

Search history

Search 1: STAC=(dome and geodesic and structure and foam) (Results 5)

Search 2: STAC=(dome and geodesic and structure) (Results 155)

Title: Large span **dome**

Abstract: Source: US4611442A A clear-span **dome** for athletic stadia and the like includes a primary network of principal structural members which are interconnected to span a space to be covered and to define the principal curvature of the **dome**. The network members divide the principal curvature into a plurality of openings of selected configuration. The primary network is supported on foundations, around the perimeter of the space, which carry vertical and lateral loads of the **dome**. Each opening in the primary network is closed by a secondary **dome** which has its perimeter connected to the network principal members which form the perimeter of the opening. Each secondary **dome** has a curvature greater than the principal **dome** curvature. The primary network can be assembled, without use of shoring, from the perimeter of the space toward the center of the overall **dome**.

Classifications:

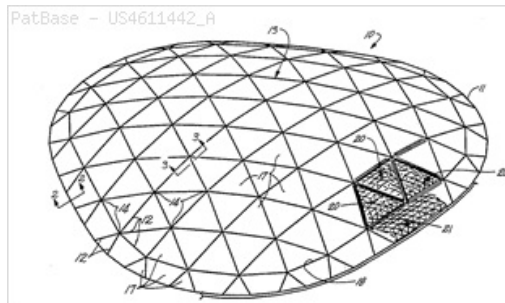
International (IPC 8-9): E04B1/00 E04B1/32 (Advanced/Invention);
E04B7/06 E04D3/08 (Advanced/Non-invention);
E04B1/32 (Core/Invention);
E04B7/06 E04D3/02 (Core/Non-invention)

International (IPC 1-7): E04B1/00 E04B1/32 E04B1/62

CPC: E04B1/3211 E04B2001/3247 E04B2001/3252 E04B2001/3288
E04B2001/3294 E04B2007/066 E04D2003/0806 E04D2003/0831
E04D2003/0862

European: E04B1/32C P04B1/32M1B P04B1/32M2 P04B1/32P2
P04B1/32S P04B7/06A1 P04D3/08P1 P04D3/08P3A1 P04D3/08R2

US: 52/204.591 52/204.593 52/398 52/467 52/489 52/489.1 52/741
52/745.07 52/745.15 52/774 52/81 52/81.2 52/81.3 52/81.4 54/397



Family:

Publication number	Publication date	Application number	Application date
CA1268919 A1	19900515	CA19860506982	19860417
GB2174735 A1	19861112	GB19860010074	19860424
GB2174735 B2	19881012	GB19860010074	19860424
GB8610074 A0	19860529	GB19860010074	19860424
HK61689 A	19890811	HK19890000616	19890803
SG8890872 A	19890616	SG19880090872	19881210
US4611442 A	19860916	US19850730164	19850503
US4711063 A	19871208	US19860852561	19860416
US4833843 A	19890530	US19870128871	19871204
US4843773 A	19890704	US19880174708	19880329

Priority:

CA19860506982 19860417 US19850730164 19850503 US19860852561 19860416
US19870128871 19871204 US19880174708 19880329

Probable Assignee: TEMCOR

Assignee(s): (std): TEMCOR

Assignee(s): TEMCOR 2825 TOLEDO STREET TORRANCE CA 90510 A CORP ; TEMCOR A CA CORP ; BNP PARIBAS ;
BNP PARIBAS ADMINISTRATIVE AGENT AS ; COMERICA BANK ; CST COVERS IND INC ; RICHTER
DONALD L

Inventor(s): (std): RICHTER DONALD L

Inventor(s): DONALD L RICHTER

Agent(s): FETHERSTONHAUGH AND CO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA1268919 A1	19970515	LSLE	-MKLA	LAPSED	
GB2174735 A1	19861112	LSPB	+	published / reissued	
GB2174735 A1	19961211	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 19960424
GB2174735 B2	19881012	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2174735 B2	20060424	PEXP		Calculated Patent Term Expiry	
HK61689 A	19890811	LSGT	+	granted / extensions (spc, cpc, pte)	
HK61689 A	20090803	PEXP		Calculated Patent Term Expiry	
US4611442 A	19860916	LSGT	+	granted / extensions	

					(spc, cpc, pte)
US4611442 A	19850503	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, 2825 TOLEDO STREET, TORRANCE, CA 90510 A C DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:RICHTER, DONALD L.; REEL/FRAME:004407/0954 EFFECTIVE DATE : 19850426
US4611442 A	19860715	LSGT	PAT1	Patented Case	
US4611442 A	19900315	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4611442 A	19940307	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4611442 A	19971215	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4611442 A	20080324	LSAS	AS	ASSIGNMENT	OWNER NAME : COMERICA BANK, CALIFORNIA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:TEMCOR CORPORATION; REEL/FRAME:020690/0023 EFFECTIVE DATE : 20080321
US4611442 A	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : BNP PARIBAS, TEXAS DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:TEMCOR; REEL/FRAME:023220/0156 EFFECTIVE DATE : 20090910
US4611442 A	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, CALIFORNIA DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:COMERICA BANK; REEL/FRAME:023220/0097 EFFECTIVE DATE : 20090828
US4611442 A	20120221	LSAS	AS	ASSIGNMENT	OWNER NAME : CST COVERS INDUSTRIES, INC., CALIFORNIA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:TEMCOR; REEL/FRAME:027746/0741 EFFECTIVE DATE : 20111216
US4611442 A	20120601	LSAS	AS	ASSIGNMENT	OWNER NAME : BNP PARIBAS, AS ADMINISTRATIVE AGENT, TEXAS DESCRIPTION : GRANT OF PATENT SECURITY INTEREST; ASSIGNOR:CST COVERS INDUSTRIES, INC.; REEL/FRAME:028314/0647 EFFECTIVE DATE : 20120523
US4611442 A	20120612	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, CALIFORNIA DESCRIPTION : RELEASE OF SECURITY INTEREST IN INTELLECTUAL PROPERTY COLLATERAL AT REEL/FRAME NO. 23220/0156; ASSIGNOR:BNP PARIBAS; REEL/FRAME:028358/0532 EFFECTIVE DATE : 20120524
US4711063 A	19871208	LSGT	+	granted / extensions (spc, cpc, pte)	
US4711063 A	19871005	LSGT	PAT1	Patented Case	
US4711063 A	19910409	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4711063 A	19950331	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4711063 A	19991205	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4711063 A	20000215	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19991208
US4711063 A	20080324	LSAS	AS	ASSIGNMENT	OWNER NAME : COMERICA BANK, CALIFORNIA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:TEMCOR CORPORATION; REEL/FRAME:020690/0023 EFFECTIVE DATE : 20080321
US4711063 A	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, CALIFORNIA DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:COMERICA BANK;

US4833843 A	19890530	LSGT	+	granted / extensions (spc, cpc, pte)	
US4833843 A	19871204	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, 2825 TOLEDO STREET, TORRANCE, CA. 90510 A DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:RICHTER, DONALD L.; REEL/FRAME:004798/0794 EFFECTIVE DATE : 19871201
US4833843 A	19871204	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, 2825 TOLEDO STREET, TORRANCE, CA. 90510 A DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RICHTER, DONALD L.; REEL/FRAME:004798/0794 EFFECTIVE DATE : 19871201
US4833843 A	19871204	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, 2825 TOLEDO STREET, TORRANCE, CA. 90510 A DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RICHTER, DONALD L.; REEL/FRAME:4798/794 EFFECTIVE DATE : 19871201
US4833843 A	19890405	LSGT	PAT1	Patented Case	
US4833843 A	19900508	LSRE	CC	CERTIFICATE OF CORRECTION	
US4833843 A	19921127	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4833843 A	19960822	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4833843 A	20000905	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4833843 A	20080324	LSAS	AS	ASSIGNMENT	OWNER NAME : COMERICA BANK, CALIFORNIA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:TEMCOR CORPORATION; REEL/FRAME:020690/0023 EFFECTIVE DATE : 20080321
US4833843 A	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, CALIFORNIA DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:COMERICA BANK; REEL/FRAME:023220/0097 EFFECTIVE DATE : 20090828
US4833843 A	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : BNP PARIBAS, TEXAS DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:TEMCOR; REEL/FRAME:023220/0156 EFFECTIVE DATE : 20090910
US4833843 A	20120221	LSAS	AS	ASSIGNMENT	OWNER NAME : CST COVERS INDUSTRIES, INC., CALIFORNIA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:TEMCOR; REEL/FRAME:027746/0741 EFFECTIVE DATE : 20111216
US4833843 A	20120601	LSAS	AS	ASSIGNMENT	OWNER NAME : BNP PARIBAS, AS ADMINISTRATIVE AGENT, TEXAS DESCRIPTION : GRANT OF PATENT SECURITY INTEREST; ASSIGNOR:CST COVERS INDUSTRIES, INC.; REEL/FRAME:028314/0647 EFFECTIVE DATE : 20120523
US4833843 A	20120612	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, CALIFORNIA DESCRIPTION : RELEASE OF SECURITY INTEREST IN INTELLECTUAL PROPERTY COLLATERAL AT REEL/FRAME NO. 23220/0156; ASSIGNOR:BNP PARIBAS; REEL/FRAME:028358/0532 EFFECTIVE DATE : 20120524
US4843773 A	19890704	LSGT	+	granted / extensions (spc, cpc, pte)	
US4843773 A	19880329	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, 2825 TOLEDO STREET, TORRANCE, CA 90510, A DESCRIPTION : ASSIGNMENT OF

					ASSIGNORS INTEREST.; ASSIGNOR:RICHTER, DONALD L.; REEL/FRAME:004856/0616 EFFECTIVE DATE : 19880328
US4843773 A	19880329	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, A CA CORP., CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RICHTER, DONALD L.; REEL/FRAME:4856/616 EFFECTIVE DATE : 19880328
US4843773 A	19880329	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, A CA CORP., CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RICHTER, DONALD L.; REEL/FRAME:004856/0616 EFFECTIVE DATE : 19880328
US4843773 A	19890510	LSGT	PAT1	Patented Case	
US4843773 A	19930104	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4843773 A	19960822	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4843773 A	20000905	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4843773 A	20080324	LSAS	AS	ASSIGNMENT	OWNER NAME : COMERICA BANK, CALIFORNIA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:TEMCOR CORPORATION; REEL/FRAME:020690/0023 EFFECTIVE DATE : 20080321
US4843773 A	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : BNP PARIBAS, TEXAS DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:TEMCOR; REEL/FRAME:023220/0156 EFFECTIVE DATE : 20090910
US4843773 A	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, CALIFORNIA DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:COMERICA BANK; REEL/FRAME:023220/0097 EFFECTIVE DATE : 20090828
US4843773 A	20120221	LSAS	AS	ASSIGNMENT	OWNER NAME : CST COVERS INDUSTRIES, INC., CALIFORNIA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:TEMCOR; REEL/FRAME:027746/0741 EFFECTIVE DATE : 20111216
US4843773 A	20120601	LSAS	AS	ASSIGNMENT	OWNER NAME : BNP PARIBAS, AS ADMINISTRATIVE AGENT, TEXAS DESCRIPTION : GRANT OF PATENT SECURITY INTEREST; ASSIGNOR:CST COVERS INDUSTRIES, INC.; REEL/FRAME:028314/0647 EFFECTIVE DATE : 20120523
US4843773 A	20120612	LSAS	AS	ASSIGNMENT	OWNER NAME : TEMCOR, CALIFORNIA DESCRIPTION : RELEASE OF SECURITY INTEREST IN INTELLECTUAL PROPERTY COLLATERAL AT REEL/FRAME NO. 23220/0156; ASSIGNOR:BNP PARIBAS; REEL/FRAME:028358/0532 EFFECTIVE DATE : 20120524

Title: CONSTRUCTING **GEODESIC DOMES**

Abstract: Source: US2003213186A Techniques are described for constructing **geodesic dome structures**. For example, a method includes connecting a set of temporary spacers to a set of connectors. The spacers arrange the connectors in space so that the connectors are referenced with respect to one another to form the geometries of a **geodesic dome**. The method may further include making the temporary **geodesic dome structure** permanent. The techniques described may allow the construction of a **geodesic dome structure** of precisely controlled dimensions with relatively small numbers of people and little strenuous labor.

