8729457 BB	20140520	US20100973632	20101220
US8735800 BB	20140527	US20100973627	20101220
US9377821 BB	20160628	US20140280987	20140519
US9423835 BB	20160823	US20140281536	20140519
WO08008860 A2	20080117	WO2007US73295	20070711
WO08008860 A3	20080522	WO2007US73295	20070711

Priority:

US20060456833 20060711 US20060551988 20061023 US20100973627 20101220
US20100973632 20101220 US20140280987 20140519 US20140281536 20140519
US20160181901 20160614 US20160219125 20160725 US20180038092 20180717
US20180038607 20180718

Probable Assignee: APPLE INC

Assignee(s): (std): ANDRE BARTLEY K ; APPLE COMPUTER ; APPLE INC ; CHOW PAUL C L ; COSTER DANIEL ; COSTER DANIEL J ; DE IULIIS DANIELE ; DE LULIIS DANIELE ; HOWARTH RICHARD ; HOWARTH RICHARD P ; IVE JONATHAN P ; KERR DUNCAN ; KERR DUNCAN ROBERT ; KHOSLA JIVAN KUMAR ; MORGENSTERN DAVID ; MORGENSTERN DAVID MORGENSTERN ; NISHIBORI SHIN ; ROHRBACH MATTHEW ; ROHRBACH MATTHEW DEAN ; SATZGER DOUG B ; SATZGER DOUGLAS B ; SEID CALVIN ; SEID CALVIN Q ; SEID VINCENT KEANE ; STRINGER CHRISTOPER J ; STRINGER CHRISTOPHER ; STRINGER CHRISTOPHER J ; WHANG EUGENE ; WHANG EUGENE ANTONY ; ZORKENDORER RICO ; ZORKENDORFER RICO

Assignee(s): APPLE COMPUTER INC ; CHOW PAUL C

Inventor(s): (std): ANDRE BARTLEY K ; CHOW PAUL C L ; COSTER DANIEL ; COSTER DANIEL J ; DE IULIIS DANIELE ; DE LULIIS DANIELE ; HOWARTH RICHARD ; HOWARTH RICHARD P ; IVE JONATHAN P ; KERR DUNCAN ; KERR DUNCAN ROBERT ; KHOSLA JIVAN KUMAR ; LVE JONATHAN P ; MORGENSTERN DAVID ; MORGENSTERN DAVID MORGENSTERN ; NISHIBORI SHIN ; ROHRBACH MATTHEW ; ROHRBACH MATTHEW DEAN ; SATZGER DOUG B ; SATZGER DOUGLAS B ; SEID CALVIN ; SEID CALVIN Q ; STRINGER CHRISTOPER J ; STRINGER CHRISTOPHER ; STRINGER CHRISTOPHER J ; WHANG EUGENE ; WHANG EUGENE ANTHONY ; WHANG EUGENE ANTONY ; ZOERKENDOERFER RICO ; ZORKENDOERFER RICO ; ZORKENDORER RICO ; ZORKENDORFER RICO

Inventor(s): CHOW PAUL C

Agent(s): DAVID C; FLETCHER YODER PC; ISHIMARU AND ZAHRT LLP; KENDALL P; KENDALL W; KRAMER LEVIN NAFTALIS AND FRANKEL LLP; LYONS MICHAEL H; MICHAEL H; MORRIS ROBERT W ET AL; ROPES AND GRAY LLP PATENT DOCKETING 39 361; ROPES AND GRAY LLP, PATENT DOCKETING 39/361; TREYZ G VICTOR; TREYZ LAW GROUP PC

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 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
US10034349 BB	20180704	LSGT	PAT1	Patented Case	
US10034349 BB	20180724	LSGT	+	granted / extensions (spc, cpc, pte)	
US10034349 BB	20370120	PEXP		Calculated Patent Term Expiry (PTA 220 days)	
US10034350 BB	20180704	LSGT	PAT1	Patented Case	
US10034350 BB	20180724	LSGT	+	granted / extensions (spc, cpc, pte)	
US10034350 BB	20270111	PEXP		Calculated Patent Term Expiry (PTA 184 days)	
US10624173 BB	20180717	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10624173 BB	20180910		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US10624173 BB	20200325	LSGT	PAT1	Patented Case	
US10624173 BB	20200414	LSGT	+	granted / extensions (spc, cpc, pte)	
US10624173 BB	20261004	PEXP		Calculated Patent Term Expiry (PTA 85 days)	
US10743387 BB	20180718	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10743387 BB	20180813		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
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US2008024470 AA	20080131	LSPB	+	published / reissued	
US2008024470 AA	20110112	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2008084404 AA	20080410	LSPB	+	published / reissued	
US2008084404 AA	20110119	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2011119973 AA	20110526	LSPB	+	published / reissued	
US2011119973 AA	20140507	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
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US2014321098 AA	20160608	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2015192964 AA	20150709	LSPB	+	published / reissued	
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US2017006689 AA	20161101		RFE1	Docketed New Case - Ready for Examination	
US2017006689 AA	20170105	LSPB	+	published / reissued	
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US2017006689 AA	20180326	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017006689 AA	20180626	LSFE	PPV1	Publications - - Issue Fee Payment Verified	
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US2018324927 AA	20191209	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
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US2018324927 AA	20200325	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018324928 AA	20180813		RFE1	Docketed New Case - Ready for	

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US2018324928 AA	20200722	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US7880131 BB	20061115	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ANDRE, BARTLEY K.;COSTER, DANIEL J.;HOWARTH, RICHARD P.;AND OTHERS;REEL/FRAME:018522/0107;SIGNING DATES FROM 20061020 TO 20061110 Owner: APPLE COMPUTER, INC., CALIFORNIA PartyType: owner
US7880131 BB	20061115	LSAS	AS	ASSIGNMENT	Owner: APPLE COMPUTER, INC., CALIFORNIA PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ANDRE, BARTLEY K.;COSTER, DANIEL J.;HOWARTH, RICHARD P.;AND OTHERS;SIGNING DATES FROM 20061020 TO 20061110;REEL/FRAME:018522/0107
US7880131 BB	20070918	LSAS	AS	ASSIGNMENT	Effective date: 20070109 PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:APPLE COMPUTER, INC.;REEL/FRAME:019842/0591 Owner: APPLE INC., CALIFORNIA
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US7880131 BB	20110201	LSGT	+	granted / extensions (spc, cpc, pte)	

US7880131 BB	20111115	LSRE	CC	CERTIFICATE OF CORRECTION	
US7880131 BB	20140702	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7880131 BB	20180719	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 8
US7880131 BB	20291202	PEXP		Calculated Patent Term Expiry (PTA 1136 days)	
US7884315 BB	20070709	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: APPLE COMPUTER, INC., CALIFORNIA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ANDRE, BARTLEY K.;COSTER, DANIEL;HOWARTH, RICHARD;AND OTHERS;REEL/FRAME:019533/0218;SIGNING DATES FROM 20060603 TO 20060710
US7884315 BB	20070709	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: APPLE COMPUTER, INC., CALIFORNIA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:ANDRE, BARTLEY K.;COSTER, DANIEL;HOWARTH, RICHARD;AND OTHERS;SIGNING DATES FROM 20060603 TO 20060710;REEL/FRAME:019533/0218
US7884315 BB	20070710	LSAS	AS	ASSIGNMENT	OldParty: CHANGE OF NAME;ASSIGNOR:APPLE COMPUTER, INC.;REEL/FRAME:019538/0981 Effective date: 20070109 Owner: APPLE INC., CALIFORNIA PartyType: owner
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US7884315 BB	20110208	LSGT	+	granted / extensions (spc, cpc, pte)	
US7884315 BB	20111115	LSRE	CC	CERTIFICATE OF CORRECTION	
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US7884315 BB	20180726	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 8
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US8729457 BB	20140430	LSGT	PAT1	Patented Case	
US8729457 BB	20140520	LSGT	+	granted / extensions (spc, cpc, pte)	
US8729457 BB	20171109	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8729457 BB	20280408	PEXP		Calculated Patent Term Expiry (PTA 637 days)	
US8735800 BB	20140507	LSGT	PAT1	Patented Case	
US8735800 BB	20140527	LSGT	+	granted / extensions (spc, cpc, pte)	
US8735800 BB	20171116	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8735800 BB	20280326	PEXP		Calculated Patent Term Expiry (PTA 624 days)	
US9377821 BB	20140723		RFE1	Docketed New Case - Ready for Examination	
US9377821 BB	20160608	LSGT	PAT1	Patented Case	
US9377821 BB	20160628	LSGT	+	granted / extensions (spc, cpc, pte)	

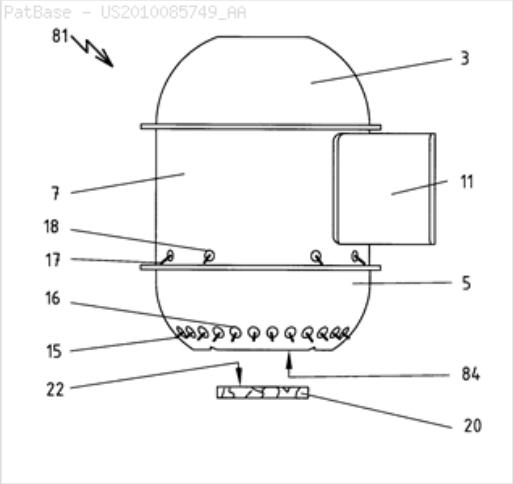
US9377821 BB	20191213	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9377821 BB	20270221	PEXP		Calculated Patent Term Expiry (PTA 225 days)	
US9423835 BB	20150406		RFE1	Docketed New Case - Ready for Examination	
US9423835 BB	20160803	LSGT	PAT1	Patented Case	
US9423835 BB	20160823	LSGT	+	granted / extensions (spc, cpc, pte)	
US9423835 BB	20200206	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9423835 BB	20260921	PEXP		Calculated Patent Term Expiry (PTA 72 days)	
WO08008860 A2	20080117	LSPB	+	published / reissued	
WO08008860 A3	20090113	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO08008860 A3	20090211	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: RU
WO08008860 A3	20090812	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A2 Ref document number: 07799506 Country of Ref document: EP

48) Family number: 44597025 (US2010085749 AA)

Title: **LIGHTING** DEVICE

Abstract: A method of examining an object containing a polycrystalline material, in which at least one part of the surface of the object is illuminated with substantially isotropic **light**, as well as a illumination device for carrying out the method. In this manner, the polycrystalline material is less influenced by the different reflection characteristics of individual particles of the polycrystalline material.

Classifications:
International (IPC 8-9): F21K99/00 F21V1/00 F21V3/00 F21V3/02 F21V33/00 F21V7/00 G01B11/02 G01B11/28 G01N21/88 G01N21/95 H01L31/04 H05B33/00
CPC: G01N21/8806 G01N21/9505 H02S50/00
US: 1/1 356/237.5 356/237.500S 356/630 356/630S 362/235 362/235P 362/296.02 362/296.020S



Family:

Publication number	Publication date	Application number	Application date
DE102008047085 A1	20100325	DE200810047085	20080912
DE102008047085 B4	20160218	DE200810047085	20080912
IN01144KO2009 A	20160902	IN2009KO01144	20090911
MY154802 A	20150731	MY20090003840	20090914
SG10201506753P A1	20151029	SG20151006753	20090914
SG160297 A1	20100429	SG20090060880	20090914
SG179436 A1	20120427	SG20120015434	20090914
TW201017156 A	20100501	TW20090130891	20090911
TWI561811 B	20161211	TW20090130891	20090911
US2010085749 AA	20100408	US20090558624	20090914
US9250197 BB	20160202	US20090558624	20090914

Priority:
DE200810047085 20080912

Probable Assignee: GP INSPECT GMBH

Assignee(s): (std): BEZGACHEV VITALY ; GP INSPECT GMBH ; HEMSENDORF MARC ; PROBST CHRISTIAN ; RECHT STEFAN ; WANSLEBEN STEPHANUS

Assignee(s): GP INSPECT GMBHDE ; GP檢測股份有限公司

Inventor(s): (std): BEZGACHEV VITALY ; CHRISTIAN PROBST ; HEMSENDORF DR MARC ; HEMSENDORF MARC ; HEMSENDORF MARC DR ; MARC HEMSENDORF ; MARE HEMSENDORF DR ; PROBST CHRISTIAN ; RECHT STEFAN ; STEFAN RECHT ; STEPHANUS WANSLEBEN ; STEPHANUS WANSLEBEN DR ; VITALY BEZGACHEV ; WANSLEBEN DR STEPHANUS ; WANSLEBEN STEPHANUS ; WANSLEBEN STEPHANUS DR

Inventor(s): HEMSENDORF DR MARE ; 克利斯汀 普羅貝斯特 ; 史蒂芬 雷特希 ; 斯特凡努斯 萬斯萊本 ; 維塔利 本滋卡薇 ; 馬克 哈姆山豆夫

Agent(s): LAURENCE A; LERNER GREENBERG STEMER LLP; PYPRUS PTE LTD; RALPH E; WERNER H; 蘇建太; 陳志成

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE102008047085 A1	20100325	LSPB	+	published / reissued	
DE102008047085 A1	20100325	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE102008047085 A1	20120511	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE102008047085 A1	20121126	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE102008047085 A1	20140915	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE102008047085 A1	20151103	LSGT	+R018	GRANT DECISION BY EXAMINATION SECTION/EXAMINING DIVISION	

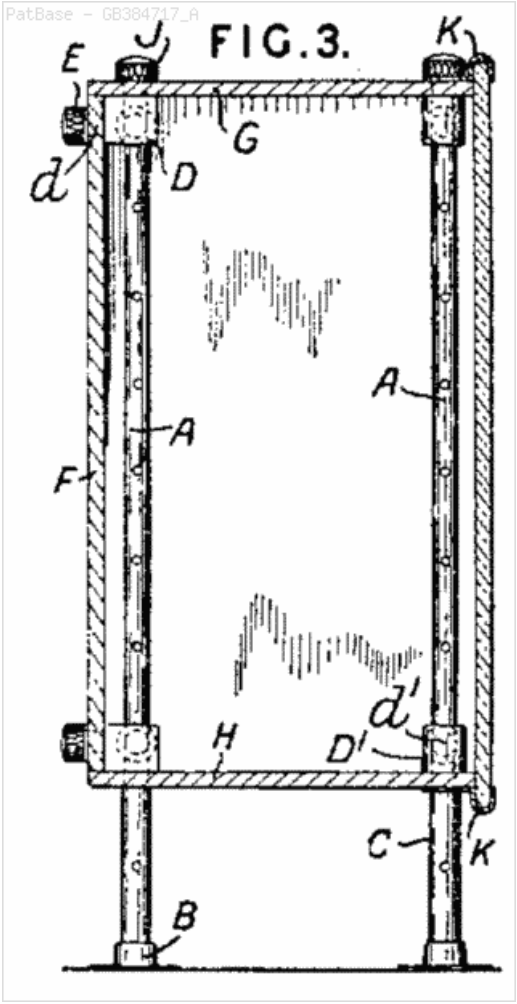
DE102008047085 A1	20151209	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	PartyType: owner OldParty: FORMER OWNER: GP INSPECT GMBH, 82152 PLANEGG, DE Owner: GP INSPECT GMBH, DE
DE102008047085 A1	20151209		R082	CHANGE OF REPRESENTATIVE	Representative: HEYERHOFF GEIGER & PARTNER PATENTANWAELTE PART, DE PartyType: representative
DE102008047085 A1	20161119	LSGT	+R020	PATENT GRANT NOW FINAL	
DE102008047085 B4	20160218	LSGT	+	granted / extensions (spc, cpc, pte)	
DE102008047085 B4	20280912	PEXP		Calculated Patent Term Expiry	
IN01144KO2009 A	20160902	LSPB	+	published / reissued	
MY154802 A	20150731	LSGT	+	granted / extensions (spc, cpc, pte)	
MY154802 A	20290914	PEXP		Calculated Patent Term Expiry	
SG10201506753P A1	20151029	LSPB	+	published / reissued	
SG160297 A1	20100429	LSPB	+	published / reissued	
SG179436 A1	20120427	LSPB	+	published / reissued	
TW201017156 A	20100501	LSPB	+	published / reissued	
TWI561811 B	20161211	LSGT	+	granted / extensions (spc, cpc, pte)	
TWI561811 B	20290911	PEXP		Calculated Patent Term Expiry	
US2010085749 AA	20100408	LSPB	+	published / reissued	
US2010085749 AA	20141204	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BEZGACHEV, VITALY;HEMSENDORF, MARC;PROBST, CHRISTIAN;AND OTHERS;SIGNING DATES FROM 20091110 TO 20091116;REEL/FRAME:034379/0236 Owner: GP INSPECT GMBH, GERMANY PartyType: owner
US2010085749 AA	20141209	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: CORRECTIVE ASSIGNMENT TO ADD OMITTED CONVEYING PARTY PREVIOUSLY RECORDED ON REEL 034379 FRAME 0236. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT;ASSIGNORS:BEZAGACHEV, VITALY;HEMSENDORF, MARC;PROBST, CHRISTIAN;AND OTHERS;SIGNING DATES FROM 20090916 TO 20091116;REEL/FRAME:034545/0419 Owner: GP INSPECT GMBH, GERMANY
US2010085749 AA	20160113	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US9250197 BB	20150917	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US9250197 BB	20151221	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US9250197 BB	20160113	LSGT	PAT1	Patented Case	
US9250197 BB	20160202	LSGT	+	granted / extensions (spc, cpc, pte)	
US9250197 BB	20190729	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9250197 BB	20341126	PEXP		Calculated Patent Term Expiry (PTA 1899 days)	

49) Family number: 20161605 (GB384717 A)

Title: Improvements relating to glass **structures** such as show cases, shop fronts, and the li

Abstract: 24901 and 27848. [Class 20 (iii).] A display cabinet, show-case, or shop front comprises glass sheets held in edge-abutting relation by interior vertical pillars having adjustable brackets provided with outwardly directed stems passing through holes in the sheets and secured by external screws or nuts. Four pillars A resting on foot-plate B are provided with tubular spacers C on which a floor-plate H rests. Each of two of the pillars A carries two right-angled brackets D, provided with screw-threaded stems d and each of the other two pillars carries two plain brackets D <1> provided with stems d <1> . The stems d, d <1> pass through holes in the walls F and are secured by screws E. A roof-plate G is fitted over the top ends of the pillars A and secured by nuts J. The front plate is slidably mounted between channel pieces K and is provided at its lower edge with a metal runner having at its ends a finger pull and a stop. Two or more relatively slidable front plates may be provided.

Classifications:
International (IPC 8-9): A47F3/00
International (IPC 1-7): A47F3/12 F21V3/00
CPC: A47F3/005



Family:

Publication number	Publication date	Application number	Application date
GB384717 A	19321215	GB19310024901	19310904

Priority:
GB19310024901 19310904

Probable Assignee: ALBERT ERNEST DUTFIELD
Assignee(s): (std): ALBERT ERNEST DUTFIELD

Legal status (INPADOC)

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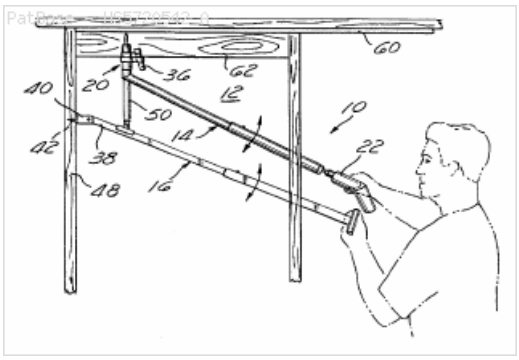
Patent	Date recorded	Event group	Code	Event	Details
GB384717 A	19321215	LSGT	+	granted / extensions (spc, cpc, pte)	
GB384717 A	19510904	PEXP		Calculated Patent Term Expiry	

50) Family number: 10668797 (US5720542 A)

Title: Tool **system** for reaching a confined location

Abstract: A hand tool **system** having a longitudinally extendable operating component and a longitudinally extendable support component for reaching a remote and/or confined location. The operating component includes a worm drive having a proximal end for attachment to a rotational drive device such as a **drill** motor, and a distal end for attachment to a rotational driver having a first end which can accept a connector engagement device such as a screwdriver head or other type bit and a second end from which extends a pivotable arm. The support component has a pivotable distal end with a securement member releasably securable to a **structure**, a hand engageable proximal end, and an exterior surface slidingly engageable with the pivotal arm extending from the driver. In use, an operator manipulates the support component with one hand while powering the **drill** motor with the other hand such that the support component engages the pivotable arm of the driver to thereby leverage and stabilize the driver during rotational movement of the screwdriver or other bit head and consequent placement of a screw member.

Classifications:
International (IPC 8-9): B25B13/00 B25B13/48 B25F5/00 B25F5/02 B25H1/00 F21V33/00
International (IPC 1-7): B25B23/18
CPC: B25B13/481 B25F5/021 B25H1/0057 F21V33/0084
US: 362/109 362/120 81/57.24 81/57.35



Family:

Publication number	Publication date	Application number	Application date
US5720542 A	19980224	US19970786694	19970122

Priority:
US19970786694 19970122

Probable Assignee: BIRGE JR WILLIAM F
Assignee(s): (std): BIRGE JR WILLIAM F ; VALENZUELA ROBERT
Inventor(s): (std): BIRGE JR WILLIAM F ; VALENZUELA ROBERT

Legal status (INPADOC)

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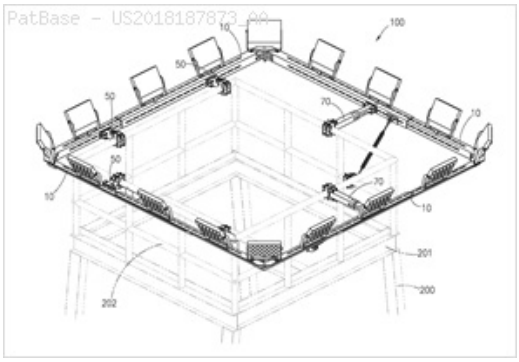
Patent	Date recorded	Event group	Code	Event	Details
US5720542 A	19980224	LSGT	+	granted / extensions (spc, cpc, pte)	
US5720542 A	20010918		REMI	MAINTENANCE FEE REMINDER MAILED	
US5720542 A	20020225	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5720542 A	20020326	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5720542 A	20020326	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US5720542 A	20020423	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20020224
US5720542 A	20170122	PEXP		Calculated Patent Term Expiry	

51) Family number: 70343120 (US2018187873 AA)

Title: METHOD AND APPARATUS FOR ILLUMINATION OF **DRILLING** RIGS AND SURROUNDING LOCATIONS

Abstract: A **lighting** assembly can be quickly and efficiently mounted to a crown of a **drilling** rig derrick in order to provide wide-area illumination of the derrick and surrounding work location. An adjustable support frame member can be operationally attached to a hand rail of a derrick crown using fixed-length bracket members, adjustable-length bracket members and/or a combination(s) thereof. **Lighting** -emitting **light** source elements are adjustably attached to the support frame, and can be selectively aimed to direct **light** as desired.

Classifications:
International (IPC 8-9): E21B15/00 E21B41/00 F21S2/00 F21S8/04 F21V19/00 F21V21/00 F21V21/14 F21V21/15 F21V21/22 F21V21/28
CPC: E21B15/00 E21B41/00 F21S2/00 F21S8/046 F21V19/001 F21V21/22 F21V21/28 F21V21/30 F21W2131/1005 F21W2131/402
US: 1/1 362/427



Family:

Publication number	Publication date	Application number	Application date
CA2990789 AA	20180704	CA20182990789	20180104
US10473310 BB	20191112	US20180861313	20180103
US2018187873 AA	20180705	US20180861313	20180103
US2020072451 AA	20200305	US20190676772	20191107

Priority:
US20170442023P 20170104 US20180861313 20180103 US20190676772 20191107

Probable Assignee: LOCATION ILLUMINATOR TECH LLC
Assignee(s): (std): LOCATION ILLUMINATOR TECH LLC
Assignee(s): CARROLL CHARLES ALLEN ; LOCATION ILLUMINATOR TECHNOLOGIES LLC
Inventor(s): (std): CARROLL CHARLES ALLEN
Agent(s): ANTHONY TED M; MACRAE AND CO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2990789 AA	20180704	LSPB	+	published / reissued	
US10473310 BB	20180103	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10473310 BB	20180126	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO SMALL (ORIGINAL EVENT CODE: SMAL); ENTITY STATUS OF PATENT OWNER: SMALL ENTITY
US10473310 BB	20191112	LSGT	+	granted / extensions (spc, cpc, pte)	
US10473310 BB	20380103	PEXP		Calculated Patent Term Expiry	
US2018187873 AA	20180705	LSPB	+	published / reissued	
US2018187873 AA	20181207		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018187873 AA	20190129		FRM1	Final Rejection Mailed	
US2018187873 AA	20190129		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2018187873 AA	20190802	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2018187873 AA	20190802		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION

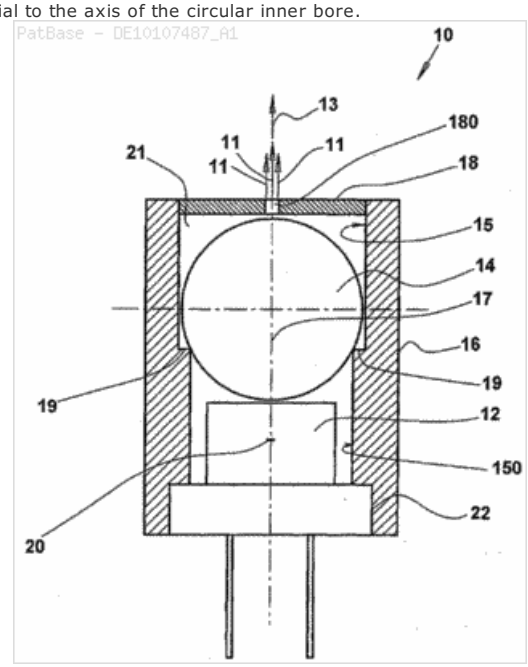
US2018187873 AA	20190907		RFE1	Docketed New Case - Ready for Examination	
US2018187873 AA	20190907		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018187873 AA	20191003	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018187873 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018187873 AA	20191023	LSGT	PAT1	Patented Case	
US2018187873 AA	20191023	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2020072451 AA	20191203	LSES	NFA1	Non Final Action Mailed	
US2020072451 AA	20200305	LSPB	+	published / reissued	
US2020072451 AA	20200706	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	

52) Family number: 23550055 (DE10107487 A1)

Title: DEVICE FOR GENERATING POINT-SHAPED **LIGHT** BEAM HAS SPHERICAL GLASS OR PLASTIC LENS **LIGHT** FOCUSING DEVICE ARRANGED IN FRONT OF **LIGHT** SOURCE IN **LIGHT** OUTPUT DIRECTION

Abstract: The device has a **light** source (12) with a spherical glass or plastic lens **light** focusing device (14) arranged in front of it in the **light** output direction. The spherical lens is accommodated in an inner bore (15) of essentially circular cross-section in a housing element (16). The **light** source is essentially axial to the axis of the circular inner bore.

Classifications:
International (IPC 8-9): F21V5/04 G02B27/20 G02B3/00 G02B7/00 G02B7/02
International (IPC 1-7): F21V5/04 G02B27/20
CPC: G02B27/20 G02B7/027



Family:

Publication number	Publication date	Application number	Application date
DE10107487 A1	20020829	DE20011007487	20010215
DE10107487 B4	20121004	DE20011007487	20010215

Priority:
DE20011007487 20010215

Probable Assignee: STAPELFELDT KAI
Assignee(s): (std): STAPELFELDT KAI
Assignee(s): STAPELFELDT
Inventor(s): (std): STAPELFELDT KAI

Legal status (INPADOC)

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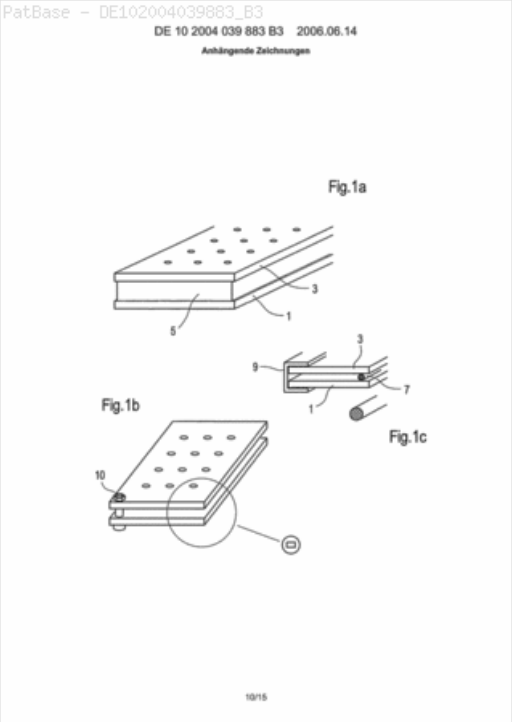
Patent	Date recorded	Event group	Code	Event	Details
DE10107487 A1	20020829	LSPB	+	published / reissued	
DE10107487 A1	20080403	LSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE10107487 A1	20110922	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE10107487 A1	20120228	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE10107487 A1	20120527	LSGT	+R018	GRANT DECISION BY EXAMINATION SECTION/EXAMINING DIVISION	
DE10107487 B4	20121004	LSGT	+	granted / extensions (spc, cpc, pte)	
DE10107487 B4	20121029		R082	CHANGE OF REPRESENTATIVE	PartyType: representative Representative: PROPINDUS PATENTANWAELTE NIEDMERS JAEGER KOEST, DE
DE10107487 B4	20130411	LSGT	+R020	PATENT GRANT NOW FINAL	Effective date: 20130105
DE10107487 B4	20210215	PEXP		Calculated Patent Term Expiry	

53) Family number: 33067372 (DE102004039883 B3)

Title: TRANSPARENT ELEMENT COMPRISES PRIMARY AND SECONDARY TRANSPARENT PLATES, AND AN INTERMEDIATE ELECTRICAL CONSUMER

Abstract: A transparent element comprises a primary transparent plate (1), a secondary transparent plate (3) and an electrical consumer (4). The consumer is located between the two transparent plates and is a **light** diode. The plates consist of insulating glass and are held together by a frame.

Classifications:
International (IPC 8-9): F21V13/00 F21V13/02 F21V3/00 F21V9/00 F21V9/02 G09F13/08 H01L23/12 H01L23/14 H01L23/52 H01L23/53 H01L23/538 H01L25/10 H01L25/13 H01L33/00 H01L33/48 H01L33/56
CPC: B32B17/10036 B32B17/10174 B32B17/10293 F21Y2109/00 F21Y2115/10 G09F19/00 G09F19/22 H01L33/483 H01L33/56



Family:

Publication number	Publication date	Application number	Application date
DE102004039883 B3	20060614	DE200410039883	20040817

Priority:
DE200410039883 20040817

Probable Assignee: SCHOTT AG

Assignee(s): (std): SCHOTT AG

Inventor(s): (std): ANTON MATTHIAS ; BIETHMANN STEFAN ; DOEPPNER CHRISTOPH LOTHAR ; LUEDEKE RUEDIGER ; NICKUT ANDREAS ; SCHILLERT HORST ; SCHMITZ THOMAS ; SCHNEIDER ROLF A O

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE102004039883 B3	20060614	LSGT	+	granted / extensions (spc, cpc, pte)	
DE102004039883 B3	20060614	LSPB	+8100	PUBLICATION OF THE EXAMINED APPLICATION WITHOUT PUBLICATION OF UNEXAMINED APPLICATION	
DE102004039883 B3	20061207	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE102004039883 B3	20150312		R082	CHANGE OF REPRESENTATIVE	Representative: PATENTANWAELTE FRITZ & BRANDENBURG, DE PartyType: representative
DE102004039883 B3	20150522	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	OldParty: FORMER OWNER: SCHOTT AG, 55122 MAINZ, DE Owner: PATERIAL GMBH, DE PartyType: owner
DE102004039883 B3	20150522	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	PartyType: owner Owner: LIGHTPAT GMBH, DE OldParty: FORMER OWNER: SCHOTT AG, 55122 MAINZ, DE

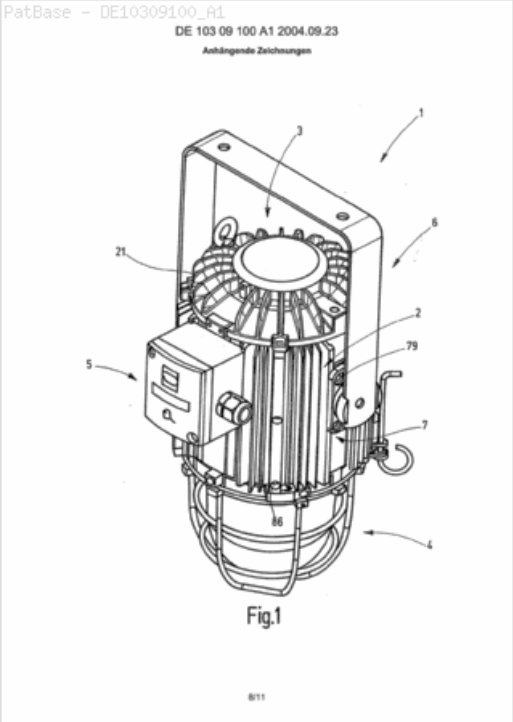
DE102004039883 B3	20150522		R082	CHANGE OF REPRESENTATIVE	PartyType: representative Representative: PATENTANWAELTE FRITZ & BRANDENBURG, DE
DE102004039883 B3	20160606	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	Owner: LIGHTPAT GMBH, DE OldParty: FORMER OWNER: PATERIAL GMBH, 60389 FRANKFURT, DE PartyType: owner
DE102004039883 B3	20160606		R082	CHANGE OF REPRESENTATIVE	Representative: PATENTANWAELTE FRITZ & BRANDENBURG, DE PartyType: representative
DE102004039883 B3	20200303	LSDW	-R119	APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE	
DE102004039883 B3	20200303	LSDW	-R119	APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE	
DE102004039883 B3	20240817	PEXP		Calculated Patent Term Expiry	

54) Family number: 30969803 (DE10309100 A1)

Title: EXPLOSION-PROTECTED SUSPENDED **LIGHT**, ESPECIALLY FOR ESSENTIALLY ASYMMETRICAL **LIGHT** SOURCES, HAS LAMP CARRIER IN SPACE BOUNDED BY HOUSING BODY, REAR COVER AND **LIGHT** GLASS

Abstract: The **light** (1) has a tubular housing body (2) formed by a section of an extrusion profile that is profiled in the longitudinal direction and that is bounded by two ends, a rear cover (3) seated on one end, a **light** glass (4) seated on the other end and a lamp carrier in the space bounded by the housing body, the rear cover and the **light** glass.

Classifications:
International (IPC 8-9): F21S8/04 F21S8/06 F21V15/00 F21V15/01 F21V21/10 F21V21/112 F21V25/00 F21V25/12 F21V27/00 F21V27/02 F21V29/00
International (IPC 1-7): F21S8/06 F21V15/01 F21V25/12 F21V29/00 F21V3/00
CPC: F21S8/06 F21V15/013 F21V21/112 F21V25/12 F21V27/02 F21V29/773



Family:

Publication number	Publication date	Application number	Application date
DE10309100 A1	20040923	DE20031009100	20030303

Priority:
DE20031009100 20030303

Probable Assignee: STAHL R SCHALTGERAETE GMBH
Assignee(s): (std): STAHL R SCHALTGERAETE GMBH
Assignee(s): R STAHL SCHALTGERAETE GMBH
Inventor(s): (std): PILZ DIETER

Legal status (INPADOC)

View legal status timeline

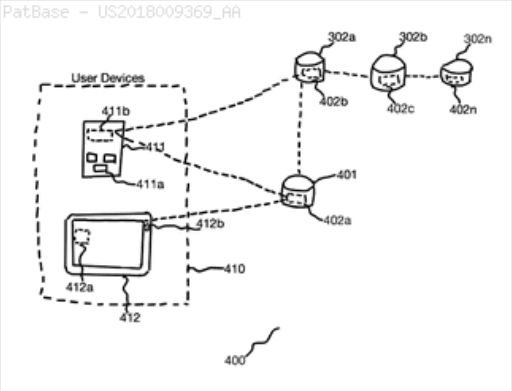
Patent	Date recorded	Event group	Code	Event	Details
DE10309100 A1	20040923	LSPB	+	published / reissued	
DE10309100 A1	20040923	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE10309100 A1	20050310	LSRV	-8131	REJECTION	

55) Family number: 68162706 (US2018009369 AA)

Title: WIRELESS CAB MARKER **LIGHTS** FOR TRUCK

Abstract: A three dimensional truck or SUV cab marker **light** apparatus comprising a container having a right circular cylinder **structure** with a shape determined by the number of walls used during assembly, each wall being formed from a generally flat sheet of a rigid material and a transparent material, the walls being assembled to form a container enclosing an interior region for a **light** -transmission source and having a lower surface for attachment to a cab roof without **drilling** holes into the cab roof and without installing wires through the cab roof.

Classifications:
International (IPC 8-9): B60Q1/26 F21V23/04
CPC: B60Q1/2611 B60Q2900/10 B60Q2900/30
US: 1/1 362/546



Family:

Publication number	Publication date	Application number	Application date
US10562441 BB	20200218	US20170686130	20170824
US2018009369 AA	20180111	US20170686130	20170824

Priority:
US20160360325P 20160709 US20170645661 20170710 US20170686130 20170824

Probable Assignee: CAB OVER AMERICA LLC
Assignee(s): (std): CAB OVER AMERICA LLC
Inventor(s): (std): BADKIN VINCENT L
Agent(s): GALVIN BRIAN R; GALVIN PATENT LAW LLC

Legal status (INPADOC)

View legal status timeline

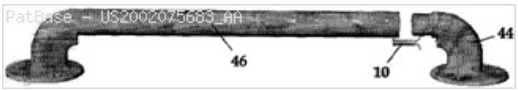
Patent	Date recorded	Event group	Code	Event	Details
US10562441 BB	20170830	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO MICRO (ORIGINAL EVENT CODE: MICR); ENTITY STATUS OF PATENT OWNER: MICROENTITY
US10562441 BB	20171001		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US10562441 BB	20171012	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:BADKIN, VINCENT L.;REEL/FRAME:044204/0377 PartyType: owner Owner: CAB OVER AMERICA LLC, OREGON Effective date: 20171012
US10562441 BB	20200218	LSGT	+	granted / extensions (spc, cpc, pte)	
US10562441 BB	20380107	PEXP		Calculated Patent Term Expiry (PTA 136 days)	
US2018009369 AA	20171001		RFE1	Docketed New Case - Ready for Examination	
US2018009369 AA	20180111	LSPB	+	published / reissued	
US2018009369 AA	20190404	LSES	NFA1	Non Final Action Mailed	
US2018009369 AA	20190404		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018009369 AA	20190813		RSP4	Response to Non-	

				Final Office Action Entered and Forwarded to Examiner	
US2018009369 AA	20190813		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018009369 AA	20191007	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018009369 AA	20191007		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018009369 AA	20200129	LSGT	PAT1	Patented Case	
US2018009369 AA	20200129	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE

56) Family number: 28228478 (US2002075683 AA)

Title: SUPER BRIGHT LED UTILITY AND EMERGENCY **LIGHT**

Abstract: The present invention provides a miniature **lighting** **system** which is durable, inexpensive and yet versatile. The **lighting** **system** has a **light** source and electrical component assembly located within a housing. The electrical component assembly is surrounded by a sealant in order to prevent any water or moisture from reaching the electrical connections and to permanently seal and unitize the circuitry with the housing. The housing is shaped so as to surround and protect the **light** source without allowing the sealant to reach or coat the **light** source.



Classifications:
International (IPC 8-9): E04F11/18 F21K99/00 F21S2/00 F21S4/20 F21S8/02 F21V21/002 F21V21/14 F21V21/28 F21V23/04 F21V29/00 F21V31/00 F21Y101/02 H01R33/00
International (IPC 1-7): F21L4/02 F21S2/00 F21S8/02 F21V29/00 F21V31/00 H01R33/00
CPC: E04F2011/1048 E04F2011/1872 F21S8/02 F21S9/022 F21S9/03 F21V21/28 F21V23/0442 F21V31/005 F21W2111/027 F21W2111/08 F21Y2115/10 F21S4/28 F21V33/006
US: 362/158 362/158S 362/184 362/184S 362/198 362/198S 362/226 362/267 362/267P 362/365 362/382 362/382P 362/399 362/399S 362/640 362/647 362/647P 362/652 362/800 362/800S

Family:

Publication number	Publication date	Application number	Application date
AU200211826 A1	20020408	AU20020011826	20011001
AU200211826 A5	20020408	AU20020011826	20011001
AU2002211826 AA	20020408	AU20020211826	20011001
CA2491991 AA	20050712	CA20052491991	20050112
CA2492011 AA	20050712	CA20052492011	20050112
US2002075683 AA	20020620	US20010968560	20011001
US2004141318 AA	20040722	US20040755516	20040112
US2005141225 AA	20050630	US20040834725	20040429
US6676278 BB	20040113	US20010968560	20011001
US7052170 BB	20060530	US20040755516	20040112
US7168843 BB	20070130	US20040834725	20040429
WO0227235 A1	20020404	WO2001US42385	20011001

Priority:

US20000237012P 20000929 WO2001US42385 20011001 US20010968560 20011001
US20040755516 20040112 US20040834725 20040429 CA20052491991 20050112
CA20052492011 20050112

Probable Assignee: SUNCOR STAINLESS INC
Assignee(s): (std): STRIEBEL ROMAN F ; SUNCOR STAINLESS INC
Inventor(s): (std): MCLEISH DONALD ; STRIEBEL ROMAN F
Inventor(s): DONALD MCLEISH ; ROMAN F STRIEBEL ; STRIEBEL ROMAN
Agent(s): BURNS AND LEVINSON LLP; JACOB N; JOHN A; PERKINS SMITH AND COHEN LLP; SMART AND BIGGAR
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 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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU200211826 A1	20020408	LSPB	+	published / reissued	
AU2002211826 AA	20020408	LSPB	+	published / reissued	
CA2491991 AA	20050712	LSPB	+	published / reissued	
CA2491991 AA	20090112	LSLE	-FZDE	DEAD	
CA2492011 AA	20050712	LSPB	+	published / reissued	
CA2492011 AA	20090112	LSLE	-FZDE	DEAD	
US2002075683 AA	20020620	LSPB	+	published / reissued	
US2002075683 AA	20031126	LSAS	AS	ASSIGNMENT	Effective date: 20031121 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STRIEBEL, ROMAN F.;REEL/FRAME:014726/0347 PartyType: owner Owner: SUNCOR STAINLESS, INC., MASSACHUSETTS
US2002075683 AA	20031223	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2004141318 AA	20040722	LSPB	+	published / reissued	

US2004141318 AA	20060510	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2005141225 AA	20050630	LSPB	+	published / reissued	
US2005141225 AA	20070110	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US6676278 BB	20031223	LSGT	PAT1	Patented Case	
US6676278 BB	20040113	LSGT	+	granted / extensions (spc, cpc, pte)	
US6676278 BB	20070711	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US6676278 BB	20110713	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US6676278 BB	20150713	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US6676278 BB	20211001	PEXP		Calculated Patent Term Expiry	
US7052170 BB	20040112	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: SUNCOR STAINLESS, INC., MASSACHUSETTS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STRIEBEL, ROMAN F.;REEL/FRAME:014894/0716 Effective date: 20040109
US7052170 BB	20060510	LSGT	PAT1	Patented Case	
US7052170 BB	20060530	LSGT	+	granted / extensions (spc, cpc, pte)	
US7052170 BB	20091130	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7052170 BB	20131202	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US7052170 BB	20171130	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 12
US7052170 BB	20240711	PEXP		Calculated Patent Term Expiry (PTA 181 days)	
US7168843 BB	20040813	LSAS	AS	ASSIGNMENT	Effective date: 20040723 Owner: SUNCOR STAINLESS, INC., MASSACHUSETTS PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STRIEBEL, ROMAN F.;REEL/FRAME:015680/0521
US7168843 BB	20070110	LSGT	PAT1	Patented Case	
US7168843 BB	20070130	LSGT	+	granted / extensions (spc, cpc, pte)	
US7168843 BB	20100730	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7168843 BB	20140224	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US7168843 BB	20180730	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 12
US7168843 BB	20241228	PEXP		Calculated Patent Term Expiry (PTA 243 days)	
WO0227235 A1	20020404	LSPB	+	published / reissued	
WO0227235 A1	20020404		+AK	DESIGNATED STATES	Kind code of Ref document: A1 Country of Ref document: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
WO0227235 A1	20020404		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AM AT AZ BE BF BJ BY CF CG CH CI CM CY DE DK ES FI FR GA GB GH GM GN GQ GR GW IE IT KE KG KZ LS LU MC MD ML MR MW MZ NE NL PT RU SD SE SL SN SZ TD TG TJ TM TR TZ UG ZW
WO0227235 A1	20021016		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO0227235 A1	20030807	LSWD	REG	REFERENCE TO NATIONAL CODE	Ref legal event code: 8642 Ref country code: DE

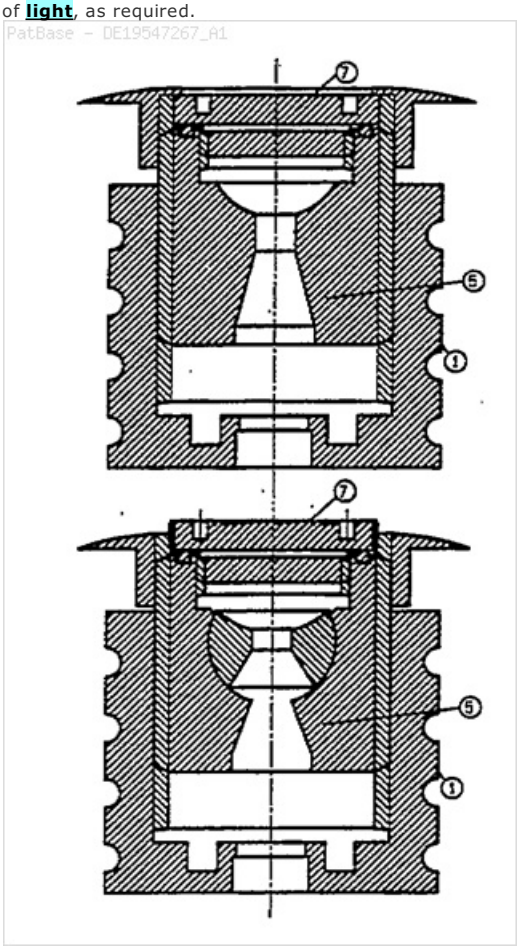
WO0227235 A1	20031119	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref country code: WO
WO0227235 A1	20050914	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: JP

57) Family number: 12868866 (DE19547267 A1)

Title: PRESSURISED WATER- AND GAS-TIGHT RADIATOR ESP. FOR FIBRE=OPTICS ILLUMINATIONS

Abstract: The radiator has a lower part (1) which can be inserted and fixed in the wall or ceiling, or mounted on a suspension. A screw-in piece (5) can be screwed into the lower part. There is also a cover disc. An O-ring may be fitted between the screw-in piece and the cover disc to seal the unit. The tube or suspension connected and the other components are also sealed against each other. The external thread of the screw-in piece (20) enables the connection to the building to be screwed tight. The cover ring may or may not permit the passage of **light**, as required.