Classifications:

International (IPC 8-9): E04B1/32 E04B7/08 E04B7/10

E04H12/00 (Advanced/Invention);

E04B1/32 E04B7/10 E04H12/00 (Core/Invention)

International (IPC 1-7): E04B7/08

CPC: E04B1/3211 E04B7/102 E04B2001/3217 E04B2001/3247

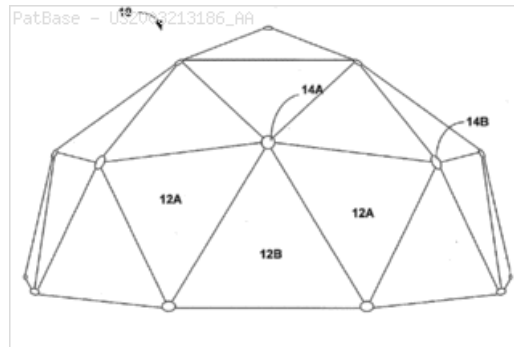
E04B2001/3264 E04B2001/3282

European: E04B1/32C E04B7/10B P04B1/32H P04B1/32M1B

P04B1/32N1 P04B1/32P1B

US: 446/116 446/126 52/650.2 52/656.9 52/81.1 52/81.3

52/81.300P 52/81.4 52/811 52/814



Family:

Publication number	Publication date	Application number	Application date
US2003213186 AA	20031120	US20030355387	20030130
US2005022461 AA	20050203	US20040919689	20040817
US6996942 BB	20060214	US20030355387	20030130
US7434359 BB	20081014	US20040919689	20040817

Priority:

US20020381757P 20020516 US20030355387 20030130 US20040919689 20040817

Probable Assignee: GEIGER DAVID S

Assignee(s): (std): GEIGER DAVID S

Inventor(s): (std): GEIGER DAVID S

Inventor(s): GEIGER DAVID

Agent(s): SHUMAKER AND SIEFFERT P A; SHUMAKER AND SIEFFERT PA

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2003213186 AA	20031120	LSPB	+	published / reissued	
US2005022461 AA	20050203	LSPB	+	published / reissued	
US6996942 BB	20060214	LSGT	+	granted / extensions (spc, cpc, pte)	
US6996942 BB	20060125	LSGT	PAT1	Patented Case	
US6996942 BB	20090803	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6996942 BB	20130729	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6996942 BB	20170925	LSFE	FEPP	FEE PAYMENT PROCEDURE	TEXT : MAINTENANCE FEE REMINDER MAILED (ORIGINAL EVENT CODE: REM.)
US6996942 BB	20230506	PEXP		Calculated Patent Term Expiry (PTA 96 days)	
US7434359 BB	20081014	LSGT	+	granted / extensions (spc, cpc, pte)	
US7434359 BB	20120228	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7434359 BB	20161014	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7434359 BB	20161114	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7434359 BB	20161206	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20161014
US7434359 BB	20251015	PEXP		Calculated Patent Term Expiry (PTA 424 days)	

Title: SYSTEMS, APPARATUS AND METHODS OF A **DOME** RETORT

Abstract: Source: US2011313218A A system, apparatus and method for hydrocarbon extraction from feedstock material that is or includes organic material, such as oil shale, coal, lignite, tar sands, animal waste and biomass. A retort system including at least one retort vessel may include a monolithic **dome structure** surrounded by a process isolation barrier, the **dome structure** being sealingly engaged with the process isolation barrier. The **dome structure** and the process isolation barrier define a retort chamber, at least a portion of which may comprise a subterranean chamber. A lower end of the **dome** retort **structure** provides an exit for collected hydrocarbons and spent feedstock material. Systems may include a plurality of such **dome** retort **structures**. A control system may be used for controlling one or more operating parameters of a retorting process performed within such a **dome** retort **structure** for extraction and collection of hydrocarbons.

Classifications:

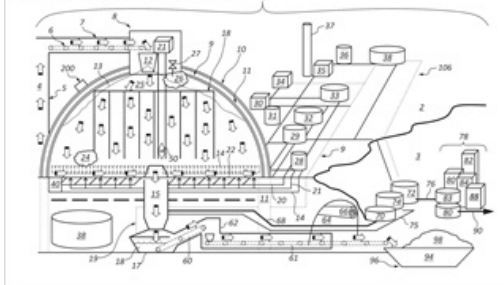
International (IPC 8-9): B01D B01D3/00 B01J19/18 B01J6/00 C01B31/02 C07C1/00 C10B1/04 C10B29/02 C10C1/20 C10G C10G1/00 C10G1/02 C10G3/00 C10G7/00 C10G9/00 C10G9/04 E21B E21B43/24 E21C E21C41/00 F23G5/027 F27D99/00 (Advanced/Invention)

CPC: C10G2300/1003 C10G2300/1014 C10G2300/1025 C10G2300/205 C10G2300/308 C10G2300/4043 C10G2300/4081 C10G2300/44 C10G2400/02 C10G2400/04 C10G2400/08 C10G2400/28 C10G2300/807 C10B9/00 C10B49/02 C10G2300/42 C10G1/10 C10G1/04 C10G1/02 B01D1/14 C10B49/06 C10B53/06 C10G1/00 C10G9/02 C10G9/04 C10B49/04 C10B1/04 Y02P20/129 Y02P20/133 Y02P20/134 Y02P20/145 Y02P30/20

European: B01D1/14 C10B49/02 C10B53/06 C10B9/00 C10G1/00 C10G1/02 C10G1/04

US: 196/46 196/46P 196/46S 201/18 201/18P 202/108 202/120 202/120S 202/123 202/123S 208/400 208/400S 208/409 208/409S 422/164 422/164S 422/233 422/233S 432/5 432/5P 585/240 585/240P

PatBase - US2011313218_AA



Family:

Publication number	Publication date	Application number	Application date
AU2011232418 AA	20110929	AU20110232418	20110323
AU2011232418 AH	20121101	AU20110232418	20110323
BR112012024044 A2	20160830	BR20121124044	20110323
CA2793947 AA	20110929	CA20112793947	20110323
MA34168 B1	20130403	MA20120035322	20121023
US2011313218 AA	20111222	US20110070334	20110323
US2012138422 AA	20120607	US20120348545	20120111
US2012138445 AA	20120607	US20120348443	20120111
US2012138446 AA	20120607	US20120348413	20120111
US2012141947 AA	20120607	US20120348535	20120111
WO11119756 A2	20110929	WO2011US29657	20110323
WO11119756 A3	20111215	WO2011US29657	20110323
WO13106415 A1	20130718	WO2013US20809	20130109
WO13106438 A1	20130718	WO2013US20843	20130109
WO13106509 A1	20130718	WO2013US20939	20130110
WO13106524 A1	20130718	WO2013US20959	20130110
ZA201207932 A	20131223	ZA20120007932	20110323

Priority:

US20100316748P 20100323 US20110070334 20110323 US20120348545 20120111
 US20120348443 20120111 US20120348413 20120111 US20120348535 20120111
 WO2011US29657 20110323

Probable Assignee: DANA TODD

Assignee(s): (std): DANA TODD ; DANA TODD C ; TODD C DANA

Assignee(s): DANA TODD A

Inventor(s): (std): DANA TODD C ; DANA TODD C

Inventor(s): TODD C DANA

Agent(s): GRIFFITH HACK; SIM AND MCBURNEY; BUSCHMANN CRAIG ET AL; BACCOCH JOHN C ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP 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
AU2011232418 AA	20150326	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
BR112012024044 A2	20160830	LSPB	+	published / reissued	
BR112012024044 A2	20160913	LSFE	-B08F	APPLICATION FEES: DISMISSAL -	TEXT : REFERENTE A SA ANUIDADE.

BR112012024044 A2	20170110	LSLE	-B08K	ARTICLE 86 OF INDUSTRIAL PROPERTY LAW LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)	TEXT : EM VIRTUDE DO ARQUIVAMENTO PUBLICADO NA RPI 2384 DE 13-09-2016 E CONSIDERANDO AUSENCIA DE MANIFESTACAO DENTRO DOS PRAZOS LEGAIS, INFORMO QUE CABE SER MANTIDO O ARQUIVAMENTO DO PEDIDO DE PATENTE, CONFORME O DISPOSTO NO ARTIGO 12, DA RESOLUCAO 113/2013.
CA2793947 AA	20110929	LSPB	+	published / reissued	
CA2793947 AA	20160504	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20160323
MA34168 B1	20130403	LSGT	+	granted / extensions (spc, cpc, pte)	
MA34168 B1	20321023	PEXP		Calculated Patent Term Expiry	
US2011313218 AA	20111222	LSPB	+	published / reissued	
US2011313218 AA	20141216	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012138422 AA	20120607	LSPB	+	published / reissued	
US2012138422 AA	20151109	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012138445 AA	20120607	LSPB	+	published / reissued	
US2012138445 AA	20151117	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012138446 AA	20120607	LSPB	+	published / reissued	
US2012138446 AA	20151109	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012141947 AA	20120607	LSPB	+	published / reissued	
US2012141947 AA	20151020	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
WO11119756 A2	20110929	LSPB	+	published / reissued	
WO11119756 A3	20120919	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2011232418 COUNTRY OF REF DOCUMENT : AU
WO11119756 A3	20120920	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2793947 COUNTRY OF REF DOCUMENT : CA
WO11119756 A3	20120924	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11119756 A3	20121011	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011232418 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20110323 KIND CODE OF REF DOCUMENT : A
WO11119756 A3	20160830	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012024044 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20120921
WO13106415 A1	20130718	LSPB	+	published / reissued	
WO13106415 A1	20140711	LSNE	NENP	NON-ENTRY	REF COUNTRY CODE : DE

				INTO THE NATIONAL PHASE IN:	
WO13106415 A1	20150204	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13736396 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO13106438 A1	20130718	LSPB	+	published / reissued	
WO13106438 A1	20140711	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13106438 A1	20150204	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13735793 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO13106509 A1	20130718	LSPB	+	published / reissued	
WO13106509 A1	20140711	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13106509 A1	20150204	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13735903 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO13106524 A1	20130718	LSPB	+	published / reissued	
WO13106524 A1	20140711	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13106524 A1	20150204	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13736307 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
ZA201207932 A	20131223	LSGT	+	granted / extensions (spc, cpc, pte)	
ZA201207932 A	20310322	PEXP		Calculated Patent Term Expiry	

Title: Spherical projection-type screen for use in a vehicle simulator

Abstract: Source: US4514347A A **geodesic dome structure** is described, i.e., a **structure** having a mathematically-derived surface. This new **dome structure** is formed of a single, one-piece layer of synthetic material and provides a one-piece, seamless screen to permit the viewing of a scene in a vehicle simulator in order to achieve a maximum of realism matching substantially real world conditions. One form of the **structure** for this **geodesic dome** is described with the single, one-piece layer of synthetic material bonded to a generally **dome-shaped geodesic structure** in order to provide sufficient strength for a free-standing **structure**. However, another form of the **geodesic dome** is described with the synthetic material formed of sufficient thickness to be strong enough to provide a free-standing **structure**, and the synthetic material may even be reinforced if desired. The method described of achieving this **geodesic dome** includes erecting a generally **dome-shaped geodesic structure** and applying a coating of a predetermined thickness of synthetic material to the inner surface of such a **structure**. Thereafter, this synthetic material is smoothed to provide the seamless screen for viewing a scene from a vehicle simulator. The method described also includes a tool stand erected in order to locate positively a pivot point from which a tool boom is movable in order to achieve the accuracy desired for the inner, smooth, one-piece, seamless screen surface.

Classifications:

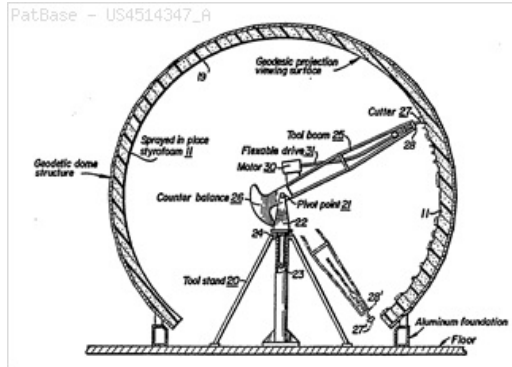
International (IPC 8-9): E04B1/16 E04B1/32 E04B1/35 E04B7/10 E04D13/03 E04H3/22 G03B21/56 G09B27/00 G09B9/02 G09B9/08 G09B9/30 G09B9/32 (Advanced/Invention); E04H3/10 G03B21/56 G09B27/00 (Core/Invention)

International (IPC 1-7): B24B5/00 B29C17/12 B29D27/04 E04B1/16 E04B1/32 E04B7/10 E04D13/03 E04H3/22 G03B21/56 G09B27/00 G09B9/00 G09B9/02 G09B9/08

CPC: E04B1/164 E04B1/3211 E04B1/35 E04B2001/3217 E04B2001/3229 E04B2001/3258 E04B2001/3264 G09B9/32

European: E04B1/16C E04B1/32C E04B1/35 G09B9/32 P04B1/32H P04B1/32L P04B1/32N P04B1/32N1

US: 264/162 264/269 264/32 264/46.6 264/46.9 434/40 451/159 451/280 451/361 51/2R 52/81.1 52/81.6



Family:

Publication number	Publication date	Application number	Application date
CA1203361 A1	19860422	CA19830443780	19831220
EP0131019 A1	19850116	EP19840900347	19831205
EP0131019 A4	19850610	EP19840900347	19831205
JP1749268 C3	19930408	JP19840500400	19831205
JP4035077 B4	19920609	JP19840500400	19831205
JP60500147 T2	19850131	JP19840500400T	19831205
JP60500147 T2	19850131	JP19840500400	19831205
US4514347 A	19850430	US19820451985	19821221
US4631867 A	19861230	US19850685823	19850219
WO8402548 A1	19840705	WO1983US01911	19831205

Priority:

CA19830443780 19831220 US19820451985 19821221 WO1983US01911 19831205
US19850685823 19850219

Probable Assignee: HUGHES AIRCRAFT CO

Assignee(s): (std): SINGER CO

Assignee(s): LINK FLIGHT SIMULATION CORP ; THE SINGER COMPANY ; SINGER COMPANY THE ; LINK FLIGHT SIMULATION KIRKWOOD INDUSTRIAL PARK BI ; SINGER CO THE ; REED JOHN T ; CAE LINK A CORP OF DE CORP ; CAE LINK CORP ; HUGHES AIRCRAFT CO ; L 3 COMMUNICATIONS CORP

Inventor(s): (std): REED JOHN T

Agent(s): RIDOUT AND MAYBEE LLP

Designated states: DE FR GB JP SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA1203361 A1	20031220	LSLE	-MKEX	EXPIRY	
EP0131019 A1	19850116	LSPB	+	published / reissued	
EP0131019 A1	19850220	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19841211
EP0131019 A1	19870624	LSRV	-18R	REFUSED	EFFECTIVE DATE : 19870123
JP1749268 C3	19930408	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1749268 C3	20031205	PEXP		Calculated Patent Term Expiry	
JP4035077 B4	19920609	LSPB	+	published / reissued	

JP60500147 T2	19850131	LSPB	+	published / reissued	
JP60500147 T2	19850131	LSPB	+	published / reissued	
US4514347 A	19850430	LSGT	+	granted / extensions (spc, cpc, pte)	
US4514347 A	19830118	LSAS	AS	ASSIGNMENT	OWNER NAME : SINGER COMPANY THE, BINGHAMTON, NY A CORP. OF NJ DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:REED, JOHN T.; REEL/FRAME:004080/0241 EFFECTIVE DATE : 19821214
US4514347 A	19850302	LSGT	PAT1	Patented Case	
US4514347 A	19880823	LSAS	AS	ASSIGNMENT	OWNER NAME : LINK FLIGHT SIMULATION CORPORATION, KIRKWOOD INDUS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:SINGER COMPANY, THE, A NJ CORP.; REEL/FRAME:004998/0190 EFFECTIVE DATE : 19880425
US4514347 A	19881005	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4514347 A	19891024	LSAS	AS	ASSIGNMENT	OWNER NAME : CAE-LINK CORPORATION, A CORP. OF DE. DESCRIPTION : MERGER; ASSIGNORS:LINK FLIGHT SIMULATION CORPORATION, A DE CORP.; LINK FACTICAL MILITARY SIMULATION CORPORATION, A CORP. OF DE; LINK TRAINING SERVICES CORPORATION, A CORP. OF DE (MERGED INTO); AND OTHERS; REEL/FRAME:005252/0187 EFFECTIVE DATE : 19881130
US4514347 A	19920930	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4514347 A	19960722	LSAS	AS	ASSIGNMENT	OWNER NAME : HUGHES AIRCRAFT COMPANY, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CAE- LINK CORPORATION; REEL/FRAME:008059/0305 EFFECTIVE DATE : 19950224
US4514347 A	19970428	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4514347 A	20000828	LSAS	AS	ASSIGNMENT	OWNER NAME : L-3 COMMUNICATIONS CORPORATION, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RAYTHEON CORPORATION; REEL/FRAME:011035/0782 EFFECTIVE DATE : 20000210
US4631867 A	19861230	LSGT	+	granted / extensions (spc, cpc, pte)	
US4631867 A	19880823	LSAS	AS	ASSIGNMENT	OWNER NAME : LINK FLIGHT SIMULATION CORPORATION, KIRKWOOD INDUS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:SINGER COMPANY, THE, A NJ CORP.; REEL/FRAME:004998/0190 EFFECTIVE DATE : 19880425
US4631867 A	19891024	LSAS	AS	ASSIGNMENT	OWNER NAME : CAE-LINK CORPORATION, A CORP. OF DE. DESCRIPTION : MERGER; ASSIGNORS:LINK FLIGHT SIMULATION CORPORATION, A DE CORP.; LINK FACTICAL MILITARY SIMULATION CORPORATION, A CORP. OF DE; LINK TRAINING SERVICES CORPORATION, A CORP. OF DE (MERGED INTO); AND OTHERS; REEL/FRAME:005252/0187 EFFECTIVE DATE : 19881130
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US4631867 A	19901230	LSLE	-PEX1	Patent Expired Due to NonPayment of	

				Maintenance Fees Under 37 CFR 1.362	
US4631867 A	19910312	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19901230
US4631867 A	19960722	LSAS	AS	ASSIGNMENT	OWNER NAME : HUGHES AIRCRAFT COMPANY (NOW KNOWN AS HUGHES ELECT DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CAE-LINK CORPORATION; REEL/FRA:008059/0605 EFFECTIVE DATE : 19950224
WO8402548 A1	19840705	LSPB	+	published / reissued	
WO8402548 A1	19841030	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1984900347 COUNTRY OF REF DOCUMENT : EP
WO8402548 A1	19850116	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1984900347 COUNTRY OF REF DOCUMENT : EP
WO8402548 A1	19870123	LSRV	-WWR	WIPO INFORMATION: REFUSED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1984900347 COUNTRY OF REF DOCUMENT : EP
WO8402548 A1	19870502	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1984900347 COUNTRY OF REF DOCUMENT : EP

Title: INDOOR/OUTDOOR STADIUM SYSTEM FOR ENERGY USE REDUCTION

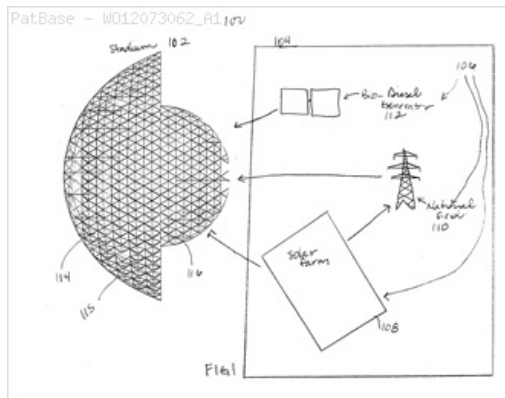
Abstract: A passive indoor/outdoor stadium **structure** (100) configured to reduce energy demands from the stadium **structure** includes a moveable roofing system (114) and a micro - climate cooling system. The moveable roofing system (114) covers an interior space of the stadium (102) and has an open position and a closed position. The roofing system (114) includes a fixed half - **dome** roof (115) and a revolving half **dome** roof retractable beneath the fixed half **dome** roof (115), both the fixed half **dome** roof (115) and the revolving half **dome** roof (116) having an outer half **dome** clad with a plurality of solar hoods (236) positioned in an overlapping arrangement. The micro - climate cooling system for cooling the indoor/outdoor stadium comprises a tiered seating (128), a raised concrete barrier (434) opposing the tiered seating (128) and first (436) and second (438) walls perpendicular to the tiered seatings (128) which funnel cooling air supplied by a plurality of air handling units (406)..