Classifications:
International (IPC 8-9): F21S2/00 F21S8/00 F21S8/02 F21V21/00 F21V21/02 F21V21/04 F21V31/00 F21V8/00 F21W131/30 F21W131/40 F21Y101/00
International (IPC 1-7): F21P7/00 F21S1/02 F21S5/00 F21S8/02 F21V21/00 F21V21/04 F21V31/00
CPC: F21S8/02 F21V21/00 F21V31/00 G02B6/0008



Family:

Publication number	Publication date	Application number	Application date
DE19547267 A1	19970703	DE19951047267	19951219
DE19547267 C2	20001026	DE19951047267	19951219

Priority:
DE19951047267 19951219

Probable Assignee: LEBER HERMANN
Assignee(s): (std): LEBER HERMANN
Assignee(s): LEBER HERMANN 90455 NUERNBERG DE
Inventor(s): (std): LEBER HERMANN
Inventor(s): LEBER HERMANN 90455 NUERNBERG DE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE19547267 A1	19970703	LSPB	+	published / reissued	
DE19547267 A1	19970703	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE19547267 A1	20000316		8125	CHANGE OF THE MAIN CLASSIFICATION	ClassificationSymbol: F21S 8/02 ClassificationScheme: IPC
DE19547267 C2	20001026	LSGT	+	granted / extensions (spc, cpc, pte)	
DE19547267 C2	20001026	LSGT	+D2	GRANT AFTER EXAMINATION	
DE19547267 C2	20010426	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	

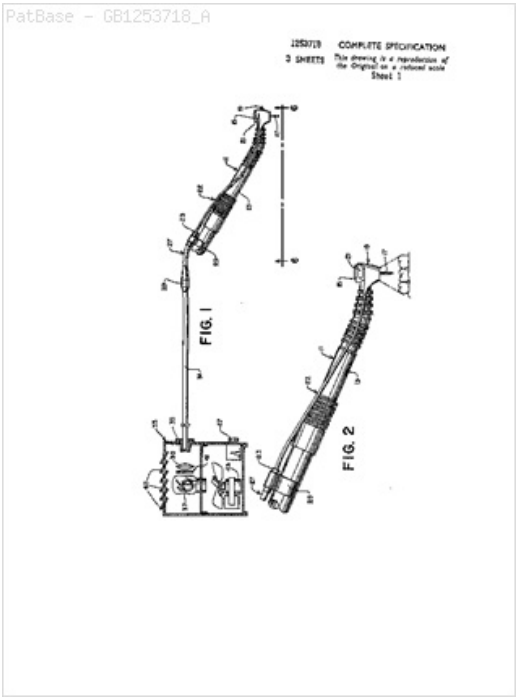
DE19547267 C2	20041021	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE
DE19547267 C2	20151219	PEXP		Calculated Patent Term Expiry

58) Family number: 286750 (GB1253718 A)

Title: ILLUMINATOR APPARATUS

Abstract: 1,253,718. Dental handpieces. RADIOPTICS Inc. 20 March, 1969 [27 March, 1968], No. 14795/69. Heading A5R. [Also in Divisions F4 and G2] An illuminator apparatus for directing **light** on to an area to be worked comprises optical fibres 51, Fig. 9, connected at one end to a **light** source and at the other to an annular support surrounding the working portion 17, Fig. 1, of a tool 11, for example a dentist's **drill**. The support comprises concentric rings 53 and 54 between which the fibres are evenly distributed; the rings and fibres may be arranged such that the fibres are parallel (Fig. 4, not shown), converging (Fig. 5, not shown) or diverging, and may consist of one or more layers so that at a given working distance and annular radius the area is evenly illuminated; a diffuser (55) (Fig. 4, not shown) may be used to this end. Fibres 51 from the annulus are cemented over an inner form 73 and an outer form 75 cemented over that to form an illuminator head 19; the form 75 may have a clip 21 to attach it to the head 15 of the tool 11. The fibres may be divided into bundles 22 with protective sleeves 71 which may be united in a transmission section 23 to form a guide 27 connected to a coupler 29 and a further **light** guide 31 connects the coupler to the **light** source comprising a lamp 37, cooled by a fan 43 and louvres 45 in the housing 33, an infra red filter 41, condensing lens 39 and **light** intensity control 47. The fibre annulus is constructed by cementing the fibres at one end and placing the open ends over the tip (63) (Fig. 7, not shown) of a madrel (61) and cementing these to the inner ring 54 mounted on the madrel, the outer ring 53 is then cemented in place, the fibres being cut and ground after assembly on to the tool.

Classifications:
International (IPC 8-9): A61B1/06 A61B1/07 A61B1/24 A61C1/08 F04B1/22 F04B21/08 F04C15/00 F21S8/00 F21V8/00 G02B6/04
International (IPC 1-7): A61C1/08 A61C3/00 F21L15/00 F21S5/00 F21V33/00
CPC: A61B1/0014 A61B1/07 A61B1/24 A61C1/088 F21W2131/202 G02B6/0005
US: 240/2 362/119 362/554 362/573 362/581 433/29 606/16



Family:

Publication number	Publication date	Application number	Application date
AU196952339 A1	19700924	AU19690052339	19690321
AU206952339 A1	19700924	AU19690052339	19690321
DE1915770 A1	19691009	DE19691915770	19690327
FR2004874 A1	19691205	FR19690009141	19690327
GB1253718 A	19711117	GB19690014795	19690320
US3590232 A	19710629	US19680716591	19680327

Priority:
US19680716591 19680327

Probable Assignee: RADIOPTICS INC
Assignee(s): (std): RADIOPTICS INC
Inventor(s): (std): SADOWSKI HENRY B W ; WALTER SADOWSKI HENRY BRONISLA
Inventor(s): HENRY B W SADOWSKI ; HENRY BRONISLAVA WALTER SADOWSKI ; WALTER SADOWSKI HENRY BRONISLAUS

Legal status (INPADOC)

View legal status timeline

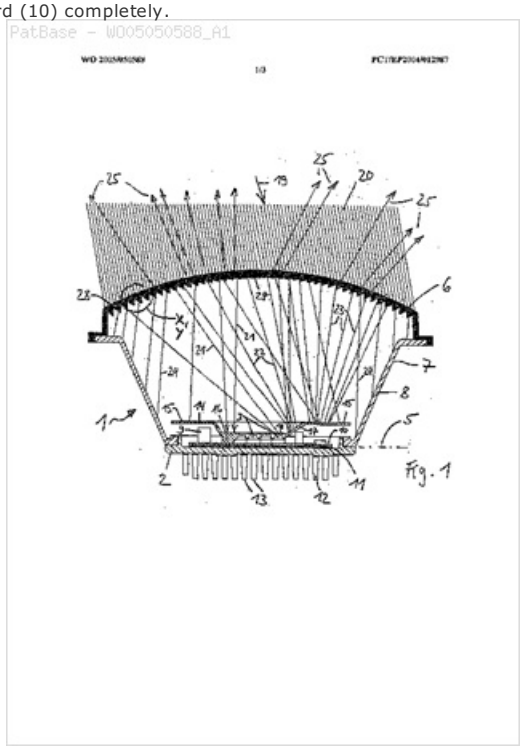
Patent	Date recorded	Event group	Code	Event	Details
AU196952339 A1	19700924	LSPB	+	published / reissued	
AU206952339 A1	19700924	LSPB	+	published / reissued	
DE1915770 A1	19691009	LSPB	+	published / reissued	
FR2004874 A1	19691205	LSPB	+	published / reissued	
FR2004874 A1	19760514	LSLE	-ST	NOTIFICATION OF LAPSE	
GB1253718 A	19711117	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1253718 A	19890320	PEXP		Calculated Patent Term Expiry	
US3590232 A	19710629	LSGT	+	granted / extensions (spc, cpc, pte)	

59) Family number: 31934039 (WO05050588 A1)

Title: SIGNAL LAMP

Abstract: The present invention relates to a signal lamp having an LED **light** (LED = **light** emitting diode) which is in particular used in traffic signal devices or display devices like traffic **lights** or road signs. The signal lamp comprises an optical lens for directing the radiation emitted by a single LED or a number of LEDs efficiently at predetermined angles or in predetermined directions. The Signal lamp has a basis support (2) and at least one **light** means (3), preferably two or a few more electric **light** means (3), which together represent a quasi central **light** source, and which are arranged with a small distance between them on the basis support (2) within a plane, such that the area enclosed by **light** means (3) comprises a maximum side value, and has a lens device (6), which is arranged in a predetermined distance in front of the **light** means (3) such, that said predetermined distane is greater, and especially substantially greater than the maximum side value. The **light** means (3) are arranged on one single circuit board (10), said circuit board housing also the electric circuits for controlling and power supplying said **light**, means, and comprising a form part (14) fabricated of a **light** absorbing material, preferably synthetic material, said form part covering the circuit board (10) completely.

Classifications:
International (IPC 8-9): G08G1/095
International (IPC 1-7): F21K7/00 F21S8/10 F21V5/04 G08G1/095 G08G1/95
CPC: G08G1/095



Family:

Publication number	Publication date	Application number	Application date
AT426877 E	20090415	AT20040013321T	20040605
DE10354176 A1	20050804	DE20031054176	20031119
DE602004020168 D1	20090507	DE200460020168T	20040605
EP1533774 A1	20050525	EP20040013321	20040605
EP1533774 B1	20090325	EP20040013321	20040605
WO05050588 A1	20050602	WO2004EP12987	20041116

Priority:
DE20031054176 20031119

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

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AT426877 E	20090415	LSGT	+	granted / extensions (spc, cpc, pte)	
AT426877 E	20090915	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AT426877 E	20240605	PEXP		Calculated Patent Term Expiry	

DE10354176 A1	20050804	LSPB	+	published / reissued	
DE10354176 A1	20101118	LSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE10354176 A1	20120209	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	
DE10354176 A1	20120913	LSDW	-R119	APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE	Effective date: 20120601
DE602004020168 D1	20100415	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE602004020168 D1	20150924	LSRE	+R074	RE-ESTABLISHMENT ALLOWED	
EP1533774 A1	20050525	LSPB	+	published / reissued	
EP1533774 A1	20050525		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: 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
EP1533774 A1	20050525		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL HR LT LV MK
EP1533774 A1	20060125	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20051125
EP1533774 A1	20060215	LSFE	+AKX	DESIGNATION FEES PAID	Country of Ref document: 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
EP1533774 A1	20060215	LSFE	+AXX	EXTENSION FEES PAID	Payment date: 20051125 Country of Ref document: AL
EP1533774 A1	20060215	LSFE	+AXX	EXTENSION FEES PAID	Payment date: 20051125 Country of Ref document: LT
EP1533774 A1	20060215	LSFE	+AXX	EXTENSION FEES PAID	Payment date: 20051125 Country of Ref document: LV
EP1533774 A1	20060215	LSFE	+AXX	EXTENSION FEES PAID	Payment date: 20051125 Country of Ref document: MK
EP1533774 A1	20070404		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: LOMBERG, MARKUS PartyType: inventor
EP1533774 A1	20070404		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: HERTRICH, MICHAEL PartyType: inventor
EP1533774 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20140101 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: DE
EP1533774 B1	20090325	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1533774 B1	20090325		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: 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
EP1533774 B1	20090325		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL LT LV MK
EP1533774 B1	20090325	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP1533774 B1	20090331	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP1533774 B1	20090429	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: IE
EP1533774 B1	20090507		REF	CORRESPONDS TO:	Date of Ref document: 20090507 Kind code of Ref document: P Ref document number: 602004020168

					Country of Ref document: DE
EP1533774 B1	20090731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090325 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: FI
EP1533774 B1	20090731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090325 Country of Ref document: SI
EP1533774 B1	20090825	LSRV	-LTIE	LT: INVALIDATION OF EUROPEAN PATENT OR PATENT EXTENSION	Effective date: 20090325 Ref country code: EP
EP1533774 B1	20090831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090325 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AT
EP1533774 B1	20090831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090325 Country of Ref document: PL
EP1533774 B1	20090831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090625 Country of Ref document: SE
EP1533774 B1	20090901	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
EP1533774 B1	20090930	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090325 Country of Ref document: BE
EP1533774 B1	20091030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090325 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: CZ
EP1533774 B1	20091030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090325 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: EE
EP1533774 B1	20091030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090706 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: ES
EP1533774 B1	20091030	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090901 Country of Ref document: PT
EP1533774 B1	20091130	LSLE	-PG25	LAPSED IN A CONTRACTING	Lapsed date: 20090325 NotificationOfLapse: LAPSE

				STATE [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 Country of Ref document: NL
EP1533774 B1	20091130	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090325 Country of Ref document: RO
EP1533774 B1	20091130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090325 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SK
EP1533774 B1	20100129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090625 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: BG
EP1533774 B1	20100129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090325 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: DK
EP1533774 B1	20100129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20090630 Country of Ref document: MC
EP1533774 B1	20100129	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: PL Ref country code: CH
EP1533774 B1	20100224	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	Effective date: 20090625 Ref country code: EP
EP1533774 B1	20100303	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20091229
EP1533774 B1	20100326	LSLE	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20100226 Ref legal event code: ST Ref country code: FR
EP1533774 B1	20100430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20090630 Country of Ref document: CH
EP1533774 B1	20100430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20090630 Country of Ref document: FR
EP1533774 B1	20100430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090605 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: IE
EP1533774 B1	20100430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090630 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LI
EP1533774 B1	20100531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20090625

				POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Country of Ref document: GB
EP1533774 B1	20101029	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090626 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: GR
EP1533774 B1	20110331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090325 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IT
EP1533774 B1	20110429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20090605 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LU
EP1533774 B1	20110630	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090926 Country of Ref document: HU
EP1533774 B1	20110831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090325 Country of Ref document: TR
EP1533774 B1	20110930	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20090325 Country of Ref document: CY
EP1533774 B1	20140403	LSDW	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 602004020168 Ref country code: DE Effective date: 20140101 Ref legal event code: R119 Country of Ref document: DE
EP1533774 B1	20140430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20140101 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: DE
EP1533774 B1	20140501		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: R073 Ref document number: 602004020168 Ref country code: DE Country of Ref document: DE
EP1533774 B1	20150924	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: R074 Ref document number: 602004020168 Ref country code: DE Country of Ref document: DE
EP1533774 B1	20151030	LSRE	+PGRI	PATENT REINSTATED IN CONTRACTING STATE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Reinstated date: 20150921 Country of Ref document: DE
EP1533774 B1	20160429	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20151223 Year of fee payment: 12 Country of Ref document: DE
EP1533774 B1	20170103	LSDW	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 602004020168 Ref legal event code: R119 Ref country code: DE Country of Ref document: DE

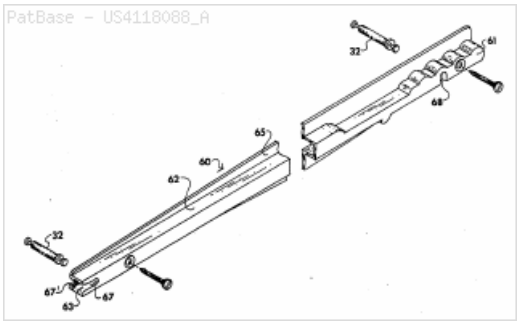
EP1533774 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20170103 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: DE
EP1533774 B1	20240605	PEXP		Calculated Patent Term Expiry	
WO05050588 A1	20050602	LSPB	+	published / reissued	
WO05050588 A1	20050602		+AK	DESIGNATED STATES	Kind code of Ref document: A1 Country of Ref document: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
WO05050588 A1	20050602		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AM AT AZ BE BF BG BJ BW BY CF CG CH CI CM CY CZ DE DK EE ES FI FR GA GB GH GM GN GQ GR GW HU IE IS IT KE KG KZ LS LU MC MD ML MR MW MZ NA NE NL PL PT RO RU SD SE SI SK SL SN SZ TD TG TJ TM TR TZ UG ZM ZW
WO05050588 A1	20050727		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO05050588 A1	20070103	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref country code: WO

60) Family number: 7032065 (US4118088 A)

Title: KNOCK-DOWN FURNITURE **SYSTEM**

Abstract: Known furniture **systems** of the knock-down type are provided with improved connecting elements; i.e., hinge fixing plates, drawer slides, shelf supports and facing strips, which facilitate assembly and fabrication increase stability and durability, and refine the appearance of the cabinet. The improved hinge fixing plate includes bearing bosses so arranged and **structured** as to accept conventionally available hinges in such manner as to permit adjusting of the cabinet door overhang. The improved drawer slide includes a longitudinal open-end rear slot and a transverse or vertical open-bottom forward slot spaced therefrom; the two slots cooperating to form an improved installation means. The shelf support bracket attaches to the side edge of a partial shelf having the ear section cut off to provide clearance for a **lighting** fixture. The shelf bracket uses countersunk holes to provide clearance between the heads of the attaching screws and the adjusting side walls. A front and rear recess which secures the bracket to the **system** hardware allow the brackets to be used interchangably on the left or right side. Facing strips releasably attach to and conceal exterior locking pin heads to improve the overall appearance of the cabinet.

Classifications:
International (IPC 8-9): A47B88/04 E05D5/00 E05D5/02 E05D7/04
International (IPC 1-7): A47B81/00 A47B88/04 A47B97/00 F21V33/00
CPC: A47B88/43 E05D5/0276 E05D7/0407 E05Y2900/20
US: 211/134 248/239 312/204 312/223 312/257.1 312/350 362/133 52/288.1



Family:

Publication number	Publication date	Application number	Application date
US4118088 A	19781003	US19770803988	19770606
US4152034 A	19790501	US19780894570	19780407
US4154492 A	19790515	US19780894568	19780407

Priority:
US19770803988 19770606 US19780894570 19780407 US19780894568 19780407

Probable Assignee: DUNNING LTD
Assignee(s): (std): DUNNING LTD
Inventor(s): (std): DUNNING III JOHN M ; DUNNING JOHN M III

Legal status (INPADOC)

View legal status timeline

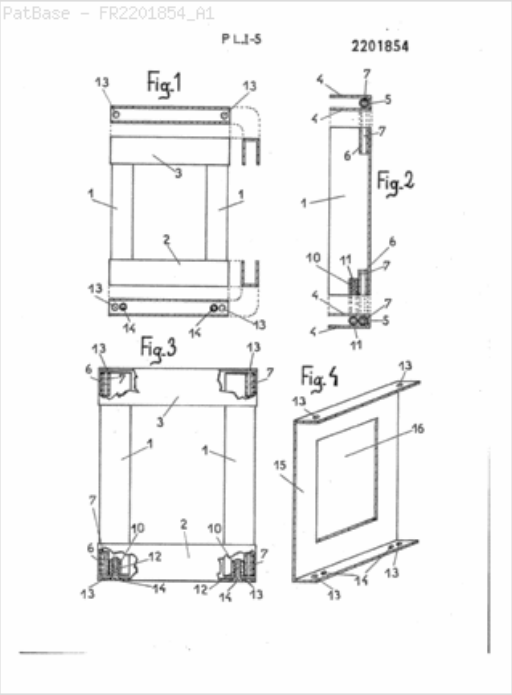
Patent	Date recorded	Event group	Code	Event	Details
US4118088 A	19781003	LSGT	+	granted / extensions (spc, cpc, pte)	
US4152034 A	19790501	LSGT	+	granted / extensions (spc, cpc, pte)	
US4154492 A	19790515	LSGT	+	granted / extensions (spc, cpc, pte)	
US4154492 A	19790515	LSGT	PAT1	Patented Case	

61) Family number: 3026824 (FR2201854 A1)

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Abstract: Source: FR2201854 A1 **Machine translation:** (Claim 1) 1. **Structure** mountable, removable for incorporation or use built in a **lighting** device, wherein the standard elements are assembled by threaded fasteners such **structure**, mobile or immobile, form-ing an independent piety and solidarity with a lamp **lighting** while highlighting an indeterminate number of frames that can receive photographs presented angles favorable to indirect **light**.

Classifications:
International (IPC 8-9): F21V17/00 F21V17/12 F21V33/00
International (IPC 1-7): A47G1/00 F21V17/00
CPC: F21V17/12 F21V33/0032



Family:

Publication number	Publication date	Application number	Application date
FR2201854 A1	19740503	FR19720035644	19721009

Priority:
FR19720035644 19721009

Probable Assignee: JACOMME LUCIEN
Assignee(s): (std): JACOMME LUCIEN
Assignee(s): JACOMME LUCIEN FR

Legal status (INPADOC)

View legal status timeline

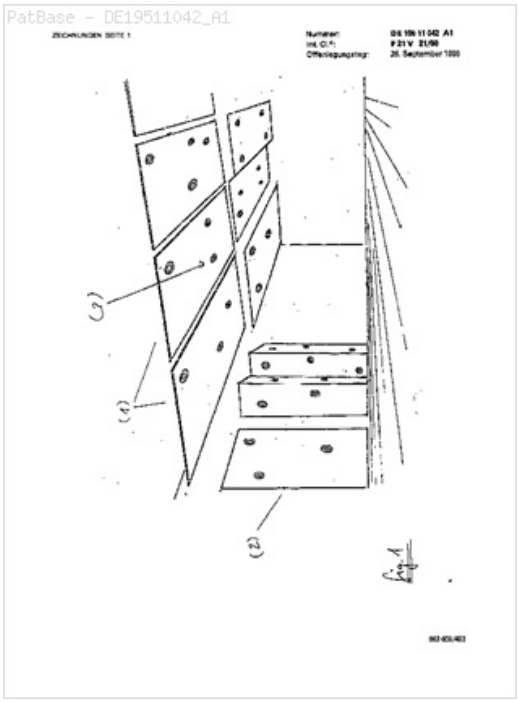
Patent	Date recorded	Event group	Code	Event	Details
FR2201854 A1	19740503	LSPB	+	published / reissued	
FR2201854 A1	19771216	LSLE	-ST	NOTIFICATION OF LAPSE	

62) Family number: 30266812 (DE19511042 A1)

Title: WALL- OR CEILING PLATE **LIGHTING SYSTEM**

Abstract: A wall- or ceiling-plate **lighting system** with built-in beam **lights** and in which the wall-or ceiling plates are electrically conducting and are taken up with low voltage operation. At each selected or preferred point in a wall or ceiling plate,a **light** can be installed without use of work-tools into n opening available at the work point or subsequently made during building work, with electrical contact formed simultaneously with the installation of the **light** which is then functionally ready for use. The **light** s can be removed from the wall or ceiling plate without use of tools and installed at any other point, with rotatable or swivel mounting.

Classifications:
International (IPC 8-9): E04B9/00 F21S2/00 F21S8/02 F21V21/02 F21V21/04 F21V23/00
International (IPC 1-7): E04F13/12 F21S1/14 F21V21/00 F21V23/00 H01R25/00
CPC: E04B9/006 F21S2/00 F21S8/02 F21V21/04 F21V23/00



Family:

Publication number	Publication date	Application number	Application date
DE19511042 A1	19960926	DE19951011042	19950325
DE19511042 C2	19990617	DE19951011042	19950325

Priority:

DE19951011042 19950325

Probable Assignee: IDL IND AND DESIGN LICHT GMBH

Assignee(s): (std): ALULITE LICHTSYSTEME GMBH ; IDL IND AND DESIGN LICHT GMBH

Assignee(s): ALULITE LICHTSYSTEME GMBH 81669 MUENCHEN DE ; IDL INDUSTRIE AND DESIGN LICHT GMBH ; IDL INDUSTRIE AND DESIGN LICHT GMBH 09212 LIMBACH ; IDL INDUSTRIE AND DESIGN LICHT GMBH 09212 LIMBACH OBERFROHNA DE

Inventor(s): (std): SACHER DOMINIC

Inventor(s): SACHER DOMINIC 82041 OBERHACHING DE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE19511042 A1	19960926	LSPB	+	published / reissued	
DE19511042 A1	19960926	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE19511042 A1	19961031	LSLI	8122	NONBINDING INTEREST IN GRANTING LICENCES DECLARED	
DE19511042 A1	19990204	LSAS	8127	NEW PERSON/NAME/ADDRESS OF THE APPLICANT	Owner: ALULITE LICHTSYSTEME GMBH, 81669 MUENCHEN, DE PartyType: owner
DE19511042 C2	19990617	LSGT	+	granted / extensions (spc, cpc, pte)	
DE19511042 C2	19990617	LSGT	+D2	GRANT AFTER EXAMINATION	
DE19511042 C2	19991216	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE19511042 C2	20030116	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE19511042 C2	20150325	PEXP		Calculated Patent Term	

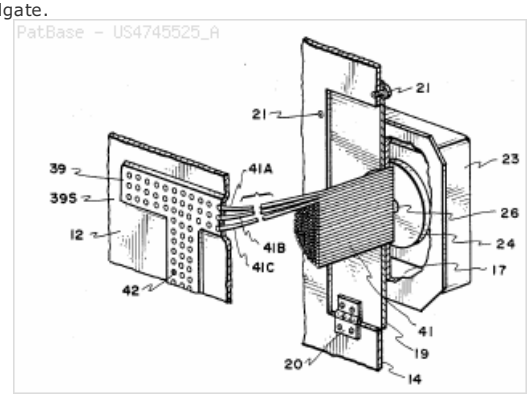
Expiry

63) Family number: 10212360 (US4745525 A)

Title: **Lighted** tailgate for pickup truck

Abstract: A variable color fiber-optic **lighting** **system** for pickup trucks that utilizes an optionally changeable in color **light** source, disposed within the confines a pickup truck's tailgate, whose **light** is directed to a series of fiber-optic cables which, at one end are aligned adjacent the **light** source, and set out in a configuration corresponding to the trademark of the truck's vendor at their second end on the exterior of the rear side of the tailgate.

Classifications:
International (IPC 8-9): B60Q1/00 B60Q1/26 B60Q1/56 F21V8/00
International (IPC 1-7): F21V7/04
CPC: B60Q1/0011 B60Q1/56 G02B6/0006
US: 340/479 362/32 362/511 362/559 362/80 40/547



Family:

Publication number	Publication date	Application number	Application date
US4745525 A	19880517	US19870020432	19870302

Priority:
US19870020432 19870302

Probable Assignee: SHEEHY PAUL M
Assignee(s): (std): SHEEHY PAUL M
Inventor(s): (std): SHEEHY PAUL M

Legal status (INPADOC)

View legal status timeline

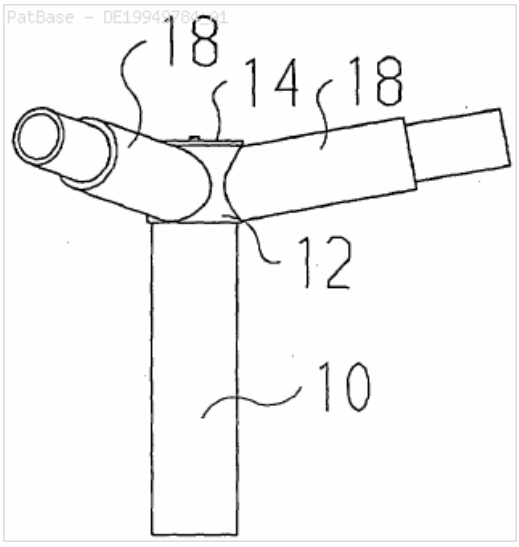
Patent	Date recorded	Event group	Code	Event	Details
US4745525 A	19880317	LSGT	PAT1	Patented Case	
US4745525 A	19880517	LSGT	+	granted / extensions (spc, cpc, pte)	
US4745525 A	19920107		REMI	MAINTENANCE FEE REMINDER MAILED	
US4745525 A	19920123		REMI	MAINTENANCE FEE REMINDER MAILED	
US4745525 A	19920517	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4745525 A	19920721	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 19920517
US4745525 A	20180130	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US4745525 A	20180130	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

64) Family number: 12555075 (DE19949784 A1)

Title: Fixing module for lamps to be fitted on lampposts or on masts has base body to fit on lamppost and brackets to fit support arms for lamps fitted to base body by connection elements

Abstract: The fixing module has one or more brackets to fit at least one support arm (32,34) for one or more lamps (58,60) at a lamppost (30). A base body (20) has an outer surface (44) and at least one through bore for the lamppost and a connection element, which is connected to the support arm and fixed to the outer surface of the base body. Preferably, the base body has several through bores of different diameters. Independent claims are included for a set of fixing modules and a lamp arrangement including the fixing module.

Classifications:
International (IPC 8-9): F21V21/10 F21V21/108 F21V21/116
International (IPC 1-7): F21S8/08 F21V21/10
CPC: F21V21/108 F21V21/116



Family:

Publication number	Publication date	Application number	Application date
DE19949784 A1	20010426	DE19991049784	19991015

Priority:
DE19991049784 19991015

Probable Assignee: SITECO BELEUCHTUNGSTECH GMBH
Assignee(s): (std): SITECO BELEUCHTUNGSTECH GMBH ; SITECO BELEUCHTUNGSTECHNIK GMB
Assignee(s): SITECO BELEUCHTUNGSTECHNIK GMBH
Inventor(s): (std): ANDREUCCI ALESSANDRO ; WEINACHT MICHAEL

Legal status (INPADOC)

View legal status timeline

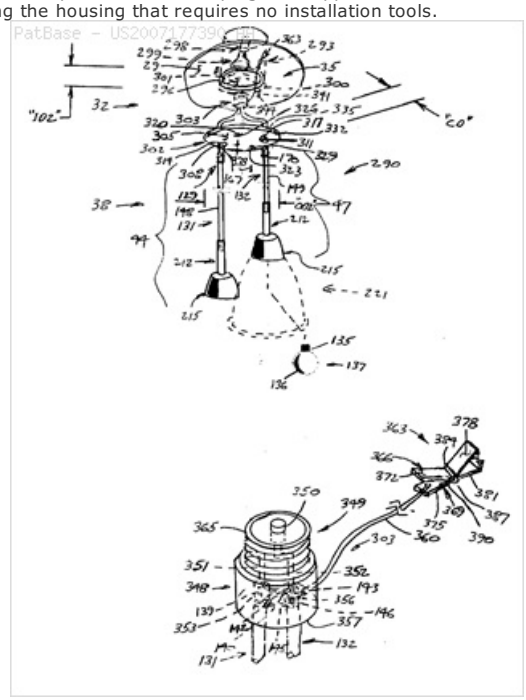
Patent	Date recorded	Event group	Code	Event	Details
DE19949784 A1	20010426	LSPB	+	published / reissued	
DE19949784 A1	20060817	LSLE	-8139	DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE	

65) Family number: 56022187 (US2007177390 AA)

Title: HANGING **LIGHTING** FIXTURE FOR RETROFITTING TO RECESSED CEILING **LIGHTS**

Abstract: A hanging **lighting** fixture that is easily and quickly changed over from a recessed ceiling **light** without requiring rewiring. The **lighting** fixture utilizes a housing with attached **light** bulb socket of the ceiling **light** already affixed within a hole in a ceiling. The **lighting** fixture includes a cover plate that mounts to the ceiling covering the housing and the hole to provide a finished look. A screw plug threadably engages the **light** bulb socket that is electrically connected to a **light** bulb socket through an electrical cord that includes a pair of insulated electrical wires. The electrical cord has a top end extending through a cord mounting hole of the cover plate connected to the screw plug supported by the cover plate using a cord coupling. A bottom end of the electrical cord is connected to the **light** bulb socket extending through a heat shield in which the **light** bulb socket is mounted. A lamp shade is connected to the **light** bulb socket. The cover plate mounts to the ceiling using screws that extend through respective ceiling mounting holes thereof into screw anchors press-fit into respective bores of the ceiling. The screw plug may connect to the housing for electrical grounding and the **light** bulb socket may be electrically grounded thereto through a ground conductor. The ground conductor is part of the electrical cord with a lower end connected to the **light** bulb socket and an upper end that extends outwardly from the screw plug. The upper end terminates at an electrically conductive, finger-operable spring clamp for gripping the housing that requires no installation tools.

Classifications:
International (IPC 8-9)**:** F21V15/00
CPC: F21S8/06 F21V21/02 F21V23/00 F21Y2115/10 H02G3/20
US: 362/147 362/365



Family:

Publication number	Publication date	Application number	Application date
US2007177390 AA	20070802	US20060342714	20060128

Priority:

US20060342714 20060128 US20060342714 20060130

Probable Assignee: EVANS MARY A
Assignee(s): (std)**:** EVANS MARY A
Inventor(s): (std)**:** EVANS MARY A
Inventor(s): EVANS MARY
Agent(s): BRIAN R RAYVE

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2007177390 AA	20070802	LSPB	+	published / reissued	
US2007177390 AA	20080414	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2007177390 AA	20080414		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION

66) Family number: 8440419 (AU199352291 A1)

Title: AN ABOVE-GROUND POOL **LIGHTING** **SYSTEM**

Abstract: A **lighting** **system** for an above-ground pool comprising a flange member (11) adapted to be fitted to an upper portion of a side wall of the pool, a **light** fitting and mounting means (100) for securing the **light** fitting at an underside of the flange member. 931209,p\opcr\dh,dlaneO2.spe,9

Classifications:

International (IPC 8-9): F21V21/00 F21V33/00

International (IPC 1-7): F21V21/00 F21V33/00

Family:

Publication number	Publication date	Application number	Application date
AU199352291 A1	19940623	AU19930052291	19931209

Priority:

AU1992PL06285 19921209 AU19930052291 19931209

Probable Assignee: THOMAS F DELANEY

Assignee(s): (std): THOMAS F DELANEY

Assignee(s): DELANEY THOMAS F

Inventor(s): (std): DELANEY THOMAS F

Inventor(s): THOMAS F DELANEY

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD

Legal status (INPADOC)

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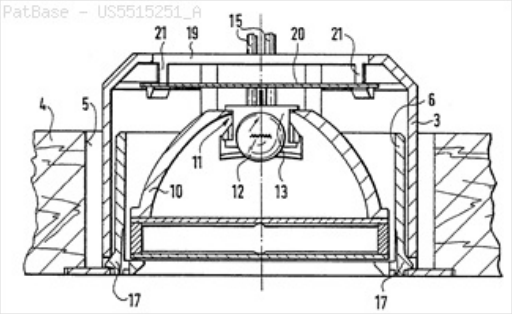
Patent	Date recorded	Event group	Code	Event	Details
AU199352291 A1	19940623	LSPB	+	published / reissued	

67) Family number: 11586511 (US5515251 A)

Title: INCORPORATED **LIGHTING SYSTEM** IN FURNITURE

Abstract: The invention concerns an incorporated **lighting system** in furniture with a reflector radiating downward, and the task is established to extensively reduce the downward heat radiation. This task is essentially resolved by the fact that a cold-**light** reflector is used as the reflector, and this reflector has an apical opening in the region of its apex, whereby a heat distribution plate that is ventilated by air and absorbs heat radiation is arranged above the apical opening.

Classifications:
International (IPC 8-9): F21S8/02 F21V15/00 F21V15/06 F21V29/00 F21V29/15 F21V29/83 F21V7/00 F21V7/04 F21V7/22
International (IPC 1-7): A47F11/10 F21S1/02 F21V29/00 F21V7/02 F21V7/22 F21V9/04
CPC: F21S8/02 F21V29/15 F21V29/83 F21V29/87 F21V7/04 F21V7/24 F21V7/28 F21W2131/301
US: 362/127 362/293 362/294 362/345 362/373



Family:

Publication number	Publication date	Application number	Application date
DE4334882 A1	19950629	DE19934334882	19931008
US5515251 A	19960507	US19940318384	19941005

Priority:
DE19934334882 19931008

Probable Assignee: HERMANN ABKE GMBH AND CO ELEKTRO KG

Assignee(s): (std): ABKE HERMANN ELEKTRO KG

Assignee(s): HERMANN ABKE GMBH ; HERMANN ABKE GMBH AND CO ELEKTRO ELEKTROTECHNIK HERA LICHTTECHNIK 32584 LOEHNE DE KG ; HERMANN ABKE GMBH AND CO ELEKTRO KG ; HERMANN ABKE GMBH AND CO ELEKTRO KG ELEKTROTECHNIK HERA LICHTTECHNIK 32584 LOEHNE DE

Inventor(s): (std): ABKE DIETER

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
DE4334882 A1	19950629	LSPB	+	published / reissued	
DE4334882 A1	19950629	LSES	+OM8	SEARCH REPORT AVAILABLE AS TO PARAGRAPH 43 LIT. 1 SENTENCE 1 PATENT LAW	
DE4334882 A1	19951005	LSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE4334882 A1	19990128	LSRV	-8131	REJECTION	
US5515251 A	19941005	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:ABKE, DIETER;REEL/FRAME:007191/0522 Owner: HERMANN ABKE GMBH & CO. ELEKTRO KG, GERMANY Effective date: 19940920
US5515251 A	19960425	LSGT	PAT1	Patented Case	
US5515251 A	19960507	LSGT	+	granted / extensions (spc, cpc, pte)	
US5515251 A	19991022	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5515251 A	20031126		REMI	MAINTENANCE FEE REMINDER MAILED	
US5515251 A	20040507	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5515251 A	20040706	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20040507
US5515251 A	20141005	PEXP		Calculated Patent Term Expiry	
US5515251 A	20180125	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5515251 A	20180125	LSLE	-STCH	INFORMATION ON	Text: PATENT EXPIRED DUE TO

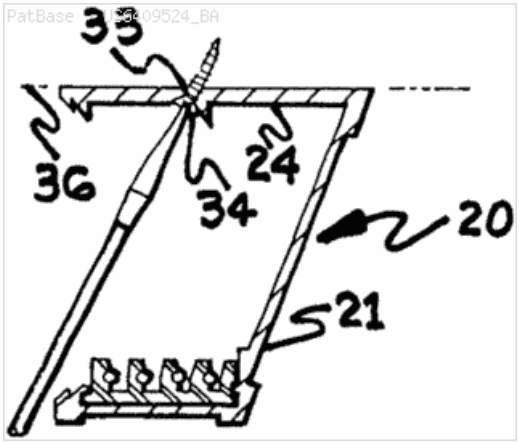
	STATUS: PATENT DISCONTINUATION	NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

68) Family number: 23424245 (US6409524 BA)

Title: SIDE-MOUNTED TRACKLIGHT **SYSTEM**

Abstract: A tracklight **system** includes a generally U-shaped track comprising an elongated metal extrusion having a canted base extending between a first parallel leg extending at an acute angle from the base to a distal end and a second parallel leg extending at an obtuse angle from the base to a distal end. The first parallel leg has means for attaching it to a wall or ceiling, and an elongated insulator is attached to second parallel leg 26 and extending through the track length. The insulator has a number of longitudinal slots, each including an electrical conductor receiving power from remote mains. One or more tracklight fixtures may be mounted onto or within the parallel legs. In a preferred embodiment the distal end of the first parallel leg terminates in a J-shaped hook suitable for hanging paintings, or other wall hangings, to be illuminated by the fixtures of the track.