Classifications:

International (IPC 8-9): E04B1/32 E04B7/16 E04H15/20 E04H3/14 (Advanced/Invention)

CPC: F24J2002/0092 Y02B10/24 E04B7/163 E04H3/12 E04H3/14 F24F5/0046 F24F2221/50 Y02B10/20 F24F2007/004 E04B1/3211

European: E04B7/16P E04H3/12 E04H3/14 F24F5/00F R24F221/50 Y02B10/20

**Family:**

Publication number	Publication date	Application number	Application date
WO12073062 A1	20120607	WO2010IB03194	20101129
WO12073062 A9	20120907	WO2010IB03194	20101129

Priority:

WO2010IB03194 20101129

Probable Assignee: QATAR FOOTBALL ASS

Assignee(s): (std): BEAVEN MICHAEL ; HOSKING LEE ; QATAR FOOTBALL ASS

Assignee(s): QATAR FOOTBALL ASSOCIATION

Inventor(s): (std): BEAVEN MICHAEL ; HOSKING LEE

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
WO12073062 A1	20120607	LSPB	+	published / reissued	
WO12073062 A9	20130529	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12073062 A9	20131225	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10807360 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: INDOOR/OUTDOOR STADIUM SYSTEM FOR ENERGY USE REDUCTION

Abstract: Source: US2012131861A A passive indoor/outdoor stadium **structure** configured to reduce energy demands from the stadium **structure** includes a moveable roofing system and a micro-climate cooling system. The moveable roofing system covers an interior space of the stadium and has an open position and a closed position. The roofing system includes a fixed half **dome** roof and a revolving half **dome** roof retractable beneath the fixed half **dome** roof, both the fixed half **dome** roof and the revolving half **dome** roof having an outer half **dome** clad with a plurality of solar hoods positioned in an overlapping arrangement. The micro-climate cooling system for cooling the indoor/outdoor stadium includes a full circulation mode for cooling a stadium volume when the roofing system is in the closed position, and a micro-climate mode for cooling a portion of the stadium volume when the roofing system is in the open position.

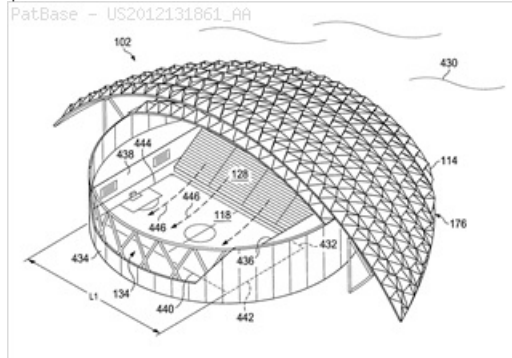
Classifications:

International (IPC 8-9): E04B1/346 E04B1/70 E04C2/20 E04H14/00 E04H3/12 (Advanced/Invention)

CPC: Y02B10/24 Y02E10/40 Y02E60/147 Y02E70/30 E04H3/14 E04B7/105 E04B7/163 F24F3/044 F24F5/0021 F24F5/0046 F24F13/0604 F24F2005/0064 F24F2221/50 F24J2/00 F24J2002/0092 Y02B10/20 F24F2221/08 E04B1/3211 H02S40/38

European: E04B7/10C E04B7/16P E04H3/14 F24F13/06A F24F3/044 F24F5/00C5A F24F5/00F F24J2/00 H01L31/058C R24F221/50 R24F5/00F9 Y02B10/20

US: 454/199 52/173.1 52/173.100S 52/302.1 52/302.100S 52/309.1 52/309.100S 52/6 52/64 52/65 52/66 52/66S 52/8 52/80.1 52/81.2 52/8P



Family:

Publication number	Publication date	Application number	Application date
US2012131861 AA	20120531	US20100955559	20101129
US8555557 BB	20131015	US20100955559	20101129

Priority:

US20100955559 20101129

Probable Assignee: QATAR FOOTBALL ASSOCIATION

Assignee(s): (std): BEAVEN MICHAEL EDWARD ; HOSKING LEE ; QATAR FOOTBALL ASS

Assignee(s): QATAR FOOTBALL ASSOCIATION

Inventor(s): (std): BEAVEN MICHAEL EDWARD ; HOSKING LEE

Agent(s): DENTONS US LLP

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2012131861 AA	20120531	LSPB	+	published / reissued	
US8555557 BB	20131015	LSGT	+	granted / extensions (spc, cpc, pte)	
US8555557 BB	20101130	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : QATAR FOOTBALL ASSOCIATION, QATAR OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOSKING, LEE; BEAVEN, MICHAEL; REEL/FRAME:025431/0562 EFFECTIVE DATE : 20101125
US8555557 BB	20130925	LSGT	PAT1	Patented Case	
US8555557 BB	20170316	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8555557 BB	20301129	PEXP		Calculated Patent Term Expiry	

Title: **GEODESIC DOMES** WITH REDUCED STRUT LENGTH VARIATIONS

Abstract: Source: US2008307720A A **domed structure** (500) comprises a plurality of struts (505) of equal or a reduced number of differing lengths. The struts are held in place by hubs (510, 515, 1400). In one aspect, a first hub secures the ends of inserted struts at a constant distance from its center, while other hubs secure the ends of inserted struts at predetermined distances from their centers. The differences between the various predetermined distances is the difference in strut lengths required by the design of the **structure**. Thus all struts are of equal length and identical, or a reduced number of lengths, resulting in an economy of scale and ease of construction. A cover can be added after the **structure** is built. Alternatively, the hubs can be sewn into a fabric or plastic cover for further ease of construction. The struts can be glued in place, or removed from the hubs to disassemble the **structure**.

Classifications:

International (IPC 8-9): E04B7/08 E04B7/10 E04H12/00

F16D1/00 (Advanced/Invention);

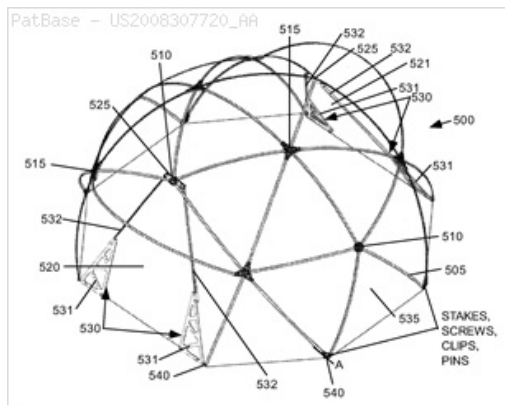
E04B7/08 E04B7/10 (Core/Invention)

CPC: Y10T403/34 Y10T403/341 Y10T403/342 Y10T403/347

E04B1/3211 E04B2001/3247

European: E04B1/32C P04B1/32M1B

US: 403/169 403/170 403/171 403/176 52/655.1 52/81.1 52/81.2 52/81.3 52/81.300P 52/DIG.1 52/DIG.10



Family:

Publication number	Publication date	Application number	Application date
US2008307720 AA	20081218	US20070762449	20070613
US8347561 BB	20130108	US20070762449	20070613
WO08153614 A1	20081218	WO2008US03105	20080307

Priority:

US20070762449 20070613

Probable Assignee: HOWE ROBERT H

Assignee(s): (std): HOWE ROBERT H

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

Agent(s): DAVID PRESSMAN ESQ; DAVID; KETTLESTRINGS DONALD A

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 SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

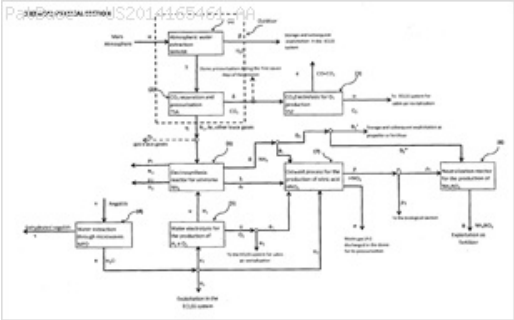
[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
US2008307720 AA	20081218	LSPB	+	published / reissued	
US8347561 BB	20130108	LSGT	+	granted / extensions (spc, cpc, pte)	
US8347561 BB	20170108	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8347561 BB	20170206	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US8347561 BB	20170228	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20170108
US8347561 BB	20280923	PEXP		Calculated Patent Term Expiry (PTA 468 days)	
WO08153614 A1	20081218	LSPB	+	published / reissued	
WO08153614 A1	20091215	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08153614 A1	20100707	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 08726614 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: PROCESS FOR THE PRODUCTION OF USEFUL MATERIALS FOR SUSTAINING MANNED SPACE MISSIONS ON MARS THROUGH IN-SITU RESOURCES UTILIZATION

Abstract: Source: US2014165461A A process for the production of useful materials to sustain manned space missions on Mars, as well as the kit of materials and apparatus for implementing the same, is described. Said process uses as raw feedstock only natural resources available in-situ, namely Mars atmosphere and regolith. The kit allows to implement the process of the invention by providing all materials and apparatus that will be used on the Martian soil.

Classifications:
International (IPC 8-9): A01G15/00 A01G7/00 A01G9/18 C05C1/00 C05F11/02 C25B15/08 C25B9/18 E21C51/00 (Advanced/Invention)
CPC: A01G15/00 C25B9/18 C25B15/08 E21C51/00 A01G9/18
US: 47/1.01R 47/1.4 47/17 47/58.1SC



Family:

Publication number	Publication date	Application number	Application date
CN103826438 A	20140528	CN201280043264	20120724
CN103826438 B	20150902	CN201280043264	20120724
DE602012019408 D1	20160714	DE201260019408T	20120724
EP2736320 A1	20140604	EP20120759226	20120724
EP2736320 B1	20160608	EP20120759226	20120724
IN01590CN2014 A	20160701	IN2014CN01590	20140227
ITMI20111420 A1	20130129	IT2011MI01420	20110728
JP2014530595 T2	20141120	JP20140522187T	20120724
JP5662619 B2	20150204	JP20140522187T	20120724
RU2014107659 A	20150910	RU20140107659	20120724
RU2600183 C2	20161020	RU20140107659	20120724
US2014165461 AA	20140619	US20120235549	20120724
US8978293 BB	20150317	US20120235549	20120724
WO13014606 A1	20130131	WO20121B53754	20120724

Priority:

EP20120759226 20120724 IT2011MI01420 20110728 WO20121B53754 20120724

Probable Assignee: I AGENZIA SPAZIALE ITALIANA AS

Assignee(s): (std): CORRIAS GIANLUCA ; CAO GIACOMO ; CONCAS ALESSANDRO ; PISU MASSIMO ; ORRU ROBERTO ; LICHERI ROBERTA ; I AGENZIA SPAZIALE ITALIANA AS ; UNI DEGLI STUDI DI CAGLIARI DIPARTIMENTO ; CRS4 SRL CT DI RICERCA SVILUPPO E STUDI SUPERI ; UNIV CAGLIARI ; CT DI RICERCA SVILUPPO E STUDI SUPERIORI IN SARDEGNA SOCIETA A RESPONSABILITA LIMITATA ; ORRU AND 8242 ROBERTO ; UNIV DELI STUDI DI KALYARI ; AGENZIA SPAZIALE ITALIANA I AS

Assignee(s): ASI AGENZIA SPAZIALE ITALIANA ; ASL AGENZIA SPAZIALE ITALIANA ; A S I AGENZIA SPAZIALE ITALIANA ; UNIVERSITA DELI STUDI DI KALYARI ; UNIVERSITA DEGLI STUDI DI CAGLIARI DIPARTIMENTO ; UNIVERSITA DEGLI STUDI DI CAGLIARI ; CRS4 SRL CENTRO DI RICERCA SVILUPPO E STUDI SUPERI ; CENTRO DI RICERCA SVILUPPO E STUDI SUPERIORI IN SARDEGNA SOCIETA A RESPONSABILITA LIMITATA ; CENTRO DI RICERCA SVILUPPO E STUDI SUPERIORI ; CENTRO DI RICERCA SVILUPPO ESTUDI SUPERIORI IN SARDEGNA SOCIETA A RESPONSABILITA LIMITATA

Inventor(s): (std): CAO GIACOMO ; CONCAS ALESSANDRO ; CORRIAS GIANLUCA ; KAO DZHAKOMO ; KONKAS ALESSANDRO ; KORRIAS DZHANLUKA ; LICHERI ROBERTA ; LIKERI ROBERTA ; ORRU AND 8242 ROBERTO ; ORRU ROBERTO ; PISU MASSIMO ; PIZU MASSIMO

Agent(s): VILLA LIVIA; LECLAIRRYAN A PROFESSIONAL CORP; VILLA LIVIA ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EF 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
CN103826438 A	20140528	LSPB	+	published / reissued	
CN103826438 A	20140528	LSPB	+C06	PUBLICATION	
CN103826438 A	20150902	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103826438 B	20150902	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103826438 B	20320724	PEXP		Calculated Patent Term Expiry	

EP2736320 A1	20140604	LSPB	+	published / reissued	
EP2736320 A1	20140604	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140227
EP2736320 A1	20160113	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20151218
EP2736320 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160915 YEAR OF FEE PAYMENT : 5
EP2736320 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160907 YEAR OF FEE PAYMENT : 5
EP2736320 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160907 YEAR OF FEE PAYMENT : 5
EP2736320 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160919 YEAR OF FEE PAYMENT : 5
EP2736320 B1	20160608	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2736320 B1	20160608	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2736320 B1	20160615	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2736320 B1	20160629	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2736320 B1	20160714	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602012019408 COUNTRY OF REF DOCUMENT : DE
EP2736320 B1	20160715	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 804545 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160715
EP2736320 B1	20160919	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 5
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EP2736320 B1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20160608
EP2736320 B1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20160908
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EP2736320 B1	20161115	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 804545

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EP2736320 B1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608
EP2736320 B1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608
EP2736320 B1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608
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EP2736320 B1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160909
EP2736320 B1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608
EP2736320 B1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608
EP2736320 B1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160731
EP2736320 B1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608
EP2736320 B1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608

EP2736320 B1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20160608
EP2736320 B1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20161008
EP2736320 B1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20160608
EP2736320 B1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SM NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20160608
EP2736320 B1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20160608
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EP2736320 B1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20161010
EP2736320 B1	20170228	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2736320 B1	20170309	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602012019408 COUNTRY OF REF DOCUMENT : DE
EP2736320 B1	20170331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT LAPSED DATE : 20160608
EP2736320 B1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF

EP2736320 B1	20170428	LSLE	-PG25	INFORM. FROM NAT. OFFICE TO EPO LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	DUE FEES LAPSED DATE : 20160731 COUNTRY OF REF DOCUMENT : LI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160731
EP2736320 B1	20170503	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2736320 B1	20170517	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20170309
EP2736320 B1	20170531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608
EP2736320 B1	20170531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160608
EP2736320 B1	20170613	LSFE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 6
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EP2736320 B1	20170731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20170613 YEAR OF FEE PAYMENT : 6
EP2736320 B1	20170831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160724
EP2736320 B1	20170831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20170616 YEAR OF FEE PAYMENT : 6
EP2736320 B1	20171031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20170719 YEAR OF FEE PAYMENT : 6
EP2736320 B1	20171031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20170719 YEAR OF FEE PAYMENT : 6
EP2736320 B1	20320724	PEXP		Calculated Patent Term Expiry	
IN01590CN2014 A	20160701	LSPB	+	published / reissued	
ITMI20111420 A1	20130129	LSPB	+	published / reissued	
JP2014530595 T2	20141120	LSPB	+	published / reissued	
JP2014530595 T2	20141011	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20141010
JP2014530595 T2	20141031	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014530595 T2	20141112	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20141111

JP2014530595 T2	20141211	LSFE	+A61	(UTILITY MODEL) FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20141204
JP5662619 B2	20150204	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5662619 B2	20320724	PEXP		Calculated Patent Term Expiry	
RU2014107659 A	20150910	LSPB	+	published / reissued	
RU2600183 C2	20161020	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2600183 C2	20320724	PEXP		Calculated Patent Term Expiry	
US2014165461 AA	20140619	LSPB	+	published / reissued	
US2014165461 AA	20140128	LSAS	AS	ASSIGNMENT	OWNER NAME : A.S.I. AGENZIA SPAZIALE ITALIANA, ITALY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CAO, GIACOMO; CONCAS, ALESSANDRO; CORRIAS, GIANLUCA; AND OTHERS; REEL/FRAME:032062/0873 EFFECTIVE DATE : 20121011
US2014165461 AA	20140128	LSAS	AS	ASSIGNMENT	OWNER NAME : CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN S DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CAO, GIACOMO; CONCAS, ALESSANDRO; CORRIAS, GIANLUCA; AND OTHERS; REEL/FRAME:032062/0873 EFFECTIVE DATE : 20121011
US2014165461 AA	20140128	LSAS	AS	ASSIGNMENT	OWNER NAME : UNIVERSITA' DEGLI STUDI DI CAGLIARI, ITALY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CAO, GIACOMO; CONCAS, ALESSANDRO; CORRIAS, GIANLUCA; AND OTHERS; REEL/FRAME:032062/0873 EFFECTIVE DATE : 20121011
US8978293 BB	20150317	LSGT	+	granted / extensions (spc, cpc, pte)	
US8978293 BB	20150225	LSGT	PAT1	Patented Case	
US8978293 BB	20320724	PEXP		Calculated Patent Term Expiry	
WO13014606 A1	20130131	LSPB	+	published / reissued	
WO13014606 A1	20140127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014522187 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO13014606 A1	20140128	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13014606 A1	20140128	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14235549 COUNTRY OF REF DOCUMENT : US
WO13014606 A1	20140228	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014107659 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A

Title: Metal framed **geodesic structure**

Abstract: Source: US6098347A A metal-framed **geodesic structure** (40) has pyramidal frames (1, 8, 12) made of sheet metal. Edges of the pentagonally pyramidal frames are positioned on top edges of rectangular base wall sections (14). The base wall sections are positioned uprightly and the pentagonally pyramidal frames are slanted radially inward towards a structural center about which the base wall sections and the pentagonally pyramidal frames are positioned circumferentially. Edges of the hexagonally pyramidal frames are positioned on top-corner edges of pentagonally pyramidal frames and slanted inward radially to positions of contact with edges of adjacent hexagonally pyramidal frames in a circumferential ring having a top pentagonally polyhedral center which can have skylights and a ventilation aperture (42) at its apex. While edges of the pentagonally pyramidal frames are being attached to edges of the hexagonally pyramidal frames, temporary positioning braces (45, 46) maintain the frames accurately and reliably in structural position.

Classifications:

International (IPC 8-9): E04B1/32 E04B7/10 (Advanced/Invention); E04B1/32 E04B7/10 (Core/Invention)

International (IPC 1-7): E04B7/08

CPC: E04B1/3211 E04B7/105 E04B2001/3217 E04B2001/3276 E04B2001/3288 E04B2001/3294

European: E04B1/32C E04B7/10C P04B1/32H P04B1/32P1

P04B1/32P2 P04B1/32S

US: 52/309.5 52/582.1 52/81.3 52/813

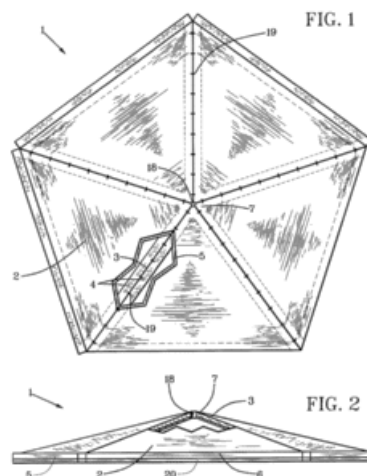
PatBase - US6098347_A

U.S. Patent

Aug. 8, 2000

Sheet 1 of 9

6,098,347



Family:

Publication number	Publication date	Application number	Application date
US6098347 A	20000808	US19980010158	19980121

Priority:

US19980010158 19980121

Probable Assignee:

JAEGER LEROY L

Assignee(s): (std):

JAEGER LEROY L ; WETZEL THIELE

Inventor(s): (std):

JAEGER LEROY L ; WETZEL THIELE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US6098347 A	20000808	LSGT	+	granted / extensions (spc, cpc, pte)	
US6098347 A	20031216	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6098347 A	20071228	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6098347 A	20120808	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6098347 A	20120903	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6098347 A	20120925	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20120808
US6098347 A	20180121	PEXP		Calculated Patent Term Expiry	

Title: **GEODESIC DOME STRUCTURE****Abstract:** Source: US3439460A ABSTRACT OF THE DISCLOSURE

A geodesic **dome** of generally part-spherical form includes a belt **structure** comprising an annular succession of adjacent face-linked tetrahedral modules formed of sheet material. In a horizontal succession of modules 15 there are alternate modules having triangular faces and intervening modules having triangular faces, two faces of each alternate module being in face-to-face contact respectively with two faces of intervening modules on opposite sides of the included alternate module. Adjacent 20 modules are connected, inter alia, along lines extending along radii of the sphere, thus providing ribs of trusses extending spirally generally from base to top of the modular **structure**. One half of the trusses are spiralled in one direction, and the other half are spiralled in the opposite 25 direction. All trusses together provide a scissors type truss system resistant to twisting forces.