Classifications:
International (IPC 8-9): F21V21/34 F21V5/00 F21V5/08 F21V7/00 F21V8/00 H01R25/00 H01R25/14
International (IPC 1-7): H01R2/500 H01R25/00
CPC: F21S8/033 F21S8/04 F21V21/34 F21V2200/40 F21V5/08 F21V7/0008 F21W2131/304 H01R25/14
US: 439/110



Family:

Publication number	Publication date	Application number	Application date
US6409524 BA	20020625	US20010917516	20010730

Priority:
US20010917516 20010730

Probable Assignee:	MILLER JACK V
Assignee(s): (std):	MILLER JACK V ; MILLER RUTH E
Inventor(s): (std):	MILLER JACK V ; MILLER RUTH E
Inventor(s):	JACK V MILLER ; RUTH E MILLER

Legal status (INPADOC)

View legal status timeline

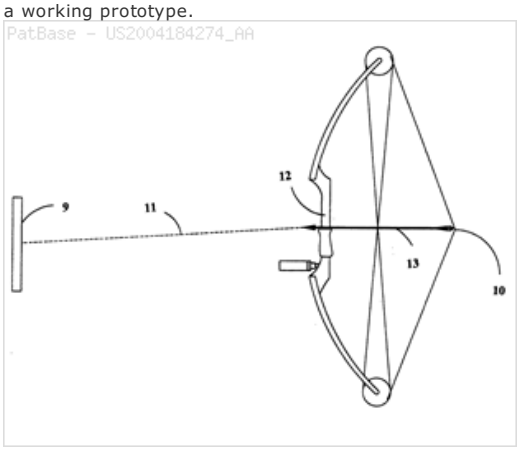
Patent	Date recorded	Event group	Code	Event	Details
US6409524 BA	20020625	LSGT	+	granted / extensions (spc, cpc, pte)	
US6409524 BA	20051101	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US6409524 BA	20091109	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US6409524 BA	20140131		REMI	MAINTENANCE FEE REMINDER MAILED	
US6409524 BA	20140625	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6409524 BA	20140721	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6409524 BA	20140721	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6409524 BA	20140812	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20140625
US6409524 BA	20210730	PEXP		Calculated Patent Term Expiry	

69) Family number: 30974147 (US2004184274 AA)

Title: ARCHERS FLAME ILLUMINATED ARROW NOCK

Abstract: An archery arrow including conventional components such as a tubular shaft, a pointed head attached to the forward end of the shaft, fletching on the rearward portion of the shaft and a nock at the rear end of the shaft. The arrow **structure** also includes an illuminated nock of the present invention and includes a battery/switch/collar/L.E.D-combined unit, which is held in place by a single anchor pin with the L.E.D. portion of the battery inside a conventional translucent or clear nock. The arrow shaft also uses a wooden dowel or other like material to create a backstop and cushion within the arrow shaft. This may also be permanently constructed as part of the arrow shaft during manufacturing. This helps disperse the load generated from the strings forward motion when released from the bow in a full drawn position between the end cap and the entire battery and switch assembly. Upon shooting the arrow from a longbow, compound, or crossbow, the switch contacts are forced into the "closed switch" position by the forward force generated along the axis of the arrow shaft. Therefore, energizing the L.E.D. **light** source to give off **light** through the translucent or clear nock. Once shot and activated it's a simple matter of removing the nock from the shaft pulling rearward on the battery while holding the nock in a stationary position to turn the LED off. With this configuration of components said **lighted** nock can be dislodged from the arrow shaft and still remain in the **lighted** position. This invention is also reusable by turning said nock off and reinserting the nock back into the arrow shaft and shooting again. I have also made and tested a working prototype.

Classifications:
International (IPC 8-9): F21V33/00 F42B12/02 F42B12/36
International (IPC 1-7): F21V1/00
CPC: F21V33/008 F21Y2115/10 F42B12/362
US: 362/109 362/253 362/458



Family:

Publication number	Publication date	Application number	Application date
US2004184274 AA	20040923	US20040763117	20040122
US7021784 BB	20060404	US20040763117	20040122

Priority:

US20030442108P 20030123 US20040763117 20040122

Probable Assignee: DICARLO JOSEPH L
Assignee(s): (std): DICARLO JOSEPH L
Inventor(s): (std): DICARLO JOSEPH L
Inventor(s): JOSEPH L DICARLO

Legal status (INPADOC)

View legal status timeline

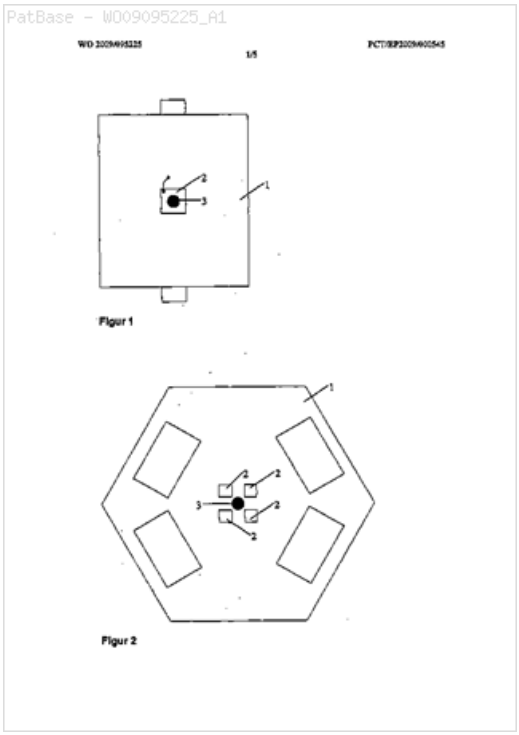
Patent	Date recorded	Event group	Code	Event	Details
US2004184274 AA	20040923	LSPB	+	published / reissued	
US7021784 BB	20060404	LSGT	+	granted / extensions (spc, cpc, pte)	
US7021784 BB	20090406	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7021784 BB	20131115		REMI	MAINTENANCE FEE REMINDER MAILED	
US7021784 BB	20140404	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7021784 BB	20140505	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7021784 BB	20140505	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7021784 BB	20140527	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20140404
US7021784 BB	20240623	PEXP		Calculated Patent Term Expiry (PTA 153 days)	

70) Family number: 43549634 (WO09095225 A1)

Title: DEVICE FOR ILLUMINATION AND DISPLAY

Abstract: An annular **light** for concentrical illumination of an object or a surface features a semiconductor chip (1) that has on its surface at least one **light** emitting diode with an associated **light** emitting area (2) that is able to emit **light** perpendicular to the surface. On the surface of the semiconductor chip there is at least one region that emits no **light** and that is concentrically surrounded by one or more **light** emitting areas and that has the appearance of a recess or opening (3) that has been made in the surface. In a similar way it is possible to get a displaying device to display image information. This displaying device consists of a semiconductor chip with a **light** emitting diode on its surface with an associated **light** emitting area that is able to emit **light** perpendicular to the surface and where the **light** emitting area is delimited towards one or multiple regions that emit no **light** such that the **light** emitting area has the shape of a sign, a symbol, an icon, a logo or an image.

Classifications:
International (IPC 8-9): F21K7/00 F21K99/00 F21V8/00 G02B6/42 G09F13/04 G09F13/20 H01L33/08
CPC: G02B6/0006 G02B6/0096 G02B6/4298 G09F13/02 G09F19/12 H01L33/08



Family:

Publication number	Publication date	Application number	Application date
DE102008006364 A1	20090730	DE200810006364	20080128
WO09095225 A1	20090806	WO2009EP00545	20090128

Priority:
DE200810006364 20080128

Probable Assignee: VIDENSIS GMBH

Assignee(s): (std): VIDENSIS GMBH ; ZELLER PHILIPP

Inventor(s): (std): ZELLER PHILIPP

Agent(s): KLEIN PETER

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
DE102008006364 A1	20090730	LSPB	+	published / reissued	
DE102008006364 A1	20090730	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE102008006364 A1	20120906	LSWD	-R120	APPLICATION WITHDRAWN OR IP RIGHT ABANDONED	Effective date: 20110805
WO09095225 A1	20090806	LSPB	+	published / reissued	
WO09095225 A1	20090930		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 09706849 Country of

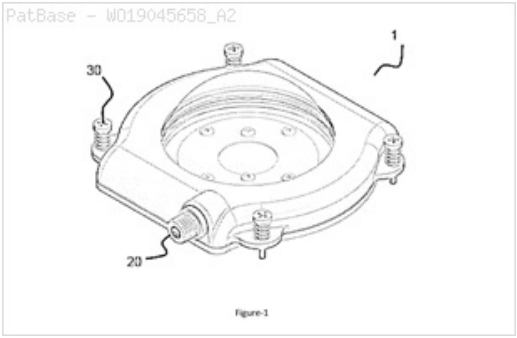
					Ref document: EP
WO09095225 A1	20100729	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO09095225 A1	20110223	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 09706849 Country of Ref document: EP

71) Family number: 65482733 (WO19045658 A2)

Title: WATERPROOF **LIGHTING** MODULE WHICH CHIP-ON-BOARD (COB), DIE-ON-BOARD (DOB) OR SIMILAR LED CLUSTERS INTEGRATED WITH OPTICAL **STRUCTURE**

Abstract: The invention relates to an integrated **lighting** module (1) that is watertight, heat conduction enhanced and easily removable which is manufactured by assembly of cover, which carries an optical **structure**(lens) and a connection apparatus, via screws or bolts to a chassis for transferring electrical signals and/or a printed circuit board (PCB), which COB, DOB and / or similar LED clusters used in **lighting** **systems** are installed.

Classifications:
International (IPC 8-9): F21V1/00 F21V15/01 F21V17/10 F21V19/00 F21V21/00 F21V23/00 F21V23/06 F21V31/00 F21Y115/10 H05K1/14 H05K1/18
CPC: F21V15/01 F21V19/0015 F21V21/00 F21V23/006 F21V23/06 F21V31/005 F21Y2115/10 H05K1/141 H05K1/181 H05K2201/049 H05K2201/09027 H05K2201/09063 H05K2201/10106 Y02P70/50



Family:

Publication number	Publication date	Application number	Application date
TR201614398 A2	20170123	TR20160014398	20161013
WO19045658 A2	20190307	WO2017TR50488	20171010
WO19045658 A3	20190411	WO2017TR50488	20171010

Priority:
TR20160014398 20161013

Probable Assignee: TTAF ELEKTRONIK SANAYI VE TICARET LTD SIRKETI
Assignee(s): (std): TTAF ELEKTRONIK SANAYI VE TICARET LTD SIRKETI
Assignee(s): TTAF ELEKTRONIK SANAYI VE TICARET SIRKETI LTD
Inventor(s): (std): ENGIN GUER ; GUR ENGIN
Agent(s): ERHAN EMRAH KELOGLU; INNOVASIA PATENT SANAYI VE TICARET SIRKETI 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 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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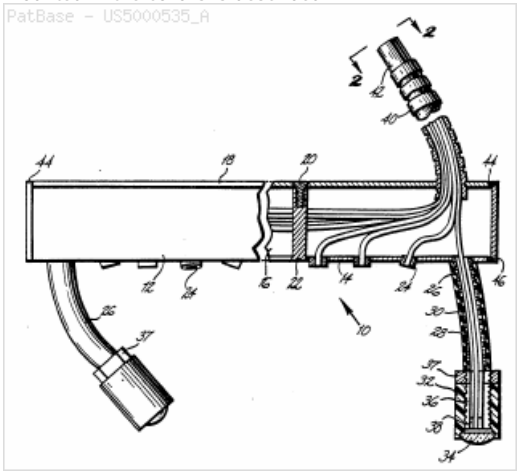
Patent	Date recorded	Event group	Code	Event	Details
TR201614398 A2	20170123	LSPB	+	published / reissued	
WO19045658 A2	20190307	LSPB	+	published / reissued	
WO19045658 A3	20190416	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO19045658 A3	20191016	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 17921431 Kind code of Ref document: A2 Country of Ref document: EP

72) Family number: 4499929 (US5000535 A)

Title: FIBER OPTICS **LIGHT** BAR

Abstract: An elongated metal channel having a U-shaped cross-section has a cover and end caps secured thereto forming a housing. Along one wall of the housing are **drilled** longitudinally spaced holes. In some of the holes (which may have different orientations) are fixed metal collars having secured therein one end of a bundle of optical fibers. The fiber ends are secured by an adhesive which has been cured, after which the ends are polished. The fiber bundles are led through the housing to an opening (which may be in the cover) where a flexible sleeve has one end mounted. The fibers are threaded through the flexible sleeve and secured in a tip at the other end of the sleeve. The fibers in the tip are secured therein by an epoxy and polished. In some cases the metal collars with the fiber bundle are positioned at the end of a gooseneck with a lens mounted adjacent to the tip. The method by which the fibers are mounted in the collars is described.

Classifications:
International (IPC 8-9): F21V8/00 G02B6/32 G02B6/36 G09F9/30 G09F9/305
International (IPC 1-7): F21V7/04 G02B6/26 G02B6/32
CPC: G02B6/0008 G02B6/32 G02B6/3624 G02B6/3887 G02B6/40 G09F9/305 Y10S385/901
US: 350/96.18 350/96.2 350/96.22 350/96.24 362/32 362/551 362/582 385/115 385/901



Family:

Publication number	Publication date	Application number	Application date
US5000535 A	19910319	US19890442514	19891128

Priority:

US19890442514 19891128

Probable Assignee: ADVANCED FIBEROPTIC TECHNOLIGIES INC

Assignee(s): (std): CHURCHILL DAVID L

Assignee(s): ADVANCED FIBEROPTIC TECHNOLIGIES INC ; DLC RRP HOLDING INC ; DLC RRP HOLDINGS INC ; NATIONSBANK NA

Inventor(s): (std): CHURCHILL DAVID L

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US5000535 A	19910319	LSGT	+	granted / extensions (spc, cpc, pte)	
US5000535 A	19941025		REMI	MAINTENANCE FEE REMINDER MAILED	
US5000535 A	19950227	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5000535 A	19950227		+SULP	SURCHARGE FOR LATE PAYMENT	
US5000535 A	19960314	LSAS	AS	ASSIGNMENT	Effective date: 19960307 Owner: DLC-RRP HOLDING, INC., FLORIDA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CHURCHILL, DAVID L.;REEL/FRAME:007846/0001 PartyType: owner
US5000535 A	19970410	LSAS	AS	ASSIGNMENT	Owner: ADVANCED FIBEROPTIC TECHNOLIGIES, INC., FLORIDA Effective date: 19961230 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:DLC-RRP HOLDING, INC.;REEL/FRAME:008519/0402 PartyType: owner
US5000535 A	19980116	LSAS	AS	ASSIGNMENT	Effective date: 19960307 PartyType: owner Owner: DLC-RRP HOLDINGS, INC., FLORIDA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:CHURCHILL, DAVID L.;REEL/FRAME:008933/0748

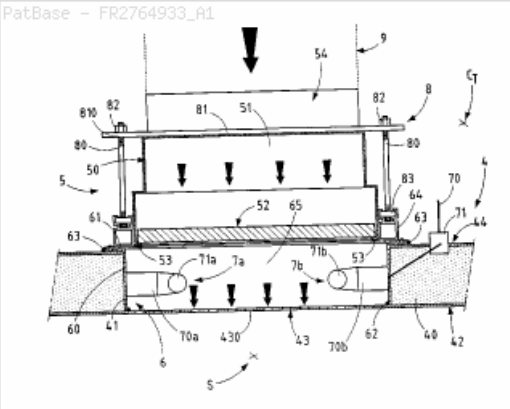
US5000535 A	19980629	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5000535 A	19990709	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:ADVANCED FIBEROPTIC TECHNOLOGIES, INC.;REEL/FRAME:010078/0071 Owner: NATIONSBANK, N.A., NORTH CAROLINA PartyType: owner Effective date: 19990629
US5000535 A	20030319	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5000535 A	20030416	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5000535 A	20030416	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US5000535 A	20030513	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20030319
US5000535 A	20091128	PEXP		Calculated Patent Term Expiry	

73) Family number: 13418575 (FR2764933 A1)

Title: VENTILATION AND **LIGHTING** **SYSTEM** FOR CEILINGS IN CONTROLLED ATMOSPHERE ROOMS IN PHARMACEUTICAL, ELECTRONICS, FOOD OR NUCLEAR INDUSTRIES

Abstract: The **system** is designed to be embedded in an opening (41) in the ceiling of a room (S). The ceiling is made of panels. The **system** has a base (6) with a lower frame (60) with vertical walls, forming an enclosed space (65) the same shape as the opening. The base has an upper collar providing a horizontal frame which allows the device to be placed on the upper face (44) of the ceiling and fixed in position. The ventilation **system** has a housing (50) with a filter (52) at its lower end opening in the enclosure and an upper pipe (54) which takes up the air at a specific pressure and rate. A **light** source (7a, 7b) is attached to one of the vertical walls of the lower frame.

Classifications:
International (IPC 8-9): E04B9/00 E04B9/02 F21V33/00 F24F13/06 F24F13/078
International (IPC 1-7): E04B9/02 E06B1/02 E06B1/60 E06B1/64 F21S3/02 F21V21/04 F24F13/078 F24F13/28 F24F7/10
CPC: E04B9/006 E04B9/02 F21S8/02 F21V33/0088 F21Y2103/00 F21Y2113/00 F24F13/078



Family:

Publication number	Publication date	Application number	Application date
FR2764933 A1	19981224	FR19970007658	19970619

Priority:
FR19970007658 19970619

Probable Assignee:	SADSEC
Assignee(s): (std):	SADSEC
Inventor(s): (std):	DUFFAY GUY
Inventor(s):	GUY DUFFAY
Agent(s):	FEDIT LORIOT

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FR2764933 A1	19981224	LSPB	+	published / reissued	
FR2764933 A1	19981224		SC	SEARCH COMPLETED	BOPI Date: 1998-52
FR2764933 A1	19990414	LSFE	+PLFP	Fee Payement	Year of fee payment: 3 Payment date: 19990414
FR2764933 A1	20091202	LSRV	-PLAR	APPLICATION REFUSED	

74) Family number: 32173299 (AU2005100393 AD)

Title: Russell's **Light** portable animation table

Abstract: O O 6 SABSTRACT o o The Disclosed Portable **light** animation table is a 0 **structure** utilising the strength and flexibility of lever arch folders and other existing stationery, cut to size Perspex, and a commercially available **light**, to provide a high performing work **light** animation table suitable for students and professionals alike. Russell Tagg I I Mayq 2005 I

Classifications:
International (IPC 8-9): F21V33/00
International (IPC 1-7): F21V33/00

Family:

Publication number	Publication date	Application number	Application date
AU2005100393 AD	20050728	AU20050100393	20050511

Priority:

AU20050100393 20050511

Probable Assignee:	TAGG RUSSELL
Assignee(s): (std):	TAGG RUSSELL
Assignee(s):	RUSSELL TAGG ; TAGG RUSSELL JOHN MR
Inventor(s): (std):	TAGG RUSSELL
Inventor(s):	RUSSELL TAGG
Agent(s):	TAGG RUSSELL JOHN MR

Legal status (INPADOC)

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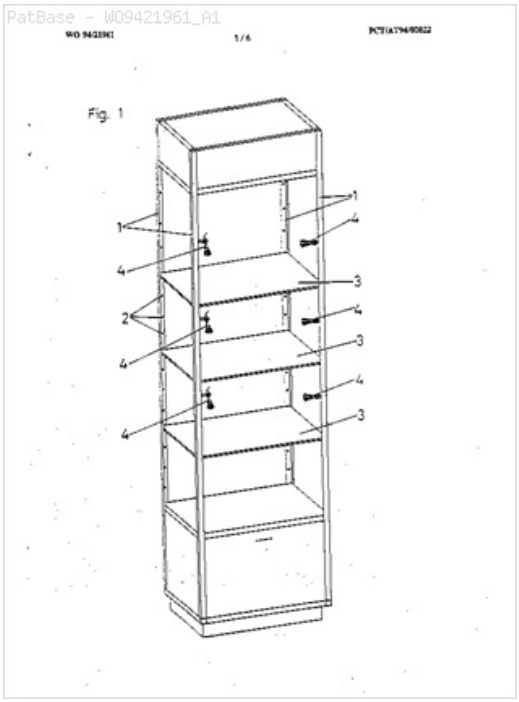
Patent	Date recorded	Event group	Code	Event	Details
AU2005100393 AD	20050728	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2005100393 AD	20050728	LSGT	+FGI	LETTERS PATENT SEALED OR GRANTED (INNOVATION PATENT)	
AU2005100393 AD	20250511	PEXP		Calculated Patent Term Expiry	

75) Family number: 30248126 (WO9421961 A1)

Title: CONSTRUCTIONAL ELEMENT AND **LIGHTING SYSTEM**

Abstract: The invention pertains to a constructional element and **lighting system**, especially for showcases, having at least one constructional element in the form of a support section (1) in which **drilled** holes (2) are situated at regular intervals. Each **lighting** unit (4) can be inserted into a **drilled** hole (2) in the support section (1). Arranged within the support section (1) is an electrical conductor (6) with which a contact piece (8) of the **lighting** unit (4) establishes electrical contact when the **lighting** unit (4) is plugged into the **drilled** hole (2). The second connection is conveniently formed by the support section (1) itself.

Classifications:
International (IPC 8-9): A47B47/00 A47B96/00 A47B96/14 F21V21/002 F21V21/34 F21V21/35 H01R25/00 H01R25/14 H01R33/00 H01R33/02 H01R4/24
International (IPC 1-7): F21V21/14 F21V21/34 F21V33/00 H01B7/04 H01R25/14 H01R4/24
CPC: F21V21/002 F21V21/35 F21W2131/405 H01R2201/08 H01R25/142 H01R25/147 H01R33/02 H01R4/2406 A47B47/0008 A47B96/14 F21V21/30 F21V33/0012



Family:

Publication number	Publication date	Application number	Application date
DE9404962 U1	19940526	DE19940004962U	19940323
WO9421961 A1	19940929	WO1994AT00022	19940307

Priority:
AT19930000588 19930324 AT19930000960 19930514

Probable Assignee: PLANLICHT HANDELSGESELLSCHAFT
Assignee(s): (std): MAIR CHRISTIAN ; PLANLICHT HANDEL GMBH ; PLANLICHT HANDELSGESELLSCHAFT
Assignee(s): PLANLICHT HANDELSGES M B H AND CO KG VOMP ; PLANLICHT HANDELSGES MBH AND CO VOMP KG ; PLANLICHT HANDELSGESELLSCHAFT MBH AND CO KG
Inventor(s): (std): MAIR CHRISTIAN
Designated states: AT BE CH CZ DE DK ES FR GB GR HU IE IT LU MC NL PT SE SI US

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE9404962 U1	19940526	LSGT	+	granted / extensions (spc, cpc, pte)	
DE9404962 U1	20040323	PEXP		Calculated Patent Term Expiry	
WO9421961 A1	19940929	LSPB	+	published / reissued	
WO9421961 A1	19940929		+AK	DESIGNATED STATES	Kind code of Ref document: A1 Country of Ref document: CZ HU SI US
WO9421961 A1	19940929		+AL	DESIGNATED COUNTRIES FOR REGIONAL PATENTS	Kind code of Ref document: A1 Country of Ref document: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
WO9421961 A1	19941208		DFPE	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)	
WO9421961 A1	19941221		121	EP: THE EPO HAS BEEN INFORMED BY	

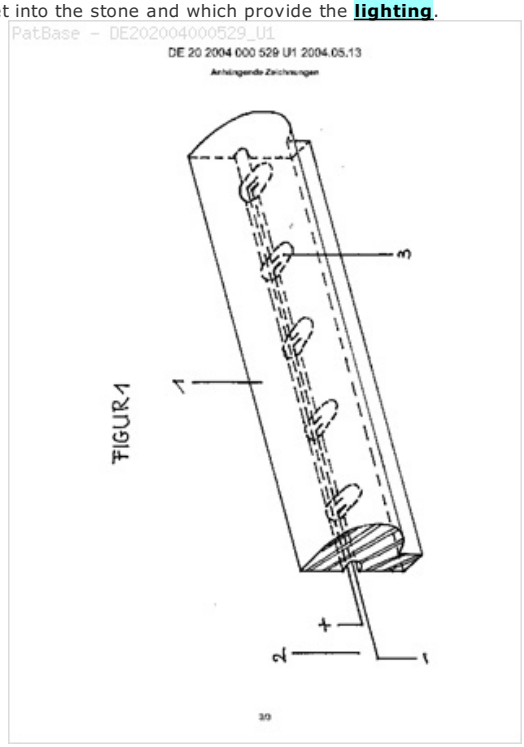
				WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO9421961 A1	19960710	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref country code: WO

76) Family number: 30567196 (DE202004000529 U1)

Title: NATURAL STONE IS USED AS THE BASIS OF A **LIGHTING** UNIT AND HAS A SERIES OF **LIGHT** EMITTING DIODES SET INTO IT

Abstract: The natural optical properties of certain stone materials are used to provide a **lighting** effect for buildings. A bar [1] of the material has a groove formed on the rear surface into which is set an electrical power cable [2]. The cable connects with a number of **light** emitting diodes, LED [3], that are set into the stone and which provide the **lighting**.

Classifications:
International (IPC 8-9): E04C1/00 E04C1/39 E04C2/52 E04F11/02 E04F11/16 E04H13/00 F21S4/00 F21S8/00 F21S8/02 F21V3/00 F21V3/04 F21V33/00 G09F13/04 G09F13/22
International (IPC 1-7): E04C1/39 E04C2/52 E04H13/00 F21S10/00 F21S8/02 F21V3/04 F21Y101/02 G09F13/04
CPC: F21V33/004 F21V33/006 F21W2121/00 F21Y2115/10 G09F13/22 E04C1/39 E04F11/163 E04F2011/1048 E04F2290/026 F21S4/20 F21S8/022 F21V3/04



Family:

Publication number	Publication date	Application number	Application date
DE102005002178 A1	20051006	DE200510002178	20050117
DE202004000529 U1	20040408	DE200420000529U	20040115
DE202005000714 U1	20050504	DE200520000714U	20050117

Priority:
DE200420000529U 20040115 DE200510002178 20050117 DE200520000714U 20050117

Probable Assignee: DOPFER OTTMAR
Assignee(s): (std): DOPFER OTTMAR
Inventor(s): (std): DOPFER OTTMAR

Legal status (INPADOC)

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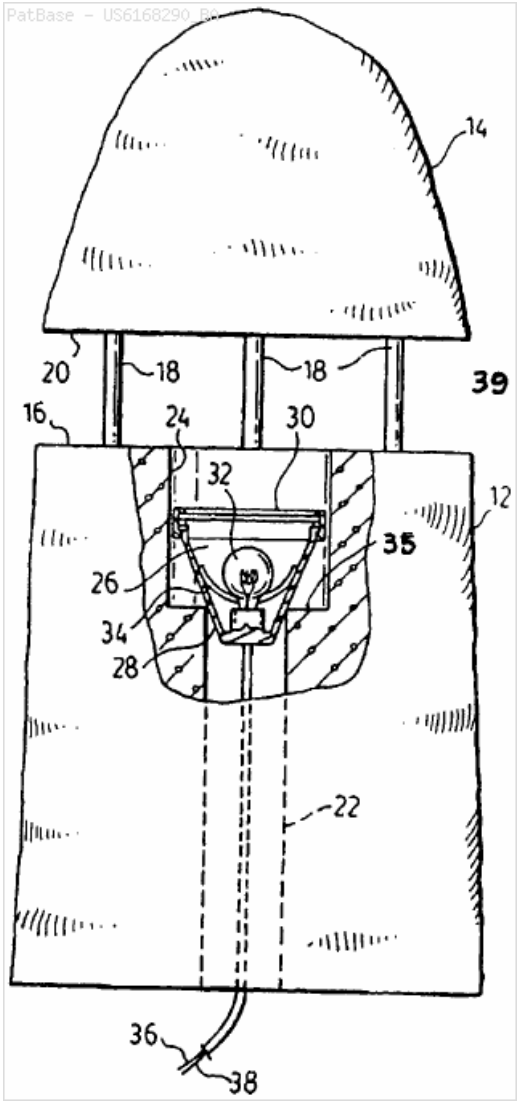
Patent	Date recorded	Event group	Code	Event	Details
DE102005002178 A1	20051006	LSPB	+	published / reissued	
DE102005002178 A1	20091119	LSLE	-8139	DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE	
DE202004000529 U1	20040408	LSGT	+	granted / extensions (spc, cpc, pte)	
DE202004000529 U1	20040513	LSGT	R207	UTILITY MODEL SPECIFICATION	Effective date: 20040513
DE202004000529 U1	20040826	LSES	R021	SEARCH REQUEST VALIDLY FILED	Effective date: 20040514
DE202004000529 U1	20040909		+R163	IDENTIFIED PUBLICATIONS NOTIFIED	Effective date: 20040707
DE202004000529 U1	20071115	LSLE	-R156	LAPSE OF IP RIGHT AFTER 3 YEARS	Effective date: 20070801
DE202004000529 U1	20140115	PEXP		Calculated Patent Term Expiry	
DE202005000714 U1	20050504	LSGT	+	granted / extensions (spc, cpc, pte)	
DE202005000714 U1	20050609	LSGT	R207	UTILITY MODEL SPECIFICATION	Effective date: 20050609
DE202005000714 U1	20081120	LSLE	-R156	LAPSE OF IP RIGHT AFTER 3 YEARS	Effective date: 20080801
DE202005000714 U1	20150117	PEXP		Calculated Patent Term Expiry	

77) Family number: 14939918 (US6168290 BA)

Title: GARDEN LAMP

Abstract: An outdoor **lighting** device composed of suitable natural rock wherein the rock itself provides a suitable housing for a **light** source, and the rock is also used to function as a reflector-diffuser to provide a "soft" **light** for illuminating outdoor gardens, etc.

Classifications:
International (IPC 8-9): F21S8/00 F21V21/00 F21V7/00
International (IPC 1-7): F21V3/300 F21V33/00
CPC: F21V7/0008 F21W2131/10 F21W2131/109 Y10S362/805
US: 362/253 362/364 362/431 362/805



Family:

Publication number	Publication date	Application number	Application date
US6168290 BA	20010102	US19990318762	19990526

Priority:
US19990318762 19990526

Probable Assignee:	CHRISTIANSEN CARL
Assignee(s):	CHRISTIANSEN CARL
Inventor(s): (std):	CHRISTIANSEN CARL
Inventor(s):	CARL CHRISTIANSEN
Agent(s):	EDWARD H OLDHAM

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US6168290 BA	20010102	LSGT	+	granted / extensions (spc, cpc, pte)	
US6168290 BA	20040721		REMI	MAINTENANCE FEE REMINDER MAILED	
US6168290 BA	20040812	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US6168290 BA	20040812		+SULP	SURCHARGE FOR LATE PAYMENT	
US6168290 BA	20080116	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8

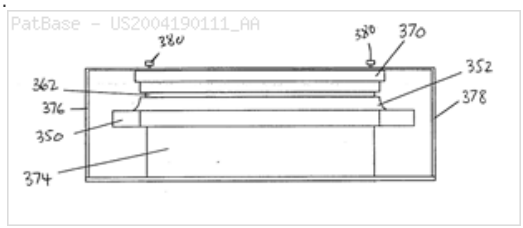
US6168290 BA	20120813		REMI	MAINTENANCE FEE REMINDER MAILED	
US6168290 BA	20130102	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6168290 BA	20130128	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6168290 BA	20130128	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6168290 BA	20130219	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20130102
US6168290 BA	20190526	PEXP		Calculated Patent Term Expiry	

78) Family number: 31003971 (US2004190111 AA)

Title: DIGITAL MICROMIRROR DEVICE HAVING A WINDOW TRANSPARENT TO ULTRAVIOLET (UV) **LIGHT**

Abstract: A UV-transmissable window assembly for a DMD device includes a UV-transmissable glass window provided in a frame. The window and frame are bonded together to preferably effect a hermetic seal therebetween. Optical coatings specific to the intended wavelength of **light** transmission are applied to the inner and outer surfaces of the glass window to reduce reflection and increase -**light** transmission therethrough. The window assembly, and DMD provided with the same, is adapted for excellent transmission of ultraviolet **light**, even at the deep ultraviolet portion of the spectrum. The DMD window assembly has application in the medical arts, both surgery and device manufacture, in the production of integrated circuits (IC), and in other optical lithography applications, among other fields.

Classifications:
International (IPC 8-9): A61B A61F9/007 A61F9/01 A61F9/013 G02B1/00 G02B1/02 G02B26/00 G02B26/08 G02B27/00
International (IPC 1-7): A61B A61B1/00 E05B17/10 F21V9/06 G02B1/00 G02B13/14 G02B26/00 G02B5/20
CPC: B81B2201/042 B81B7/0067 G02B26/0833 A61F9/013 G02B1/02 A61F2009/00872 A61F9/00804 A61F9/00817
US: 359/290 359/291 359/292 359/293 359/35 359/350 359/355 359/361 362/100 362/100P



Family:

Publication number	Publication date	Application number	Application date
CA2520104 AA	20050923	CA20042520104	20040323
EP1613203 A2	20060111	EP20040758020	20040323
EP1613203 A4	20091209	EP20040758020	20040323
JP2006521580 T2	20060921	JP20060507454T	20040323
US2004190111 AA	20040930	US20030395661	20030324
US2004190127 AA	20040930	US20030395662	20030324
US2004190281 AA	20040930	US20030395660	20030324
US6859311 BB	20050222	US20030395662	20030324
US7023605 BB	20060404	US20030395660	20030324
US7161727 BB	20070109	US20030395661	20030324
WO04084710 A2	20041007	WO2004US08735	20040323
WO04084710 A3	20060323	WO2004US08735	20040323

Priority:

US20030395661 20030324 US20030395662 20030324 US20030395660 20030324
WO2004US08735 20040323

Probable Assignee: MEMPHIS EYE AND CATARACT ASSOCIATES AMBULATORY SURGERY CENTER DBA MECA LASER AND SURGERY CENTER

Assignee(s) (std): MEMPHIS EYE AND CATARACT ASSOCIA ; RY CT D BA MECA LASER AND SURG

Assignee(s): CALLIES BRIAN M ; MEMPHIS EVE AND CATARACT ASSOC ; MEMPHIS EVE AND CATARACT ASSOCIATES AMBULATORY SUR ; MEMPHIS EVE AND CATARACT ASSOCIATES AMBULATORY SURGERY CENTER (DBA MECA LASER AND SURGERY CENTER) ; MEMPHIS EVE AND CATARACT ASSOCIATES AMBULATORY SURGERY CENTER DBA MECA LASER AND SURGERY CENTER ; MEMPHIS EYE AND CATARACT ASSOCIATES AMBULATORY ; MEMPHIS EYE AND CATARACT ASSOCIATES AMBULATORY SUR ; MEMPHIS EYE AND CATARACT ASSOCIATES AMBULATORY SURGERY CENTER ; MEMPHIS EYE AND CATARACT ASSOCIATES AMBULATORY SURGERY CENTER (DBA MECA LASER AND SURGERY CENTER) ; MEMPHIS EYE AND CATARACT ASSOCIATES AMBULATORY SURGERY CENTER D B A MECA ; MEMPHIS EYE AND CATARACT ASSOCIATES AMBULATORY SURGERY CENTER D B A MECA LASER AND SURGERY CENTER ; RY CENTER D BA MECA LASER AND SURGERY CENTER MEM ; RY CENTER D BA MECA LASER AND SURGERY CENTER MEMPHIS EYE AND CATARACT ASSOCIATES AMBULATORY SURGE ; RY CENTER MEMPHIS EYE AND CATARACT ASSOCIATES AMBU ; THOMAS DAVID E ; WILLIAMS ROY E ; メンフィス アイ アンド カタラクト アソシエーツ アンビュラトリー サージェリー センター(ディー. ビー. エー.)メカ レーザー アンド サージェリー センター

Inventor(s) (std): CALLIES BRIAN M ; THOMAS DAVID E ; WILLIAMS ROY E

Inventor(s): BRIAN M CALLIES ; DAVID E THOMAS ; ROY E WILLIAMS ; ウィリアムズ, ロイ イー. ; カリーズ, ブライアン エム. ; トーマス, デイビッド イー.

Agent(s): GORDON AND JACOBSON PC; SMART AND BIGGAR

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2520104 AA	20050923	LSPB	+	published / reissued	
CA2520104 AA	20090318	LSES	+EEER	EXAMINATION REQUEST	
CA2520104 AA	20120502	LSLE	-FZDE	DEAD	
EP1613203 A2	20060111	LSPB	+	published / reissued	
EP1613203 A2	20060111	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20051013

EP1613203 A2	20060111		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: 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
EP1613203 A2	20060111		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL LT LV MK
EP1613203 A2	20060531		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: G02B 26/00 20060101AFI20060410BHEP ClassificationScheme: IPC
EP1613203 A2	20060628		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP1613203 A4	20091209	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20091111
EP1613203 A4	20091209		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 26/00 20060101AFI20060410BHEP
EP1613203 A4	20091209		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: G02B 1/02 20060101ALI20091105BHEP
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EP1613203 A4	20100324	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20100222
EP1613203 A4	20101222	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20100706
JP2006521580 T2	20060921	LSPB	+	published / reissued	
US2004190111 AA	20040930	LSPB	+	published / reissued	
US2004190127 AA	20040930	LSPB	+	published / reissued	
US2004190127 AA	20130325	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US2004190281 AA	20040930	LSPB	+	published / reissued	
US6859311 BB	20030324	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:WILLIAMS, ROY E.;CALLIES, BRIAN M.;THOMAS, DAVID E.;REEL/FRAME:013910/0394;SIGNING DATES FROM 20030225 TO 20030310 PartyType: owner Owner: MEMPHIS EVE & CATARACT ASSOCIATES AMBULATORY SURGE
US6859311 BB	20050222	LSGT	+	granted / extensions (spc, cpc, pte)	
US6859311 BB	20080717	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US6859311 BB	20121008		REMI	MAINTENANCE FEE REMINDER MAILED	
US6859311 BB	20130222	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6859311 BB	20130325	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6859311 BB	20130416	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20130222
US6859311 BB	20230512	PEXP		Calculated Patent Term Expiry (PTA 49 days)	
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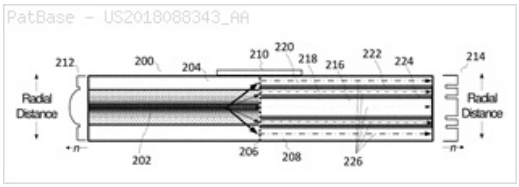
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US7161727 BB	20150303	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20150109
US7161727 BB	20250320	PEXP		Calculated Patent Term Expiry (PTA 727 days)	
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WO04084710 A2	20050926	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2006507454 Country of Ref document: JP
WO04084710 A2	20051013	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2004758020 Country of Ref document: EP

WO04084710 A2	20060111	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 2004758020 Country of Ref document: EP
WO04084710 A3	20060518		DPEN	REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED FROM 20040101)	

79) Family number: 69020170 (US2018088343 AA)

Title: ADJUSTABLE BEAM CHARACTERISTICS

Abstract: Disclosed herein are methods, apparatus, and **systems** for providing an optical beam delivery device, comprising a first length of fiber comprising a first RIP formed to enable modification of one or more beam characteristics of an optical beam by a perturbation device and a second length of fiber having a second RIP coupled to the first length of fiber, the second RIP formed to confine at least a portion of the modified beam characteristics of the optical beam within one or more confinement regions.