Classifications:

International (IPC 8-9): E04B1/32 (Advanced/Invention);
E04B1/32 (Core/Invention)

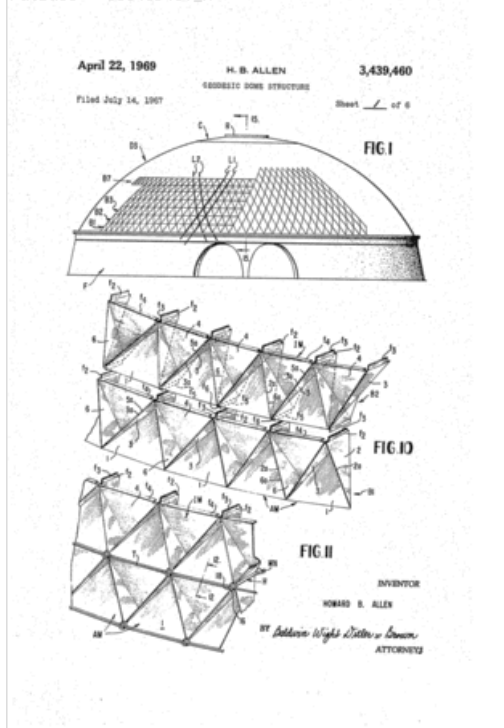
International (IPC 1-7): E04B1/32 E04B7/08

CPC: E04B1/3211 E04B2001/3217 E04B2001/3276 E04B2001/3288
E04B2001/3294

European: E04B1/32C P04B1/32H P04B1/32P1 P04B1/32P2
P04B1/32S

US: 52/81.4 52/810 D25/13

PatBase - US3439460_A

**Family:**

Publication number	Publication date	Application number	Application date
US3439460 A	19690422	US19670653553	19670714

Priority:

US19670653553 19670714

Probable Assignee:

HOWARD B ALLEN

Assignee(s): (std):

HOWARD B ALLEN

Inventor(s): (std):

ALLEN HOWARD B

Inventor(s):

HOWARD B ALLEN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US3439460 A	19690422	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: **GEODESIC DOME** AND METHOD OF MAKING

Abstract: Source: US4729197A A **geodesic dome** includes a strut assembly including groups of primary struts having end connectors, each of which has a first hinge loop pinned to a second hinge loop of a successive primary strut end connector so that the end connectors formed closed rigid hubs from which the primary struts outwardly extend. Interconnection of the primary struts by means of the end connectors forms a plurality of primary triangles. Each primary triangle is divided into four secondary triangles by means of three secondary struts having their ends connected to the midportions of the three primary struts forming the primary triangle. Each primary strut and each secondary strut is composed of a pair of glued-together pre-finished wooden beams, the hinge loops of the primary strut end connectors being attached to opposite sides of a plate attached between the wooden beams at each end thereof. A plurality of straps are also attached between the wooden beams and extend from the outer surfaces of the primary and secondary struts. Prefabricated triangular panels each composed of an outer plate, a prefinished inner plate and insulation material disposed therebetween are coextensive with the secondary triangles. The prefabricated panels are positioned against the outer surfaces of the secondary triangles, and the straps are bent around the outer edges of the triangular panels and attached to the outer surface thereof to form a prefinished insulating cover of the **geodesic dome**. In one embodiment of the invention, the strut end connectors are used on the ends of upper and lower grid struts of a space frame **structure**; similar strut end connectors are provided on inter-grid struts and are interconnected with the upper and lower grid strut end connectors to form rigid hubs at which the grid struts and inter-grid struts are interconnected.

Classifications:

International (IPC 8-9): E04B1/32 E04B1/344 (Advanced/Invention);

E04B1/32 E04B1/344 (Core/Invention);

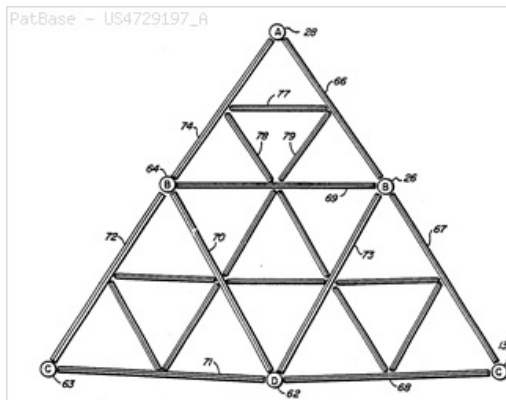
E04B (Subclass/Invention)

International (IPC 1-7): E04B1/32 E04B1/344

CPC: E04B1/3211 E04B2001/3241 E04B2001/3252 E04B2001/3294 Y10T403/343

European: E04B1/32C P04B1/32M1 P04B1/32M2 P04B1/32S

US: 403/172 52/81 52/81.3 52/81.4



Family:

Publication number	Publication date	Application number	Application date
AU198425081 A1	19840906	AU19840025081	19840227
CA1219421 A1	19870324	CA19840448240	19840224
IL71063 A0	19840531	IL19840071063	19840227
JP59206538 A2	19841122	JP19840037208	19840228
US4729197 A	19880308	US19860874799	19860613

Priority:

CA19840448240 19840224 US19830470533 19830228 US19860874799 19860613

Probable Assignee: CAHILL SUTTON AND THOMAS A PARTNERSHIP OF ARIZONA

Assignee(s): (std): ARUBIN II MIRAA ; MILLER A E ; MILLER ALVIN E

Assignee(s): MILLER AE ; CAHILL SUTTON AND THOMAS ; CAHILL SUTTON AND THOMAS A PARTNERSHIP OF ARIZONA

Inventor(s): (std): ARUBIN II MIRAA ; MILLER ALVIN E

Inventor(s): ALVIN E MILLER

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; RIDOUT AND MAYBEE LLP

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
CA1219421 A1	20040324	LSLE	-MKEX	EXPIRY	
JP59206538 A2	19841122	LSPB	+	published / reissued	
US4729197 A	19880308	LSGT	+	granted / extensions (spc, cpc, pte)	
US4729197 A	19880111	LSGT	PAT1	Patented Case	
US4729197 A	19880523	LSAS	AS	ASSIGNMENT	OWNER NAME : CAHILL, SUTTON AND THOMAS, 1400 VALLEY BANK CENTER, DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:WORLD GEODESICS, INC.; REEL/FRAME:004887/0753 EFFECTIVE DATE : 19871204
US4729197 A	19880523	LSAS	AS	ASSIGNMENT	OWNER NAME : CAHILL, SUTTON AND THOMAS, A PARTNERSHIP OF ARIZONA, DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:WORLD GEODESICS, INC.; REEL/FRAME:004887/0753 EFFECTIVE DATE : 19871204

US4729197 A	19920308	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4729197 A	19920512	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19920308

Title: FRAME ASSEMBLY SYSTEM FOR **GEODESIC** FRAMED **STRUCTURES**

Abstract: A node assembly for connecting a plurality of struts (10) in a framework (6) of a **geodesic dome** or other **structure** (2), comprising a hub (20) defining a toroidal retaining channel (42, 43) therewithin, and one or more retention elements (30a, 30b) each carried on or attachable to an end of a respective strut (10) and insertable into the retaining channel (42, 43). The hub (20) includes clamping means (24a, 24b) for clamping the or each retention element (30a, 30b) within the retaining channel (42, 43) once inserted therein, and the side walls defining the retaining channel (42, 43) in the hub (20) are configured and dimensioned such that the respective retention heads (32a, 32b) of the retention elements (30a, 30b) are substantially completely enclosed therein. The retention elements (30a, 30b) each preferably have a bifurcated retention head (32a, 32b) angled with respect to the main body (34) of the retention element for insertion into and retention within the retaining channel (42, 43) and pivotable therein to provide adjustment of the strut (10) before the clamping means (24a, 24b) are actuated to tighten and clamp the retention elements (30a, 30b) within the retaining channel (42, 43) in the hub (20). The system of node assemblies comprising hubs (20) and retention elements (30a, 30b) carried on the struts (10) allows for a simplified modular frame construction system based on a minimised number of different structural components. Once the frame is constructed, it may be clad by conventional means such as sheeting or discrete panels (120) of glass or plastics material anchored to the struts (10) via panel restraining devices (118, 130, 136).

Classifications:

International (IPC 8-9): E04B1/24 E04B1/32 (Advanced/Invention)

CPC: E04B1/3211 E04B2001/3247 E04B2001/3252 E04B2001/3294 E04B1/2403

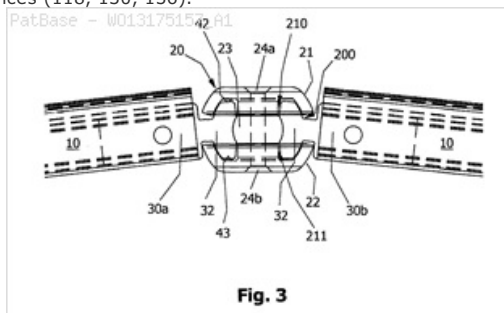


Fig. 3

Family:

Publication number	Publication date	Application number	Application date
EP2852712 A1	20150401	EP20130729037	20130520
GB201208937 A0	20120704	GB20120008937	20120521
GB2502284 A1	20131127	GB20120008937	20120521
WO13175157 A1	20131128	WO2013GB00222	20130520

Priority:

GB20120008937 20120521 WO2013GB00222 20130520

Probable Assignee: SOLARDOME IND LTD

Assignee(s): (std): SOLARDOME IND LTD

Assignee(s): SOLARDOME INDUSTRIES LTD

Inventor(s): (std): PRICE ANDREW JOHN

Inventor(s): ANDREW JOHN PRICE

Agent(s): LINN SAMUEL JONATHAN; LINN SAMUEL JOHATHAN

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2852712 A1	20150401	LSPB	+	published / reissued	
EP2852712 A1	20150401	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20141218
EP2852712 A1	20160120	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20151221
GB2502284 A1	20131127	LSPB	+	published / reissued	
GB2502284 A1	20141008	LSWD	-WAP	APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	
WO13175157 A1	20131128	LSPB	+	published / reissued	
WO13175157 A1	20141121	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: Hemispherical projection

Abstract: Source: US7791799B A method of projection provides a frame **structure** that has a base and a top, couples a first membrane layer to the frame **structure**, and couples a second membrane layer to the first membrane layer, thereby forming a cavity enclosed by the first membrane layer and the second membrane layer. The method removes air from the enclosed cavity such that the second membrane layer is drawn toward the frame **structure**, and projects an image onto a surface of the second membrane layer. Some embodiments include a system for implementation of the foregoing.