Classifications:
International (IPC 8-9): A61B5/06 B22F3/10 B22F3/105 B22F3/11 B22F3/24 B23K1/00 B23K1/005 B23K101/42 B23K103/00 B23K26/00 B23K26/03 B23K26/04 B23K26/046 B23K26/06 B23K26/062 B23K26/0622 B23K26/064 B23K26/067 B23K26/073 B23K26/08 B23K26/082 B23K26/12 B23K26/14 B23K26/144 B23K26/21 B23K26/34 B23K26/342 B23K26/354 B23K26/38 B23K26/57 B23K26/60 B23K26/70 B28B1/00 B29C47/00 B29C48/08 B29C64/141 B29C64/153 B29C64/264 B29C64/268 B29C64/282 B29C64/371 B29C64/393 B33Y10/00 B33Y30/00 B33Y40/00 B33Y50/02 B33Y80/00 C03B37/15 C03B40/00 F21V8/00 G02B26/00 G02B26/10 G02B27/09 G02B27/30 G02B6/00 G02B6/02 G02B6/028 G02B6/036 G02B6/10 G02B6/12 G02B6/14 G02B6/24 G02B6/255 G02B6/26 G02B6/27 G02B6/28 G02B6/293 G02B6/34 G02B6/35 G02B6/42 G02B6/43 G02F1/01 G02F1/015 G02F1/11 G02F1/295 G02F1/313 G02F1/35 G03F7/00 H01S3/00 H01S3/067 H01S3/094 H01S3/0941 H01S3/10 H01S3/102 H01S3/105 H01S3/106 H01S3/11 H01S3/115 H01S3/121 H01S3/13 H01S3/16 H01S3/23 H01S5/00 H01S5/022
CPC: B22F2003/1056 B22F2003/1057 B22F3/1055 B22F3/1109 B22F3/24 B23K26/032 B23K26/034 B23K26/0342 B23K26/064 B23K26/067 B23K26/073 B23K26/21 B23K26/342 B23K26/38 B29C48/08 B29C64/153 B33Y10/00 B33Y30/00 B33Y50/02 G02B2006/12121 G02B26/101 G02B27/0927 G02B27/0933 G02B27/0994 G02B6/02 G02B6/02004 G02B6/021 G02B6/02347 G02B6/02371 G02B6/02395 G02B6/0281 G02B6/0288 G02B6/03611 G02B6/03616 G02B6/03627 G02B6/03633 G02B6/03638 G02B6/0365 G02B6/03688 G02B6/14 G02B6/255 G02B6/262 G02B6/4203 G02B6/4206 G02B6/4296 G02F1/0115 G02F2001/0151 Y02P10/25 B23K26/06 B23K26/062 B23K26/34 B23K26/354 B23K1/0016 B23K1/0056 B23K2101/42 B23K26/0643 B23K26/0648 B23K26/0732 B23K26/0736 G02B6/02042 G02B6/03622 G02B6/03661 G02B6/2551 B23K26/082 B23K26/0853 B23K26/144 B23K26/1476 B29C64/268 B22F2003/247 B22F2207/17 B22F3/11 B23K2103/00 B23K2103/42 B23K26/046 B23K26/0626 B23K26/0821 B33Y80/00 H01S3/005 H01S3/06716 H01S3/06729 H01S3/1053 H01S3/1067 H01S3/1603 H01S3/1608 H01S3/161 H01S3/1611 H01S3/1616 H01S3/1618 H01S3/163 H01S3/1636 H01S3/1655 H01S3/1685 H01S3/23 B23K26/0665 B23K26/57 H01S3/0085 H01S3/0675 B22F2003/248 B22F2203/11 B22F2207/11 B22F2998/10 B22F2999/00 G03F7/0037 B23K26/0604 B23K26/0622 B23K26/08 B23K26/0876 B23K26/60 G02B27/0961 G02B27/30 H01S5/0085 H01S5/02284 B23K26/043 B23K26/123 B23K26/1464 B28B1/001 B29C64/141 B29C64/371 B33Y40/00 G02B6/03666 G02B6/3502 G02B6/3574 G02B6/0219 G02B6/028 G02B6/0286 G02B6/2821 G02B6/2856 H01S3/067 H01S3/094003 H01S3/0941 H01S3/102 H01S3/106 H01S3/1109 H01S3/115 H01S3/121 H01S3/06725 G02F1/3523 H01S3/1305 G02B27/0955 G02B27/0972 G02F1/353 G02F2001/3503 G02B6/02076 G02B6/02147 G02B27/095 G02B6/0006 G02B6/0008 C03B37/15 C03B40/00 G02B6/28 G02B6/24 B23K26/704 B29C64/264 G02B6/023 G02B6/036 G02B6/03694 B29C47/0021 G02B26/103 G02B27/09 B23K2103/04 B23K2103/05 B23K26/048 B23K26/14 B23K26/40
US: 1/1 219/121.6 219/121.66 219/121.73 219/76.1 264/401 372/26 372/6 385/1 385/123 385/125 385/15 385/27 385/28 385/31 385/48 385/50 385/95 425/174.4 428/566 65/484

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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 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
CN109791252 A	20190521	LSPB	+	published / reissued	
CN109791252 A	20190521	LSPB	PB01	PUBLICATION	
CN109791252 A	20190521	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN109791252 A	20191029		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN109791252 A	20191029		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN110892304 A	20200317	LSPB	+	published / reissued	
CN110892304 A	20200317	LSPB	PB01	PUBLICATION	
CN110892304 A	20200317	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN110892304 A	20200619		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN110892304 A	20200619		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN110892593 A	20200317	LSPB	+	published / reissued	
CN110892593 A	20200317	LSPB	PB01	PUBLICATION	
CN110892593 A	20200317	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN110892593 A	20200619		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	

CN110892593 A	20200619		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN110914015 A	20200324	LSPB	+	published / reissued	
CN110914015 A	20200324	LSPB	PB01	PUBLICATION	
CN110914015 A	20200324	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN110914015 A	20200619		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN110914015 A	20200619		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN110914725 A	20200324	LSPB	+	published / reissued	
CN110914725 A	20200324	LSPB	PB01	PUBLICATION	
CN110914725 A	20200324	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN110914725 A	20200616		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN110914728 A	20200324	LSPB	+	published / reissued	
CN110914728 A	20200324	LSPB	PB01	PUBLICATION	
CN110914728 A	20200324	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN110914728 A	20200609		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN110914728 A	20200609		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN110915078 A	20200324	LSPB	+	published / reissued	
CN110915078 A	20200324	LSPB	PB01	PUBLICATION	
CN110915078 A	20200324	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN110915078 A	20200619		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN110915078 A	20200619		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN110944787 A	20200331	LSPB	+	published / reissued	
CN110944787 A	20200331	LSPB	PB01	PUBLICATION	
CN110944787 A	20200331	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN110944787 A	20200605		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN110944787 A	20200605		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN110959232 A	20200403	LSPB	+	published / reissued	
CN110959232 A	20200403	LSPB	PB01	PUBLICATION	
CN110959232 A	20200403	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN110959232 A	20200501		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
CN110959232 A	20200501		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
EP3519871 A1	20190807	LSPB	+	published / reissued	
EP3519871 A1	20190807	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20190429
EP3519871 A1	20190807		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3519871 A1	20190807		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: MA MD
EP3519871 A1	20190807		+AX	REQUEST FOR	Country of Ref document: BA ME

				EXTENSION OF THE EUROPEAN PATENT	
EP3519871 A1	20200108		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3519871 A1	20200108		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3630407 A1	20200408	LSPB	+	published / reissued	
EP3630407 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191223
EP3630407 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3630407 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: MA MD TN
EP3630407 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3630407 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3630407 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3630410 A1	20200408	LSPB	+	published / reissued	
EP3630410 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191220
EP3630410 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3630410 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3630410 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3630410 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3630410 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3630456 A1	20200408	LSPB	+	published / reissued	
EP3630456 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191220
EP3630456 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3630456 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3630456 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3630456 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3630456 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3631543 A1	20200408	LSPB	+	published / reissued	
EP3631543 A1	20200408	LSES	+17P	REQUEST FOR	Effective date: 20191223

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EP3631543 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631543 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3631543 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3631543 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3631543 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3631544 A1	20200408	LSPB	+	published / reissued	
EP3631544 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191220
EP3631544 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631546 A1	20200408	LSPB	+	published / reissued	
EP3631546 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191223
EP3631546 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631546 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3631546 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3631546 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3631546 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3631547 A1	20200408	LSPB	+	published / reissued	
EP3631547 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191220
EP3631547 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631547 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3631547 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3631547 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3631547 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3631576 A1	20200408	LSPB	+	published / reissued	
EP3631576 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191220
EP3631576 A1	20200408		+AK	DESIGNATED	Kind code of Ref document: A1

				CONTRACTING STATES	Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631576 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3631576 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3631576 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3631576 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3631915 A1	20200408	LSPB	+	published / reissued	
EP3631915 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191220
EP3631915 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631915 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3631915 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3631915 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3631915 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3631916 A1	20200408	LSPB	+	published / reissued	
EP3631916 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191220
EP3631916 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631916 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3631916 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3631916 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3631916 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3631917 A1	20200408	LSPB	+	published / reissued	
EP3631917 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191223
EP3631917 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631917 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3631917 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3631917 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	

EP3631917 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3631919 A1	20200408	LSPB	+	published / reissued	
EP3631919 A1	20200408	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20191220
EP3631919 A1	20200408		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3631919 A1	20200408		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: KH MA MD TN
EP3631919 A1	20200408		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3631919 A1	20200902		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3631919 A1	20200902		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
IN201917016930 A	20190809	LSPB	+	published / reissued	
JP2019537047 T2	20190722		A632	国内書面	Effective date: 20190328
JP2019537047 T2	20190722		A634	国際出願翻訳文提出書	Effective date: 20190524
JP2019537047 T2	20191219	LSPB	+	published / reissued	
JP2019537047 T2	20200519	LSRE	A521	WRITTEN AMENDMENT	Effective date: 20200519 Text: JAPANESE INTERMEDIATE CODE: A523
JP2019537047 T2	20200519		A523	手続補正書	Effective date: 20200519
JP2019537047 T2	20200519	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	Text: JAPANESE INTERMEDIATE CODE: A621 Effective date: 20200519
JP2019537047 T2	20200519	LSES	+A621	出願審査請求書	Effective date: 20200519
JP2020522012 T2	20200727	LSPB	+	published / reissued	
JP2020522013 T2	20200727	LSPB	+	published / reissued	
JP2020522014 T2	20200727	LSPB	+	published / reissued	
JP2020523626 T2	20200806	LSPB	+	published / reissued	
KR20190054141 A	20190521	LSPB	+	published / reissued	
KR20190054141 A	20200525	LSES	A201	REQUEST FOR EXAMINATION	
TW201819968 A	20180601	LSPB	+	published / reissued	
TWI695196 B	20200601	LSGT	+	granted / extensions (spc, cpc, pte)	
TWI695196 B	20370929	PEXP		Calculated Patent Term Expiry	
US10295845 BB	20170630	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KLINER, DAHV A.V.;FARROW, ROGER;REEL/FRAME:042874/0203 Effective date: 20170526
US10295845 BB	20180322	LSAS	AS	ASSIGNMENT	Effective date: 20171220 PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:045676/0366 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA
US10295845 BB	20190501	LSGT	PAT1	Patented Case	
US10295845 BB	20190521	LSGT	+	granted / extensions (spc, cpc, pte)	

US10295845 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10423015 BB	20170630	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KLINER, DAHV A.V.;FARROW, ROGER;REEL/FRAME:042874/0203 Effective date: 20170526 Owner: NLIGHT, INC., WASHINGTON
US10423015 BB	20180108	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:045019/0370 Effective date: 20171220 PartyType: owner
US10423015 BB	20180322	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:045676/0366 PartyType: owner Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20171220
US10423015 BB	20190924	LSGT	+	granted / extensions (spc, cpc, pte)	
US10423015 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10646963 BB	20180131	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10646963 BB	20200512	LSGT	+	granted / extensions (spc, cpc, pte)	
US10646963 BB	20380131	PEXP		Calculated Patent Term Expiry	
US10649241 BB	20180323	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10649241 BB	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US10649241 BB	20200512	LSGT	+	granted / extensions (spc, cpc, pte)	
US10649241 BB	20380323	PEXP		Calculated Patent Term Expiry	
US10656330 BB	20180131	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10656330 BB	20200429	LSGT	PAT1	Patented Case	
US10656330 BB	20200519	LSGT	+	granted / extensions (spc, cpc, pte)	
US10656330 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10656427 BB	20180322	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10656427 BB	20180530	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RIVERA, CHRIS A.;FARROW, ROGER L.;SIGNING DATES FROM 20180413 TO 20180420;REEL/FRAME:045932/0242
US10656427 BB	20180530	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON PartyType: owner Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046264/0193
US10656427 BB	20200429	LSGT	PAT1	Patented Case	
US10656427 BB	20200519	LSGT	+	granted / extensions (spc, cpc, pte)	
US10656427 BB	20380322	PEXP		Calculated Patent Term Expiry	

US10656440 BB	20180327	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10656440 BB	20180524	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20180501 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KLINER, DAHV A.V.;FARROW, ROGER L.;REEL/FRAME:045892/0077 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US10656440 BB	20180524	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111 PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046229/0171
US10656440 BB	20200429	LSGT	PAT1	Patented Case	
US10656440 BB	20200519	LSGT	+	granted / extensions (spc, cpc, pte)	
US10656440 BB	20380327	PEXP		Calculated Patent Term Expiry	
US10661342 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10661342 BB	20200526	LSGT	+	granted / extensions (spc, cpc, pte)	
US10661342 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10661391 BB	20180129	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10661391 BB	20200526	LSGT	+	granted / extensions (spc, cpc, pte)	
US10661391 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10663742 BB	20180227	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10663742 BB	20200526	LSGT	+	granted / extensions (spc, cpc, pte)	
US10663742 BB	20380227	PEXP		Calculated Patent Term Expiry	
US10663767 BB	20200526	LSGT	+	granted / extensions (spc, cpc, pte)	
US10663767 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10663768 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10663768 BB	20180524	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MARTINSEN, ROBERT J.;KLINER, DAHV A.V.;FARROW, ROGER L.;SIGNING DATES FROM 20180501 TO 20180507;REEL/FRAME:045892/0218 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US10663768 BB	20180524	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046229/0461 Effective date: 20160111
US10663768 BB	20200526	LSGT	+	granted / extensions (spc, cpc, pte)	
US10663768 BB	20380328	PEXP		Calculated Patent Term Expiry	
US10663769 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10663769 BB	20200526	LSGT	+	granted / extensions (spc,	

				cpc, pte)	
US10663769 BB	20380328	PEXP		Calculated Patent Term Expiry	
US10668535 BB	20180129	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10668535 BB	20200602	LSGT	+	granted / extensions (spc, cpc, pte)	
US10668535 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10668537 BB	20180327	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10668537 BB	20200602	LSGT	+	granted / extensions (spc, cpc, pte)	
US10668537 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10668567 BB	20180322	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10668567 BB	20180611	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VICTOR, BRIAN M.;GROSS, KEN;BROWN, AARON W.;AND OTHERS;SIGNING DATES FROM 20180521 TO 20180530;REEL/FRAME:046049/0219
US10668567 BB	20180611	LSAS	AS	ASSIGNMENT	Effective date: 20160111 PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046337/0366 Owner: NLIGHT, INC., WASHINGTON
US10668567 BB	20200602	LSGT	+	granted / extensions (spc, cpc, pte)	
US10668567 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10670872 BB	20180324	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10670872 BB	20200602	LSGT	+	granted / extensions (spc, cpc, pte)	
US10670872 BB	20380324	PEXP		Calculated Patent Term Expiry	
US10673197 BB	20180316	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10673197 BB	20180606	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KLINER, DAHV A.V.;FARROW, ROGER;SIGNING DATES FROM 20180521 TO 20180530;REEL/FRAME:046003/0349
US10673197 BB	20200602	LSGT	+	granted / extensions (spc, cpc, pte)	
US10673197 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10673198 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10673198 BB	20180731	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KLINER, DAHV A.V.;VICTOR, BRIAN;SHEEHAN, LYNN;AND OTHERS;SIGNING DATES FROM 20180413 TO 20180607;REEL/FRAME:046515/0539
US10673198 BB	20180908	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT, INC., WASHINGTON OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS

					CORPORATION;REEL/FRAME:046821/0849 Effective date: 20160111
US10673198 BB	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US10673198 BB	20200602	LSGT	+	granted / extensions (spc, cpc, pte)	
US10673198 BB	20380328	PEXP		Calculated Patent Term Expiry	
US10673199 BB	20180316	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10673199 BB	20180606	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:KLINER, DAHV A.V.;REEL/FRAME:046004/0012 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner Effective date: 20180529
US10673199 BB	20200602	LSGT	+	granted / extensions (spc, cpc, pte)	
US10673199 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10677984 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10677984 BB	20180522	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20180420 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BROWN, AARON W.;KLINER, DAHV A.V.;FARROW, ROGER L.;REEL/FRAME:045866/0314 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US10677984 BB	20180522	LSAS	AS	ASSIGNMENT	Effective date: 20160111 Owner: NLIGHT, INC., WASHINGTON OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046201/0725 PartyType: owner
US10677984 BB	20200520	LSGT	PAT1	Patented Case	
US10677984 BB	20200609	LSGT	+	granted / extensions (spc, cpc, pte)	
US10677984 BB	20380328	PEXP		Calculated Patent Term Expiry	
US10682726 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10682726 BB	20200616	LSGT	+	granted / extensions (spc, cpc, pte)	
US10682726 BB	20380328	PEXP		Calculated Patent Term Expiry	
US10684487 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10684487 BB	20200616	LSGT	+	granted / extensions (spc, cpc, pte)	
US10684487 BB	20380328	PEXP		Calculated Patent Term Expiry	
US10690928 BB	20180226	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10690928 BB	20200623	LSGT	+	granted / extensions (spc, cpc, pte)	
US10690928 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10705348 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY

US10705348 BB	20180608	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MARTINSEN, ROBERT J.;BELL, JACOB L.;KLINER, DAHV A.V.;AND OTHERS;SIGNING DATES FROM 20180521 TO 20180530;REEL/FRAME:046036/0556
US10705348 BB	20180608	LSAS	AS	ASSIGNMENT	OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046329/0461 PartyType: owner Effective date: 20160111 Owner: NLIGHT, INC., WASHINGTON
US10705348 BB	20200617	LSGT	PAT1	Patented Case	
US10705348 BB	20200707	LSGT	+	granted / extensions (spc, cpc, pte)	
US10705348 BB	20380328	PEXP		Calculated Patent Term Expiry	
US10730785 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10730785 BB	20200804	LSGT	+	granted / extensions (spc, cpc, pte)	
US10730785 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10732439 BB	20180328	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KLINER, DAHV A.V.;FARROW, ROGER L.;SIGNING DATES FROM 20180315 TO 20180316;REEL/FRAME:045379/0803 PartyType: owner
US10732439 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10732439 BB	20200804	LSGT	+	granted / extensions (spc, cpc, pte)	
US10732439 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10732440 BB	20190502	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10732440 BB	20190503	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner Effective date: 20170526 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KLINER, DAHV A.V.;FARROW, ROGER;REEL/FRAME:049071/0600
US10732440 BB	20190503	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:049085/0049 PartyType: owner
US10732440 BB	20200804	LSGT	+	granted / extensions (spc, cpc, pte)	
US10732440 BB	20370526	PEXP		Calculated Patent Term Expiry (a terminal disclaimer has been filed)	
US10739621 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10739621 BB	20200811	LSGT	+	granted / extensions (spc, cpc, pte)	
US10739621 BB	20370526	PEXP		Calculated Patent Term Expiry	
US10751834 BB	20180328	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10751834 BB	20180531	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KOPONEN,

					JOONA;FARROW, ROGER L.;KLINER, DAHV A.V.;SIGNING DATES FROM 20180413 TO 20180524;REEL/FRAME:045948/0416 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US10751834 BB	20180531	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046275/0874
US10751834 BB	20200805	LSGT	PAT1	Patented Case	
US10751834 BB	20200825	LSGT	+	granted / extensions (spc, cpc, pte)	
US10751834 BB	20370526	PEXP		Calculated Patent Term Expiry	
US2018088343 AA	20170630	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT, INC., WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KLINER, DAHV A.V.;FARROW, ROGER;REEL/FRAME:042874/0203 Effective date: 20170526
US2018088343 AA	20180108	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20171220 PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:045019/0370
US2018088343 AA	20180126		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018088343 AA	20180322	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:045676/0366 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20171220
US2018088343 AA	20180329	LSPB	+	published / reissued	
US2018088343 AA	20180509		FRM1	Final Rejection Mailed	
US2018088343 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Effective date: 20181017
US2018088343 AA	20181227	LSES	NFA1	Non Final Action Mailed	
US2018088343 AA	20181227		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018088343 AA	20190708	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018088343 AA	20190708		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018088343 AA	20190913		RFE1	Docketed New Case - Ready for Examination	
US2018088343 AA	20190913		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018088343 AA	20200117	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018088343 AA	20200117		STPP	INFORMATION ON STATUS: PATENT	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF

				APPLICATION AND GRANTING PROCEDURE IN GENERAL	PUBLICATIONS
US2018088343 AA	20200425	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018088343 AA	20200425		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018088343 AA	20200506	LSGT	PAT1	Patented Case	
US2018088343 AA	20200506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018088357 AA	20180202		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018088357 AA	20180329	LSPB	+	published / reissued	
US2018088357 AA	20180501		FRM1	Final Rejection Mailed	
US2018088357 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner Effective date: 20181017 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA
US2018088357 AA	20190109	LSES	NFA1	Non Final Action Mailed	
US2018088357 AA	20190109		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018088357 AA	20190426		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018088357 AA	20190426		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018088357 AA	20190531	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018088357 AA	20190531		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018088357 AA	20190610	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2018088357 AA	20190610		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT RECEIVED
US2018088357 AA	20190612	LSFE	AWA3	Awaiting TC Resp, Issue Fee Payment Verified	
US2018088357 AA	20190612		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: AWAITING TC RESP, ISSUE FEE PAYMENT VERIFIED
US2018088357 AA	20190620	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018088357 AA	20190620		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED

				PROCEDURE IN GENERAL	
US2018088357 AA	20190904	LSGT	PAT1	Patented Case	
US2018088357 AA	20190904	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018088358 AA	20180130		FRM1	Final Rejection Mailed	
US2018088358 AA	20180329	LSPB	+	published / reissued	
US2018088358 AA	20180608	LSES	NFA1	Non Final Action Mailed	
US2018088358 AA	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181017 OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner Owner: PACIFIC WESTERN BANK, NORTH CAROLINA
US2018088358 AA	20190103	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018088358 AA	20190103		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018088358 AA	20190409	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018088358 AA	20190409		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018088358 AA	20190501	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018161873 AA	20180614	LSPB	+	published / reissued	
US2018161873 AA	20180710	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BROWN, AARON;KENNEDY, KEITH;DAWSON, DAVID;AND OTHERS;SIGNING DATES FROM 20180326 TO 20180423;REEL/FRAME:046302/0248
US2018161873 AA	20181017	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047259/0894 Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111
US2018161873 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner Effective date: 20181017 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA
US2018161873 AA	20181031	LSES	NFA1	Non Final Action Mailed	
US2018161873 AA	20181031		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018161873 AA	20190409		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018161873 AA	20190409		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018161873 AA	20190723	LSES	NFA1	Non Final Action Mailed	
US2018161873 AA	20190723		STPP	INFORMATION ON	Text: NON FINAL ACTION MAILED

				STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	
US2018161873 AA	20191024		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018161873 AA	20191024		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018161873 AA	20200121	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018161873 AA	20200121		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018161873 AA	20200425	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018161873 AA	20200425		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018161873 AA	20200513	LSGT	PAT1	Patented Case	
US2018161873 AA	20200513	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018161935 AA	20180614	LSPB	+	published / reissued	
US2018161935 AA	20180709	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BROWN, AARON;VICTOR, BRIAN;MARTINSEN, ROBERT;AND OTHERS;SIGNING DATES FROM 20180326 TO 20180420;REEL/FRAME:046297/0346 PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US2018161935 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018161935 AA	20181017	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047259/0894 Effective date: 20160111 Owner: NLIGHT, INC., WASHINGTON
US2018161935 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017 OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner
US2018161935 AA	20190327	LSES	NFA1	Non Final Action Mailed	
US2018161935 AA	20190327		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018161935 AA	20190705		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018161935 AA	20190705		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018161935 AA	20190729	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	

US2018161935 AA	20190729		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018161935 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018161935 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018161935 AA	20200128	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018161935 AA	20200128		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018161935 AA	20200425	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018161935 AA	20200425		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018161935 AA	20200506	LSGT	PAT1	Patented Case	
US2018161935 AA	20200506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018180803 AA	20180628	LSPB	+	published / reissued	
US2018180803 AA	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181017 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833
US2018180803 AA	20181030	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VICTOR, BRIAN;MARTINSEN, ROBERT;SHEEHAN, LYNN;AND OTHERS;SIGNING DATES FROM 20180326 TO 20180607;REEL/FRAME:047360/0929
US2018180803 AA	20181030	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047364/0554 PartyType: owner
US2018180803 AA	20181031	LSES	NFA1	Non Final Action Mailed	
US2018180803 AA	20181031		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018180803 AA	20190409		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018180803 AA	20190409		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018180803 AA	20190723	LSES	NFA1	Non Final Action Mailed	
US2018180803 AA	20190723		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN	Text: NON FINAL ACTION MAILED

				GENERAL	
US2018180803 AA	20190831		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018180803 AA	20190831		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018180803 AA	20200103	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: PETITION RELATED TO MAINTENANCE FEES GRANTED (ORIGINAL EVENT CODE: PTGR); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US2018180803 AA	20200115	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018180803 AA	20200115		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018180803 AA	20200317	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner OldParty: CORRECTIVE ASSIGNMENT TO CORRECT THE CONVEYING PARTY DATA PREVIOUSLY RECORDED AT REEL: 047360 FRAME: 0932. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT;ASSIGNORS:VICTOR, BRIAN;MARTINSEN, ROBERT;SHEEHAN, LYNN;AND OTHERS;SIGNING DATES FROM 20180326 TO 20180607;REEL/FRAME:052184/0363
US2018180803 AA	20200417	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018180813 AA	20180628	LSPB	+	published / reissued	
US2018180813 AA	20180824	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GROSS, KEN;VICTOR, BRIAN;MARTINSEN, ROBERT;AND OTHERS;SIGNING DATES FROM 20180326 TO 20180420;REEL/FRAME:046696/0505 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US2018180813 AA	20181017	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047259/0894 Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111
US2018180813 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Effective date: 20181017 PartyType: owner
US2018180813 AA	20181030	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GROSS, KEN;VICTOR, BRIAN;MARTINSEN, ROBERT;AND OTHERS;SIGNING DATES FROM 20180326 TO 20180420;REEL/FRAME:047361/0942 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US2018180813 AA	20181030	LSAS	AS	ASSIGNMENT	Effective date: 20160111 PartyType: owner Owner: NLIGHT, INC., WASHINGTON OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047364/0554
US2018180813 AA	20181031	LSES	NFA1	Non Final Action Mailed	
US2018180813 AA	20181031		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018180813 AA	20190409		RSP4	Response to Non-Final Office Action	

				Entered and Forwarded to Examiner	
US2018180813 AA	20190409		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018180813 AA	20190723	LSES	NFA1	Non Final Action Mailed	
US2018180813 AA	20190723		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018180813 AA	20191030		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018180813 AA	20191030		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018180896 AA	20180628	LSPB	+	published / reissued	
US2018180896 AA	20180710	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KARLSEN, SCOTT;MARTINSEN, ROBERT;KLINER, DAHV A.V.;AND OTHERS;SIGNING DATES FROM 20180326 TO 20180420;REEL/FRAME:046304/0136 PartyType: owner
US2018180896 AA	20181017	LSAS	AS	ASSIGNMENT	Effective date: 20160111 PartyType: owner Owner: NLIGHT, INC., WASHINGTON OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047259/0894
US2018180896 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017 PartyType: owner
US2018180896 AA	20181115	LSES	NFA1	Non Final Action Mailed	
US2018180896 AA	20181115		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018180896 AA	20190409		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018180896 AA	20190409		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018180896 AA	20190724	LSES	NFA1	Non Final Action Mailed	
US2018180896 AA	20190724		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018180896 AA	20191030		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018180896 AA	20191030		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER

US2018180896 AA	20200121	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018180896 AA	20200121		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018180896 AA	20200413	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018180896 AA	20200413		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018180896 AA	20200603	LSGT	PAT1	Patented Case	
US2018180896 AA	20200603	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018185965 AA	20180705	LSPB	+	published / reissued	
US2018185965 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018185965 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018185965 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017 PartyType: owner
US2018185965 AA	20181101	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VICTOR, BRIAN;MARTINSEN, ROBERT;SHEEHAN, LYNN;AND OTHERS;SIGNING DATES FROM 20180326 TO 20180607;REEL/FRAME:047384/0741 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US2018185965 AA	20181102	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047406/0101 Effective date: 20160111 PartyType: owner
US2018185965 AA	20190404	LSES	NFA1	Non Final Action Mailed	
US2018185965 AA	20190806	LSES	NFA1	Non Final Action Mailed	
US2018185965 AA	20190806		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018185965 AA	20191031		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018185965 AA	20191031		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018185965 AA	20200108	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018185965 AA	20200108		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018185965 AA	20200422	LSGT	PAT1	Patented Case	

US2018185965 AA	20200422	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018188544 AA	20180705	LSPB	+	published / reissued	
US2018188544 AA	20180710	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GROSS, KEN;KARLSEN, SCOTT;KLINER, DAHV A.V.;AND OTHERS;REEL/FRAME:046308/0912 Effective date: 20180326 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US2018188544 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018188544 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018188544 AA	20181017	LSAS	AS	ASSIGNMENT	OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047259/0894 Effective date: 20160111 Owner: NLIGHT, INC., WASHINGTON PartyType: owner
US2018188544 AA	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181017 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833
US2018188544 AA	20190403		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018188544 AA	20190405	LSES	NFA1	Non Final Action Mailed	
US2018188544 AA	20190421		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018188544 AA	20190421		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018188544 AA	20190723	LSES	NFA1	Non Final Action Mailed	
US2018188544 AA	20190723		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018188544 AA	20191030		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018188544 AA	20191030		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018188544 AA	20200127	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018188544 AA	20200127		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018188544 AA	20200425	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018188544 AA	20200425		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED

				PROCEDURE IN GENERAL	
US2018188544 AA	20200506	LSGT	PAT1	Patented Case	
US2018188544 AA	20200506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018205195 AA	20180719	LSPB	+	published / reissued	
US2018205195 AA	20180731	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT, INC., WASHINGTON OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046512/0152 Effective date: 20160111
US2018205195 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018205195 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018205195 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017
US2018205195 AA	20190407		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018205195 AA	20190407		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018205195 AA	20190709	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018205195 AA	20190709		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018205195 AA	20191008		RFE1	Docketed New Case - Ready for Examination	
US2018205195 AA	20191008		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018205195 AA	20200127	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018205195 AA	20200127		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018205195 AA	20200423	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018205195 AA	20200423		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018205195 AA	20200513	LSGT	PAT1	Patented Case	
US2018205195 AA	20200513	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018212395 AA	20180726	LSPB	+	published / reissued	
US2018212395 AA	20180731	LSAS	AS	ASSIGNMENT	PartyType: owner

					Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046512/0454 Owner: NLIGHT, INC., WASHINGTON
US2018212395 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018212395 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018212395 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017
US2018212395 AA	20190407		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018212395 AA	20190407		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018212395 AA	20190813	LSES	NFA1	Non Final Action Mailed	
US2018212395 AA	20190813		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018212395 AA	20191120		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018212395 AA	20191120		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018212395 AA	20200121	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018212395 AA	20200121		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018212395 AA	20200423	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018212395 AA	20200423		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018212395 AA	20200513	LSGT	PAT1	Patented Case	
US2018212395 AA	20200513	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018214950 AA	20180802	LSPB	+	published / reissued	
US2018214950 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018214950 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018214950 AA	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181017 PartyType: owner Owner: PACIFIC WESTERN BANK, NORTH CAROLINA OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT,

					INC.;REEL/FRAME:047291/0833
US2018214950 AA	20181101	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KARLSEN, SCOTT;KLINER, DAHV A.V.;FARROW, ROGER;SIGNING DATES FROM 20180521 TO 20180530;REEL/FRAME:047384/0909
US2018214950 AA	20181102	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT, INC., WASHINGTON OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047406/0101 Effective date: 20160111
US2018214950 AA	20190403	LSES	NFA1	Non Final Action Mailed	
US2018214950 AA	20190710		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018214950 AA	20190710		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018214950 AA	20190731	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214950 AA	20190731		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018214950 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018214950 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018214950 AA	20200213	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214950 AA	20200213		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018214950 AA	20200413	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2018214950 AA	20200413		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT RECEIVED
US2018214950 AA	20200513	LSGT	PAT1	Patented Case	
US2018214950 AA	20200513	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018214951 AA	20180802	LSPB	+	published / reissued	
US2018214951 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018214951 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018214951 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner Effective date: 20181017

US2018214951 AA	20181128	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KOPONEN, JOONA;KLINER, DAHV A.V.;FARROW, ROGER;SIGNING DATES FROM 20180501 TO 20180524;REEL/FRAME:047608/0159 PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US2018214951 AA	20190307	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:048529/0068 Effective date: 20160111
US2018214951 AA	20190405	LSES	NFA1	Non Final Action Mailed	
US2018214951 AA	20190421		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018214951 AA	20190421		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018214951 AA	20190729	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214951 AA	20190729		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018214951 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018214951 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018214951 AA	20200121	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214951 AA	20200121		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018214951 AA	20200423	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018214951 AA	20200423		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018214951 AA	20200506	LSGT	PAT1	Patented Case	
US2018214951 AA	20200506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018214979 AA	20180802	LSPB	+	published / reissued	
US2018214979 AA	20180803	LSES	NFA1	Non Final Action Mailed	
US2018214979 AA	20181021		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018214979 AA	20181023	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017
US2018214979 AA	20190125	LSES	PIC1	Pre-Interview	

				Communication Mailed	
US2018214979 AA	20190125		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PRE-INTERVIEW COMMUNICATION MAILED
US2018214979 AA	20190401		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018214979 AA	20190401		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018214979 AA	20190820	LSES	NFA1	Non Final Action Mailed	
US2018214979 AA	20190820		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018214979 AA	20200123		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018214979 AA	20200123		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018214979 AA	20200504	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214979 AA	20200722	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018214979 AA	20200722		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018214980 AA	20180802	LSPB	+	published / reissued	
US2018214980 AA	20180803	LSES	NFA1	Non Final Action Mailed	
US2018214980 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017 PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833
US2018214980 AA	20181128	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:GROSS, KEN;KLINER, DAHV A.V.;FARROW, ROGER;SIGNING DATES FROM 20180529 TO 20180531;REEL/FRAME:047610/0680
US2018214980 AA	20181128	LSAS	AS	ASSIGNMENT	OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:048175/0563 PartyType: owner Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111
US2018214980 AA	20181203	LSES	NFA1	Non Final Action Mailed	
US2018214980 AA	20181203		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018214980 AA	20190420		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	

US2018214980 AA	20190420		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018214980 AA	20190725	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214980 AA	20190725		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018214980 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018214980 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018214980 AA	20200212	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214980 AA	20200212		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018214980 AA	20200327	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214980 AA	20200327		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018214980 AA	20200514	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018214980 AA	20200514		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018214980 AA	20200527	LSGT	PAT1	Patented Case	
US2018214985 AA	20180802	LSPB	+	published / reissued	
US2018214985 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018214985 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018214985 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner Effective date: 20181017
US2018214985 AA	20190403		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018214985 AA	20190408	LSES	NFA1	Non Final Action Mailed	
US2018214985 AA	20190514		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018214985 AA	20190514		STPP	INFORMATION ON	Text: RESPONSE TO NON-FINAL OFFICE

				STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	ACTION ENTERED AND FORWARDED TO EXAMINER
US2018214985 AA	20200121	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018214985 AA	20200121		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018214985 AA	20200423	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018214985 AA	20200423		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018214985 AA	20200513	LSGT	PAT1	Patented Case	
US2018214985 AA	20200513	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018215650 AA	20180802	LSPB	+	published / reissued	
US2018215650 AA	20180918	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BROWN, AARON;HODGES, AARON LUDWIG;KLINER, DAHV A.V.;SIGNING DATES FROM 20180316 TO 20180413;REEL/FRAME:046904/0656 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON
US2018215650 AA	20180918	LSAS	AS	ASSIGNMENT	Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047321/0203 Owner: NLIGHT, INC., WASHINGTON PartyType: owner
US2018215650 AA	20181017	LSAS	AS	ASSIGNMENT	OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047259/0894 Effective date: 20160111 Owner: NLIGHT, INC., WASHINGTON PartyType: owner
US2018215650 AA	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181017 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner
US2018215650 AA	20190115		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018215650 AA	20190115		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018215650 AA	20190416	LSES	NFA1	Non Final Action Mailed	
US2018215650 AA	20190416		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018215650 AA	20190725		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018215650 AA	20190725		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018215650 AA	20190813	LSES	NAM1	Notice of Allowance Mailed --	

				Application Received in Office of Publications	
US2018215650 AA	20190813		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018215650 AA	20191117		RFE1	Docketed New Case - Ready for Examination	
US2018215650 AA	20191117		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018215650 AA	20200425	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018215650 AA	20200425		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018215650 AA	20200706	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018215650 AA	20200706		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018215650 AA	20200715	LSGT	PAT1	Patented Case	
US2018215650 AA	20200715	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018217324 AA	20180802	LSPB	+	published / reissued	
US2018217324 AA	20181023	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20181017 OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA
US2018217324 AA	20190111	LSES	PIC1	Pre-Interview Communication Mailed	
US2018217324 AA	20190318		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217324 AA	20190318		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217324 AA	20190701	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217324 AA	20190701		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217324 AA	20191004		RFE1	Docketed New Case - Ready for Examination	
US2018217324 AA	20191004		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217324 AA	20200211	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office	

				of Publications	
US2018217324 AA	20200211		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217324 AA	20200327	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217324 AA	20200327		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217324 AA	20200514	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018217324 AA	20200514		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018217385 AA	20180802	LSPB	+	published / reissued	
US2018217385 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Effective date: 20181017 PartyType: owner
US2018217385 AA	20181114	LSES	NFA1	Non Final Action Mailed	
US2018217385 AA	20181114		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018217385 AA	20190406		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217385 AA	20190406		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217385 AA	20190709	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217385 AA	20190709		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217385 AA	20191004		RFE1	Docketed New Case - Ready for Examination	
US2018217385 AA	20191004		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217385 AA	20200117	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217385 AA	20200117		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217385 AA	20200422	LSFE	PPV1	Publications -- Issue Fee Payment Verified	

US2018217385 AA	20200422		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018217386 AA	20180802	LSPB	+	published / reissued	
US2018217386 AA	20180813	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:046775/0249
US2018217386 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018217386 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018217386 AA	20181004	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KARLSEN, SCOTT R.;VICTOR, BRIAN M.;FARROW, ROGER L.;SIGNING DATES FROM 20180723 TO 20180731;REEL/FRAME:047073/0884 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner
US2018217386 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Effective date: 20181017 PartyType: owner
US2018217386 AA	20190403	LSES	NFA1	Non Final Action Mailed	
US2018217386 AA	20190725	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217386 AA	20190725		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217386 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018217386 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217386 AA	20200124	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217386 AA	20200124		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217386 AA	20200427	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2018217386 AA	20200427		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT RECEIVED
US2018217386 AA	20200513	LSGT	PAT1	Patented Case	
US2018217386 AA	20200513	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018217387 AA	20180802	LSPB	+	published / reissued	
US2018217387 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018217387 AA	20181003		STPP	INFORMATION ON	Text: NON FINAL ACTION MAILED

				STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	
US2018217387 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Effective date: 20181017
US2018217387 AA	20181128	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VICTOR, BRIAN;BELL, JACOB L.;KLINER, DAHV A.V.;AND OTHERS;SIGNING DATES FROM 20180521 TO 20180530;REEL/FRAME:047606/0344 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner
US2018217387 AA	20181128	LSAS	AS	ASSIGNMENT	Effective date: 20160111 Owner: NLIGHT, INC., WASHINGTON PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047655/0028
US2018217387 AA	20190403	LSES	NFA1	Non Final Action Mailed	
US2018217387 AA	20190711		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217387 AA	20190711		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217387 AA	20190806	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217387 AA	20190806		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217387 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018217387 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217387 AA	20200213	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217387 AA	20200213		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217387 AA	20200328	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217387 AA	20200328		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217387 AA	20200518	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018217387 AA	20200518		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED

US2018217387 AA	20200527	LSGT	PAT1	Patented Case	
US2018217407 AA	20180802	LSPB	+	published / reissued	
US2018217407 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018217407 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018217407 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner Effective date: 20181017 OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833
US2018217407 AA	20190403	LSES	NFA1	Non Final Action Mailed	
US2018217407 AA	20190711		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217407 AA	20190711		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217407 AA	20190805	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217407 AA	20190805		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217407 AA	20191004		RFE1	Docketed New Case - Ready for Examination	
US2018217407 AA	20191004		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217407 AA	20200117	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217407 AA	20200117		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217407 AA	20200422	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018217407 AA	20200422		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018217408 AA	20180802	LSPB	+	published / reissued	
US2018217408 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018217408 AA	20181003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018217408 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner Effective date: 20181017
US2018217408 AA	20181101	LSAS	AS	ASSIGNMENT	PartyType: owner

					Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VICTOR, BRIAN;RIVERA, CHRISTOPHER A.;KLINER, DAHV A.V.;AND OTHERS;SIGNING DATES FROM 20180521 TO 20180530;REEL/FRAME:047385/0127
US2018217408 AA	20181102	LSAS	AS	ASSIGNMENT	Effective date: 20160111 Owner: NLIGHT, INC., WASHINGTON OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047406/0101 PartyType: owner
US2018217408 AA	20190404	LSES	NFA1	Non Final Action Mailed	
US2018217408 AA	20190419		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217408 AA	20190419		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217408 AA	20190729	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217408 AA	20190729		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217408 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018217408 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217408 AA	20200124	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217408 AA	20200124		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217408 AA	20200427	LSFE	AWA2	Awaiting TC Resp, Issue Fee Payment Received	
US2018217408 AA	20200427		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: AWAITING TC RESP, ISSUE FEE PAYMENT RECEIVED
US2018217408 AA	20200507	LSFE	AWA3	Awaiting TC Resp, Issue Fee Payment Verified	
US2018217408 AA	20200507		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: AWAITING TC RESP, ISSUE FEE PAYMENT VERIFIED
US2018217408 AA	20200604	LSFE	AWA3	Awaiting TC Resp, Issue Fee Payment Verified	
US2018217408 AA	20200604		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: AWAITING TC RESP, ISSUE FEE PAYMENT VERIFIED
US2018217408 AA	20200722	LSGT	PAT1	Patented Case	
US2018217408 AA	20200722	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE

US2018217409 AA	20180802	LSPB	+	published / reissued	
US2018217409 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner Effective date: 20181017
US2018217409 AA	20190115		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217409 AA	20190115		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217409 AA	20190416	LSES	NFA1	Non Final Action Mailed	
US2018217409 AA	20190416		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018217409 AA	20190725		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217409 AA	20190725		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217409 AA	20190809	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217409 AA	20190809		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217409 AA	20191115		RFE1	Docketed New Case - Ready for Examination	
US2018217409 AA	20191115		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217409 AA	20200312	LSAS	AS	ASSIGNMENT	Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:052161/0482 Owner: NLIGHT, INC., WASHINGTON PartyType: owner
US2018217409 AA	20200402	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217409 AA	20200402		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217409 AA	20200706	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018217409 AA	20200706		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018217409 AA	20200715	LSGT	PAT1	Patented Case	
US2018217409 AA	20200715	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018217410 AA	20180802	LSPB	+	published /	

				reissued	
US2018217410 AA	20181006		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217410 AA	20181023	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20181017 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833
US2018217410 AA	20190111	LSES	PIC1	Pre-Interview Communication Mailed	
US2018217410 AA	20190308	LSES	PIC1	Pre-Interview Communication Mailed	
US2018217410 AA	20190308		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PRE-INTERVIEW COMMUNICATION MAILED
US2018217410 AA	20190513		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217410 AA	20190513		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217410 AA	20190716	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217410 AA	20190716		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217410 AA	20190831	LSFE	AWA4	Awaiting TC Resp., Issue Fee Not Paid	
US2018217410 AA	20190831		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: AWAITING TC RESP., ISSUE FEE NOT PAID
US2018217410 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018217410 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217410 AA	20200127	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217410 AA	20200127		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217410 AA	20200427	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2018217410 AA	20200427		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT RECEIVED
US2018217410 AA	20200506	LSGT	PAT1	Patented Case	
US2018217410 AA	20200506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018217411 AA	20180802	LSPB	+	published /	

				reissued	
US2018217411 AA	20181014		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217411 AA	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181017 PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA
US2018217411 AA	20181128	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KOPONEN, JOONA;KLINER, DAHV A.V.;FARROW, ROGER;SIGNING DATES FROM 20180524 TO 20180531;REEL/FRAME:047612/0960
US2018217411 AA	20181128	LSAS	AS	ASSIGNMENT	Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047674/0339 PartyType: owner Owner: NLIGHT, INC., WASHINGTON
US2018217411 AA	20190123	LSES	PIC1	Pre-Interview Communication Mailed	
US2018217411 AA	20190306	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KARLSEN, SCOTT;VICTOR, BRIAN;KLINER, DAHV A.V.;AND OTHERS;SIGNING DATES FROM 20190212 TO 20190228;REEL/FRAME:048519/0409 Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner
US2018217411 AA	20190328		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217411 AA	20190328		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217411 AA	20190627	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217411 AA	20190627		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217411 AA	20190924		RFE1	Docketed New Case - Ready for Examination	
US2018217411 AA	20190924		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217411 AA	20200123	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217411 AA	20200123		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217411 AA	20200427	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2018217411 AA	20200427		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT RECEIVED
US2018217411 AA	20200506	LSGT	PAT1	Patented Case	

US2018217411 AA	20200506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018217412 AA	20180802	LSPB	+	published / reissued	
US2018217412 AA	20181023	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017
US2018217412 AA	20181128	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KOPONEN, JOONA;BROWN, AARON;SHEEHAN, LYNN;AND OTHERS;SIGNING DATES FROM 20180524 TO 20180607;REEL/FRAME:047612/0079
US2018217412 AA	20181128	LSAS	AS	ASSIGNMENT	Owner: NLIGHT, INC., WASHINGTON PartyType: owner Effective date: 20160111 OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047661/0121
US2018217412 AA	20181204	LSES	NFA1	Non Final Action Mailed	
US2018217412 AA	20181204		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018217412 AA	20190423		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018217412 AA	20190423		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018217412 AA	20190813	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217412 AA	20190813		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217412 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018217412 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018217412 AA	20200127	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217412 AA	20200127		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217412 AA	20200328	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018217412 AA	20200328		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018217412 AA	20200622	LSWD	ABD2	Abandoned -- Failure to Pay	

US2018217412 AA	20200622		-STCB	Issue Fee INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO PAY ISSUE FEE
US2018239154 AA	20180823	LSPB	+	published / reissued	
US2018239154 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017 PartyType: owner OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833
US2018239154 AA	20190111	LSES	PIC1	Pre-Interview Communication Mailed	
US2018239154 AA	20190318		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018239154 AA	20190318		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018239154 AA	20190701	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018239154 AA	20190701		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018239154 AA	20191004		RFE1	Docketed New Case - Ready for Examination	
US2018239154 AA	20191004		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018239154 AA	20200316	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018239154 AA	20200316		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018239154 AA	20200609	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018239154 AA	20200609		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018239154 AA	20200617	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018281108 AA	20181004	LSPB	+	published / reissued	
US2018281108 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner Effective date: 20181017 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA
US2018281108 AA	20181115	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VICTOR, BRIAN;RIVERIA, CHRISTOPHER A.;KLINER, DAHV A.V.;AND OTHERS;SIGNING DATES FROM 20180521 TO 20180530;REEL/FRAME:047517/0547
US2018281108 AA	20181115	LSAS	AS	ASSIGNMENT	PartyType: owner

					OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:047575/0817 Effective date: 20160111 Owner: NLIGHT, INC., WASHINGTON
US2018281108 AA	20181204	LSES	NFA1	Non Final Action Mailed	
US2018281108 AA	20181204		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018281108 AA	20190423		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018281108 AA	20190423		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018281108 AA	20190729	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018281108 AA	20190729		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018281108 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018281108 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018281108 AA	20200127	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018281108 AA	20200127		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018281108 AA	20200327	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018281108 AA	20200327		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018281108 AA	20200620	LSWD	ABD2	Abandoned -- Failure to Pay Issue Fee	
US2018281108 AA	20200620		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO PAY ISSUE FEE
US2018284490 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018284490 AA	20181004	LSPB	+	published / reissued	
US2018284490 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 PartyType: owner Owner: PACIFIC WESTERN BANK, NORTH CAROLINA Effective date: 20181017
US2018284490 AA	20181127	LSAS	AS	ASSIGNMENT	Owner: NLIGHT PHOTONICS CORPORATION, WASHINGTON OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:HEMENWAY, DAVID MARTIN;GROSS, KEN;KLINER, DAHV A.V.;AND OTHERS;SIGNING DATES FROM