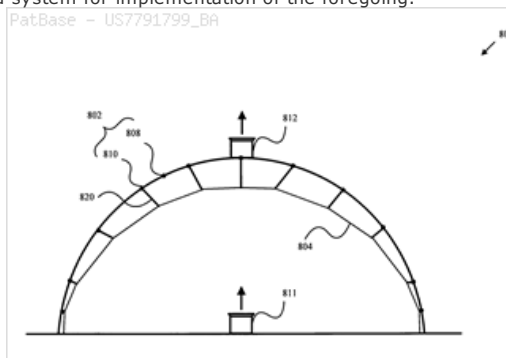
Classifications:

International (IPC 8-9): G03B21/00 G03B21/14 G03B21/26
G03B21/56 (Advanced/Invention)

CPC: G03B21/00 G03B21/56

European: G03B21/00 G03B21/56

US: 359/443 359/451



Family:

Publication number	Publication date	Application number	Application date
EP2255248 A1	20101201	EP20090722787	20090309
EP2255248 A4	20120801	EP20090722787	20090309
US7791799 BA	20100907	US20080050026	20080317
WO09117276 A1	20090924	WO2009US36578	20090309

Priority:

US20080050026 20080317 WO2009US36578 20090309

Probable Assignee: OBSCURA DIGITAL

Assignee(s): (std): LEJEUNE CHRIS ; OBSCURA DIGITAL ; OBSCURA DIGITAL INC ; THRELKEL TRAVIS

Inventor(s): (std): LEJEUNE CHRIS ; THRELKEL TRAVIS

Agent(s): BROWNE ROBIN FORSYTHE; STATTLER-SUH PC; STATTLER JOHN C

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2255248 A1	20101201	LSPB	+	published / reissued	
EP2255248 A1	20101201	LSER	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100920
EP2255248 A1	20120801	LSER	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20120702
EP2255248 A1	20120801	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : G03B 21/14 20060101AFI20120626BHEP
EP2255248 A1	20120801	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : G03B 21/00 20060101ALI20120626BHEP
EP2255248 A1	20120801	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : G03B 21/26 20060101ALI20120626BHEP
EP2255248 A1	20120801	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : G03B 21/56 20060101ALI20120626BHEP
EP2255248 A1	20130731	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20130130
US7791799 BA	20100907	LSGT	+	granted / extensions (spc, cpc, pte)	
US7791799 BA	20080317	LSAS	AS	ASSIGNMENT	OWNER NAME : OBSCURA DIGITAL, CALIFORNIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LEJEUNE, CHRIS; THRELKEL, TRAVIS;

US7791799 BA	20100818	LSGT	PAT1	Patented Case	
US7791799 BA	20140710	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7791799 BA	20281114	PEXP		Calculated Patent Term Expiry (PTA 242 days)	
WO09117276 A1	20090924	LSPB	+	published / reissued	
WO09117276 A1	20100918	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: **Geodesic** portable **structure**

Abstract: Source: US5732514A A portable **dome structure** for field use. The **dome** has a number of preformed panels that are bent at the proper angles to form part of a **dome structure**. Each panel has a series of flanges around its perimeter to allow the panels to be bolted together. The sub panels are formed into quarter sections, that be carried on the floats of a small airplane. The quarter sections can then be bolted together in the field, along with floor sections to make a complete **structure**. No complex flaming is required. There is also no covering that has to be placed over the framing. The preferred style of **dome** is elliptical, which creates more headroom without more floor space. In addition to the basic **dome** shape, the four quarter section can be bolted to rectangular extension pieces. These pieces can be added as desired to make the **dome** longer, or wider, or both. Use of these extension pieces make this **structure** highly versatile.

Classifications:

International (IPC 8-9): E04B1/32 (Advanced/Invention); E04B1/32 (Core/Invention)

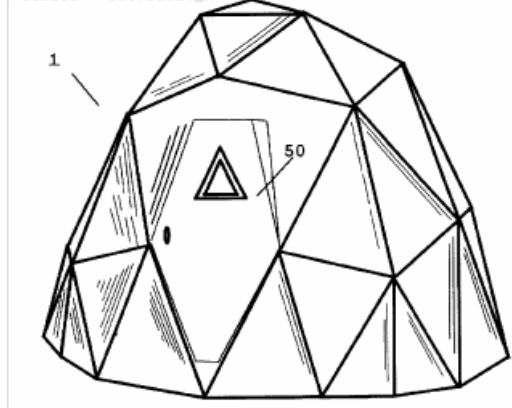
International (IPC 1-7): E04B1/32

CPC: E04B1/3211 E04B2001/3276 E04B2001/3288 E04B2001/3294

European: E04B1/32C P04B1/32P1 P04B1/32P2 P04B1/32S

US: 52/80.1 52/80.1 52/81.1 52/81.4 52/81.1 52/81.4

PatBase - US5732514_A



Family:

Publication number	Publication date	Application number	Application date
US5732514 A	19980331	US19950541795	19951010

Priority:

US19950541795 19951010

Probable Assignee: APPLIED GEODESICS INC

Assignee(s): (std): ORGAN GLENN

Assignee(s): APPLIED GEODESICS INC

Inventor(s): (std): ORGAN GLENN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US5732514 A	19980331	LSGT	+	granted / extensions (spc, cpc, pte)	
US5732514 A	20000503	LSAS	AS	ASSIGNMENT	OWNER NAME : APPLIED GEODESICS, INC., WASHINGTON DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ORGAN, GLENN; REEL/FRAME:010785/0622 EFFECTIVE DATE : 19880401
US5732514 A	20020401	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5732514 A	20020430	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5732514 A	20020528	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20020331
US5732514 A	20151010	PEXP		Calculated Patent Term Expiry	

Title: **Geodesic dome**-lens antenna

Abstract: Source: US4488156A An antenna of the **geodesic** lens type is disclosed. The antenna **structure** is based on optical principles and provides wide angle scanning of a narrow base. The exact shape of the **domed structure** is found by solving an integral equation and results in nearly perfect focus in the scan plane. A dielectric loaded flared horn is attached to the feed circle of the **domed structure** and focusses energy in the plane orthogonal to the scan plane. The cross sectional shape of the outer curvature of the dielectric is elliptical. Since the **structure** is circularly symmetrical, constant beam shape, wide angle scanning, and a rapid scan rate are possible.

Classifications:

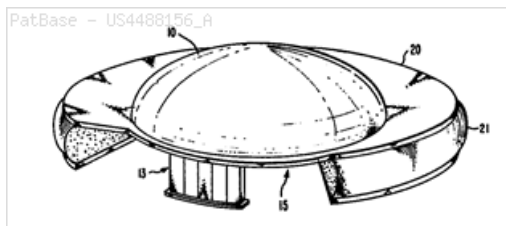
International (IPC 8-9): G01S7/02 G01S7/03 H01Q15/04 H01Q15/08 H01Q19/06 H01Q3/24 (Advanced/Invention); G01S7/02 G01S7/03 H01Q15/00 H01Q19/00 H01Q3/24 (Core/Invention)

International (IPC 1-7): G01S7/02 G01S7/03 H01Q15/04 H01Q15/08 H01Q19/06 H01Q3/24

CPC: H01Q3/245 H01Q15/04 H01Q19/062

European: H01Q15/04 H01Q19/06B H01Q3/24C

US: 343/754 343/909



Family:

Publication number	Publication date	Application number	Application date
CA1192659 A1	19850827	CA19830421256	19830209
DE3376602 D1	19880616	DE19833376602	19830121
EP0086351 A1	19830824	EP19830100513	19830121
EP0086351 B1	19880511	EP19830100513	19830121
ES519649 A0	19840301	ES19830519649	19830209
ES519649 A2	19840402	ES19830519649	19830209
ES8403251 A1	19840601	ES19830519649	19830209
GR78078 B	19840926	GR19830170348	19830127
JP1877541 C3	19941007	JP19830019916	19830210
JP5086682 B4	19931214	JP19830019916	19830210
JP58194408 A2	19831112	JP19830019916	19830210
TR21861 A	19851001	TR19830021861	19830210
US4488156 A	19841211	US19820347666	19820210

Priority:

CA19830421256 19830209 US19820347666 19820210

Probable Assignee: HUGHES AIRCRAFT COMPANY

Assignee(s): (std): HUGHES AIRCRAFT CO

Assignee(s): HUGHES AIRCRAFT COMPANY ; RAYTHEON CO ; UYEDA HAROLD A ; DU FORT EDWARD C ; HE HOLDINGS INC

Inventor(s): (std): DUFORT EDWARD C ; E C DU FORT ; EDOWAADO SHII DEYU FUOTO ; FORT E C DU ; H A UYEDA ; HARORUDO EE UEDA ; UYEDA H A ; UYEDA HAROLD A ; DU FORT EDWARD C

Agent(s): GOWLING LAFLEUR HENDERSON LLP

Designated states: DE FR GB

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA1192659 A1	20020828	LSRE	+MKEC	EXPIRY (CORRECTION)	
CA1192659 A1	20030209	LSLE	-MKEX	EXPIRY	
DE3376602 D1	19890727	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE3376602 D1	19930114	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
EP0086351 A1	19830824	LSPB	+	published / reissued	
EP0086351 A1	19840502	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19840222
EP0086351 A1	19860514	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19860327
EP0086351 A1	19861210	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : HUGHES AIRCRAFT COMPANY
EP0086351 A1	19890621	LSGT	+26N	NO OPPOSITION FILED	
EP0086351 A1	19901210	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 19901210 YEAR OF FEE PAYMENT : 9
EP0086351 A1	19901212	LSFE	+PGFP	POSTGRANT: ANNUAL	COUNTRY OF REF DOCUMENT :

				FEES PAID TO NATIONAL OFFICE	GB PAYMENT DATE : 19901212 YEAR OF FEE PAYMENT : 9
EP0086351 A1	19901231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 19901231 YEAR OF FEE PAYMENT : 9
EP0086351 A1	19920121	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GB LAPSED DATE : 19920121
EP0086351 A1	19920916	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : PCNP
EP0086351 A1	19920930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FR LAPSED DATE : 19920930
EP0086351 A1	19921001	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DE LAPSED DATE : 19921001
EP0086351 A1	19921127	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST
EP0086351 B1	19880511	LSGT	+	granted / extensions (spc, cpc, pte)	
ES8403251 A1	19840601	LSGT	+	granted / extensions (spc, cpc, pte)	
GR78078 B	19840926	LSGT	+	granted / extensions (spc, cpc, pte)	
GR78078 B	20030127	PEXP		Calculated Patent Term Expiry	
JP1877541 C3	19941007	LSGT	+	granted / extensions (spc, cpc, pte)	
JP1877541 C3	20030210	PEXP		Calculated Patent Term Expiry	
JP5086682 B4	19931214	LSPB	+	published / reissued	
JP58194408 A2	19831112	LSPB	+	published / reissued	
TR21861 A	19851001	LSGT	+	granted / extensions (spc, cpc, pte)	
US4488156 A	19841211	LSGT	+	granted / extensions (spc, cpc, pte)	
US4488156 A	19820210	LSAS	AS	ASSIGNMENT	OWNER NAME : HUGHES AIRCRAFT COMPANY; CULVER CITY, CA. A CORP. DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNORS:DU FORT, EDWARD C.; UYEDA, HAROLD A.; REEL/FRAME:003990/0635 EFFECTIVE DATE : 19820208
US4488156 A	19841012	LSGT	PAT1	Patented Case	
US4488156 A	19850730	LSRE	CC	CERTIFICATE OF CORRECTION	
US4488156 A	19880607	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4488156 A	19920609	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4488156 A	19960328	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

Title: Luneberg lens antenna constructed from two **geodesic domes**

Abstract: Source: US3400401A ABSTRACT OF THE DISCLOSURE

A directional radio and radar antenna employing the 10 Luneberg principle and forming the roof of a large geodesic building **structure** comprising an upper arched shallow prefabricated geodesic **dome** and a lower concentric supporting shallow prefabricated geodesic **dome** therefor with the space therebetween opening outwardly around its periphery. Both spaced **dome structures** are formed of prefabricated substantially hexagonal metallic grid members and include spaced dielectric or plastic supporting means for the upper **dome** disposed between the domes, securing the **domes** in fixed rigid predetermined super-imposed spaced relation. Plastic panels close the openings in the grid members. The **structure** is supported around its periphery and provides an unobstructed usable area under the geodesic antenna roof within the periphery thereof. The invention described herein may be manufactured and used by or for the United States Government for governmental purposes without the payment to me of any 30 royalty thereon.