					20180530 TO 20180601;REEL/FRAME:047595/0168 PartyType: owner
US2018284490 AA	20181127	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:NLIGHT PHOTONICS CORPORATION;REEL/FRAME:048172/0531 Owner: NLIGHT, INC., WASHINGTON Effective date: 20160111
US2018284490 AA	20190405	LSES	NFA1	Non Final Action Mailed	
US2018284490 AA	20190421		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018284490 AA	20190421		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018284490 AA	20190725	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018284490 AA	20190725		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018284490 AA	20191003		RFE1	Docketed New Case - Ready for Examination	
US2018284490 AA	20191003		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2018284490 AA	20200117	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018284490 AA	20200117		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018284490 AA	20200422	LSGT	PAT1	Patented Case	
US2018284490 AA	20200422	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018287328 AA	20181003	LSES	NFA1	Non Final Action Mailed	
US2018287328 AA	20181004	LSPB	+	published / reissued	
US2018287328 AA	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181017 OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:047291/0833 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner
US2018287328 AA	20190407		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018287328 AA	20190407		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018287328 AA	20190820	LSES	NFA1	Non Final Action Mailed	
US2018287328 AA	20190820		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018287328 AA	20191125		RSP4	Response to Non-Final Office Action	

				Entered and Forwarded to Examiner	
US2018287328 AA	20191125		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2018287328 AA	20200121	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018287328 AA	20200121		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018287328 AA	20200423	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2018287328 AA	20200423		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
US2018287328 AA	20200513	LSGT	PAT1	Patented Case	
US2018287328 AA	20200513	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2019258091 AA	20190822	LSPB	+	published / reissued	
US2019258091 AA	20190923		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019258091 AA	20190923		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019258091 AA	20191129	LSES	NFA1	Non Final Action Mailed	
US2019258091 AA	20191129		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019258091 AA	20200325	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2019258091 AA	20200325		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2019258091 AA	20200518	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2019258091 AA	20200518		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2019258091 AA	20200624	LSAS	AS	ASSIGNMENT	Effective date: 20200410 OldParty: SECURITY INTEREST;ASSIGNOR:NLIGHT, INC.;REEL/FRAME:053027/0400 Owner: PACIFIC WESTERN BANK, NORTH CAROLINA PartyType: owner
US2019258091 AA	20200630	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2019258091 AA	20200630		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED

				GRANTING PROCEDURE IN GENERAL	
US2019258091 AA	20200715	LSGT	PAT1	Patented Case	
US2019258091 AA	20200715	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2020116926 A9	20200417		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
WO18063452 A1	20180405	LSPB	+	published / reissued	
WO18063452 A1	20181128		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 17729637 Country of Ref document: EP
WO18063452 A1	20190328	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A Ref document number: 2019517064 Country of Ref document: JP
WO18063452 A1	20190330	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18063452 A1	20190423	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 20197011680 Kind code of Ref document: A Country of Ref document: KR
WO18063452 A1	20190503	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20190429 Ref document number: 2017729637 Country of Ref document: EP
WO18217242 A1	20181129	LSPB	+	published / reissued	
WO18217242 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18704741 Kind code of Ref document: A1 Country of Ref document: EP
WO18217242 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217242 A1	20200812	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 18704741 Kind code of Ref document: A1 Country of Ref document: EP
WO18217243 A1	20181129	LSPB	+	published / reissued	
WO18217243 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18704748 Country of Ref document: EP
WO18217243 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217243 A1	20200812	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18704748 Country of Ref document: EP
WO18217245 A1	20181129	LSPB	+	published / reissued	
WO18217245 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18703888 Kind code of Ref document: A1 Country of Ref document: EP
WO18217245 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217245 A1	20200902	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18703888 Country of Ref document: EP
WO18217246 A1	20181129	LSPB	+	published / reissued	
WO18217246 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS	Kind code of Ref document: A1 Ref document number: 18703467 Country of Ref document: EP

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WO18217246 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217246 A1	20200902	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18703467 Country of Ref document: EP
WO18217247 A1	20181129	LSPB	+	published / reissued	
WO18217247 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18703678 Kind code of Ref document: A1 Country of Ref document: EP
WO18217247 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217247 A1	20200102	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2018703678 Country of Ref document: EP
WO18217247 A1	20200103	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20200102 Ref document number: 2018703678 Country of Ref document: EP
WO18217277 A1	20181129	LSPB	+	published / reissued	
WO18217277 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18714668 Kind code of Ref document: A1 Country of Ref document: EP
WO18217277 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217277 A1	20200902	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18714668 Country of Ref document: EP
WO18217278 A1	20181129	LSPB	+	published / reissued	
WO18217278 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18806891 Kind code of Ref document: A1 Country of Ref document: EP
WO18217278 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217278 A1	20200805	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 18806891 Kind code of Ref document: A1 Country of Ref document: EP
WO18217279 A1	20181129	LSPB	+	published / reissued	
WO18217279 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18805152 Kind code of Ref document: A1 Country of Ref document: EP
WO18217279 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217279 A1	20200117	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20200102 Ref document number: 2018805152 Country of Ref document: EP
WO18217282 A1	20181129	LSPB	+	published / reissued	
WO18217282 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18805724 Kind code of Ref document: A1 Country of Ref document: EP
WO18217282 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217282 A1	20200805	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18805724 Country of Ref document: EP

WO18217283 A1	20181129	LSPB	+	published / reissued	
WO18217283 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18805367 Country of Ref document: EP
WO18217283 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217283 A1	20200812	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 18805367 Kind code of Ref document: A1 Country of Ref document: EP
WO18217284 A1	20181129	LSPB	+	published / reissued	
WO18217284 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18805852 Kind code of Ref document: A1 Country of Ref document: EP
WO18217284 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217284 A1	20200812	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 18805852 Kind code of Ref document: A1 Country of Ref document: EP
WO18217285 A1	20181129	LSPB	+	published / reissued	
WO18217285 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18805019 Kind code of Ref document: A1 Country of Ref document: EP
WO18217285 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217285 A1	20200102	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2018805019 Country of Ref document: EP
WO18217285 A1	20200103	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2018805019 Effective date: 20200102 Country of Ref document: EP
WO18217290 A1	20181129	LSPB	+	published / reissued	
WO18217290 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18805940 Kind code of Ref document: A1 Country of Ref document: EP
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WO18217293 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18804951 Country of Ref document: EP

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WO18217293 A1	20200805	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18804951 Country of Ref document: EP
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WO18217296 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18804952 Kind code of Ref document: A1 Country of Ref document: EP
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WO18217296 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217296 A1	20200117	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2018804952 Effective date: 20200102 Country of Ref document: EP
WO18217297 A1	20181129	LSPB	+	published / reissued	
WO18217297 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18805369 Country of Ref document: EP
WO18217297 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217297 A1	20200117	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20200102 Ref document number: 2018805369 Country of Ref document: EP
WO18217298 A1	20181129	LSPB	+	published / reissued	
WO18217298 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18806154 Country of Ref document: EP
WO18217298 A1	20191126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2019565380 Kind code of Ref document: A Country of Ref document: JP
WO18217298 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217298 A1	20200110	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2018806154 Effective date: 20200102 Country of Ref document: EP
WO18217299 A1	20181129	LSPB	+	published / reissued	
WO18217299 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18805241 Kind code of Ref document: A1 Country of Ref document: EP
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WO18217300 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18806084 Kind code of Ref document: A1 Country of Ref document: EP
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WO18217300 A1	20200110	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20200102 Ref document number: 2018806084 Country of Ref document: EP
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WO18217301 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217301 A1	20200117	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20200102 Ref document number: 2018805491 Country of Ref document: EP
WO18217302 A1	20181129	LSPB	+	published / reissued	
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WO18217302 A1	20200103	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2018805725 Effective date: 20200102 Country of Ref document: EP
WO18217303 A1	20181129	LSPB	+	published / reissued	
WO18217303 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18805726 Country of Ref document: EP
WO18217303 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217303 A1	20200117	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2018805726 Effective date: 20200102 Country of Ref document: EP
WO18217304 A1	20181129	LSPB	+	published / reissued	
WO18217304 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18806895 Kind code of Ref document: A1 Country of Ref document: EP
WO18217304 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217304 A1	20200117	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Effective date: 20200102 Ref document number: 2018806895 Country of Ref document: EP
WO18217305 A1	20181129	LSPB	+	published / reissued	
WO18217305 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18804953 Kind code of Ref document: A1 Country of Ref document: EP
WO18217305 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217305 A1	20200805	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18804953 Country of Ref document: EP
WO18217306 A1	20181129	LSPB	+	published / reissued	
WO18217306 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED	Ref document number: 18805628 Kind code of Ref document: A1 Country of Ref document: EP

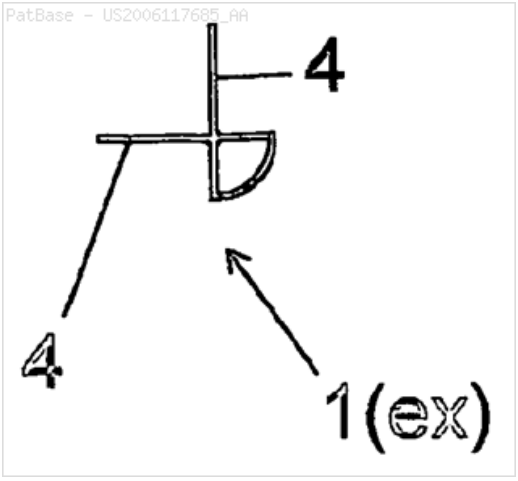
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WO18217306 A1	20191126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2019565390 Kind code of Ref document: A Country of Ref document: JP
WO18217306 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217306 A1	20200110	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2018805628 Effective date: 20200102 Country of Ref document: EP
WO18217307 A1	20181129	LSPB	+	published / reissued	
WO18217307 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18806896 Country of Ref document: EP
WO18217307 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217307 A1	20200812	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 18806896 Kind code of Ref document: A1 Country of Ref document: EP
WO18217308 A1	20181129	LSPB	+	published / reissued	
WO18217308 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18805242 Kind code of Ref document: A1 Country of Ref document: EP
WO18217308 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217308 A1	20200805	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18805242 Country of Ref document: EP
WO18217309 A1	20181129	LSPB	+	published / reissued	
WO18217309 A1	20190109		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A1 Ref document number: 18806786 Country of Ref document: EP
WO18217309 A1	20191127	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18217309 A1	20200812	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18806786 Country of Ref document: EP

80) Family number: 31304469 (US2006117685 AA)

Title: SHAPING MEMBER AND METHOD

Abstract: The invention relates to the provision of various shapes integral to surface members in architectural walls and ceilings such as building board materials, plaster and cement render. A first aspect relates to a shaping member for forming a smooth and continuous joint between two dissimilar materials in such a manner that the said joint is not normally apparent to the human eye with the intention of shaping the said surface member for the purpose of housing or augmenting the functioning of utilitarian devices such as **light** fittings, air conditioning registers and/or to provide decorative forms. An advantage of the present invention is that architectural walls and ceilings may be shaped into specific forms in order to direct the emission of **light** from associated **light** fittings and the flow of air from ventilation devices, etc. The second aspect relates to the integration of the said shaping member with supporting members and suspension members with which to suspend or otherwise support surface members with the advantage that framing members are reduced in number, construction time reduced and ease of construction increased to achieve the desired aesthetic.

Classifications:
International (IPC 8-9): E04B2/00 E04B9/00 E04B9/06 E04B9/18 E04B9/22 E04B9/32 E04F13/02 E04F13/06 E04F19/02 F21S8/02 F21V19/00 F21V21/00
International (IPC 1-7): E04F13/06 E04F19/02 F21S8/02 F21V19/00 F21V21/00
CPC: E04B9/061 E04B9/064 E04B9/18 E04B9/205 E04B9/225 E04B9/32 E04F13/06 E04F19/061 E04F19/064 E04F19/08 E04F2013/063 F21S8/026 F21V21/041 F21V21/049 F21Y2103/10 F21Y2113/00 F21Y2115/10
US: 52/287.1 52/287.100P



Family:

Publication number	Publication date	Application number	Application date
AU2003901988 A0	20030515	AU20030901988	20030424
AU2004233352 AA	20041104	AU20040233352	20040129
AU2010201193 AA	20100415	AU20100201193	20100325
CN1809674 A	20060726	CN200480017660	20040129
CN1809674 B	20110223	CN200480017660	20040129
EP1627116 A1	20060222	EP20040706097	20040129
EP1627116 A4	20110112	EP20040706097	20040129
IN01274KN2011 A	20160902	IN2011KN01274	20110324
IN02375KN2005 A	20061027	IN2005KN02375	20051124
US2006117685 AA	20060608	US20040554539	20040129
WO04094750 A1	20041104	WO2004AU00102	20040129

Priority:

AU20030901988 20030424 AU20030907215 20030801 WO2004AU00102 20040129
AU20040233352 20040129 IN2005KN02375 20051124 AU20100201193 20100325

Probable Assignee: MORPH PTY LTD

Assignee(s): (std): KENESSEY S ; KENESSEY STEVEN ; STEVEN KENESSEY

Assignee(s): MORPH PTY LTD ; 史蒂文 凯奈谢伊 ; 史蒂文·凯奈谢伊

Inventor(s): (std): KENESSEY STEVEN ; STEVEN KENESSEY

Inventor(s): 史蒂文 凯奈谢伊 ; 史蒂文·凯奈谢伊

Agent(s): HOLLANDER LAW FIRM PLC; WALSH AND ASSOCIATES; 中国国际贸易促进委员会专利商标事务所 11038; 朱德强

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2004233352 AA	20041104	LSPB	+	published / reissued	
AU2004233352 AA	20100422	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
AU2010201193 AA	20100415	LSPB	+	published / reissued	
AU2010201193 AA	20120823	LSLE	-MK4	APPLICATION	

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CN1809674 A	20060726	LSPB	+	published / reissued	
CN1809674 A	20060726	LSPB	+C06	PUBLICATION	
CN1809674 A	20060920		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN1809674 B	20110223	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1809674 B	20110223	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1809674 B	20150325	LSLE	-C17	CESSATION OF PATENT RIGHT	
CN1809674 B	20240129	PEXP		Calculated Patent Term Expiry	
EP1627116 A1	20060222	LSPB	+	published / reissued	
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EP1627116 A4	20110112	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20101213
EP1627116 A4	20120620	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20120518
EP1627116 A4	20130123	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20120801
IN01274KN2011 A	20160902	LSPB	+	published / reissued	
IN02375KN2005 A	20061027	LSPB	+	published / reissued	
US2006117685 AA	20060608	LSPB	+	published / reissued	
US2006117685 AA	20060630	LSAS	AS	ASSIGNMENT	Owner: MORPH PTY LIMITED, AUSTRALIA PartyType: owner Effective date: 20060522 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:KENESSEY, STEVEN;REEL/FRAME:017880/0868
US2006117685 AA	20111204	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
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WO04094750 A1	20041104	LSPB	+	published / reissued	
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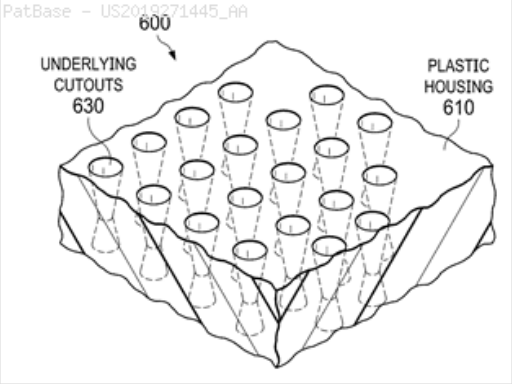
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WO04094750 A1	20051124	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2375/KOLNP/2005 Country of Ref document: IN
WO04094750 A1	20051208	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A1 Ref document number: 2006117685 Country of Ref document: US
WO04094750 A1	20051208	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A Date of Ref document: 20040129 Ref document number: 2004233352 Country of Ref document: AU
WO04094750 A1	20051208	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 10554539 Country of Ref document: US
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WO04094750 A1	20051223	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 20048176605 Country of Ref document: CN
WO04094750 A1	20060222	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 2004706097 Country of Ref document: EP
WO04094750 A1	20060608	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	Ref document number: 10554539 Country of Ref document: US

81) Family number: 75747125 (US2019271445 AA)

Title: **SYSTEM** AND METHOD FOR PRODUCING INDICATOR **LIGHT** ASSEMBLY WITH PLASTIC HOUSING

Abstract: A method for producing an indicator **light** assembly may include selecting a laser power amount based on the thickness of a plastic housing, and **drilling** multiple conically shaped cutouts in the plastic housing, each creating a respective inner hole with a first diameter and a respective outer hole with a second diameter, the first diameter being larger than the second diameter. The method may include mounting a **light** source within the plastic housing, positioning the **light** source near the first holes on the interior side of the plastic housing such that when the **light** source is enabled, a portion of the emitted **light** passes through each cutout and is emitted through the second holes on the exterior side of the plastic housing. The second diameter may be small enough that the second holes are not visible to the human eye when the **light** source is disabled.

Classifications:
International (IPC 8-9): B23K26/384 F21K9/237 F21K9/90 F21V19/00
CPC: B23K2103/42 B23K26/0622 B23K26/14 B23K26/384 B23K26/402 F21K9/237 F21K9/90 F21V19/003 F21Y2115/10



Family:

Publication number	Publication date	Application number	Application date
US2019271445 AA	20190905	US20180909414	20180301

Priority:
US20180909414 20180301

Probable Assignee: DELL INC

Assignee(s): (std): DELL PRODUCTS LP

Assignee(s): BANK OF NEW YORK MELLON TRUST CO NA ; BANK OF NEW YORK MELLON TRUST CO NA COLLATERAL AGENT AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH COLLATERAL AGENT AG AS ; DELL INC

Inventor(s): (std): CHUANG KANG MING ; HU SHENG YAO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2019271445 AA	20180301	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:HU, SHENG-YAO;CHUANG, KANG-MING;REEL/FRAME:045079/0684 PartyType: owner Effective date: 20180228 Owner: DELL PRODUCTS L.P., TEXAS
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US2019271445 AA	20180601	LSAS	AS	ASSIGNMENT	Owner: THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., A PartyType: owner OldParty: PATENT SECURITY AGREEMENT (NOTES);ASSIGNORS:DELL PRODUCTS L.P.;EMC CORPORATION;EMC IP HOLDING COMPANY LLC;REEL/FRAME:046366/0014 Effective date: 20180529
US2019271445 AA	20180601	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: CREDIT SUISSE AG, CAYMAN ISLANDS BRANCH, AS COLLATERAL AGENT, NORTH CAROLINA Effective date: 20180529 OldParty: PATENT SECURITY AGREEMENT (CREDIT);ASSIGNORS:DELL PRODUCTS L.P.;EMC

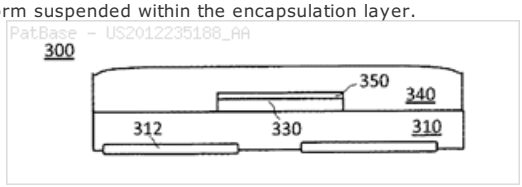
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US2019271445 AA	20190321	LSAS	AS	ASSIGNMENT	OldParty: SECURITY AGREEMENT;ASSIGNORS:CREDANT TECHNOLOGIES, INC.;DELL INTERNATIONAL L.L.C.;DELL MARKETING L.P.;AND OTHERS;REEL/FRAME:049452/0223 Effective date: 20190320 PartyType: owner Owner: THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., TEXAS
US2019271445 AA	20190905	LSPB	+	published / reissued	
US2019271445 AA	20200316	LSES	NFA1	Non Final Action Mailed	
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US2019271445 AA	20200422	LSAS	AS	ASSIGNMENT	OldParty: SECURITY AGREEMENT;ASSIGNORS:CREDANT TECHNOLOGIES INC.;DELL INTERNATIONAL L.L.C.;DELL MARKETING L.P.;AND OTHERS;REEL/FRAME:053546/0001 PartyType: owner Owner: THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., TEXAS Effective date: 20200409
US2019271445 AA	20200607		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019271445 AA	20200607		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019271445 AA	20200821		FRM1	Final Rejection Mailed	

82) Family number: 51933170 (US2012235188 AA)

Title: METHOD AND APPARATUS FOR A FLAT TOP **LIGHT** SOURCE

Abstract: A **light** -emitting device and method for manufacturing the device are disclosed. In one embodiment, the **light** -emitting device comprises a flat substrate and an encapsulation layer formed above the flat substrate. The top portion of the encapsulation layer is flat and the encapsulation layer is divided into a high density layer and a low density layer. The high density layer is formed from a wavelength-converting material precipitated on one side of the encapsulation layer. In the low density layer, the wavelength-converting material exists in particle form suspended within the encapsulation layer.

Classifications:
International (IPC 8-9): F21V9/16 G03B15/02 G03B15/05 H01L25/075 H01L33/48 H01L33/50 H01L33/52 H01L33/54 H01L33/60
CPC: H01L2224/48091 H01L2224/48227 H01L2224/8592 H01L2924/181 H01L2933/0041 H01L33/508 G03B2215/0567 H01L25/0753 H01L2933/005 H01L33/486 H01L33/52 H01L33/507 H01L33/60 H01L2924/00014
US: 257/98 257/99 257/E33.059 257/E33.061 362/16 362/84 438/27



Family:

Publication number	Publication date	Application number	Application date
CN103247746 A	20130814	CN201310042788	20130201
US2012235188 AA	20120920	US20110048136	20110315
US2012236529 AA	20120920	US20120363926	20120201
US2013050982 AA	20130228	US20120664278	20121030
US9041046 BB	20150526	US20120664278	20121030

Priority:
US20110048136 20110315 US20120363926 20120201 US20120664278 20121030

Probable Assignee: AVAGO TECHNOLOGIES LTD

Assignee(s): (std): AVAGO TECH ECBU IP SG PTE LTD ; AVAGO TECHNOLOGIES GENERAL IP ; LEE MENG EE ; ONG ENG CHUAN ; PHANG CHIN EWE

Assignee(s): AVAGO TECHNOLOGIES ECBU IP SINGAPORE PTE LTD ; AVAGO TECHNOLOGIES GENERAL IP SINGAPORE PTE L ; AVAGO TECHNOLOGIES GENERAL IP SINGAPORE PTE LTD ; AVAGO TECHNOLOGIES INT SALES PTE LTD ; AVAGO TECHNOLOGIES LTD ; BANK OF AMERICA NA COLLATERAL AGENT AS ; DEUTSCHE BANK NEW YORK BRANCH COLLATERAL AGENT AG AS ; INTELLECTUAL DISCOVERY CO LTD

Inventor(s): (std): LEE MENG EE ; LIM SEONG CHOON ; ONG ENG CHUAN ; PHANG CHIN EWE

Agent(s): 刘国伟; 北京律盟知识产权代理有限责任公司 11287

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN103247746 A	20130814	LSPB	+	published / reissued	
CN103247746 A	20130814	LSPB	+C06	PUBLICATION	
CN103247746 A	20170606	LSRV	-RJ01	REJECTION OF INVENTION PATENT APPLICATION AFTER PUBLICATION	
US2012235188 AA	20110315	LSAS	AS	ASSIGNMENT	Effective date: 20110309 Owner: AVAGO TECHNOLOGIES ECBU IP (SINGAPORE) PTE. LTD., OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PHANG, CHIN EWE;LEE, MENG EE;ONG, ENG CHUAN;REEL/FRAME:025956/0255 PartyType: owner
US2012235188 AA	20120917	LSAS	AS	ASSIGNMENT	Effective date: 20120709 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;AVAGO TECHNOLOGIES ECBU IP (SINGAPORE) PTE. LTD.;AVAGO TECHNOLOGIES FIBER IP (SINGAPORE) PTE. LTD.;REEL/FRAME:028968/0296 Owner: INTELLECTUAL DISCOVERY CO., LTD., KOREA, REPUBLIC
US2012235188 AA	20120920	LSPB	+	published / reissued	
US2012235188 AA	20151206		RFE1	Docketed New Case - Ready for Examination	
US2012235188 AA	20170424		RFE1	Docketed New Case - Ready for Examination	
US2012235188 AA	20170626	LSES	NFA1	Non Final Action	

				Mailed	
US2012235188 AA	20180105	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012235188 AA	20180105		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2012236529 AA	20120201	LSAS	AS	ASSIGNMENT	Effective date: 20120201 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PHANG, CHIN EWE;LEE, MENG EE;ONG, ENG CHUAN;REEL/FRAME:027637/0136 Owner: AVAGO TECHNOLOGIES ECBU IP (SINGAPORE) PTE. LTD., PartyType: owner
US2012236529 AA	20120920	LSPB	+	published / reissued	
US2012236529 AA	20130507	LSAS	AS	ASSIGNMENT	Effective date: 20121030 OldParty: MERGER;ASSIGNOR:AVAGO TECHNOLOGIES ECBU IP (SINGAPORE) PTE. LTD.;REEL/FRAME:030369/0496 Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD PartyType: owner
US2012236529 AA	20130507	LSAS	AS	ASSIGNMENT	Effective date: 20121030 OldParty: MERGER;ASSIGNOR:AVAGO TECHNOLOGIES ECBU IP (SINGAPORE) PTE. LTD.;REEL/FRAME:030369/0496 Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD., SINGAPORE PartyType: owner
US2012236529 AA	20140508	LSAS	AS	ASSIGNMENT	Effective date: 20140506 OldParty: PATENT SECURITY AGREEMENT;ASSIGNOR:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;REEL/FRAME:032851/0001 Owner: DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AG PartyType: owner
US2012236529 AA	20140508	LSAS	AS	ASSIGNMENT	Effective date: 20140506 OldParty: PATENT SECURITY AGREEMENT;ASSIGNOR:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;REEL/FRAME:032851/0001 Owner: DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AGENT, NEW YORK PartyType: owner
US2012236529 AA	20150826	LSES	ADV1	Advisory Action Mailed	
US2012236529 AA	20151226	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012236529 AA	20151226		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2012236529 AA	20160202	LSAS	AS	ASSIGNMENT	Effective date: 20160201 OldParty: TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENT RIGHTS (RELEASES RF 032851-0001);ASSIGNOR:DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AGENT;REEL/FRAME:037689/0001 Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD PartyType: owner
US2012236529 AA	20160202	LSAS	AS	ASSIGNMENT	Effective date: 20160201 OldParty: TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENT RIGHTS (RELEASES RF 032851-0001);ASSIGNOR:DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AGENT;REEL/FRAME:037689/0001 Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD., SINGAPORE PartyType: owner
US2013050982 AA	20130228	LSPB	+	published /	

				reissued	
US2013050982 AA	20140508	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20140506 OldParty: PATENT SECURITY AGREEMENT;ASSIGNOR:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;REEL/FRAME:032851/0001 Owner: DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AG
US2013050982 AA	20140508	LSAS	AS	ASSIGNMENT	OldParty: PATENT SECURITY AGREEMENT;ASSIGNOR:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;REEL/FRAME:032851/0001 PartyType: owner Owner: DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AGENT, NEW YORK Effective date: 20140506
US2013050982 AA	20150506	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US9041046 BB	20121030	LSAS	AS	ASSIGNMENT	Effective date: 20121030 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PHANG, CHIN EWE;LIM, SEONG CHOON;ONG, ENG CHUAN;REEL/FRAME:029213/0880 Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD PartyType: owner
US9041046 BB	20150506	LSGT	PAT1	Patented Case	
US9041046 BB	20150526	LSGT	+	granted / extensions (spc, cpc, pte)	
US9041046 BB	20160202	LSAS	AS	ASSIGNMENT	Effective date: 20160201 PartyType: owner Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD OldParty: TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENT RIGHTS (RELEASES RF 032851-0001);ASSIGNOR:DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AGENT;REEL/FRAME:037689/0001
US9041046 BB	20160202	LSAS	AS	ASSIGNMENT	Effective date: 20160201 PartyType: owner OldParty: TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENT RIGHTS (RELEASES RF 032851-0001);ASSIGNOR:DEUTSCHE BANK AG NEW YORK BRANCH, AS COLLATERAL AGENT;REEL/FRAME:037689/0001 Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD., SINGAPORE
US9041046 BB	20160211	LSAS	AS	ASSIGNMENT	Owner: BANK OF AMERICA, N.A., AS COLLATERAL AGENT, NORTH OldParty: PATENT SECURITY AGREEMENT;ASSIGNOR:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;REEL/FRAME:037808/0001 Effective date: 20160201 PartyType: owner
US9041046 BB	20160211	LSAS	AS	ASSIGNMENT	OldParty: PATENT SECURITY AGREEMENT;ASSIGNOR:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;REEL/FRAME:037808/0001 Effective date: 20160201 Owner: BANK OF AMERICA, N.A., AS COLLATERAL AGENT, NORTH CAROLINA PartyType: owner
US9041046 BB	20170203	LSAS	AS	ASSIGNMENT	OldParty: TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENTS;ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGENT;REEL/FRAME:041710/0001 Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD Effective date: 20170119 PartyType: owner
US9041046 BB	20170203	LSAS	AS	ASSIGNMENT	OldParty: TERMINATION AND RELEASE OF SECURITY INTEREST

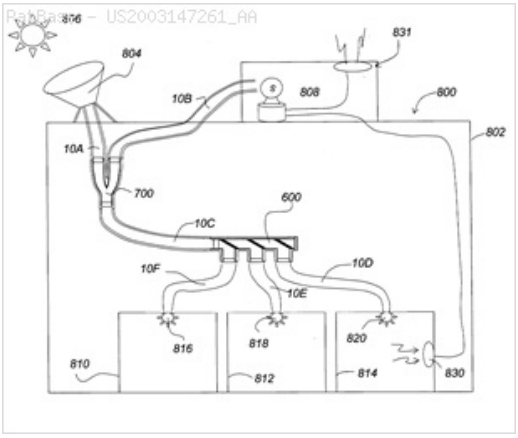
					IN PATENTS;ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGENT;REEL/FRAME:041710/0001 PartyType: owner Effective date: 20170119 Owner: AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD., SINGAPORE
US9041046 BB	20181005	LSAS	AS	ASSIGNMENT	Effective date: 20180509 OldParty: MERGER;ASSIGNOR:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;REEL/FRAME:047422/0464 Owner: AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITE PartyType: owner
US9041046 BB	20181025	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9041046 BB	20190306	LSAS	AS	ASSIGNMENT	OldParty: CORRECTIVE ASSIGNMENT TO CORRECT THE EXECUTION DATE PREVIOUSLY RECORDED AT REEL: 047422 FRAME: 0464. ASSIGNOR(S) HEREBY CONFIRMS THE MERGER;ASSIGNOR:AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE) PTE. LTD.;REEL/FRAME:048883/0702 Owner: AVAGO TECHNOLOGIES INTERNATIONAL SALES PTE. LIMITE PartyType: owner Effective date: 20180905
US9041046 BB	20321030	PEXP		Calculated Patent Term Expiry	

83) Family number: 28831684 (US2003147261 AA)

Title: LIQUID **LIGHT** GUIDE **SYSTEM** FOR INTERIOR **LIGHTING**

Abstract: A liquid-filled **light** guide is coupled with a solar collector and a **light** dispersion device to form a **system** used to illuminate the interior of a human-inhabitable **structure**, such as building, underground space or lightless underwater space. The liquid filled **light** guide establishes a **light** transmissive pathway that may be split and joined through the use of liquid filled coupling devices.

Classifications:
International (IPC 8-9): F21S11/00 F21S19/00 F21V8/00 G02B5/00 G02B6/00
International (IPC 1-7): F21S11/00 F21V9/12 G02B6/00 G02B6/24
CPC: F21S11/00 F21S19/005 G02B2006/0325 G02B6/0008
US: 362/318 362/318S 362/58 362/580 362/580S 362/582 362/582P 362/583 362/583S



Family:

Publication number	Publication date	Application number	Application date
AU2002361901 AA	20030724	AU20020361901	20021231
AU2002361901 AH	20080403	AU20020361901	20021231
US2003147261 AA	20030807	US20020334640	20021231
WO03058117 A2	20030717	WO2002US41747	20021231
WO03058117 A3	20080221	WO2002US41747	20021231

Priority:
US20020345268P 20020103 WO2002US41747 20021231 US20020334640 20021231

Probable Assignee: BABBIT VICTOR
Assignee(s): (std): BABBIT VICTOR ; MCCLURE NEIL L
Assignee(s): BABBITT VICTOR
Inventor(s): (std): BABBIT VICTOR ; BABBITT VICTOR ; MCCLURE NEIL L
Inventor(s): NEIL L MCCLURE ; VICTOR BABBIT ; VICTOR BABBITT
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 TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2002361901 AA	20030724	LSPB	+	published / reissued	
AU2002361901 AA	20040923	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
US2003147261 AA	20030807	LSPB	+	published / reissued	
US2003147261 AA	20050926	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2003147261 AA	20050926		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
WO03058117 A2	20030717	LSPB	+	published / reissued	
WO03058117 A2	20030717		+AK	DESIGNATED STATES	Kind code of Ref document: A2 Country of Ref document: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
WO03058117 A2	20030717		+AL	DESIGNATED COUNTRIES FOR REGIONAL	Kind code of Ref document: A2 Country of Ref document: AM AT AZ BE BF BG BJ BY CF CG CH CI CM CY CZ DE DK EE ES FI FR GA GB GH GM GN GQ GR GW IE IT KE KG KZ LS

				PATENTS	LU MC MD ML MR MW MZ NE NL PT RU SD SE SI SK SL SN SZ TD TG TJ TM TR TZ UG ZM ZW
WO03058117 A2	20030910		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	
WO03058117 A2	20040706	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO03058117 A2	20050629	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref country code: WO
WO03058117 A2	20060608	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: JP
WO03058117 A2	20060608	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	Text: JP

84) Family number: 62376484 (EP3021440 A1)

Title: A CONNECTION DEVICE FOR AN ELECTRICAL DEVICE

Abstract: A connection device (1) and a **system** for installing a connection device (1) for an electrical device at a ceiling, comprising a ceiling fastener (12) and an anchor (13) for anchoring the ceiling fastener (12) to the ceiling. The connection device (1) comprises a connection interface for receiving an electric cable (2), a connection interface for providing electric power to the electrical device (3), and a supporting element (4) configured to be connected to a ceiling **structure** and to support the electrical device. The anchor (13) comprises a foldable **structure** having at least two positions. The connection device (1) comprises an opening (5) for receiving the electric cable and a ceiling fastener (12) from the ceiling **structure**; the opening (5) comprising a slot (6) in the supporting element (4) for slidably receiving the body of a ceiling fastener (12), and the slot (6) comprising a fixing portion (7) smaller than the head of the ceiling fastener (12), said portion of the supporting element (4) being configured to suspend the connection device (1) from the head of the ceiling fastener (12).

Classifications:
International (IPC 8-9): F21V21/03 H02G3/20
CPC: H02G3/20

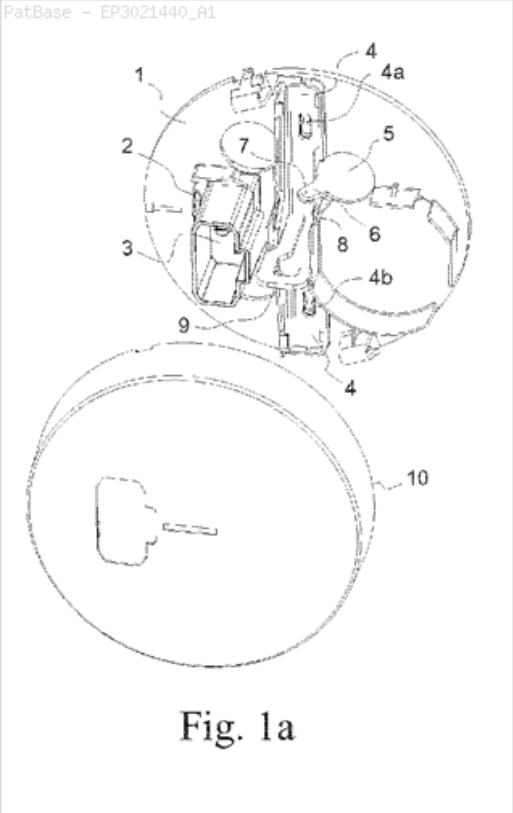


Fig. 1a

Family:

Publication number	Publication date	Application number	Application date
DE602015016869 D1	20181025	DE201560016869T	20151112
DK3021440 T3	20190121	DK20150194195T	20151112
EP3021440 A1	20160518	EP20150194195	20151112
EP3021440 B1	20180926	EP20150194195	20151112
ES2700540 T3	20190218	ES20150194195T	20151112
FI126485 B	20170113	FI20140005991	20141112
FI20145991 A	20160513	FI20140005991	20141112

Priority:
FI20140005991 20141112 EP20150194195 20151112

Probable Assignee: ENSTO FINLAND OY

Assignee(s): (std): ENSTO FINLAND OY

Inventor(s): (std): LINDROOS KAJ ; MATIKAINEN ESKO ; SUNDBERG FRANS

Agent(s): BOEHMERT AND BOEHMERT ANWALTSPARTNERSCHAFT MBB PATENTANWAELTE RECHTSANWAELTE; DURAN CORRETJER SLP DURAN CORRETJER SLP; PAPULA OY

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
DK3021440 T3	20190121	LSGT	+	granted / extensions (spc, cpc, pte)	
DK3021440 T3	20351112	PEXP		Calculated Patent Term Expiry	
EP3021440 A1	20160518	LSPB	+	published / reissued	
EP3021440 A1	20160518		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT

					LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3021440 A1	20160518		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: MA MD
EP3021440 A1	20160518		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP3021440 A1	20161123	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20161012
EP3021440 A1	20161123		+RBV	DESIGNATED CONTRACTING STATES (CORRECTED)	Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3021440 A1	20170118	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20161215
EP3021440 A1	20171220	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20171122
EP3021440 A1	20180425		INTC	INTENTION TO GRANT ANNOUNCED (DELETED)	
EP3021440 A1	20180523	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20180423
EP3021440 B1	20180926	LSGT	+	granted / extensions (spc, cpc, pte)	
EP3021440 B1	20180926		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3021440 B1	20180926	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP3021440 B1	20180928	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP3021440 B1	20181015	LSNP	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Ref country code: AT Effective date: 20181015 Ref legal event code: REF Ref document number: 1047157 Country of Ref document: AT
EP3021440 B1	20181017	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: FG4D
EP3021440 B1	20181025	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: R096 Ref document number: 602015016869 Ref country code: DE Country of Ref document: DE
EP3021440 B1	20190114	LSNP	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20180926 Ref legal event code: T2 Ref country code: NO
EP3021440 B1	20190121		REG	REFERENCE TO A NATIONAL CODE	Effective date: 20190109 Ref country code: DK Ref legal event code: T3
EP3021440 B1	20190129		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: TRGR Ref country code: SE
EP3021440 B1	20190130		REG	REFERENCE TO A NATIONAL CODE	Ref country code: NL Ref legal event code: MP Effective date: 20180926
EP3021440 B1	20190131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180926 Country of Ref document: LT
EP3021440 B1	20190131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RS
EP3021440 B1	20190131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181227 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: GR
EP3021440 B1	20190131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM	NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-

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EP3021440 B1	20190131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20181218 Year of fee payment: 4 Country of Ref document: DK
EP3021440 B1	20190131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20181119 Year of fee payment: 4 Country of Ref document: DE
EP3021440 B1	20190131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 4 Payment date: 20181116 Country of Ref document: SE
EP3021440 B1	20190131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 4 Payment date: 20181218 Country of Ref document: FI
EP3021440 B1	20190211	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MG4D Ref country code: LT
EP3021440 B1	20190215		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4A Ref country code: EE Ref document number: E016677 Effective date: 20181219 Country of Ref document: EE
EP3021440 B1	20190218	LSGT	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20190218 Kind code of Ref document: T3 Ref country code: ES Ref document number: 2700540 Ref legal event code: FG2A Country of Ref document: ES
EP3021440 B1	20190228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: HR
EP3021440 B1	20190228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AL
EP3021440 B1	20190228	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180926 Country of Ref document: LV
EP3021440 B1	20190228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20181130 Year of fee payment: 4 Country of Ref document: IT
EP3021440 B1	20190228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 4 Payment date: 20181121 Country of Ref document: FR
EP3021440 B1	20190315	LSRV	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Ref country code: AT Ref document number: 1047157 Effective date: 20180926 Ref legal event code: MK05 Country of Ref document: AT
EP3021440 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: CZ
EP3021440 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RO

EP3021440 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AT
EP3021440 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180926 Country of Ref document: NL
EP3021440 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: PL
EP3021440 B1	20190430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190126 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IS
EP3021440 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 4 Payment date: 20181218 Country of Ref document: NO
EP3021440 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20190228 Year of fee payment: 4 Country of Ref document: ES
EP3021440 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180926 Country of Ref document: SK
EP3021440 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190126 Country of Ref document: PT
EP3021440 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180926 Country of Ref document: SM
EP3021440 B1	20190531	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 4 Payment date: 20181126 Country of Ref document: EE
EP3021440 B1	20190627	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 602015016869 Ref legal event code: R097 Ref country code: DE Country of Ref document: DE
EP3021440 B1	20190628	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: PL Ref country code: CH
EP3021440 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181112 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LU
EP3021440 B1	20190731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180926 Country of Ref document: MC
EP3021440 B1	20190819		REG	REFERENCE TO A	Effective date: 20181130

				NATIONAL CODE	Ref country code: BE Ref legal event code: MM
EP3021440 B1	20190821	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MM4A Ref country code: IE
EP3021440 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20181130 Country of Ref document: CH
EP3021440 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20181130 Country of Ref document: LI
EP3021440 B1	20190904	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20190627
EP3021440 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20181112 Country of Ref document: IE
EP3021440 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SI
EP3021440 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181130 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: BE
EP3021440 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20181112 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: MT
EP3021440 B1	20200131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191115 Year of fee payment: 5 Country of Ref document: FI
EP3021440 B1	20200131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191118 Year of fee payment: 5 Country of Ref document: NO
EP3021440 B1	20200131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20191118 Country of Ref document: SE
EP3021440 B1	20200131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20191120 Country of Ref document: DE
EP3021440 B1	20200228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191115 Year of fee payment: 5 Country of Ref document: FR
EP3021440 B1	20200228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 5 Payment date: 20191127 Country of Ref document: IT
EP3021440 B1	20200228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191118 Year of fee payment: 5 Country of Ref document: DK
EP3021440 B1	20200228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191126 Year of fee payment: 5 Country of Ref document: EE
EP3021440 B1	20200228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM	Year of fee payment: 5 Payment date: 20191205 Country of Ref document: ES

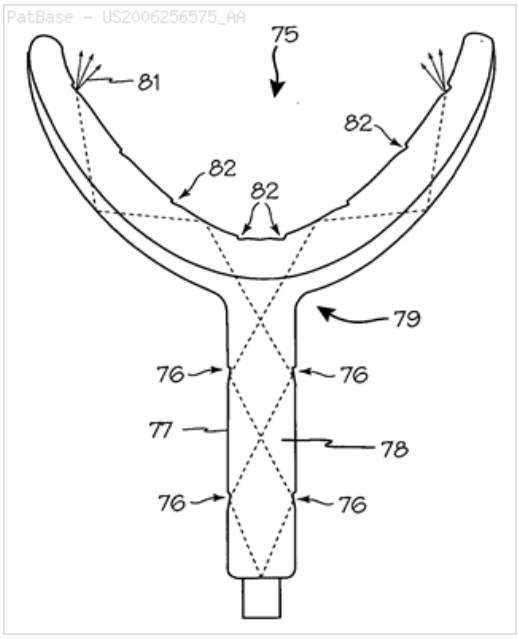
				NATIONAL OFFICE TO EPO]	
EP3021440 B1	20200331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: TR
EP3021440 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191118 Year of fee payment: 5 Country of Ref document: GB
EP3021440 B1	20200630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20151112 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 Country of Ref document: HU
EP3021440 B1	20200630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20180926 Country of Ref document: MK
EP3021440 B1	20200630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180926 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: CY
EP3021440 B1	20351112	PEXP		Calculated Patent Term Expiry	
ES2700540 T3	20190218	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2700540 T3	20351112	PEXP		Calculated Patent Term Expiry	
FI126485 B	20170113	LSPB	+	published / reissued	
FI126485 B	20170113	LSGT	+FG	PATENT GRANTED	Kind code of Ref document: B Ref document number: 126485 Country of Ref document: FI
FI126485 B	20341112	PEXP		Calculated Patent Term Expiry	
FI20145991 A	20160513	LSPB	+	published / reissued	

85) Family number: 33689724 (US2006256575 AA)

Title: BODY CAVITY ILLUMINATION **SYSTEM**

Abstract: A cavity illumination **system** according to the present disclosure may comprise one or more illumination elements composed of a transparent or semi-transparent, biocompatible sterilizable polymer and one or more illumination sources. The sterilizable polymer operates as a waveguide. An illumination element may incorporate micro **structured** optical components such as for example gratings, prisms and or diffusers to operate as precision optics for customized delivery of the **light** energy. The micro **structured** optical components may also be used to polarize and/or filter the **light** energy entering or exiting the illumination element.

Classifications:
International (IPC 8-9): A61B1/00 A61B1/06 A61B1/07 A61B1/247 A61B1/267 A61B1/303 A61B1/32 A61B17/02 F21V33/00 F21V5/00
CPC: A61B1/00066 A61B1/0011 A61B1/0623 A61B1/0676 A61B1/0684 A61B1/07 A61B1/247 A61B1/267 A61B1/303 A61B1/32 A61B17/02 F21V33/0068
US: 1/1 362/333 362/551 362/572 362/573 362/573P 362/574 362/575 362/804 362/804S 600/212



Family:

Publication number	Publication date	Application number	Application date
US2006256575 AA	20061116	US20060432898	20060512
US2014153278 AA	20140605	US20140175875	20140207
US2017224206 AA	20170810	US20170497132	20170425
US8684577 BB	20140401	US20060432898	20060512

Priority:

US20050681074P 20050513 US20050681119P 20050513 US20050681089P 20050513
US20060432898 20060512 US20140175875 20140207 US20170497132 20170425

Probable Assignee: INVUITY INC
Assignee(s): (std): INVUITY INC ; SPOTLIGHT SURGICAL INC ; VAYSER ALEX
Assignee(s): HEALTHCARE ROYALTY PARTNERS II LP ; MIDCAP FINANCIAL TRUST AGENT AS
Inventor(s): (std): VAYSER ALEX
Agent(s): CROCKETT AND CROCKETT; WILSON SONSINI GOODRICH AND ROSATI

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US2006256575 AA	20061116	LSPB	+	published / reissued	
US2006256575 AA	20081203	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: INVUITY, INC., CALIFORNIA Effective date: 20071108 OldParty: CHANGE OF NAME;ASSIGNOR:SPOTLIGHT SURGICAL, INC.;REEL/FRAME:021923/0103
US2006256575 AA	20081203	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:SPOTLIGHT SURGICAL, INC.;REEL/FRAME:021923/0103 Owner: INVUITY, INC.,CALIFORNIA Effective date: 20071108
US2006256575 AA	20140228	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20140228 OldParty: SECURITY AGREEMENT;ASSIGNOR:INVUITY, INC.;REEL/FRAME:032372/0240 Owner: HEALTHCARE ROYALTY PARTNERS II, L.P., CONNECTICUT

US2006256575 AA	20140312	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014153278 AA	20140208	LSAS	AS	ASSIGNMENT	Effective date: 20060512 PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:VAYSER, ALEX;REEL/FRAME:032177/0640 Owner: SPOTLIGHT SURGICAL, INC., CALIFORNIA
US2014153278 AA	20140208	LSAS	AS	ASSIGNMENT	OldParty: CHANGE OF NAME;ASSIGNOR:SPOTLIGHT SURGICAL, INC.;REEL/FRAME:032189/0383 PartyType: owner Owner: INVUITY, INC., CALIFORNIA Effective date: 20071108
US2014153278 AA	20140605	LSPB	+	published / reissued	
US2014153278 AA	20150515	LSES	NFA1	Non Final Action Mailed	
US2014153278 AA	20150603	LSAS	AS	ASSIGNMENT	Owner: INVUITY, INC., CALIFORNIA OldParty: MERGER;ASSIGNOR:INVUITY, INC.;REEL/FRAME:035819/0943 Effective date: 20150528 PartyType: owner
US2014153278 AA	20150731	LSAS	AS	ASSIGNMENT	Effective date: 20150730 OldParty: SECURITY INTEREST;ASSIGNOR:INVUITY, INC.;REEL/FRAME:036229/0990 PartyType: owner Owner: HEALTHCARE ROYALTY PARTNERS II, L.P., CONNECTICUT
US2014153278 AA	20151204		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2014153278 AA	20170207	LSES	NFA1	Non Final Action Mailed	
US2014153278 AA	20170317	LSAS	AS	ASSIGNMENT	Owner: INVUITY, INC., CALIFORNIA OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:HEALTHCARE ROYALTY PARTNERS II, L.P.;REEL/FRAME:042035/0801 PartyType: owner Effective date: 20170310
US2014153278 AA	20170321	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: MIDCAP FINANCIAL TRUST, AS AGENT, MARYLAND Effective date: 20170310 OldParty: SECURITY INTEREST (TERM LOAN);ASSIGNOR:INVUITY, INC.;REEL/FRAME:042053/0284
US2014153278 AA	20170321	LSAS	AS	ASSIGNMENT	Owner: MIDCAP FINANCIAL TRUST, AS AGENT, MARYLAND PartyType: owner Effective date: 20170310 OldParty: SECURITY INTEREST (REVOLVING LOAN);ASSIGNOR:INVUITY, INC.;REEL/FRAME:042052/0834
US2014153278 AA	20170925	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2014153278 AA	20170925		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2014153278 AA	20181023	LSAS	AS	ASSIGNMENT	OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MIDCAP FINANCIAL TRUST, AS AGENT;REEL/FRAME:047292/0435 Owner: INVUITY, INC., CALIFORNIA Effective date: 20181023 PartyType: owner
US2014153278 AA	20181023	LSAS	AS	ASSIGNMENT	Owner: INVUITY, INC., CALIFORNIA PartyType: owner Effective date: 20181023 OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MIDCAP FINANCIAL TRUST, AS AGENT;REEL/FRAME:047719/0034
US2017224206 AA	20170530		RFE1	Docketed New Case	

				- Ready for Examination	
US2017224206 AA	20170530		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US2017224206 AA	20170810	LSPB	+	published / reissued	
US2017224206 AA	20171002	LSAS	AS	ASSIGNMENT	Effective date: 20170310 Owner: MIDCAP FINANCIAL TRUST, AS AGENT, MARYLAND OldParty: SECURITY INTEREST (TERM LOAN);ASSIGNOR:INVUITY, INC.;REEL/FRAME:044100/0045 PartyType: owner
US2017224206 AA	20171002	LSAS	AS	ASSIGNMENT	OldParty: SECURITY INTEREST (REVOLVING LOAN);ASSIGNOR:INVUITY, INC.;REEL/FRAME:044100/0070 PartyType: owner Effective date: 20170310 Owner: MIDCAP FINANCIAL TRUST, AS AGENT, MARYLAND
US2017224206 AA	20180309	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:VAYSER, ALEX;REEL/FRAME:045161/0073 Owner: SPOTLIGHT SURGICAL, INC., CALIFORNIA Effective date: 20060512 PartyType: owner
US2017224206 AA	20180309	LSAS	AS	ASSIGNMENT	Effective date: 20150528 OldParty: MERGER;ASSIGNOR:INVUITY, INC.;REEL/FRAME:045161/0295 PartyType: owner Owner: INVUITY, INC., CALIFORNIA
US2017224206 AA	20180309	LSAS	AS	ASSIGNMENT	OldParty: CHANGE OF NAME;ASSIGNOR:SPOTLIGHT SURGICAL, INC.;REEL/FRAME:045560/0880 Effective date: 20071108 Owner: INVUITY, INC., CALIFORNIA PartyType: owner
US2017224206 AA	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181023 PartyType: owner OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MIDCAP FINANCIAL TRUST, AS AGENT;REEL/FRAME:047292/0435 Owner: INVUITY, INC., CALIFORNIA
US2017224206 AA	20181023	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: INVUITY, INC., CALIFORNIA Effective date: 20181023 OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MIDCAP FINANCIAL TRUST, AS AGENT;REEL/FRAME:047719/0034
US2017224206 AA	20190904	LSES	NFA1	Non Final Action Mailed	
US2017224206 AA	20190904		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2017224206 AA	20191110		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017224206 AA	20191110		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2017224206 AA	20200204	LSES	NFA1	Non Final Action Mailed	
US2017224206 AA	20200204		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2017224206 AA	20200506		RSP4	Response to Non-Final Office Action	

				Entered and Forwarded to Examiner	
US2017224206 AA	20200506		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2017224206 AA	20200706		FRM1	Final Rejection Mailed	
US8684577 BB	20060512	LSAS	AS	ASSIGNMENT	Effective date: 20060512 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:VAYSER, ALEX;REEL/FRAME:017895/0750 Owner: SPOTLIGHT SURGICAL, INC., CALIFORNIA PartyType: owner
US8684577 BB	20140312	LSGT	PAT1	Patented Case	
US8684577 BB	20140401	LSGT	+	granted / extensions (spc, cpc, pte)	
US8684577 BB	20150603	LSAS	AS	ASSIGNMENT	OldParty: MERGER;ASSIGNOR:INVUITY, INC.;REEL/FRAME:035819/0943 PartyType: owner Owner: INVUITY, INC., CALIFORNIA Effective date: 20150528
US8684577 BB	20170317	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: INVUITY, INC., CALIFORNIA OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:HEALTHCARE ROYALTY PARTNERS II, L.P.;REEL/FRAME:042035/0801 Effective date: 20170310
US8684577 BB	20170321	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20170310 Owner: MIDCAP FINANCIAL TRUST, AS AGENT, MARYLAND OldParty: SECURITY INTEREST (TERM LOAN);ASSIGNOR:INVUITY, INC.;REEL/FRAME:042053/0284
US8684577 BB	20170321	LSAS	AS	ASSIGNMENT	Owner: MIDCAP FINANCIAL TRUST, AS AGENT, MARYLAND PartyType: owner OldParty: SECURITY INTEREST (REVOLVING LOAN);ASSIGNOR:INVUITY, INC.;REEL/FRAME:042052/0834 Effective date: 20170310
US8684577 BB	20171002	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8684577 BB	20181023	LSAS	AS	ASSIGNMENT	Effective date: 20181023 Owner: INVUITY, INC., CALIFORNIA PartyType: owner OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MIDCAP FINANCIAL TRUST, AS AGENT;REEL/FRAME:047292/0435
US8684577 BB	20181023	LSAS	AS	ASSIGNMENT	OldParty: RELEASE BY SECURED PARTY;ASSIGNOR:MIDCAP FINANCIAL TRUST, AS AGENT;REEL/FRAME:047719/0034 Effective date: 20181023 Owner: INVUITY, INC., CALIFORNIA PartyType: owner
US8684577 BB	20191004	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US8684577 BB	20260731	PEXP		Calculated Patent Term Expiry (PTA 80 days)	

86) Family number: 46626102 (US2010214768 AA)

Title: **LIGHT** FOR A POWER TOOL AND METHOD OF ILLUMINATING A WORKPIECE

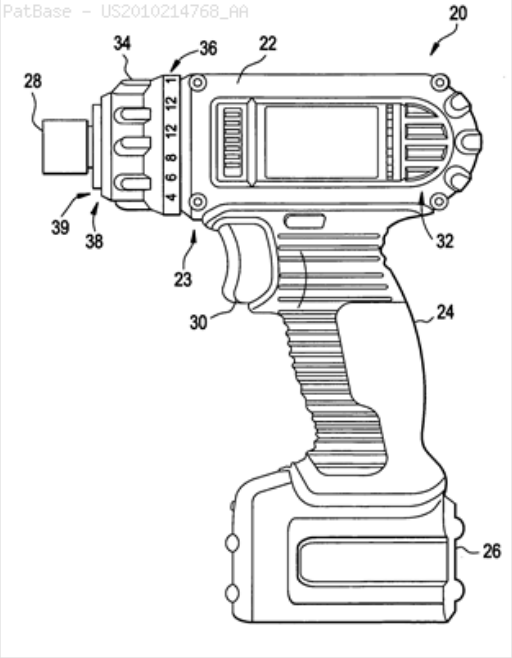
Abstract: A power tool including a end effector rotatable with respect to the housing, a collar rotatable with respect to the housing, a printed circuit board (PCB) rotatably fixed with respect to the housing, and a **light** element operatively connected to the PCB and adjacent to the end effector and in a recess of the collar and located to illuminate a workpiece machined by the power tool. A method of providing **light** for a workpiece being machined by a power tool including locating **lighting** elements around a spindle of a power tool, aligning the **lighting** elements to shine **light** on a workpiece being machined by the power tool, operatively connecting the **lighting** elements to a PCB, containing and supporting the PCB with a guide, supporting wires configured to provide power to the PCB with the guide, locating the **lighting** elements, PCB and guide in a rotatable collar, and preventing the **lighting** elements, PCB and guide from rotating when the collar rotates.

Classifications:

International (IPC 8-9): B23B31/00 B23B45/00 B23B45/02 B23B45/16 B23Q17/24 B25B21/00 B25B21/02 B25B23/00 B25B23/12 B25B23/14 B25B23/18 B25B29/00 B25F3/00 B25F5/00 B25F5/02 B28D1/04 F21L13/00 F21S9/04 F21V33/00 F21V7/00 F21V8/00 F21Y101/00 F21Y105/18 F21Y115/10 H01R39/64 H02K16/00 H02K7/18

CPC: B25F5/021 B23B31/00 B23B45/00 B23Q17/2404 B25B21/00 B25B21/02 B25B23/0057 B25B23/141 B25B23/18 B25F5/02 F21L13/00 F21S9/04 H01R39/64 H02K16/005 H02K7/116 H02K7/14 H02K7/18 H02K7/1807 B23B45/003 F21V33/0084 B25F5/00 F21V7/0091 F21Y2101/00 F21Y2105/18 F21Y2115/10 G02B6/0008 G02B6/0096

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Family:

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CN201685236 U	20101229	CN201020188961U	20100225
CN202592344 U	20121212	CN201120373483U	20110930
CN202716245 U	20130206	CN201120300506U	20110818
CN203156712 U	20130828	CN201220533393U	20120725
DE602012010898 D1	20151105	DE201260010898T	20120725
EP2223783 A1	20100901	EP20100154585	20100224
EP2223783 B1	20180711	EP20100154585	20100224
EP2420358 A2	20120222	EP20110177720	20110816
EP2420358 A3	20171108	EP20110177720	20110816
EP2447006 A2	20120502	EP20110183126	20110928
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EP2447006 B1	20190508	EP20110183126	20110928
EP2551066 A2	20130130	EP20120177787	20120725
EP2551066 A3	20131120	EP20120177787	20120725
EP2551066 B1	20150923	EP20120177787	20120725
EP2687338 A1	20140122	EP20130176802	20130717
EP2687338 B1	20200819	EP20130176802	20130717
US10543588 BB	20200128	US20170479321	20170405
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US2011058356 AA	20110310	US20100859036	20100818
US2011188232 AA	20110804	US20100895051	20100930
US2013003358 AA	20130103	US20120616610	20120914
US2013003359 AA	20130103	US20120616686	20120914
US2013021783 AA	20130124	US20120553197	20120719
US2013286635 AA	20131031	US20130933625	20130702
US2013301244 AA	20131114	US20130944922	20130718
US2014036482 AA	20140206	US20130750222	20130125
US2016010848 AA	20160114	US20150681167	20150408
US2017203421 AA	20170720	US20170479321	20170405
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US8328381 BB	20121211	US20090379585	20090225
US8506108 BB	20130813	US20120616610	20120914
US8820955 BB	20140902	US20130933625	20130702
US8827483 BB	20140909	US20120616686	20120914
US9028088 BB	20150512	US20120553197	20120719
US9328915 BB	20160503	US20130750222	20130125
US9352458 BB	20160531	US20130944922	20130718
US9644837 BB	20170509	US20150681167	20150408

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US20130944922 20130718 US20150681167 20150408 US20170479321 20170405
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Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN201685236 U	20101229	LSGT	+	granted / extensions (spc, cpc, pte)	
CN201685236 U	20101229	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN201685236 U	20170412	LSLE	-CF01	TERMINATION OF PATENT RIGHT DUE TO NON-PAYMENT OF ANNUAL FEE	
CN201685236 U	20200225	PEXP		Calculated Patent Term Expiry	
CN202592344 U	20121212	LSGT	+	granted / extensions (spc, cpc, pte)	
CN202592344 U	20121212	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN202592344 U	20121212	LSGT	+GR01	授权	Text: 授权 (Authorization)
CN202592344 U	20190917	LSLE	-CF01	TERMINATION OF PATENT RIGHT DUE TO NON-PAYMENT OF ANNUAL FEE	
CN202592344 U	20190917	LSLE	-CF01	未缴年费专利权终止	Effective date: 20180930 Text: 专利权的终止 (Termination of Patent Right)
CN202592344 U	20210930	PEXP		Calculated Patent Term Expiry	
CN202716245 U	20130206	LSGT	+	granted / extensions (spc, cpc, pte)	
CN202716245 U	20130206	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN202716245 U	20130206	LSGT	+GR01	授权	Text: 授权 (Authorization)

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CN202716245 U	20210818	PEXP		Calculated Patent Term Expiry	
CN203156712 U	20130828	LSGT	+	granted / extensions (spc, cpc, pte)	
CN203156712 U	20130828	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN203156712 U	20130828	LSGT	+GR01	授权	Text: 授权 (Authorization)
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CN203156712 U	20220725	PEXP		Calculated Patent Term Expiry	
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EP2223783 A1	20100901		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
EP2223783 A1	20100901		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: AL BA RS
EP2223783 A1	20110406	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20110225
EP2223783 A1	20180425		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B25F 5/02 20060101AFI20180322BHEP ClassificationScheme: IPC
EP2223783 A1	20180516	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20180419
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EP2223783 B1	20180713	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: EP Ref country code: CH
EP2223783 B1	20180715	LSNP	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Effective date: 20180715 Ref country code: AT Ref document number: 1016400 Ref legal event code: REF Country of Ref document: AT
EP2223783 B1	20180808	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: IE
EP2223783 B1	20180809	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: R096 Ref country code: DE Ref document number: 602010051764 Country of Ref document: DE
EP2223783 B1	20181114		REG	REFERENCE TO A NATIONAL CODE	Ref country code: NL Ref legal event code: MP Effective date: 20180711
EP2223783 B1	20181126	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref country code: LT Ref legal event code: MG4D
EP2223783 B1	20181215	LSRV	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Ref country code: AT Ref document number: 1016400 Effective date: 20180711 Ref legal event code: MK05 Country of Ref document: AT

EP2223783 B1	20181231	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180711 Country of Ref document: NL
EP2223783 B1	20190131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180711 Country of Ref document: AT
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EP2223783 B1	20190131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180711 Country of Ref document: FI
EP2223783 B1	20190228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180711 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: ES
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EP2223783 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 10 Payment date: 20190111 Country of Ref document: FR
EP2223783 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 10 Payment date: 20190220 Country of Ref document: GB
EP2223783 B1	20190531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180711 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SM
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EP2223783 B1	20190930	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: PL Ref country code: CH
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EP2223783 B1	20200331	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180711 Country of Ref document: TR
EP2223783 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20200212 Year of fee payment: 11 Country of Ref document: GB
EP2223783 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20200211 Year of fee payment: 11 Country of Ref document: DE
EP2223783 B1	20200630	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20181111 Country of Ref document: PT
EP2223783 B1	20200630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190224 Country of Ref document: MT
EP2223783 B1	20300224	PEXP		Calculated Patent Term Expiry	
EP2420358 A2	20120222	LSPB	+	published / reissued	
EP2420358 A2	20120222		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2420358 A2	20120222		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2420358 A3	20171108		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A3 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2420358 A3	20171108		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2420358 A3	20171108		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B25F 5/02 20060101AFI20171005BHEP
EP2420358 A3	20171108		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED	ClassificationScheme: IPC ClassificationSymbol: B25B 23/18 20060101ALI20171005BHEP

				BEFORE GRANT	
EP2420358 A3	20181031	LSDW	-18D	APPLICATION DEEMED TO BE WITHDRAWN	Effective date: 20180509
EP2447006 A2	20120502	LSPB	+	published / reissued	
EP2447006 A2	20120502		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2447006 A2	20120502		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2447006 A3	20160420		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A3 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2447006 A3	20160420		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: F21S 9/04 20060101ALI20160314BHEP
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B23B 31/00 20060101ALI20160314BHEP ClassificationScheme: IPC
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B23Q 17/24 20060101ALI20160314BHEP
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H02K 7/18 20060101ALI20160314BHEP
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B25B 21/00 20060101AFI20160314BHEP
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B23B 45/00 20060101ALI20160314BHEP
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B25B 21/02 20060101ALI20160314BHEP
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B25B 23/00 20060101ALI20160314BHEP
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: H02K 16/00 20060101ALI20160314BHEP ClassificationScheme: IPC
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B25B 23/14 20060101ALI20160314BHEP ClassificationScheme: IPC
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B25F 5/02 20060101ALI20160314BHEP ClassificationScheme: IPC
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: H01R 39/64 20060101ALI20160314BHEP
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: F21L 13/00 20060101ALI20160314BHEP ClassificationScheme: IPC
EP2447006 A3	20160420		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B25B 23/18 20060101ALI20160314BHEP ClassificationScheme: IPC
EP2447006 A3	20161130	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20161019
EP2447006 A3	20161130		+RBV	DESIGNATED CONTRACTING STATES (CORRECTED)	Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2447006 A3	20180228	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20180130

EP2447006 A3	20190109	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20181214
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: KUSMIERSKI, ROBERT G. PartyType: inventor
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: GEHRET, ROBERT
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: HATFIELD, ERIC E.
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: KROUT, DANIEL L.
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: DIXON, EVA J. PartyType: inventor
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: MILLER, AMANDA PartyType: inventor
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: ROBERTSON, COREY G.
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: GARBER, STUART
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: ZELLERHOF, JOERG
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: NORONA, JOAO PartyType: inventor
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: DELCAMP, JEFFREY
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: CLEANTHOUS, ARIS C. PartyType: inventor
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: PUZIO, DANIEL PartyType: inventor
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: OSBORNE, STEPHEN P. PartyType: inventor
EP2447006 A3	20190109		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: FRIEDMAN, BRIAN E. PartyType: inventor
EP2447006 A3	20190424		INTC	INTENTION TO GRANT ANNOUNCED (DELETED)	
EP2447006 A3	20190501	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20190328
EP2447006 B1	20190508	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2447006 B1	20190508		+AK	DESIGNATED	Kind code of Ref document: B1

				CONTRACTING STATES	Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2447006 B1	20190508	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP2447006 B1	20190515	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP2447006 B1	20190515	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: AT Ref legal event code: REF Effective date: 20190515 Ref document number: 1129449 Kind code of Ref document: T Country of Ref document: AT
EP2447006 B1	20190529	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: FG4D
EP2447006 B1	20190529	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref document number: 602011058693 Ref legal event code: R096 Country of Ref document: DE
EP2447006 B1	20190911		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MP Ref country code: NL Effective date: 20190508
EP2447006 B1	20190925	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MG4D Ref country code: LT
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: FI
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: LT
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SE
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190808 Country of Ref document: NO
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: HR
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190908 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: PT
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AL
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: ES
EP2447006 B1	20191031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: NL
EP2447006 B1	20191031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM	Year of fee payment: 9 Payment date: 20190917 Country of Ref document: DE

				NATIONAL OFFICE TO EPO]	
EP2447006 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190808 Country of Ref document: BG
EP2447006 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RS
EP2447006 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: LV
EP2447006 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190809 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: GR
EP2447006 B1	20191215	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref country code: AT Effective date: 20190508 Kind code of Ref document: T Ref document number: 1129449 Ref legal event code: MK05 Country of Ref document: AT
EP2447006 B1	20191231	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20190926 Year of fee payment: 9 Country of Ref document: GB
EP2447006 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SK
EP2447006 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: EE
EP2447006 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: DK
EP2447006 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: AT
EP2447006 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: RO
EP2447006 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: CZ
EP2447006 B1	20200211	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: R097 Ref country code: DE Ref document number: 602011058693 Country of Ref document: DE
EP2447006 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT

				OFFICE TO EPO]	Country of Ref document: SM
EP2447006 B1	20200228	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: IT
EP2447006 B1	20200331	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: TR
EP2447006 B1	20200415	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20200211
EP2447006 B1	20200501	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20190508 Country of Ref document: PL
EP2447006 B1	20200529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: MC
EP2447006 B1	20200529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190508 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SI
EP2447006 B1	20200529	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: PL
EP2447006 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190928 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LU
EP2447006 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190928 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: IE
EP2447006 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190930 Country of Ref document: CH
EP2447006 B1	20200731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190930 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LI
EP2447006 B1	20200806		REG	REFERENCE TO A NATIONAL CODE	Effective date: 20190930 Ref country code: BE Ref legal event code: MM
EP2447006 B1	20310928	PEXP		Calculated Patent Term Expiry	
EP2551066 A2	20130130	LSPB	+	published / reissued	
EP2551066 A2	20130130		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A2 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2551066 A2	20130130		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: FRIEDMAN BRIAN E. PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT	Inventor: COX JOHN D. PartyType: inventor

EP2551066 A2	20130306		RIN1	(CORRECTED) INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: KELLEHER JOSEPH P. PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ESHLEMAN SCOTT PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: GARBER STUART PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: NORONA JOAO PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: GEHRET ROBERT S. PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: VANKO JOHN C. PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: NOSLOV ANATOLIY PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: PUZIO DANIEL PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: USSELMAN ROBERT PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: GOTTESMANN TAL PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: OSBORNE STEPHEN P. PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: DOYLE MICHAEL C. PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: FORSTER MICHAEL K. PartyType: inventor
EP2551066 A2	20130306		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ZELLERHOFF JOERG PartyType: inventor
EP2551066 A2	20161031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20160720 Year of fee payment: 5 Country of Ref document: GB
EP2551066 A2	20161031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20160720 Year of fee payment: 5 Country of Ref document: DE
EP2551066 A3	20131120		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A3 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2551066 A3	20131120		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME

EP2551066 A3	20131120		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B25F 5/02 20060101AFI20131016BHEP ClassificationScheme: IPC
EP2551066 A3	20131120		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationSymbol: B25B 23/18 20060101ALI20131016BHEP ClassificationScheme: IPC
EP2551066 A3	20140625	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20140516
EP2551066 A3	20140625		+RBV	DESIGNATED CONTRACTING STATES (CORRECTED)	Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2551066 A3	20141119		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B25B 23/18 20060101ALI20141014BHEP
EP2551066 A3	20141119		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: B25F 5/02 20060101AFI20141014BHEP
EP2551066 A3	20141203	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20141106
EP2551066 A3	20150506	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20150410
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: GEHRET ROBERT S.
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: GOTTESMANN TAL PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: PUZIO DANIEL
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: DOYLE MICHAEL C. PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ESHLEMAN SCOTT PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: OSBORNE STEPHEN P. PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: VANKO JOHN C. PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: USSELMAN ROBERT
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: GARBER STUART
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: KELLEHER JOSEPH P. PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: ZELLERHOFF JOERG PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: FRIEDMAN BRIAN E.

EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: NOSLOV ANATOLIY PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: COX JOHN D. PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: NORONA JOAO PartyType: inventor
EP2551066 A3	20150506		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: FORSTER MICHAEL K. PartyType: inventor
EP2551066 B1	20150923	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2551066 B1	20150923		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2551066 B1	20150923	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP2551066 B1	20150930	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP2551066 B1	20151015	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: AT Ref document number: 750969 Effective date: 20151015 Kind code of Ref document: T Ref legal event code: REF Country of Ref document: AT
EP2551066 B1	20151021	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: IE
EP2551066 B1	20151105	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref document number: 602012010898 Ref legal event code: R096 Country of Ref document: DE
EP2551066 B1	20160127		REG	REFERENCE TO A NATIONAL CODE	Effective date: 20150923 Ref country code: NL Ref legal event code: MP
EP2551066 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151223 Country of Ref document: NO
EP2551066 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: FI
EP2551066 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: LV
EP2551066 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20151224 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: GR
EP2551066 B1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: LT
EP2551066 B1	20160210	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref country code: LT Ref legal event code: MG4D
EP2551066 B1	20160215	LSRV	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Effective date: 20150923 Ref document number: 750969 Ref country code: AT Ref legal event code: MK05 Country of Ref document: AT

EP2551066 B1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RS
EP2551066 B1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: SE
EP2551066 B1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: HR
EP2551066 B1	20160331	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: NL
EP2551066 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: CZ
EP2551066 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: ES
EP2551066 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: IT
EP2551066 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160123 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IS
EP2551066 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: EE
EP2551066 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SK
EP2551066 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: RO
EP2551066 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AT
EP2551066 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: PL
EP2551066 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT	NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE

				INFORMATION FROM NATIONAL OFFICE TO EPO]	PRESCRIBED TIME-LIMIT Lapsed date: 20160125 Country of Ref document: PT
EP2551066 B1	20160624	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: R097 Ref country code: DE Ref document number: 602012010898 Country of Ref document: DE
EP2551066 B1	20160831	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20160624
EP2551066 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: DK
EP2551066 B1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SI
EP2551066 B1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: BE
EP2551066 B1	20170228	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: PL
EP2551066 B1	20170331	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: MC
EP2551066 B1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160731 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LI
EP2551066 B1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160801 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: FR
EP2551066 B1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160731 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: CH
EP2551066 B1	20170428	LSLE	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20170331 Ref legal event code: ST Ref country code: FR
EP2551066 B1	20170503	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MM4A Ref country code: IE
EP2551066 B1	20170731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20160725 Country of Ref document: IE
EP2551066 B1	20170831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160725 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LU
EP2551066 B1	20171031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20170719 Year of fee payment: 6 Country of Ref document: DE
EP2551066 B1	20171031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20170719 Year of fee payment: 6 Country of Ref document: GB

EP2551066 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING 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; INVALID AB INITIO Lapsed date: 20120725 Country of Ref document: HU
EP2551066 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SM
EP2551066 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: CY
EP2551066 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20160731 Country of Ref document: MT
EP2551066 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: TR
EP2551066 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: MK
EP2551066 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20150923 Country of Ref document: BG
EP2551066 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20150923 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AL
EP2551066 B1	20181031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20180710 Year of fee payment: 7 Country of Ref document: DE
EP2551066 B1	20181130	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20180725 Year of fee payment: 7 Country of Ref document: GB
EP2551066 B1	20191031	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 8 Payment date: 20190710 Country of Ref document: DE
EP2551066 B1	20191231	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 8 Payment date: 20190724 Country of Ref document: GB
EP2551066 B1	20320725	PEXP		Calculated Patent Term Expiry	
EP2687338 A1	20140122	LSPB	+	published / reissued	
EP2687338 A1	20140122		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2687338 A1	20140122		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2687338 A1	20140827	LSES	+17P	REQUEST FOR	Effective date: 20140722

				EXAMINATION FILED	
EP2687338 A1	20140827		+RBV	DESIGNATED CONTRACTING STATES (CORRECTED)	Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2687338 A1	20170524	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20170421
EP2687338 A1	20200527	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20200430
EP2687338 A1	20200527		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: FORSTER, MICHAEL K. PartyType: inventor
EP2687338 A1	20200527		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	Inventor: GOTTESMAN, TAL PartyType: inventor
EP2687338 A1	20200527		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: PUZIO, DANIEL
EP2687338 A1	20200527		RIN1	INFORMATION ON INVENTOR PROVIDED BEFORE GRANT (CORRECTED)	PartyType: inventor Inventor: VANKO, JOHN CHARLES
EP2687338 B1	20200819	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2687338 B1	20200819		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2687338 B1	20200819	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP2687338 B1	20200831	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP2687338 B1	20330717	PEXP		Calculated Patent Term Expiry	
US10543588 BB	20200128	LSGT	+	granted / extensions (spc, cpc, pte)	
US10543588 BB	20310427	PEXP		Calculated Patent Term Expiry (PTA 209 days)	
US2010214768 AA	20100826	LSPB	+	published / reissued	
US2010214768 AA	20121121	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2011058356 AA	20101119	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20101118 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FRIEDMAN, BRIAN E.;OSBORNE, STEPHEN P.;DIXON, EVA J.;AND OTHERS;REEL/FRAME:025409/0688 Owner: BLACK & DECKER INC., DELAWARE
US2011058356 AA	20110310	LSPB	+	published / reissued	
US2011058356 AA	20131003	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2011058356 AA	20131003		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US2011188232 AA	20110804	LSPB	+	published / reissued	
US2011188232 AA	20121107	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013003358 AA	20130103	LSPB	+	published / reissued	
US2013003358 AA	20130724	LSGT	STCF	INFORMATION ON STATUS: PATENT	Text: PATENTED CASE

				GRANT	
US2013003359 AA	20130103	LSPB	+	published / reissued	
US2013003359 AA	20140820	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013021783 AA	20130124	LSPB	+	published / reissued	
US2013021783 AA	20150422	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013286635 AA	20131031	LSPB	+	published / reissued	
US2013286635 AA	20140813	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2013301244 AA	20131114	LSPB	+	published / reissued	
US2013301244 AA	20160511	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2014036482 AA	20140206	LSPB	+	published / reissued	
US2014036482 AA	20160413	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016010848 AA	20160114	LSPB	+	published / reissued	
US2016010848 AA	20170419	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2017203421 AA	20170405	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VANKO, JOHN C.;GOTTESMAN, TAL;PUZIO, DANIEL;AND OTHERS;SIGNING DATES FROM 20120720 TO 20121003;REEL/FRAME:041852/0792 Owner: BLACK & DECKER INC., CONNECTICUT PartyType: owner
US2017203421 AA	20170427		RFE1	Docketed New Case - Ready for Examination	
US2017203421 AA	20170720	LSPB	+	published / reissued	
US2017203421 AA	20181231	LSES	NFA1	Non Final Action Mailed	
US2017203421 AA	20190320		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2017203421 AA	20190320		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2017203421 AA	20190627		FRM1	Final Rejection Mailed	
US2017203421 AA	20190627		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2017203421 AA	20190808	LSAL	NAF1	Notice of Appeal Filed	
US2017203421 AA	20190808	LSAL	STCV	INFORMATION ON STATUS: APPEAL PROCEDURE	Text: NOTICE OF APPEAL FILED
US2017203421 AA	20191021	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017203421 AA	20191021		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2017203421 AA	20191211	LSFE	PPR1	Publications -- Issue Fee Payment	

US2017203421 AA	20191211		STPP	Received INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: PUBLICATIONS -- ISSUE FEE PAYMENT RECEIVED
US2017203421 AA	20200108	LSGT	PAT1	Patented Case	
US2017203421 AA	20200108	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2020114499 AA	20191211	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VANKO, JOHN C.;GOTTESMAN, TAL;PUZIO, DANIEL;AND OTHERS;SIGNING DATES FROM 20120720 TO 20121003;REEL/FRAME:051241/0586 Owner: BLACK & DECKER INC., CONNECTICUT PartyType: owner
US2020114499 AA	20200106		RFE1	Docketed New Case - Ready for Examination	
US2020114499 AA	20200416	LSPB	+	published / reissued	
US8317350 BB	20110407	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: BLACK & DECKER INC., DELAWARE OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FRIEDMAN, BRIAN E.;OSBORNE, STEPHEN P.;DIXON, EVA J.;AND OTHERS;SIGNING DATES FROM 20110302 TO 20110328;REEL/FRAME:026092/0167
US8317350 BB	20121107	LSGT	PAT1	Patented Case	
US8317350 BB	20121127	LSGT	+	granted / extensions (spc, cpc, pte)	
US8317350 BB	20160512	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8317350 BB	20200514	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 8
US8317350 BB	20300930	PEXP		Calculated Patent Term Expiry	
US8328381 BB	20090515	LSAS	AS	ASSIGNMENT	Owner: BLACK & DECKER INC., DELAWARE PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DIXON, EVA;KROUT, DANIEL;KUSMIERSKI, ROBERT;AND OTHERS;SIGNING DATES FROM 20090501 TO 20090506;REEL/FRAME:022692/0093
US8328381 BB	20121121	LSGT	PAT1	Patented Case	
US8328381 BB	20121211	LSGT	+	granted / extensions (spc, cpc, pte)	
US8328381 BB	20160526	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8328381 BB	20200528	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 8
US8328381 BB	20300722	PEXP		Calculated Patent Term Expiry (PTA 512 days)	
US8506108 BB	20130724	LSGT	PAT1	Patented Case	
US8506108 BB	20130813	LSGT	+	granted / extensions (spc, cpc, pte)	
US8506108 BB	20170202	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US8506108 BB	20320914	PEXP		Calculated Patent Term Expiry	
US8820955 BB	20140813	LSGT	PAT1	Patented Case	
US8820955 BB	20140902	LSGT	+	granted / extensions (spc, cpc, pte)	
US8820955 BB	20180215	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8820955 BB	20330702	PEXP		Calculated Patent Term Expiry	
US8827483 BB	20140820	LSGT	PAT1	Patented Case	

US8827483 BB	20140909	LSGT	+	granted / extensions (spc, cpc, pte)	
US8827483 BB	20180222	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US8827483 BB	20320914	PEXP		Calculated Patent Term Expiry	
US9028088 BB	20121003	LSAS	AS	ASSIGNMENT	Owner: BLACK & DECKER INC., DELAWARE PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VANKO, JOHN C.;GOTTESMAN, TAL;PUZIO, DANIEL;AND OTHERS;SIGNING DATES FROM 20120720 TO 20121003;REEL/FRAME:029070/0070
US9028088 BB	20150422	LSGT	PAT1	Patented Case	
US9028088 BB	20150512	LSGT	+	granted / extensions (spc, cpc, pte)	
US9028088 BB	20181101	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9028088 BB	20330730	PEXP		Calculated Patent Term Expiry (PTA 376 days)	
US9328915 BB	20130422	LSAS	AS	ASSIGNMENT	Owner: BLACK & DECKER INC., DELAWARE PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VANKO, JOHN C.;GOTTESMAN, TAL;FORSTER, MICHAEL K.;AND OTHERS;REEL/FRAME:030260/0326 Effective date: 20130128
US9328915 BB	20151116		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US9328915 BB	20160413	LSGT	PAT1	Patented Case	
US9328915 BB	20160503	LSGT	+	granted / extensions (spc, cpc, pte)	
US9328915 BB	20191223	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US9328915 BB	20200608	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
US9328915 BB	20200608	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US9328915 BB	20200608	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US9328915 BB	20200630	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20200503
US9328915 BB	20320416	PEXP		Calculated Patent Term Expiry (PTA 564 days)	
US9352458 BB	20131001	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: BLACK & DECKER INC., DELAWARE OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:FRIEDMAN, BRIAN E.;OSBORNE, STEPHEN P.;KROUT, DANIEL L.;AND OTHERS;SIGNING DATES FROM 20130819 TO 20131001;REEL/FRAME:031317/0016
US9352458 BB	20151130		EQA1	Ex parte Quayle Action Mailed	
US9352458 BB	20160511	LSGT	PAT1	Patented Case	
US9352458 BB	20160531	LSGT	+	granted / extensions (spc, cpc, pte)	

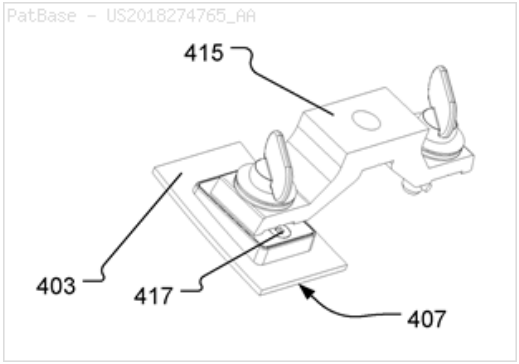
US9352458 BB	20191115	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9352458 BB	20340930	PEXP		Calculated Patent Term Expiry (PTA 439 days)	
US9644837 BB	20150408	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: BLACK & DECKER INC., DELAWARE OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:VANKO, JOHN C.;GOTTESMAN, TAL;PUZIO, DANIEL;AND OTHERS;SIGNING DATES FROM 20120720 TO 20121003;REEL/FRAME:035358/0812
US9644837 BB	20170410	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US9644837 BB	20170419	LSGT	PAT1	Patented Case	
US9644837 BB	20170509	LSGT	+	granted / extensions (spc, cpc, pte)	
US9644837 BB	20350729	PEXP		Calculated Patent Term Expiry (PTA 112 days)	

87) Family number: 65469925 (US2018274765 AA)

Title: **LIGHT** FIXTURE HOUSING WITH INTEGRATED FASTENING ELEMENT

Abstract: An attachment assembly integrated into the lamp housing and comprising an alcove formed in an outer surface of the housing shell, wherein the alcove is configured to accommodating a fastening unit, the fastening unit is configured to receive a mating member connected to a support **structure** and the mating member can be locked to the fastening unit, wherein the fastening unit is secured to the housing shell by a self-tapping screw configured **drill** itself into a part of said polymer housing shell. The invention relates also to an assembly unit where the alcove is formed as a stepped bottom where a mating recess forms the deepest bottom part, a support recess forms the middle bottom part and the alcove bottom forms an upper bottom part.

Classifications:
International (IPC 8-9): F21S8/00 F21V17/10 F21V21/00 F21V21/08 F21V21/088 F21W131/406 F21Y115/10
CPC: F21S8/03 F21V21/00 F21V21/088 F21W2131/406 F21Y2115/10
US: 1/1 248/205.1



Family:

Publication number	Publication date	Application number	Application date
CN108139067 A	20180608	CN201680058893	20161003
DE602016036155 D1	20200528	DE201660036155T	20161003
EP3362738 A1	20180822	EP20160854990	20161003
EP3362738 A4	20190320	EP20160854990	20161003
EP3362738 B1	20200506	EP20160854990	20161003
US10502398 BB	20191210	US20160764813	20161003
US2018274765 AA	20180927	US20160764813	20161003
WO17063653 A1	20170420	WO2016DK50318	20161003

Priority:
DK20150070652 20151012 WO2016DK50318 20161003 EP20160854990 20161003

Probable Assignee: HARMAN PROFESSIONAL DENMARK APS
Assignee(s): (std): HARMAN PROFESSIONAL DENMARK APS ; MARTIN PROFESSIONAL APS
Assignee(s): 哈曼专业丹麦公司
Inventor(s): (std): TOFT UFFE KJAEGAARD
Inventor(s): U.K.托夫特
Agent(s): BERTSCH FLORIAN OLIVER; BROOKS KUSHMAN PC; 北京市柳沈律师事务所 11105; 高巍
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
CN108139067 A	20180608	LSPB	+	published / reissued	
CN108139067 A	20180608	LSPB	PB01	PUBLICATION	
CN108139067 A	20181106		SE01	ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION	
EP3362738 A1	20180822	LSPB	+	published / reissued	
EP3362738 A1	20180822	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20180308
EP3362738 A1	20180822		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3362738 A1	20180822		+AV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT	Country of Ref document: MA MD
EP3362738 A1	20180822		+AX	REQUEST FOR EXTENSION OF	Country of Ref document: BA ME

				THE EUROPEAN PATENT	
EP3362738 A1	20190116		DAV	REQUEST FOR VALIDATION OF THE EUROPEAN PATENT (DELETED)	
EP3362738 A1	20190116		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP3362738 A4	20190320	LSES	+A4	SUPPLEMENTARY SEARCH REPORT DRAWN UP AND DESPATCHED	Effective date: 20190218
EP3362738 A4	20190320		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: F21V 21/08 20060101ALI20190212BHEP
EP3362738 A4	20190320		RIC1	INFORMATION PROVIDED ON IPC CODE ASSIGNED BEFORE GRANT	ClassificationScheme: IPC ClassificationSymbol: F21V 17/10 20060101AFI20190212BHEP
EP3362738 A4	20200226	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20200127
EP3362738 B1	20200506	LSGT	+	granted / extensions (spc, cpc, pte)	
EP3362738 B1	20200506		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP3362738 B1	20200506	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP3362738 B1	20200515	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP3362738 B1	20200515	LSNP	REG	REFERENCE TO A NATIONAL CODE	Effective date: 20200515 Kind code of Ref document: T Ref country code: AT Ref document number: 1267334 Ref legal event code: REF Country of Ref document: AT
EP3362738 B1	20200527	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: FG4D
EP3362738 B1	20200528	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref document number: 602016036155 Ref legal event code: R096 Country of Ref document: DE
EP3362738 B1	20361003	PEXP		Calculated Patent Term Expiry	
US10502398 BB	20180329	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10502398 BB	20180402	LSAS	AS	ASSIGNMENT	Effective date: 20180222 Owner: HARMAN PROFESSIONAL DENMARK APS, DENMARK PartyType: owner OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:TOFT, UFFE KJAEGAARD;REEL/FRAME:045407/0368
US10502398 BB	20180904		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: DOCKETED NEW CASE - READY FOR EXAMINATION
US10502398 BB	20191210	LSGT	+	granted / extensions (spc, cpc, pte)	
US10502398 BB	20361003	PEXP		Calculated Patent Term Expiry	
US2018274765 AA	20180904		RFE1	Docketed New Case - Ready for Examination	
US2018274765 AA	20180927	LSPB	+	published / reissued	

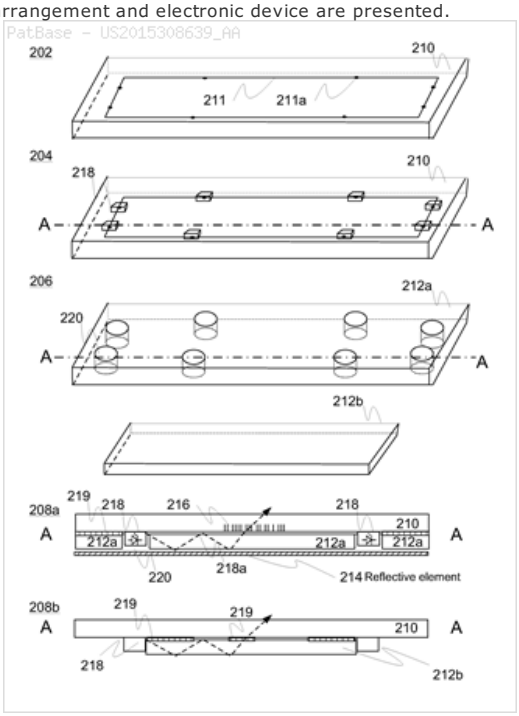
US2018274765 AA	20190419	LSES	NFA1	Non Final Action Mailed	
US2018274765 AA	20190419		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2018274765 AA	20190805	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018274765 AA	20190805		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018274765 AA	20191120	LSGT	PAT1	Patented Case	
US2018274765 AA	20191120	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
WO17063653 A1	20170420	LSPB	+	published / reissued	
WO17063653 A1	20170607		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 16854990 Kind code of Ref document: A1 Country of Ref document: EP
WO17063653 A1	20180329	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 15764813 Country of Ref document: US

88) Family number: 60681490 (US2015308639 AA)

Title: METHOD FOR MANUFACTURING ELECTRONIC PRODUCTS, RELATED ARRANGEMENT AND PRODUCT

Abstract: A method for manufacturing an electronic product, includes: obtaining a flexible, optically substantially transparent or translucent, substrate sheet; printing a number of electrical conductors on the substrate sheet in accordance with a predefined schematic; printing or disposing a number of electronic components including optoelectronic **light** emissive, preferably LED (**light** -emitting diode), components on the substrate sheet in accordance with the schematic, wherein at least some of the printed conductors are configured to provide electrical current thereto; and attaching a flexible, optically substantially transparent, lightguide sheet to the substrate so as to establish a functional multi-layer **structure**, where the **light** emitted by the **light** emissive components is incoupled to the lightguide, propagates therewithin, and is at least partly outcoupled to the environment through the substrate sheet. Related arrangement and electronic device are presented.

Classifications:
International (IPC 8-9): B29C45/14 F21K99/00 F21V1/00 F21V8/00 G02B6/36 G02B6/42 G09F13/20 H01L27/15 H01L33/60 H01L33/62 H01L51/50 H05K1/18 H05K3/10 H05K3/30
CPC: G02B6/0036 G02B6/0051 G02B6/006 G02B6/0065 G02B6/0091
US: 1/1 29/832 362/235



Family:

Publication number	Publication date	Application number	Application date
CN106461883 A	20170222	CN201580023350	20150415
CN106461883 B	20190412	CN201580023350	20150415
JP2017516304 T2	20170615	JP20160565247T	20150415
JP6522658 B2	20190529	JP20160565247T	20150415
KR102153775 B1	20200909	KR20167033439	20150415
KR20170007323 A	20170118	KR20167033439	20150415
TW201546512 A	20151216	TW20150112046	20150415
TWI652517 B	20190301	TW20150112046	20150415
US2015308639 AA	20151029	US20140264273	20140429
US2017371092 AA	20171228	US20170672684	20170809
US9869810 BB	20180116	US20140264273	20140429
WO15166135 A1	20151105	WO2015FI50261	20150415

Priority:
US20140264273 20140429 WO2015FI50261 20150415 US20170672684 20170809

Probable Assignee: TACTOTEK OY

Assignee(s): (std): TACTOTEK OY

Assignee(s): タクトテク オーユー ; 塔克图科技有限公司 ; 塔克圖科技有限公司 ; 芬蘭商塔克圖科技有限公司 ; 택토텍 오와이

Inventor(s): (std): HEIKKILA TUOMAS ; HEIKKILAE TUOMAS ; KERAENEN ANTTI ; KERANEN ANTTI ; NISKALA PAAVO ; SAASKI JARMO ; SAEAESKI JARMO ; SEVERINKANGAS KARI ; TORVINEN SAMI

Inventor(s): ケラーネン アンティ ; ケラーネン, アンティ ; サースキー ヤルモ ; サースキー, ヤルモ ; セヴェリンカンガス カリ ; セヴェリンカンガス, カリ ; トルヴィネン サミ ; トルヴィネン, サミ ; ニスカラ パーヴォ ; ニスカラ, パーヴォ ; ヘイッキラ トゥオマス ; ヘイッキラ, トゥオマス ; 卡瑞南 安堤 ; 喀利 赛芬瑞肯加斯 ; 喀利·赛芬瑞肯加斯 ; 安堤 卡瑞南 ; 安堤·卡瑞南 ; 尼斯卡拉 帕夫 ; 山米 托菲南 ; 山米·托菲南 ; 帕夫尼斯卡拉 ; 帕夫·尼斯卡拉 ; 托玛士 海基拉 ; 托玛士·海基拉 ; 托菲南 山米 ; 海基拉 托瑪士 ; 賽斯奇 賈莫 ; 賽芬瑞肯加斯喀利 ; 贾莫 赛斯奇 ; 贾莫·赛斯奇 ; 사미 토르비엔 ; 안티 케라넨 ; 자르모 사스키 ; 카리 세베린칸가스 ; 투오마스 헤이킬라 ; 파보 니스칼라

Agent(s): CARTER DELUCA FARRELL AND SCHMIDT LLP; IPR PARTNERS OY; KOBAYASHI HIROSHI; OHMORI NORIO; ROBERT P; 北京银龙知识产权代理有限公司 11243; 大森 規雄; 安利霞; 小林 浩; 林景郁; 藤田 尚; 许静; 鈴木 康仁; 閻啟泰; 이재민; 장재호

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
CN106461883 A	20170222	LSPB	+	published / reissued	
CN106461883 A	20170222	LSPB	+C06	PUBLICATION	
CN106461883 A	20170222	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN106461883 A	20170322		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN106461883 A	20170322		SE01	实质审查请求的生效	Text: 实质审查的生效 (Force of substantive review)
CN106461883 B	20190412	LSGT	+	granted / extensions (spc, cpc, pte)	
CN106461883 B	20190412	LSGT	+GR01	PATENT GRANT	
CN106461883 B	20190412	LSGT	+GR01	授权	Text: 授权 (Authorization)
CN106461883 B	20350415	PEXP		Calculated Patent Term Expiry	
JP2017516304 T2	20170615	LSPB	+	published / reissued	
JP2017516304 T2	20180316	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20180316
JP2017516304 T2	20180316	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	Effective date: 20180316 Text: JAPANESE INTERMEDIATE CODE: A621
JP2017516304 T2	20180316		A871	EXPLANATION OF CIRCUMSTANCES CONCERNING ACCELERATED EXAMINATION	Text: JAPANESE INTERMEDIATE CODE: A871 Effective date: 20180316
JP2017516304 T2	20180418		A975	REPORT ON ACCELERATED EXAMINATION	Effective date: 20180418 Text: JAPANESE INTERMEDIATE CODE: A971005
JP2017516304 T2	20180424	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Effective date: 20180424 Text: JAPANESE INTERMEDIATE CODE: A131
JP2017516304 T2	20180724	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20180724
JP2017516304 T2	20180904	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20180904
JP2017516304 T2	20181204	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20181204
JP2017516304 T2	20190219	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20190219
JP2017516304 T2	20190222	LSRE	A521	WRITTEN AMENDMENT	Effective date: 20190222 Text: JAPANESE INTERMEDIATE CODE: A523
JP2017516304 T2	20190325	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2017516304 T2	20190402	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	Text: JAPANESE INTERMEDIATE CODE: A01 Effective date: 20190402
JP2017516304 T2	20190509	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	Effective date: 20190424 Text: JAPANESE INTERMEDIATE CODE: A61
JP6522658 B2	20190404	LSGT	+A01	特許査定書	
JP6522658 B2	20190426	LSFE	R100	特許料納付書	
JP6522658 B2	20190510	LSGT	+R150	特許証	
JP6522658 B2	20190529	LSGT	+	granted / extensions (spc, cpc, pte)	
JP6522658 B2	20350415	PEXP		Calculated Patent Term Expiry	
KR102153775 B1	20200909	LSGT	+	granted / extensions (spc, cpc, pte)	
KR102153775 B1	20350415	PEXP		Calculated Patent Term Expiry	

KR20170007323 A	20170118	LSPB	+	published / reissued	
KR20170007323 A	20200313	LSES	A201	REQUEST FOR EXAMINATION	
KR20170007323 A	20200313	LSES	A302	REQUEST FOR ACCELERATED EXAMINATION	
KR20170007323 A	20200519	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20170007323 A	20200814	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
TW201546512 A	20151216	LSPB	+	published / reissued	
TWI652517 B	20190301	LSGT	+	granted / extensions (spc, cpc, pte)	
TWI652517 B	20350415	PEXP		Calculated Patent Term Expiry	
US2015308639 AA	20151029	LSPB	+	published / reissued	
US2015308639 AA	20170515		FRM1	Final Rejection Mailed	
US2015308639 AA	20170517	LSAS	AS	ASSIGNMENT	Effective date: 20170510 OldParty: CHANGE OF ASSIGNEES ADDRESS;ASSIGNOR:TACTOTEK OY;REEL/FRAME:042524/0936 PartyType: owner Owner: TACTOTEK OY, FINLAND
US2015308639 AA	20170803		RSP1	Response after Final Action Forwarded to Examiner	
US2015308639 AA	20170811	LSES	ADV1	Advisory Action Mailed	
US2015308639 AA	20170817		RFE1	Docketed New Case - Ready for Examination	
US2015308639 AA	20170920	LSES	NFA1	Non Final Action Mailed	
US2015308639 AA	20171108		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2015308639 AA	20171207	LSES	ALW2	Allowed -- Notice of Allowance Not Yet Mailed	
US2015308639 AA	20171207	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2015308639 AA	20171212	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2015308639 AA	20171213	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2015308639 AA	20171227	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2017371092 AA	20171228	LSPB	+	published / reissued	
US2017371092 AA	20180222	LSES	NFA1	Non Final Action Mailed	
US2017371092 AA	20181104	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2017371092 AA	20181104		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION
US9869810 BB	20140617	LSAS	AS	ASSIGNMENT	PartyType: owner Owner: TACTOTEK OY, FINLAND OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:KERANEN, ANTTI;SAASKI, JARMO;HEIKKILA, TUOMAS;AND OTHERS;SIGNING DATES FROM 20140509 TO

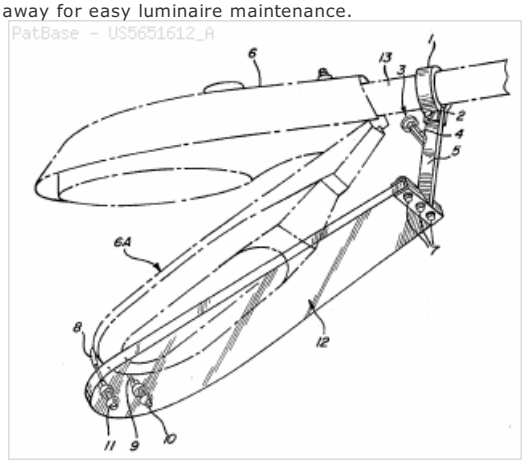
					20140616;REEL/FRAME:033187/0439
US9869810 BB	20150826	LSES	NFA1	Non Final Action Mailed	
US9869810 BB	20171227	LSGT	PAT1	Patented Case	
US9869810 BB	20180116	LSGT	+	granted / extensions (spc, cpc, pte)	
US9869810 BB	20340701	PEXP		Calculated Patent Term Expiry (PTA 63 days)	
WO15166135 A1	20151105	LSPB	+	published / reissued	
WO15166135 A1	20151216		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 15786606 Kind code of Ref document: A1 Country of Ref document: EP
WO15166135 A1	20161028	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2016565247 Kind code of Ref document: A Country of Ref document: JP
WO15166135 A1	20161031	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO15166135 A1	20161129	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 20167033439 Kind code of Ref document: A Country of Ref document: KR
WO15166135 A1	20170524	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 15786606 Kind code of Ref document: A1 Country of Ref document: EP

89) Family number: 11194603 (US5651612 A)

Title: TORSION FLEX SHIELD (FLAT) - PROTECTIVE LENS SHIELD WITH TORSION MOUNTING BRACKET FOR OUTDOOR **LIGHTING** FIXTURES

Abstract: A flat tear drop shaped protective lens shield (12) with a torsion adjustment **system** (3) and simple one bolt mounting bracket clamp (1). The protective lens shield is constructed of dual layers and thicknesses of polycarbonate sheets (12) which have ballistic containment properties. The bracket clamp (1), clamp bolt assembly (2), adjustment carriage bolt (3), threaded adjustment housing (4), and arm-shield adjustment arm (5) are constructed of steel with a galvanized coating for a corrosion resistant longer life. The hook and cable assembly (FIG. 2) is comprised of a hook (8), cable (9), and a cable assembly bolt (10) which is stainless steel corrosion resistant materials. The torsion flex **system** is enhanced by the adjustable torsion carriage bolt (3). This adjustment allows for a flex in the polycarbonate sheets allowing it to absorb the energy from objects attempting to penetrate the shield (12). The rubber grommets (11) allow for movement, yet they hold the polycarbonate sheets together to perform the task of an expansion joint The hook and cable assembly (FIG. 2) allows for a custom attachment to the existing **light** lens cover (6A) no matter where the location of the interior gussets are positioned. This custom attachment allows this protection shield to adapt to any make or model cobra head street **light**. This protective shield is lightweight, easily attached to the pole arm (13) and swings away for easy luminaire maintenance.

Classifications:
International (IPC 8-9): F21S8/08 F21V15/00 F21V3/00 F21V3/04
International (IPC 1-7): F21V15/00
CPC: F21S8/08 F21V15/00 F21V3/04 F21W2131/103 F21S8/086 F21V15/005 F21V15/02 F21V21/116
US: 362/376 362/378 362/431



Family:

Publication number	Publication date	Application number	Application date
US5651612 A	19970729	US19950356976	19950207
US5823665 A	19981020	US19970821770	19970320

Priority:
US19950356976 19950207 US19970821770 19970320

Probable Assignee: BRAUN STEVEN G
Assignee(s): BRAUN STEVEN G
Inventor(s): (std): BRAUN STEVEN G

Legal status (INPADOC)

View legal status timeline

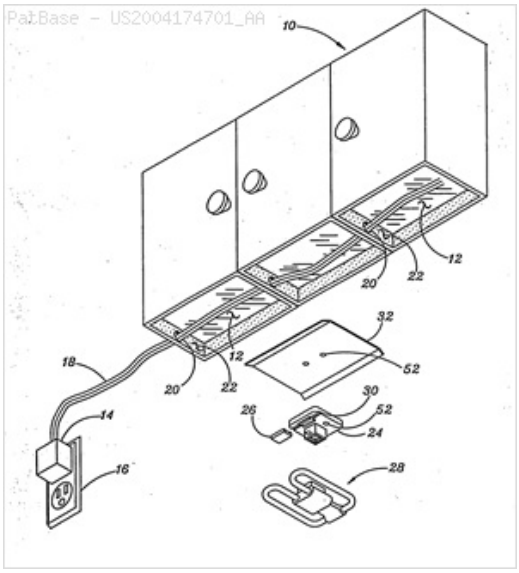
Patent	Date recorded	Event group	Code	Event	Details
US5651612 A	19970717	LSGT	PAT1	Patented Case	
US5651612 A	19970717	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US5651612 A	19970729	LSGT	+	granted / extensions (spc, cpc, pte)	
US5651612 A	20010122	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5651612 A	20040902	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5651612 A	20090122	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US5651612 A	20150207	PEXP		Calculated Patent Term Expiry	
US5823665 A	19980914	LSGT	PAT1	Patented Case	
US5823665 A	19980914	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US5823665 A	19981020	LSGT	+	granted / extensions (spc, cpc, pte)	
US5823665 A	20020405	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US5823665 A	20060403	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US5823665 A	20100309	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 12
US5823665 A	20170320	PEXP		Calculated Patent Term Expiry	

90) Family number: 30901921 (US2004174701 AA)

Title: DISTRIBUTED **LIGHTING** **SYSTEM**

Abstract: A low cost under-cabinet and display case **lighting** **system** that permits the highest degree of flexibility in the installation and location of luminaires for under-cabinet and display case **lighting**. The **system** consists of a high-frequency power source, an interconnection cord, and one or more high-frequency luminaires. The high-frequency power source is powered from a source of 50 or 60 Hertz power. The interconnection cord is connected to the high-frequency output of high-frequency power source. The high-frequency luminaires are mounted in the desired locations under the cabinets or display case shelves. Any number of high-frequency luminaires (within the capacity of the high-frequency power source) may be added.

Classifications:
International (IPC 8-9): F21S4/00 F21V21/002 F21V27/00 F21V33/00 H01R25/00 H01R25/16 H01R4/24 H05B41/00 H05B41/02
International (IPC 1-7): A47B23/06 A47B97/00 F21V33/00
CPC: F21V21/002 F21V27/00 F21V33/0012 F21W2131/301 F21Y2103/30 H01R25/165 H01R4/2404 H05B41/02 Y02B20/00
US: 362/133 362/133P 362/147 362/148 362/152 362/216 362/219 362/221 362/225 362/226 362/227 362/235 362/26 362/260 362/260S 362/391 362/647 362/652



Family:

Publication number	Publication date	Application number	Application date
US2004174701 AA	20040909	US20040801173	20040316
US6814462 BA	20041109	US20000650496	20000829
US7445353 BB	20081104	US20040801173	20040316

Priority:
US20000650496 20000829 US20040801173 20040316

Probable Assignee: BEACON POINT CAPITAL LLC
Assignee(s): (std): FIENE DALE E ; NILSSEN OLE K
Assignee(s): BEACON POINT CAPITAL LLC ; NILSSEN ELLEN ; OLE K NILSSEN
Inventor(s): (std): FIENE DALE E
Inventor(s): DALE E FIENE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2004174701 AA	20040909	LSPB	+	published / reissued	
US2004174701 AA	20050404	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20040310 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:FIENE, DALE E.;REEL/FRAME:016000/0555 Owner: OLE K. NILSSEN, FLORIDA
US2004174701 AA	20071217	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:FIENE, DALE E.;REEL/FRAME:020269/0347 Owner: OLE K. NILSSEN, FLORIDA Effective date: 20071212 PartyType: owner
US6814462 BA	20010823	LSAS	AS	ASSIGNMENT	Effective date: 20010119 Owner: OLE K. NILSSEN, FLORIDA OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:FIENE, DALE E.;REEL/FRAME:012118/0701 PartyType: owner
US6814462 BA	20041021	LSGT	PAT1	Patented Case	
US6814462 BA	20041109	LSGT	+	granted / extensions (spc, cpc, pte)	
US6814462 BA	20080506	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4

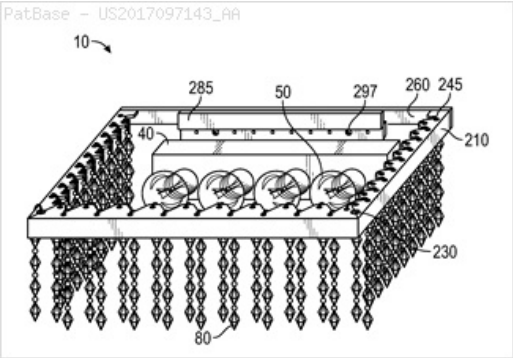
US6814462 BA	20120430	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US6814462 BA	20131001	LSAS	AS	ASSIGNMENT	Effective date: 20130905 Owner: NILSSEN, ELLEN, ILLINOIS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:ESTATE OF OLE K. NILSSEN;REEL/FRAME:031318/0067 PartyType: owner
US6814462 BA	20131002	LSAS	AS	ASSIGNMENT	Owner: BEACON POINT CAPITAL, LLC, ILLINOIS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:NILSSEN, ELLEN;REEL/FRAME:031332/0562 Effective date: 20130905 PartyType: owner
US6814462 BA	20160617		REMI	MAINTENANCE FEE REMINDER MAILED	
US6814462 BA	20161109	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6814462 BA	20161205	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6814462 BA	20161205	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US6814462 BA	20161227	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20161109
US6814462 BA	20210415	PEXP		Calculated Patent Term Expiry (PTA 229 days)	
US7445353 BB	20081015	LSGT	PAT1	Patented Case	
US7445353 BB	20081104	LSGT	+	granted / extensions (spc, cpc, pte)	
US7445353 BB	20120430	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US7445353 BB	20131001	LSAS	AS	ASSIGNMENT	Owner: NILSSEN, ELLEN, ILLINOIS Effective date: 20130905 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:ESTATE OF OLE K. NILSSEN;REEL/FRAME:031318/0067 PartyType: owner
US7445353 BB	20131002	LSAS	AS	ASSIGNMENT	OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:NILSSEN, ELLEN;REEL/FRAME:031332/0562 Effective date: 20130905 Owner: BEACON POINT CAPITAL, LLC, ILLINOIS PartyType: owner
US7445353 BB	20160617		REMI	MAINTENANCE FEE REMINDER MAILED	
US7445353 BB	20161104	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7445353 BB	20161205	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7445353 BB	20161205	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362
US7445353 BB	20161227	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 20161104
US7445353 BB	20250505	PEXP		Calculated Patent Term Expiry (PTA 415 days and a terminal disclaimer has been filed)	

91) Family number: 65364629 (US2017097143 AA)

Title: DECORATIVE **LIGHT** BAR ACCESSORY

Abstract: A decorative **light** bar accessory having a three-sided frame of two frame sides and a frame middle segment, each of the frame sides and the frame middle segment having a frame top and a frame back, the frame sides being attached to the frame middle segment at approximately right angles and having a free frame end, each frame top having a plurality of spaced apart holes, the holes sized to accommodate hooks for decorations that are suspended therefrom, and the free frame ends being adapted to suspend the decorative **light** bar accessory over a **light** bar. A **light** bar accessory kit includes packaging with instructions; the **light** bar accessory; and decorative elements to be disposed on the accessory. This unique **system** allows consumer to affordably upgrade an existing **light** **systems** to newer and more appealing appearances, increasing the desirability of the home and realty.

Classifications:
International (IPC 8-9): F21S8/00 F21V1/02 F21V17/04 F21V17/10
CPC: F21S8/033 F21V17/04 F21V17/06 F21V17/10 F21V5/06 F21W2121/00
US: 1/1



Family:

Publication number	Publication date	Application number	Application date
US2017097143 AA	20170406	US20160286484	20161005
WO17062519 A2	20170413	WO2016US55592	20161005
WO17062519 A3	20170526	WO2016US55592	20161005

Priority:
US20150237450P 20151005 US20160286484 20161005

Probable Assignee: KOMINSKI JOHN CURTIS

Assignee(s): (std): KOMINSKI JOHN CURTIS ; TEITZEL RICHARD TRAVIS ; TIETZEL RICHARD TRAVIS ; WADE LISA MARIE

Inventor(s): (std): KOMINSKI JOHN CURTIS ; TEITZEL RICHARD TRAVIS ; TIETZEL RICHARD TRAVIS ; WADE LISA MARIE

Agent(s): LUTHER BARBARA

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 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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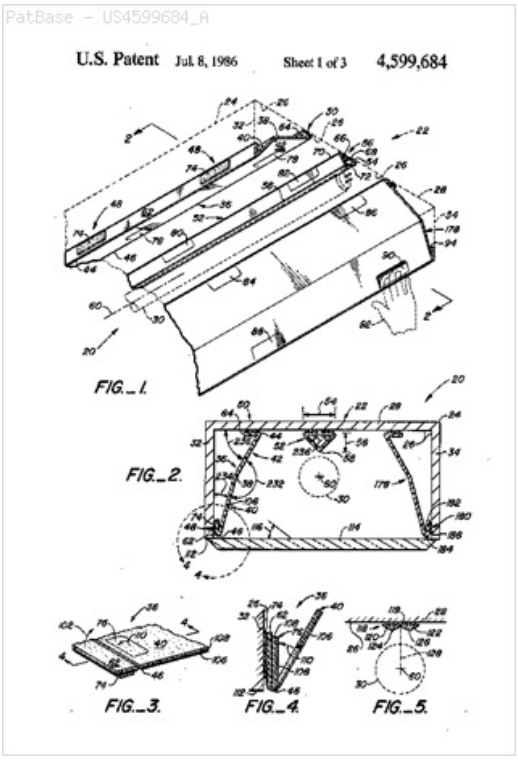
Patent	Date recorded	Event group	Code	Event	Details
US2017097143 AA	20161128		RFE1	Docketed New Case - Ready for Examination	
US2017097143 AA	20170406	LSPB	+	published / reissued	
US2017097143 AA	20180524	LSFE	AWA4	Awaiting TC Resp., Issue Fee Not Paid	
US2017097143 AA	20180604	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2017097143 AA	20181008	LSWD	ABD2	Abandoned -- Failure to Pay Issue Fee	
US2017097143 AA	20181008		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO PAY ISSUE FEE
WO17062519 A2	20170413	LSPB	+	published / reissued	
WO17062519 A3	20170531		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Kind code of Ref document: A2 Ref document number: 16854259 Country of Ref document: EP
WO17062519 A3	20180406	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO17062519 A3	20181219	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Ref document number: 16854259 Kind code of Ref

92) Family number: 2103117 (US4599684 A)

Title: **LIGHT** REFLECTOR **SYSTEM**

Abstract: A reflector assembly for fabricating as part of an original **light** fixture or for retrofitting a **light** fixture in the field. First (36) and second (52) reflector **structures** are formed with seams (38,58) about which the various reflector surfaces can be rotated for adjustment with respect to a fluorescent tube (30). A flap (62) and tape strip (74) are accessible through doors (76) for securing the reflectors in the fixture housing (24). A third reflector (178) can also be installed. A composite reflector (188) is formed by joining the respective reflectors with two additional sections (218, 228). The preferable reflector material is cardboard over which is formed a specular surface. For hallways, a reflector **structure** (240) is formed for mounting reflector surfaces (250) perpendicular to the longitudinal centerline (252) of housing and tube. The foregoing reference numbers in parentheses are provided solely to facilitate quick comprehension; these numbers are not to be used for interpreting the breadth of the Invention defined by the Claims.

Classifications:
International (IPC 8-9): F21V17/00 F21V17/02 F21V17/10 F21V7/00 F21V7/05 F21V7/16 F21V7/18 F21V7/22 F21Y103/00
International (IPC 1-7): F21S3/02 F21V13/04 F21V17/00 F21V17/02 F21V7/12 F21V7/16 F21V7/18 F21V7/22
CPC: F21V17/101 F21V7/0025 F21V7/005 F21V7/10 F21Y2103/00 F21Y2113/00 Y02B20/30
US: 362/217 362/217.05 362/217.08 362/217.1 362/277 362/301 362/346



Family:

Publication number	Publication date	Application number	Application date
CA1266850 A1	19900320	CA19860503668	19860310
CN1007552 B	19900411	CN19861002474	19860311
CN86102474 A	19861112	CN19861002474	19860311
DE3607110 A1	19860911	DE19863607110	19860305
FR2578625 A1	19860912	FR19860002666	19860226
FR2578625 B3	19870717	FR19860002666	19860226
GB2172390 A1	19860917	GB19860004279	19860220
GB2172390 B2	19880413	GB19860004279	19860220
GB8604279 A0	19860326	GB19860004279	19860220
IT1208739 A	19890710	IT19860047740	19860307
IT8647740 A0	19860307	IT19860047740	19860307
JP61233902 A2	19861018	JP19860053511	19860311
US4599684 A	19860708	US19850710545	19850311

Priority:
US19850710545 19850311 CA19860503668 19860310

Probable Assignee: SPECUFLEX INC
Assignee(s): (std): LEE RICHARD H ; SPECUFLEX INC ; SUPEKIYUFURETSUKUSU INC
Assignee(s): 斯佩库弗莱克公司
Inventor(s): (std): LEE RICHARD H ; RICHIYAADO ETSUCHI RII
Inventor(s): H LEE RICHARD ; RICHARD H LEE ; リチャード･エツチ･リー ; 理查德·H·李
Agent(s): FETHERSTONHAUGH AND CO; 中国专利代理有限公司; 王忠忠; 黄向阳

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA1266850 A1					
CA1266850 A1	19920922	LSLE	-MKLA	LAPSED	
CN1007552 B	19900411	LSPB	+	published / reissued	
CN1007552 B	19900411		C13	DECISION	

CN1007552 B	19900411	LSES	GR02	审定	Text: 审定 (Approval)
CN1007552 B	19910102	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1007552 B	19910102	LSGT	+GR01	授权	Text: 授权 (Authorization)
CN1007552 B	19930623	LSLE	-C19	LAPSE OF PATENT RIGHT DUE TO NON-PAYMENT OF THE ANNUAL FEE	
CN1007552 B	19930623	LSLE	-CF01	未缴年费专利权终止	Text: 专利权的终止未缴年费专利权终止 (Any cessation termination of patent right due to failure to pay annual fee)
CN86102474 A	19861112	LSPB	+	published / reissued	
CN86102474 A	19861112	LSPB	+C06	PUBLICATION	
CN86102474 A	19861112	LSPB	PB01	公开	Text: 公开 (Disclosure)
CN86102474 A	19870701		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN86102474 A	19870701		SE01	实质审查请求的生效	Text: 实质审查请求 (The Request for Substantive Examination)
DE3607110 A1	19860911	LSPB	+	published / reissued	
DE3607110 A1	19930311	LSLE	-8139	DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE	
FR2578625 A1	19860912	LSPB	+	published / reissued	
FR2578625 B3	19870717	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2578625 B3	19920226	PEXP		Calculated Patent Term Expiry	
GB2172390 A1	19860917	LSPB	+	published / reissued	
GB2172390 B2	19880413	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2172390 B2	19921014	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	
GB2172390 B2	20060220	PEXP		Calculated Patent Term Expiry	
IT1208739 A	19890710	LSGT	+	granted / extensions (spc, cpc, pte)	
IT1208739 A	20060307	PEXP		Calculated Patent Term Expiry	
JP61233902 A2	19861018	LSPB	+	published / reissued	
US4599684 A	19850311	LSAS	AS	ASSIGNMENT	Owner: SPECUFLEX, INC., A CA CORP Effective date: 19850225 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:LEE, RICHARD H.;REEL/FRAME:004382/0483 PartyType: owner
US4599684 A	19860508	LSGT	PAT1	Patented Case	
US4599684 A	19860708	LSGT	+	granted / extensions (spc, cpc, pte)	
US4599684 A	19890814	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 4
US4599684 A	19930920	LSFE	+FPAY	FEE PAYMENT	Year of fee payment: 8
US4599684 A	19980214		REMI	MAINTENANCE FEE REMINDER MAILED	
US4599684 A	19980705	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4599684 A	19980915	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	Effective date: 19980708
US4599684 A	20050311	PEXP		Calculated Patent Term Expiry	
US4599684 A	20180131	LSLE	PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US4599684 A	20180131	LSLE	-STCH	INFORMATION ON STATUS: PATENT DISCONTINUATION	Text: PATENT EXPIRED DUE TO NONPAYMENT OF MAINTENANCE FEES UNDER 37 CFR 1.362

93) Family number: 71451490 (US2018293854 AA)

Title: **SYSTEM** AND METHOD FOR EMERGENCY EXIT LED **LIGHTING**

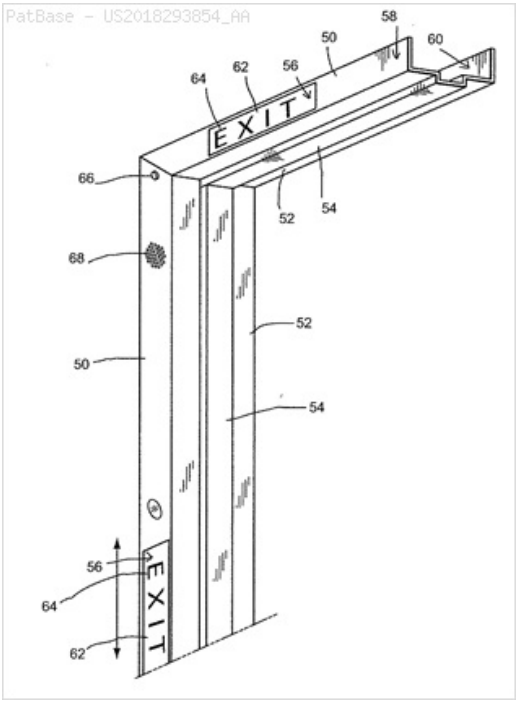
Abstract: A **system** and method for emergency exit LED **lighting**. The emergency exit **lighting** fixture comprises a **structure** for housing at least one LED **light**, an LED driver electronically coupled to the LED **light**(s), a continuous power source, a backup power source, and a test switch. The fixture, in various configurations, may be mounted to a wall, a ceiling, or a doorway. The fixture may be tested remotely.

Classifications:

International (IPC 8-9): F21S4/24 F21S8/00 F21S8/04 F21S9/02 F21V21/02 F21V21/04 F21V23/00 F21V23/04 F21V3/02 F21V33/00 F21V5/04 F21V9/08 F21W111/00 F21Y103/10 F21Y113/13 F21Y115/10 G08B29/12 G08B29/18 G08B5/36 G08B7/06 G09F13/00 H05B37/02

CPC: F21S8/033 F21S8/043 F21S9/022 F21V23/0435 F21V3/02 F21V9/08 F21Y2103/10 F21Y2115/10 G08B29/126 G08B29/181 G08B7/062 G08B7/066 G09F13/00 F21S4/24 F21V21/041 F21V21/048 F21V23/003 F21V5/04 F21W2111/00 F21Y2113/13 F21V21/02 F21V33/0076 G08B5/36 H05B47/19

US: 1/1 340/815.45



Family:

Publication number	Publication date	Application number	Application date
US10325458 BB	20190618	US20170480930	20170406
US10325459 BB	20190618	US20180946051	20180405
US2018293854 AA	20181011	US20170480930	20170406
US2018293855 AA	20181011	US20180946051	20180405
US2019259253 AA	20190822	US20190404438	20190506
US2019259254 AA	20190822	US20190404528	20190506
US2019301712 AA	20191003	US20190442820	20190617
WO18187607 A1	20181011	WO2018US26310	20180405

Priority:

US20170480930 20170406 US20180946051 20180405 US20190404438 20190506
US20190404528 20190506 US20190442820 20190617

Probable Assignee: BAGOZZI NICOLE

Assignee(s): (std): BAGOZZI NICOLE ; EVANS SCOTT ; GARTHRIGHT NICHOLAS ; MARINO JOSEPH ; MARINO LEE ; VEIRA CHRIS

Inventor(s): (std): BAGOZZI NICOLE ; EVANS SCOTT ; GARTHRIGHT NICHOLAS ; MARINO JOSEPH ; MARINO LEE ; VEIRA CHRIS

Agent(s): BYCER MATTHEW L; SCHECHTER EVAN

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
US10325458 BB	20190618	LSGT	+	granted / extensions (spc, cpc, pte)	
US10325458 BB	20370406	PEXP		Calculated Patent Term Expiry	
US10325459 BB	20180405	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US10325459 BB	20190618	LSGT	+	granted / extensions (spc, cpc, pte)	
US10325459 BB	20380405	PEXP		Calculated Patent	

				Term Expiry (a terminal disclaimer has been filed)	
US2018293854 AA	20181011	LSPB	+	published / reissued	
US2018293854 AA	20181011	LSES	NFA1	Non Final Action Mailed	
US2018293854 AA	20190201		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018293854 AA	20190207	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018293854 AA	20190207		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018293854 AA	20190506	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
US2018293854 AA	20190529	LSGT	PAT1	Patented Case	
US2018293854 AA	20190529	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2018293855 AA	20181011	LSPB	+	published / reissued	
US2018293855 AA	20181126	LSES	NFA1	Non Final Action Mailed	
US2018293855 AA	20190128		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2018293855 AA	20190215	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2018293855 AA	20190215		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN OFFICE OF PUBLICATIONS
US2018293855 AA	20190529	LSGT	PAT1	Patented Case	
US2018293855 AA	20190529	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2019259253 AA	20190822	LSPB	+	published / reissued	
US2019259253 AA	20191209	LSES	NFA1	Non Final Action Mailed	
US2019259253 AA	20191209		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019259253 AA	20200518		FRM1	Final Rejection Mailed	
US2019259253 AA	20200518		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: FINAL REJECTION MAILED
US2019259253 AA	20200819		RSP1	Response after Final Action Forwarded to Examiner	
US2019259254 AA	20190822	LSPB	+	published / reissued	
US2019259254 AA	20200121	LSES	NFA1	Non Final Action Mailed	
US2019259254 AA	20200121		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019301712 AA	20190626		RFE1	Docketed New Case - Ready for Examination	
US2019301712 AA	20190626		STPP	INFORMATION ON	Text: DOCKETED NEW CASE -

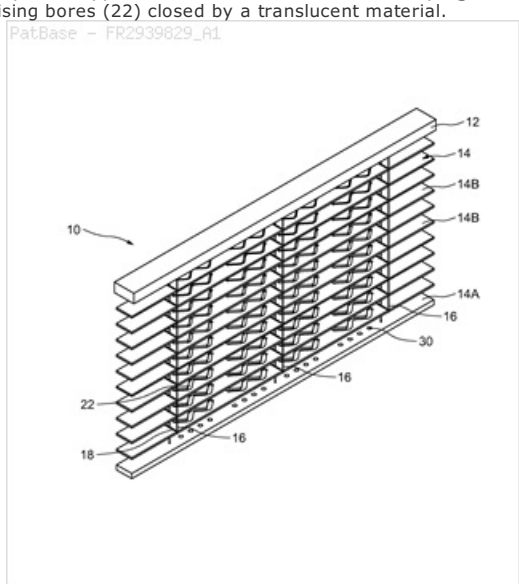
				STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	READY FOR EXAMINATION
US2019301712 AA	20191003	LSPB	+	published / reissued	
US2019301712 AA	20200518	LSES	NFA1	Non Final Action Mailed	
US2019301712 AA	20200518		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: NON FINAL ACTION MAILED
US2019301712 AA	20200720		RSP4	Response to Non-Final Office Action Entered and Forwarded to Examiner	
US2019301712 AA	20200720		STPP	INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING PROCEDURE IN GENERAL	Text: RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER
US2019301712 AA	20200803	LSES	NFA1	Non Final Action Mailed	
WO18187607 A1	20181011	LSPB	+	published / reissued	
WO18187607 A1	20181121		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 18724007 Kind code of Ref document: A1 Country of Ref document: EP
WO18187607 A1	20191008	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO18187607 A1	20200429	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	Kind code of Ref document: A1 Ref document number: 18724007 Country of Ref document: EP

94) Family number: 45548419 (FR2939829 A1)

Title: VENETIAN BLIND FOR USE IN FRONT OF WINDOW OF ROOM OF BUILDING, HAS **SYSTEM** DISPLACING STRIPS BETWEEN FOLDED POSITION AND DEPLOYED POSITION, AND PATTERN DEFINED BY ZONE PROVIDED IN STRIP AND APPEARING WHEN ZONE IS TRAVERSED BY **LIGHT**

Abstract: The blind (10) has a strip assembly (14) with strips (14A-14B) made of opaque material. A displacement **system** displaces the strips between a folded position in which the strips are placed against each other, and a deployed position in which the strips have separated median axes. The blind has a visible pattern when the strips are in the deployed position. The pattern is defined by an openwork zone provided in one of the strips and appears when the zone is traversed by **light** emitted by a **light** source (30) i.e. LED. The pattern has parts comprising bores (22) closed by a translucent material.

Classifications:
International (IPC 8-9): E06B9/28 E06B9/30 E06B9/38 E06B9/386 F21V11/00 F21V11/04
CPC: E06B9/386 F21V33/006



Family:

Publication number	Publication date	Application number	Application date
FR2939829 A1	20100618	FR20080058714	20081217
FR2939829 B1	20110701	FR20080058714	20081217

Priority:
FR20080058714 20081217

Probable Assignee:	HARBOUN DAVID
Assignee(s): (std):	HARBOUN DAVID
Assignee(s):	DAVID HARBOUN
Inventor(s): (std):	HARBOUN DAVID
Inventor(s):	DAVID HARBOUN
Agent(s):	CABINET WEINSTEIN

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
FR2939829 A1	20100618	LSPB	+	published / reissued	
FR2939829 A1	20151229	LSFE	+PLFP	FEE PAYMENT	Year of fee payment: 8
FR2939829 A1	20170929	LSLE	-ST	NOTIFICATION OF LAPSE	Effective date: 20170831
FR2939829 B1	20110701	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2939829 B1	20281217	PEXP		Calculated Patent Term Expiry	

95) Family number: 76186210 (US2019316377 AA)

Title: SOLAR PARASOL WITH MOTION SENSOR SWITCH

Abstract: A solar parsasol having a motion sensor switch for controlling an LED **light** array. Holes are provided in the supporting ribs to house the **light** array on a single side only, providing greatly increased strength and wind resistance.

Classifications:
International (IPC 8-9): E04H15/10 E04H15/28 F21V17/12 F21V23/04 F21V33/00
CPC: A45B17/00 A45B2200/1009 A45B2200/1018 A45B2200/1027 A45B25/02 E04H15/10 E04H15/28 E04H15/48 F21V17/12 F21V23/0485 F21V33/006 F21Y2103/10 F21Y2115/10



Diagram of settable touch belt No.1 for the solar parasol with touch induction switch

Family:

Publication number	Publication date	Application number	Application date
US2019316377 AA	20191017	US20180951345	20180412

Priority:
US20180951345 20180412

Probable Assignee: LINHAI TAIJI CRAFTS CO LTD
Assignee(s): (std): ATLEISURE LLC ; LINHAI TAIJI CRAFTS CO LTD
Assignee(s): LINHAI TAIJI CRAFTS CO
Inventor(s): (std): CHUAN LI

Legal status (INPADOC)

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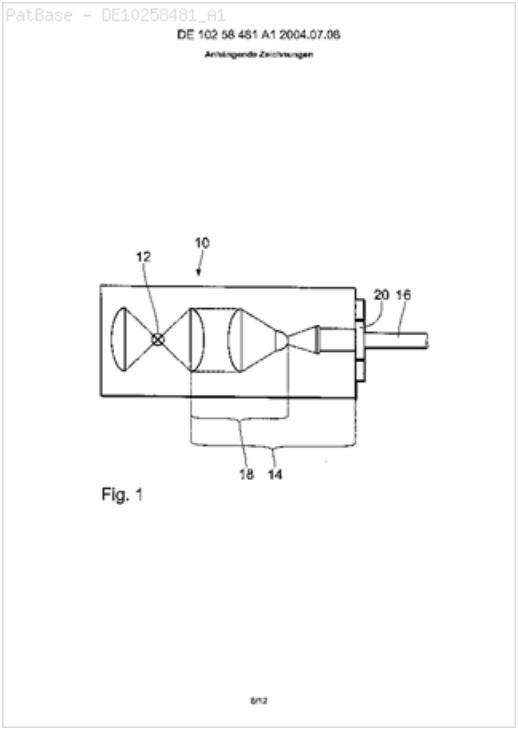
Patent	Date recorded	Event group	Code	Event	Details
US2019316377 AA	20191017	LSPB	+	published / reissued	
US2019316377 AA	20191027	LSWD	ABD3	Abandoned -- Failure to Respond to an Office Action	
US2019316377 AA	20191027		-STCB	INFORMATION ON STATUS: APPLICATION DISCONTINUATION	Text: ABANDONED -- FAILURE TO RESPOND TO AN OFFICE ACTION

96) Family number: 30714202 (DE10258481 A1)

Title: Fiber-optical illumination **system** with a plastic or glass **light** conductor comprises a **light** introduction unit incorporating a sleeve which is made partly or entirely of a transparent material

Abstract: The fiber-optical illumination **system** with a plastic or glass **light** conductor (16) comprises a **light** introduction unit incorporating a sleeve (20) which is made partly or entirely of a transparent material and accommodates the **light** conductor in the zone of its **light** entry area (26). An Independent claim is also included for a method for producing the proposed fiber-optical illumination **system**.

Classifications:
International (IPC 8-9): F21V8/00 F21Y111/00 G02B6/10 G02B6/40 G02B6/42
International (IPC 1-7): F21V8/00 F21Y111/00 G02B6/10
CPC: G02B6/0006 G02B6/403 G02B6/4201 G02B6/4204 G02B6/4292 G02B6/4296



Family:

Publication number	Publication date	Application number	Application date
DE10258481 A1	20040708	DE20021058481	20021210
DE10258481 B4	20090129	DE20021058481	20021210

Priority:
DE20021058481 20021210

Probable Assignee: LOKYS HEINZ JUERGEN
Assignee(s): (std): LOKYS HEINZ JUERGEN
Inventor(s): (std): LOKYS HEINZ JUERGEN

Legal status (INPADOC)

View legal status timeline

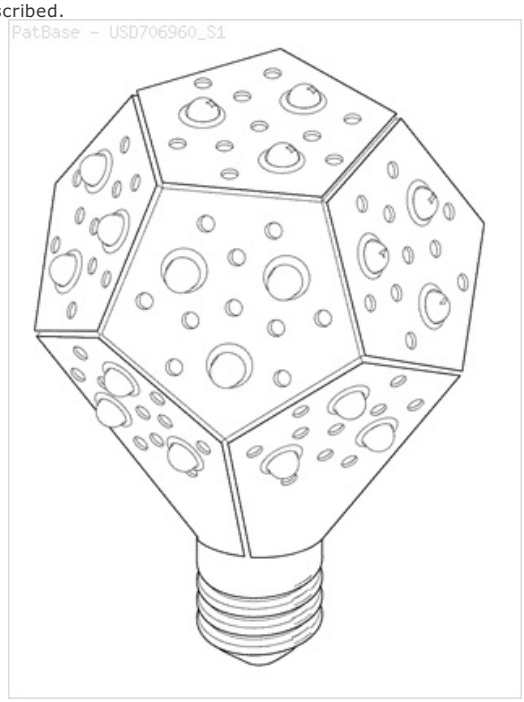
Patent	Date recorded	Event group	Code	Event	Details
DE10258481 A1	20040708	LSPB	+	published / reissued	
DE10258481 A1	20040708	LSES	+OP8	REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW	
DE10258481 B4	20090129	LSGT	+	granted / extensions (spc, cpc, pte)	
DE10258481 B4	20090723	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE10258481 B4	20101021	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
DE10258481 B4	20221210	PEXP		Calculated Patent Term Expiry	

97) Family number: 54658538 (USD706960 S1)

Title: LED BULB

Abstract: The ornamental design for an LED bulb, as shown and described.

Classifications:
International (IPC 8-9): F21K9/23 F21K9/232 F21K9/90 F21K99/00 F21S F21S2/00 F21V17/06 F21V17/10 F21V19/00 F21V23/00 F21V23/06 F21V29/00 F21V29/70 F21V29/74 F21V29/83 F21V29/89 F21Y101/00 F21Y101/02 F21Y107/00 F21Y107/40 F21Y115/10 H01L25/03 H01L33/48 H01L33/60 H01L33/64 H01R33/22 H05B33/08 H05B37/02 H05B45/325 H05K1/00 H05K1/02 H05K1/18
CPC: F21K9/23 F21V23/005 F21V29/83 F21Y2107/40 F21Y2115/10 F21K9/232 H01L2924/0002 H05B45/00 H05B45/37 H05K1/0278 H05K2201/047 H05K2201/09036 H05K2201/10106 H05K2203/0228 Y02B20/30 F21V29/50 H05K2201/09063 H01L2924/00
US: 1/1 315/32 362/249.02 D26/2
Locarno class: 26/04



Family:

Publication number	Publication date	Application number	Application date
AU350571 S	20130903	AU20130013678F	20130731
CA152308 S	20150210	CA20130152308F	20130731
CA2838641 AA	20140723	CA20142838641	20140110
CA2838641 C	20150929	CA20142838641	20140110
CN104075142 A	20141001	CN201310100381	20130326
CN203162648 U	20130828	CN201320142553U	20130326
DE602014022071 D1	20180405	DE201460022071T	20140110
EP2959508 A1	20151230	EP20140754098	20140110
EP2959508 A4	20160810	EP20140754098	20140110
EP2959508 B1	20180307	EP20140754098	20140110
HK1179104 A2	20130919	HK20130106171	20130524
US10030820 BB	20180724	US20140768884	20140110
US2014292192 AA	20141002	US20140152928	20140110
US2016003463 AA	20160107	US20140768884	20140110
US9717119 BB	20170725	US20140152928	20140110
USD706960 S1	20140610	US20130445982F	20130219
USD740457 S1	20151006	US20140492550F	20140530
WO14127450 A1	20140828	WO2014CA00012	20140110

Priority:

US20130445982F 20130219
CN201310100381 20130326
EP20140754098 20140110
US20140768884 20140110
US20130766291P 20130219
CN201320142553U 20130326
WO2014CA00012 20140110
US20140492550F 20140530
US20130455982F 20130219
US20140152928 20140110
CA20142838641 20140110

Probable Assignee: NANOGRID LTD

Assignee(s): (std): CHU GIMMY ; NANOGRID LTD ; NANOGRID LTD HK ; NANOGRID LTD HONG KONG ; RODINGER TOMAS ; YAN CHRISTIAN

Assignee(s): CHU GIMMY MISSISSAUGA ; CHU GIMMY5198 BUTTERMILL CRTMISSISSAUGAO1L5V 1S4CA ; NANOGRID HONG KONG LTD ; RODINGER TOMAS VANCOUVER ; RODINGER TOMAS905 - 689 ABBOTT STREETVANCOUVERB1V6B 0J2CA ; YAN CHRISTIAN SCARBOROUGH ; YAN CHRISTIAN1605A - 3233 EGLINGTON EASTSCARBOROUGHO1M1J 3N6CA ; 纳米格有限公司

Inventor(s): (std): CHU GIMMY ; RODINGER TOMAS ; YAN CHRISTIAN

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Agent(s): GLOBAL INTELLECTUAL PROPERTY CO LTD; LEHMANN NOVO MARIA ISABEL; MCMILLA LLP; MCMILLAN LLP; MERVYN; NORTON ROSE FULBRIGHT CANADA LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; RIEDER AND PARTNER MBB PATENTANWAELTE RECHTSANWALT; VALADARES LAW PROFESSIONAL CORP; 广州天河互易知识产权代理事务所(普通合伙) 44294; 张果达

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)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU350571 S	20130903	LSGT	+	granted / extensions (spc, cpc, pte)	
CA152308 S	20150210	LSGT	+	granted / extensions (spc, cpc, pte)	
CA152308 S	20250210	PEXP		Calculated Patent Term Expiry	
CA2838641 AA	20140723	LSPB	+	published / reissued	
CA2838641 C	20150929	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2838641 C	20340110	PEXP		Calculated Patent Term Expiry	
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CN104075142 A	20141001	LSPB	+C06	PUBLICATION	
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CN203162648 U	20180420	LSLE	-CF01	TERMINATION OF PATENT RIGHT DUE TO NON-PAYMENT OF ANNUAL FEE	
CN203162648 U	20230326	PEXP		Calculated Patent Term Expiry	
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EP2959508 A1	20151230	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20150921
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EP2959508 A1	20151230		+AX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT	Country of Ref document: BA ME
EP2959508 A1	20160525		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
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				ASSIGNED BEFORE GRANT	
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EP2959508 B1	20180307	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2959508 B1	20180307		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2959508 B1	20180307	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: GB Ref legal event code: FG4D
EP2959508 B1	20180315	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: EP
EP2959508 B1	20180315	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 976941 Ref country code: AT Ref legal event code: REF Effective date: 20180315 Kind code of Ref document: T Country of Ref document: AT
EP2959508 B1	20180404	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: FG4D
EP2959508 B1	20180405	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref document number: 602014022071 Ref legal event code: R096 Country of Ref document: DE
EP2959508 B1	20180711		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MP Effective date: 20180307 Ref country code: NL
EP2959508 B1	20180725	LSRV	REG	REFERENCE TO A	Ref legal event code: MG4D

				NATIONAL CODE	Ref country code: LT
EP2959508 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: FI
EP2959508 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180607 Country of Ref document: NO
EP2959508 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: CY
EP2959508 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: HR
EP2959508 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: ES
EP2959508 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: LT
EP2959508 B1	20180815	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MK05 Kind code of Ref document: T Ref document number: 976941 Effective date: 20180307 Ref country code: AT Country of Ref document: AT
EP2959508 B1	20180831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180607 Country of Ref document: BG
EP2959508 B1	20180831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180608 Country of Ref document: GR
EP2959508 B1	20180831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RS
EP2959508 B1	20180831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: LV

				EPO]	
EP2959508 B1	20180831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: SE
EP2959508 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: NL
EP2959508 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RO
EP2959508 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: EE
EP2959508 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: AL
EP2959508 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: PL
EP2959508 B1	20181130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SK
EP2959508 B1	20181130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AT
EP2959508 B1	20181130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: CZ
EP2959508 B1	20181130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: SM
EP2959508 B1	20181210	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref document number: 602014022071 Ref country code: DE Ref legal event code: R097 Country of Ref document: DE
EP2959508 B1	20181231	LSLE	-PG25	LAPSED IN A CONTRACTING	NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A

				STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Lapsed date: 20180709 Country of Ref document: PT
EP2959508 B1	20190131	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: DK
EP2959508 B1	20190213	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20181210
EP2959508 B1	20190228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IT
EP2959508 B1	20190228	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: SI
EP2959508 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 6 Payment date: 20190121 Country of Ref document: GB
EP2959508 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 6 Payment date: 20190124 Country of Ref document: FR
EP2959508 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20190123 Year of fee payment: 6 Country of Ref document: DE
EP2959508 B1	20190830	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20180307 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: MC
EP2959508 B1	20190830	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: CH Ref legal event code: PL
EP2959508 B1	20190930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190110 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LU
EP2959508 B1	20191017		REG	REFERENCE TO A NATIONAL CODE	Effective date: 20190131 Ref country code: BE Ref legal event code: MM
EP2959508 B1	20191030	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: MM4A
EP2959508 B1	20191129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190131 Country of Ref document: BE

EP2959508 B1	20191231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190131 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LI
EP2959508 B1	20191231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20190131 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: CH
EP2959508 B1	20200131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190110 Country of Ref document: IE
EP2959508 B1	20200331	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20180307 Country of Ref document: TR
EP2959508 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20200124 Year of fee payment: 7 Country of Ref document: GB
EP2959508 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20200121 Year of fee payment: 7 Country of Ref document: DE
EP2959508 B1	20200630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20190110 Country of Ref document: MT
EP2959508 B1	20200630	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 7 Payment date: 20200121 Country of Ref document: FR
EP2959508 B1	20340110	PEXP		Calculated Patent Term Expiry	
HK1179104 A2	20130919	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1179104 A2	20171222	LSLE	-PF2	SHORT-TERM PATENT CEASED TO HAVE EFFECT UNDER S.126(2) (NOT PAYMENT OF MAINTENANCE FEE AND HAS 6-MONTH GRACE PERIOD TO PAY)	Effective date: 20170524
HK1179104 A2	20210524	PEXP		Calculated Patent Term Expiry	
US10030820 BB	20180704	LSGT	PAT1	Patented Case	
US10030820 BB	20180724	LSGT	+	granted / extensions (spc, cpc, pte)	

US10030820 BB	20350601	PEXP		Calculated Patent Term Expiry (PTA 507 days)	
US2014292192 AA	20141002	LSPB	+	published / reissued	
US2014292192 AA	20170323	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2014292192 AA	20170616	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2014292192 AA	20170619	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2014292192 AA	20170703	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US2016003463 AA	20151010		RFE1	Docketed New Case - Ready for Examination	
US2016003463 AA	20160107	LSPB	+	published / reissued	
US2016003463 AA	20180320	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016003463 AA	20180620	LSAS	AS	ASSIGNMENT	Owner: NANOGRID LIMITED (HK), HONG KONG PartyType: owner Effective date: 20180620 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RODINGER, TOMAS;CHU, GIMMY;YAN, CHRISTIAN;REEL/FRAME:046138/0901
US2016003463 AA	20180620	LSFE	PPR1	Publications -- Issue Fee Payment Received	
US2016003463 AA	20180704	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US9717119 BB	20140820		RFE1	Docketed New Case - Ready for Examination	
US9717119 BB	20170703	LSGT	PAT1	Patented Case	
US9717119 BB	20170725	LSGT	+	granted / extensions (spc, cpc, pte)	
US9717119 BB	20180620	LSAS	AS	ASSIGNMENT	Effective date: 20180620 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:RODINGER, TOMAS;CHU, GIMMY;YAN, CHRISTIAN;REEL/FRAME:046138/0901 Owner: NANOGRID LIMITED (HK), HONG KONG PartyType: owner
US9717119 BB	20350623	PEXP		Calculated Patent Term Expiry (PTA 529 days)	
USD706960 S1	20140521	LSGT	PAT1	Patented Case	
USD706960 S1	20140610	LSGT	+	granted / extensions (spc, cpc, pte)	
USD706960 S1	20280610	PEXP		Calculated Patent Term Expiry	
USD740457 S1	20150916	LSGT	PAT1	Patented Case	
USD740457 S1	20151006	LSGT	+	granted / extensions (spc, cpc, pte)	
USD740457 S1	20291006	PEXP		Calculated Patent Term Expiry	
WO14127450 A1	20140828	LSPB	+	published /	

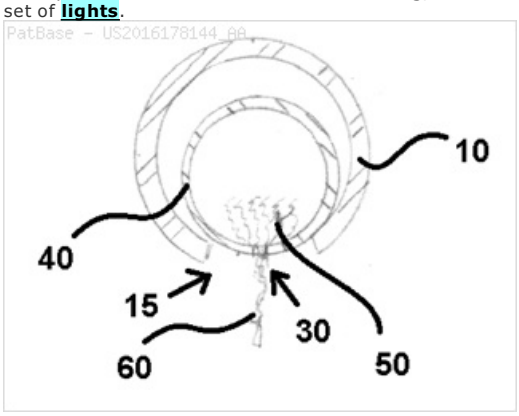
				reissued	
WO14127450 A1	20141015		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 14754098 Kind code of Ref document: A1 Country of Ref document: EP
WO14127450 A1	20150108		DPE1	REQUEST FOR PRELIMINARY EXAMINATION FILED AFTER EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED FROM 20040101)	
WO14127450 A1	20150819	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO14127450 A1	20150819	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 14768884 Country of Ref document: US
WO14127450 A1	20150918	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2014754098 Country of Ref document: EP

98) Family number: 62728960 (US2016178144 AA)

Title: **LIGHT** SLIDE **SYSTEM** AND METHOD

Abstract: A **light** installation **system** and method is described. The **system** employs a channel, at least one set of **lights**, at least one mount, and a wire housing tube. The at least one set of **lights** are configured to fit partially within the wire housing tube, and extend out of the wire housing tube via a series of exit holes arranged equidistant from one another on the bottom of each wire housing tube. Each of the wire housing tubes is configured to be placed in carefully spaced segments within the channel(s). The channel is configured to be mounted, via the at least one mount, to the gutter or soffit portion of a building **structure**. The wire housing tube is configured to rapidly and easily slide into the channel when decorating, and be removed from the channel quickly when taking down the at least one set of **lights**.

Classifications:
International (IPC 8-9): F21S2/00 F21S4/00 F21S4/10 F21S4/20 F21S8/04 F21V15/00 F21V15/015 F21V21/005 F21V21/02 F21W121/00 F21Y115/10
CPC: F21S4/10 F21S4/20 F21S8/04 F21V15/015 F21W2121/00 F21W2131/107 F21Y2115/10 F21S2/00 F21V21/005 F21V21/02 F21W2121/004 F21W2121/006
US: 362/145 362/382



Family:

Publication number	Publication date	Application number	Application date
US10208904 BA	20190219	US20180984371	20180520
US2016178144 AA	20160623	US20150637076	20150303
US9982852 BB	20180529	US20150637076	20150303

Priority:
US20140092957P 20141217 US20150637076 20150303 US20180984371 20180520

Probable Assignee: HAAS ARNOLD
Assignee(s): (std): HAAS ARNOLD
Inventor(s): (std): HAAS ARNOLD
Agent(s): LAW OFFICE OF PATRICK F OREILLY III LLC; LECH LAW LLC; LECH ROBERT R

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US10208904 BA	20180520	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE: BIG.); ENTITY STATUS OF PATENT OWNER: MICROENTITY
US10208904 BA	20180611	LSFE	FEPP	FEE PAYMENT PROCEDURE	Text: ENTITY STATUS SET TO MICRO (ORIGINAL EVENT CODE: MICR); ENTITY STATUS OF PATENT OWNER: MICROENTITY
US10208904 BA	20190130	LSGT	PAT1	Patented Case	
US10208904 BA	20190130	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US10208904 BA	20190219	LSGT	+	granted / extensions (spc, cpc, pte)	
US10208904 BA	20380520	PEXP		Calculated Patent Term Expiry	
US2016178144 AA	20160623	LSPB	+	published / reissued	
US2016178144 AA	20161208		FRM1	Final Rejection Mailed	
US2016178144 AA	20170517		RFE1	Docketed New Case - Ready for Examination	
US2016178144 AA	20180202	LSES	NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016178144 AA	20180430	LSFE	PPR1	Publications -- Issue Fee Payment Received	

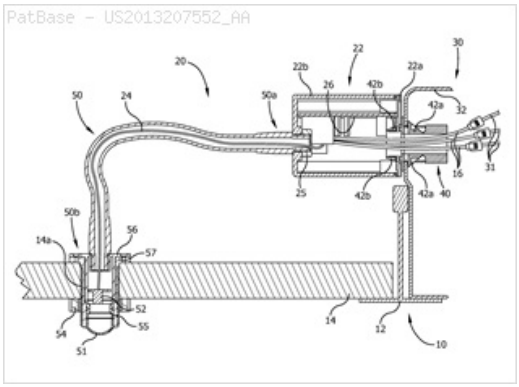
US2016178144 AA	20180502	LSFE	PPV1	Publications -- Issue Fee Payment Verified	
US2016178144 AA	20180509	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US9982852 BB	20180509	LSGT	PAT1	Patented Case	
US9982852 BB	20180529	LSGT	+	granted / extensions (spc, cpc, pte)	
US9982852 BB	20350805	PEXP		Calculated Patent Term Expiry (PTA 155 days)	

99) Family number: 50961452 (US2013207552 AA)

Title: INTEGRAL TROFFER MOTION DETECTOR

Abstract: A sensor **system** (20) electrically connected to and controlling at least one recessed luminaire (30). The sensor **system** housing (22) is externally connected to the luminaire (30) and includes a flexible member (50) projecting therefrom. The flexible member (50) supports detection electronics spaced from the sensor **system** housing (22) or the coupled **light** fixture and sensor **system** housings (32, 22). The flexible member (50) allows a sensor (52) to be horizontally and vertically positioned relative to the sensor **system** housing (22).

Classifications:
International (IPC 8-9): F21S8/02 F21S8/04 F21V17/04 F21V17/08 F21V21/04 F21V23/00 F21V23/04 F21V23/06 F21V5/00 F21Y101/02 F21Y103/00 H05B37/02
CPC: F21S8/02 F21S8/026 F21S8/04 F21V23/008 F21V23/0442 H05B47/10
US: 1/1 315/152 362/364



Family:

Publication number	Publication date	Application number	Application date
BR112013009602 A2	20160712	BR20131109602	20111012
CN103168196 A	20130619	CN201180050905	20111012
CN103168196 B	20160302	CN201180050905	20111012
DE602011022321 D1	20160218	DE201160022321T	20111012
EP2630405 A1	20130828	EP20110781866	20111012
EP2630405 B1	20151230	EP20110781866	20111012
IN03097CN2013 A	20140801	IN2013CN03097	20130422
JP2013544008 T2	20131209	JP20130534414T	20111012
JP5890838 B2	20160322	JP20130534414T	20111012
RU2013123139 A	20141127	RU20130123139	20111012
RU2606384 C2	20170110	RU20130123139	20111012
TR201602623 T4	20160321	TR20160002623T	20111012
TW201223336 A	20120601	TW20110137954	20111019
US2013207552 AA	20130815	US20110880069	20111012
US9163814 BB	20151020	US20110880069	20111012
WO12052879 A1	20120426	WO2011IB54494	20111012

Priority:

US20100405688P 20101022 WO2011IB54494 20111012 EP20110781866 20111012 US20110880069 20111012

Probable Assignee: SIGNIFY HOLDING BV

Assignee(s): (std): FILIPS LAJTING KHOLDING BV ; GRAFF EUGENE ; KONINKL PHILIPS ELECTRONICS NV ; KONINKL PHILIPS NV ; PHILIPS ELECTRONICS KONINKLL NV ; PHILIPS LIGHTING HOLDING BV ; PLUNK CARLTON ; ROYAL DUTCH PHILIPS ELECTRONICS LTD

Assignee(s): KONINKLIJKE PHILIPS ELECTRONICS N V ; PHILIPS ELECTRONICS N V KONINKLL ; PHILIPS KONINKLL NV ; PHILIPS N V KONINKLL ; SIGNIFY HOLDING BV ; КОНИНКЛЕЙКЕ ФИЛИПС ЭЛЕКТРОНИКС Н.В. ; ФИЛИПС ЛАЙТИНГ ХОЛДИНГ Б.В. ; コーニンクレッカ フィリップス エヌ ヴェ ; コーニンクレッカ フィリップス エヌ ヴェKONINKLIJKE PHILIPS N. V. ; 皇家飛利浦電子股份有限公司 ; 皇家飞利浦电子股份有限公司

Inventor(s): (std): GRAFF EGENE ; GRAFF EUGENE ; PLANK KARLTON ; PLUNK CARLTON

Inventor(s): C 普伦克 ; CARLTON PLUNK ; E 格拉夫 ; EUGENE GRAFF ; ГРАФФ ЭГЕНЕ ; ПЛАНК КАРЛТОН ; グラフ ユージーン ; グラフ, ユージーン ; プランク カールトン ; プランク, カールトン ; 普隆 卡頓 ; 葛拉夫 尤吉尼

Agent(s): EMIN KORHAN DERICIOGLU; ITOH TADAHIKO; ITOH TADASHIGE; MEISSNER BOLTE AND PARTNER GBR; OHNUKI SHINSUKE; VAN EEUWIJK ALEXANDER ET AL; VAN EEUWIJK ALEXANDER HENRICUS WALTHERUS; 中国专利代理(香港)有限公司 72001; 伊東 忠彦; 伊東 忠重; 刘红; 大貫 進介; 汪扬; 特許業務法人M AND Sパートナーズ; 陳長文

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
BR112013009602 A2	20170411	LSAS	B25D	REQUESTED CHANGE OF NAME OF APPLICANT APPROVED	Owner: KONINKLIJKE PHILIPS N.V. (NL) PartyType: owner
BR112013009602 A2	20170425	LSAS	B25G	REQUESTED CHANGE OF HEADQUARTER APPROVED	PartyType: owner Owner: KONINKLIJKE PHILIPS N.V. (NL)
BR112013009602 A2	20170509	LSAS	B25A	REQUESTED	Owner: PHILIPS LIGHTING

				TRANSFER OF RIGHTS APPROVED	HOLDING B.V. (NL) PartyType: owner
BR112013009602 A2	20181226		B06F	OBJECTIONS, DOCUMENTS AND/OR TRANSLATIONS NEEDED AFTER AN EXAMINATION REQUEST ACCORDING ART. 34 INDUSTRIAL PROPERTY LAW	
BR112013009602 A2	20190903		B06U	PRELIMINARY REQUIREMENT: REQUESTS WITH SEARCHES PERFORMED BY OTHER PATENT OFFICES: SUSPENSION OF THE PATENT APPLICATION PROCEDURE	
BR112013009602 A2	20191217	LSRV	-B11B	DISMISSAL ACC. ART. 36, PAR 1 OF IPL - NO REPLY WITHIN 90 DAYS TO FULLFIL THE NECESSARY REQUIREMENTS	
CN103168196 A	20130619	LSPB	+	published / reissued	
CN103168196 A	20130619	LSPB	+C06	PUBLICATION	
CN103168196 A	20131120		C10	ENTRY INTO SUBSTANTIVE EXAMINATION	
CN103168196 A	20160302	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103168196 A	20170329	LSAS	CP01	CHANGE IN THE NAME OR TITLE OF A PATENT HOLDER	
CN103168196 A	20170329	LSAS	TR01	TRANSFER OF PATENT RIGHT	
CN103168196 B	20160302	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103168196 B	20311012	PEXP		Calculated Patent Term Expiry	
DE602011022321 D1	20170220	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	Owner: Philips Lighting Holding B.V., Eindhoven, NL PartyType: Owner OldParty: Koninklijke Philips N.V., Eindhoven, NL
EP2630405 A1	20130828	LSPB	+	published / reissued	
EP2630405 A1	20130828	LSES	+17P	REQUEST FOR EXAMINATION FILED	Effective date: 20130522
EP2630405 A1	20130828		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: A1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2630405 A1	20130925	LSAS	RAP1	RIGHTS OF AN APPLICATION TRANSFERRED	PartyType: owner Owner: KONINKLIJKE PHILIPS N.V.
EP2630405 A1	20140129		DAX	REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (DELETED)	
EP2630405 A1	20141029	LSES	+17Q	FIRST EXAMINATION REPORT DESPATCHED	Effective date: 20140930
EP2630405 A1	20150617	LSGT	+INTG	INTENTION TO GRANT ANNOUNCED	Effective date: 20150519
EP2630405 B1	20151230	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2630405 B1	20151230		+AK	DESIGNATED CONTRACTING STATES	Kind code of Ref document: B1 Country of Ref document: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
EP2630405 B1	20151230	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: FG4D Ref country code: GB
EP2630405 B1	20151231	LSNP	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: EP Ref country code: CH
EP2630405 B1	20160115	LSNP	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Ref legal event code: REF Ref document number: 767659 Ref country code: AT Effective date: 20160115 Country of Ref document: AT
EP2630405 B1	20160127	LSGT	REG	REFERENCE TO A NATIONAL CODE	Ref country code: IE Ref legal event code: FG4D

EP2630405 B1	20160218	LSPB	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref legal event code: R096 Ref document number: 602011022321 Country of Ref document: DE
EP2630405 B1	20160425	LSRV	REG	REFERENCE TO A NATIONAL CODE	Ref country code: LT Ref legal event code: MG4D
EP2630405 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20151230 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: HR
EP2630405 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160330 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: NO
EP2630405 B1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: LT
EP2630405 B1	20160504		REG	REFERENCE TO A NATIONAL CODE	Effective date: 20151230 Ref legal event code: MP Ref country code: NL
EP2630405 B1	20160515	LSRV	REG	REFERENCE TO A NATIONAL CODE	Kind code of Ref document: T Effective date: 20151230 Ref document number: 767659 Ref country code: AT Ref legal event code: MK05 Country of Ref document: AT
EP2630405 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160331 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: GR
EP2630405 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: LV
EP2630405 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: SE
EP2630405 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: RS
EP2630405 B1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: FI
EP2630405 B1	20160630	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: NL
EP2630405 B1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230

					Country of Ref document: IT
EP2630405 B1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: CZ
EP2630405 B1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: ES
EP2630405 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20151230 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: EE
EP2630405 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: AT
EP2630405 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: SM
EP2630405 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: PL
EP2630405 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20151230 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: RO
EP2630405 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160430 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: IS
EP2630405 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20160502 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: PT
EP2630405 B1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: SK
EP2630405 B1	20161003	LSRE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: DE Ref document number: 602011022321 Ref legal event code: R097 Country of Ref document: DE
EP2630405 B1	20161027	LSFE	REG	REFERENCE TO A NATIONAL CODE	Ref country code: FR Year of fee payment: 6 Ref legal event code: PLFP Country of Ref document: FR
EP2630405 B1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM	Lapsed date: 20151230 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE

				NATIONAL OFFICE TO EPO]	WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: DK
EP2630405 B1	20161102		REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: 732E Text: REGISTERED BETWEEN 20161006 AND 20161012 Ref country code: GB
EP2630405 B1	20161207	LSGT	+26N	NO OPPOSITION FILED	Effective date: 20161003
EP2630405 B1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: BE
EP2630405 B1	20170131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20161028 Year of fee payment: 6 Country of Ref document: GB
EP2630405 B1	20170131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 6 Payment date: 20161027 Country of Ref document: FR
EP2630405 B1	20170220		REG	REFERENCE TO A NATIONAL CODE	Representative: MEISSNER BOLTE PATENTANWAELTE RECHTSANWAELTE P, DE Ref document number: 602011022321 Ref country code: DE Ref legal event code: R082 PartyType: representative Country of Ref document: DE
EP2630405 B1	20170220	LSAS	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: R081 Ref country code: DE OldParty: FORMER OWNER: KONINKLIJKE PHILIPS N.V., EINDHOVEN, NL Ref document number: 602011022321 Owner: PHILIPS LIGHTING HOLDING B.V., NL PartyType: owner Country of Ref document: DE
EP2630405 B1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: SI
EP2630405 B1	20170428	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 6 Payment date: 20161006 Country of Ref document: TR
EP2630405 B1	20170428	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20170102 Year of fee payment: 6 Country of Ref document: DE
EP2630405 B1	20170531	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: PL Ref country code: CH
EP2630405 B1	20170726	LSLE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: MM4A Ref country code: IE
EP2630405 B1	20170731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Lapsed date: 20161031 Country of Ref document: CH
EP2630405 B1	20170731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20161031 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LI
EP2630405 B1	20170831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20161012 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: LU
EP2630405 B1	20171031	LSFE	REG	REFERENCE TO A NATIONAL CODE	Year of fee payment: 7 Ref country code: FR Ref legal event code: PLFP

EP2630405 B1	20171130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20161012 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: IE
EP2630405 B1	20180131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20171004 Year of fee payment: 7 Country of Ref document: TR
EP2630405 B1	20180131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20171031 Year of fee payment: 7 Country of Ref document: FR
EP2630405 B1	20180228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 7 Payment date: 20171101 Country of Ref document: GB
EP2630405 B1	20180430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20171229 Year of fee payment: 7 Country of Ref document: DE
EP2630405 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING 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; INVALID AB INITIO Lapsed date: 20111012 Country of Ref document: HU
EP2630405 B1	20180531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20151230 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: CY
EP2630405 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20161031 NotificationOfLapse: LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES Country of Ref document: MT
EP2630405 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: MK
EP2630405 B1	20180629	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20151230 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: MC
EP2630405 B1	20180731	LSLE	-PG25	LAPSED IN A CONTRACTING 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: 20151230 Country of Ref document: BG
EP2630405 B1	20181025	LSFE	REG	REFERENCE TO A NATIONAL CODE	Ref legal event code: PLFP Ref country code: FR Year of fee payment: 8
EP2630405 B1	20181031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE [ANNOUNCED VIA POSTGRANT INFORMATION FROM NATIONAL OFFICE TO EPO]	Lapsed date: 20151230 NotificationOfLapse: LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT Country of Ref document: AL
EP2630405 B1	20190228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20181031 Year of fee payment: 8 Country of Ref document: GB
EP2630405 B1	20190228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM	Year of fee payment: 8 Payment date: 20181025 Country of Ref document: FR

				NATIONAL OFFICE TO EPO]	
EP2630405 B1	20190228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20181001 Year of fee payment: 8 Country of Ref document: TR
EP2630405 B1	20190430	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20181228 Year of fee payment: 8 Country of Ref document: DE
EP2630405 B1	20200131	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191129 Year of fee payment: 9 Country of Ref document: DE
EP2630405 B1	20200228	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 9 Payment date: 20191025 Country of Ref document: FR
EP2630405 B1	20200331	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Payment date: 20191008 Year of fee payment: 9 Country of Ref document: TR
EP2630405 B1	20200501	LSFE	+PGFP	ANNUAL FEE PAID TO NATIONAL OFFICE [ANNOUNCED FROM NATIONAL OFFICE TO EPO]	Year of fee payment: 9 Payment date: 20191029 Country of Ref document: GB
EP2630405 B1	20311012	PEXP		Calculated Patent Term Expiry	
IN03097CN2013 A	20140801	LSPB	+	published / reissued	
JP2013544008 T2	20131209	LSPB	+	published / reissued	
JP2013544008 T2	20141010	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	Effective date: 20141009 Text: JAPANESE INTERMEDIATE CODE: A621
JP2013544008 T2	20150527	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Text: JAPANESE INTERMEDIATE CODE: A131 Effective date: 20150526
JP2013544008 T2	20150528		A977	REPORT ON RETRIEVAL	Effective date: 20150527 Text: JAPANESE INTERMEDIATE CODE: A971007
JP2013544008 T2	20150612		RD02	NOTIFICATION OF ACCEPTANCE OF POWER OF ATTORNEY	Text: JAPANESE INTERMEDIATE CODE: A7422 Effective date: 20150612
JP2013544008 T2	20150824	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20150824
JP2013544008 T2	20150928	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	Effective date: 20150925 Text: JAPANESE INTERMEDIATE CODE: A131
JP2013544008 T2	20151224	LSRE	A521	WRITTEN AMENDMENT	Text: JAPANESE INTERMEDIATE CODE: A523 Effective date: 20151224
JP2013544008 T2	20160118	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2013544008 T2	20160125	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	Text: JAPANESE INTERMEDIATE CODE: A01 Effective date: 20160122
JP2013544008 T2	20160225	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	Effective date: 20160219 Text: JAPANESE INTERMEDIATE CODE: A61
JP5890838 B2	20160128	LSGT	+A01	特許査定書	
JP5890838 B2	20160223	LSFE	R100	特許料納付書	
JP5890838 B2	20160226	LSGT	+R150	特許証	
JP5890838 B2	20160322	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5890838 B2	20161014	LSAS	R313113	本権移転登録申請書 (譲渡)	
JP5890838 B2	20161014	LSAS	S111	REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP	Text: JAPANESE INTERMEDIATE CODE: R313113
JP5890838 B2	20161024	LSAS	R350	WRITTEN NOTIFICATION OF	Text: JAPANESE INTERMEDIATE CODE: R350

				REGISTRATION OF TRANSFER	
JP5890838 B2	20161024	LSAS	R350	移転登録済通知書	
JP5890838 B2	20190228	LSFE	R20	特許料納付書	
JP5890838 B2	20190305	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP5890838 B2	20190305	LSFE	+R250	年金領収書, 年金領収書 (分納)	
JP5890838 B2	20191024	LSRE	R313531	表示変更登録申請書 (住所)	Effective date: 20191018
JP5890838 B2	20191024	LSAS	R313533	表示変更登録申請書 (住所)	Effective date: 20191018
JP5890838 B2	20191024		S531	WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF DOMICILE	Text: JAPANESE INTERMEDIATE CODE: R313531
JP5890838 B2	20191024	LSAS	S533	WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF NAME	Text: JAPANESE INTERMEDIATE CODE: R313533
JP5890838 B2	20191101	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	Text: JAPANESE INTERMEDIATE CODE: R350
JP5890838 B2	20191101	LSAS	R350	移転登録済通知書	Effective date: 20191115
JP5890838 B2	20200221	LSFE	R20	特許料納付書	Effective date: 20200220
JP5890838 B2	20200225	LSFE	+R250	RECEIPT OF ANNUAL FEES	Text: JAPANESE INTERMEDIATE CODE: R250
JP5890838 B2	20200225	LSFE	+R250	年金領収書, 年金領収書 (分納)	Effective date: 20200313
JP5890838 B2	20311012	PEXP		Calculated Patent Term Expiry	
RU2013123139 A	20141127	LSPB	+	published / reissued	
RU2013123139 A	20161127	LSAS	HZ9A	CHANGING ADDRESS FOR CORRESPONDENCE WITH AN APPLICANT	
RU2606384 C2	20170110	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2606384 C2	20311012	PEXP		Calculated Patent Term Expiry	
TR201602623 T4	20160321	LSGT	+	granted / extensions (spc, cpc, pte)	
TR201602623 T4	20311012	PEXP		Calculated Patent Term Expiry	
TW201223336 A	20120601	LSPB	+	published / reissued	
US2013207552 AA	20130815	LSPB	+	published / reissued	
US2013207552 AA	20150930	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US9163814 BB	20130418	LSAS	AS	ASSIGNMENT	Owner: KONINKLIJKE PHILIPS ELECTRONICS N.V., NETHERLANDS OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PLUNK, CARLTON;GRAFF, EUGENE;REEL/FRAME:030239/0097 PartyType: owner Effective date: 20111116
US9163814 BB	20150930	LSGT	PAT1	Patented Case	
US9163814 BB	20151020	LSGT	+	granted / extensions (spc, cpc, pte)	
US9163814 BB	20160913	LSAS	AS	ASSIGNMENT	PartyType: owner Effective date: 20160607 OldParty: ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:KONINKLIJKE PHILIPS N.V.;REEL/FRAME:040060/0009 Owner: PHILIPS LIGHTING HOLDING B.V., NETHERLANDS
US9163814 BB	20190410	LSFE	+MAFP	MAINTENANCE FEE PAYMENT	Year of fee payment: 4
US9163814 BB	20191028	LSAS	AS	ASSIGNMENT	PartyType: owner OldParty: CHANGE OF NAME;ASSIGNOR:PHILIPS LIGHTING HOLDING B.V.;REEL/FRAME:050837/0576 Effective date: 20190201 Owner: SIGNIFY HOLDING B.V., NETHERLANDS

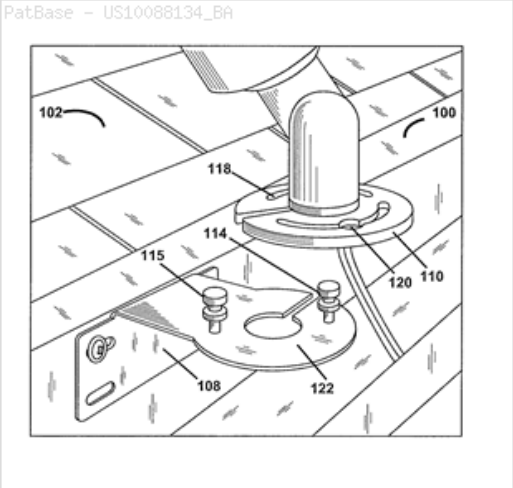
US9163814 BB	20320514	PEXP		Calculated Patent Term Expiry (PTA 215 days)	
WO12052879 A1	20120426	LSPB	+	published / reissued	
WO12052879 A1	20120620		121	EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION	Ref document number: 11781866 Kind code of Ref document: A1 Country of Ref document: EP
WO12052879 A1	20130308	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 2011781866 Country of Ref document: EP
WO12052879 A1	20130418	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A Ref document number: 2013534414 Country of Ref document: JP
WO12052879 A1	20130418	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	Ref document number: 13880069 Country of Ref document: US
WO12052879 A1	20130422	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE	Ref country code: DE
WO12052879 A1	20130522	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Ref document number: 2013123139 Kind code of Ref document: A Country of Ref document: RU
WO12052879 A1	20131231		REG	REFERENCE TO NATIONAL CODE	Ref country code: BR Ref legal event code: B01A Ref document number: 112013009602 Country of Ref document: BR
WO12052879 A1	20160712	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	Kind code of Ref document: A2 Ref document number: 112013009602 Effective date: 20130419 Country of Ref document: BR

100) Family number: 71366660 (US10088134 BA)

Title: ADJUSTABLE PLATE FOR USE WITH A MOUNT

Abstract: Mounting **system**, assemblies, and methods are shown and described. In one embodiment, the mounting **system** secures a **light** fixture about a surface in a rotational coupled position. The **system** may include an adjustable mount and an adjustable plate. The plate may include a central aperture and a plurality of alignment slots to allow the plate to be substantially rotational about said mount in said coupled position.

Classifications:
International (IPC 8-9): F21S13/02 F21V19/00 F21V19/02 F21V21/00 F21V33/00
CPC: F21V21/08 F21V21/096 F21V21/14 F21V33/006 F21W2131/10



Family:

Publication number	Publication date	Application number	Application date
US10088134 BA	20181002	US20160138273	20160426

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Probable Assignee: CLARALUX INC

Assignee(s): (std): CLARALUX INC ; CLAROLUX INC

Inventor(s): (std): GROAT ROBERT G ; HELMS BRANDON L

Agent(s): MACCORD MASON PLLC

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
US10088134 BA	20180912	LSGT	PAT1	Patented Case	
US10088134 BA	20180912	LSGT	STCF	INFORMATION ON STATUS: PATENT GRANT	Text: PATENTED CASE
US10088134 BA	20181002	LSGT	+	granted / extensions (spc, cpc, pte)	
US10088134 BA	20360503	PEXP		Calculated Patent Term Expiry (PTA 7 days)	