Classifications:

International (IPC 8-9): H01Q15/04 (Advanced/Invention);
H01Q15/00 (Core/Invention)

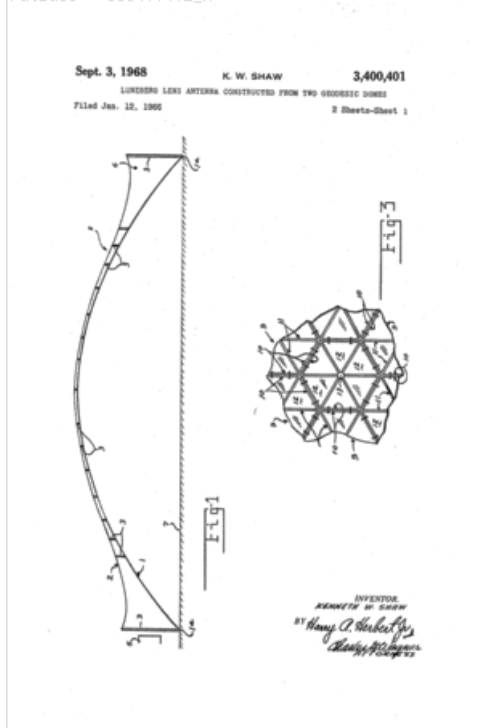
International (IPC 1-7): H01Q15/04

CPC: H01Q15/04

European: H01Q15/04

US: 343/720 343/754 343/872 343/911R 52/234 52/81.2

PatBase - US3400401_R



Family:

Publication number	Publication date	Application number	Application date
US3400401 A	19680903	US19660520191	19660112

Priority:

US19660520191 19660112

Probable Assignee: KENNETH W SHAW

Assignee(s): (std): KENNETH W SHAW

Inventor(s): (std): SHAW KENNETH W

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US3400401 A	19680903	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: GREAT-CIRCLE **GEODESIC DOME**

Abstract: Source: US2006135288A The present invention is a structural system and a method of fabricating the system comprised of finite elements called basis elements such as great circles or partial great circles to form a great-circle **geodesic** sphere, **dome**, or arch called a great sphere, **dome**, and arch, respectively. The **structure** is generated by forming a pattern of the basis element rotated at incremental angles about a rotational axis from an initial position to define a so-called primary component orbitsphere-cvf. The primary component orbitsphere defines a stationary pattern as well as a structural element called a secondary component orbitsphere-cvf that is constructed according to the pattern of the primary orbitsphere-cvf. The secondary component orbitsphere-cvf is initially oriented at the initial position and is incrementally rotated about the rotational axis to form the great-sphere-type **structure**.

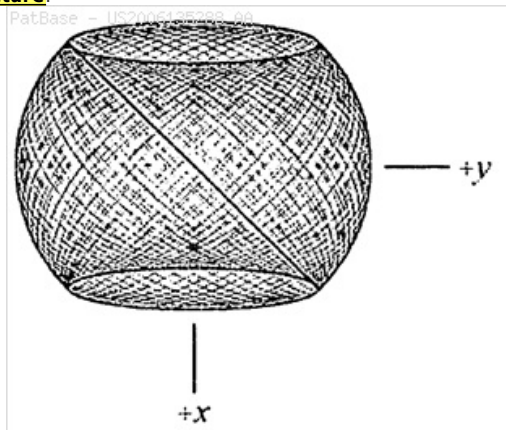
Classifications:

International (IPC 8-9): A63B37/12 E04B7/08 (Advanced/Invention);
A63B37/12 E04B7/08 (Core/Invention)

CPC: E04B1/3211 E04B7/105

European: E04B1/32C E04B7/10C

US: 473/379 52/81.1



Family:

Publication number	Publication date	Application number	Application date
US2006135288 AA	20060622	US20050296350	20051208

Priority:

US20040637889P 20041222 US20050296350 20051208 US20050643149P 20050113
US20050651006P 20050209 US20050647406P 20050128

Probable Assignee:

MILLS RANDELL L

Assignee(s): (std):

MILLS RANDELL L

Inventor(s): (std):

MILLS RANDELL L

Inventor(s):

MILLS RANDELL

Agent(s):

MANELLI DENISON AND SELTER

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
US2006135288 AA	20060622	LSPB	+	published / reissued	
US2006135288 AA	20091109	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	

Title: A building panel

Abstract: Source: EP1645694A2 A building panel (12) for a building **structure** (10) includes a plurality of engaging edges (30). Each engaging edge includes a substantially similar engaging formation (32). The panel is arranged so that in use as part of a building **structure** which includes a plurality of such panels, each engaging formation engages a substantially similar engaging formation of an adjacent panel.

Classifications:

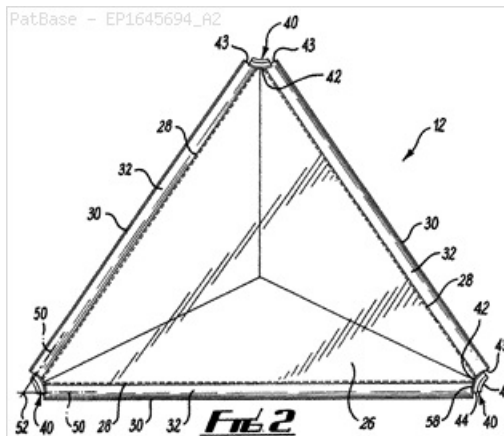
International (IPC 8-9): E04B1/32 E04B1/61 E04D3/36

E04D3/362 (Advanced/Invention);

E04B1/32 E04B1/61 E04D3/36 (Core/Invention)

CPC: E04B1/3211 E04B1/61

European: E04B1/32C E04B1/61



Family:

Publication number	Publication date	Application number	Application date
EP1645694 A2	20060412	EP20050256166	20051001
EP1645694 A3	20060927	EP20050256166	20051001
GB200422323 A0	20041110	GB20040022323	20041008
GB2418934 A1	20060412	GB20040022323	20041008

Priority:

GB20040022323 20041008

Probable Assignee: AMILA Y MECH

Assignee(s): (std): AMILA Y MECH ; MECH AMILA Y ; MOON JOHN

Assignee(s): Y MECH AMILA ; JOHN MOON

Inventor(s): (std): GLUYAS TIMOTHY JAMES ; HOBBS SIMON CHARLES ; MOON JOHN

Inventor(s): SIMON CHARLES HOBBS ; TIMOTHY JAMES GLUYAS ; JOHN MOON

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP1645694 A2	20060412	LSPB	+	published / reissued	
EP1645694 A2	20070509	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20070326
EP1645694 A2	20070530	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20070425
EP1645694 A2	20070530	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : 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
EP1645694 A2	20101020	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20100501
GB2418934 A1	20060412	LSPB	+	published / reissued	
GB2418934 A1	20070307	LSWD	-WAP	APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	

Title: Inflatable greenhouse

Abstract: Source: US6061969A The inflatable greenhouse is an approximately hemispherical dome-shaped inflatable structure which is entirely self-supporting when inflated. The greenhouse has a double-walled structure of plastic sheet material which gives the greenhouse structural rigidity when inflated and which increases the thermal protection provided by the greenhouse. The walls of the greenhouse are made of a transparent or translucent plastic material to allow optimal light transmission for photosynthetic plants or of a light filtering or opaque plastic material for light-sensitive plants and animals. The greenhouse has an access door through the wall to allow easy access to the interior of the structure. The door is placed such that it does not interrupt the structural integrity of the inflated dome-shaped structure, therefore no rigid structural members are needed to support the walls. The slit-shaped access door is equipped with a slide fastener that can be opened from the top or the bottom so that the door can be used for ventilating the interior of the greenhouse as well as for interior access. The inflatable greenhouse has a lower ring which is separately inflatable with a dense medium, such as water, for stabilizing and anchoring the greenhouse against movement by wind or storms.

Classifications:

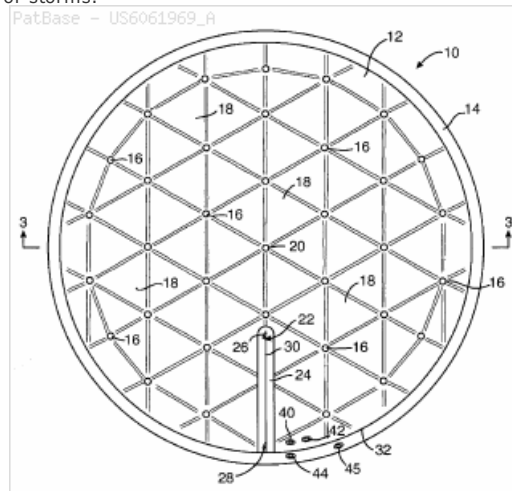
International (IPC 8-9): A01G9/14 E04H15/20 (Advanced/Invention);
A01G9/14 E04H15/20 (Core/Invention)

International (IPC 1-7): E04B1/345

CPC: A01G9/1415 E04H15/20 E04H21/26

European: A01G9/14B1 E04H15/20 P04H15/20C P04H15/20D

US: 52/2.11 52/2.18 52/211 52/218



Family:

Publication number	Publication date	Application number	Application date
US6061969 A	20000516	US19980022073	19980211

Priority:

US19970036962P 19970211 US19980022073 19980211

Probable Assignee: LEARY JEREMIAH E

Assignee(s): (std): LEARY JEREMIAH E

Inventor(s): (std): LEARY JEREMIAH E

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US6061969 A	20000516	LSGT	+	granted / extensions (spc, cpc, pte)	
US6061969 A	20000504	LSGT	PAT1	Patented Case	
US6061969 A	20040517	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6061969 A	20040713	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20040516
US6061969 A	20180211	PEXP		Calculated Patent Term Expiry	

Title: METHODS AND SYSTEMS FOR PRETREATMENT AND PROCESSING OF BIOMASS

Abstract: Source: US2004168960A According to one embodiment of the invention, a system for processing biomass includes a water-impermeable bottom liner, a gravel layer supported by the bottom liner, a drain pipe disposed within the gravel layer, a biomass input device operable to deliver biomass over the gravel layer to form a biomass pile, a lime input device operable to deliver lime to the biomass for pretreating the biomass, a distribution pipe elevated above the gravel layer, and a pump operable to circulate water through the biomass pile by delivering water to the distribution pipe and receiving water from the drain pipe after it has traveled through the biomass pile. According to another embodiment, a method for biomass pretreatment with alkali, conducted at ambient pressure for approximately 4-16 weeks at temperatures ranging from approximately 25 degrees centigrade to 95 degrees centigrade Biomass may be lignocellulosic biomass and may be rendered suitable for enzymatic digestion or pulp production.

Classifications:

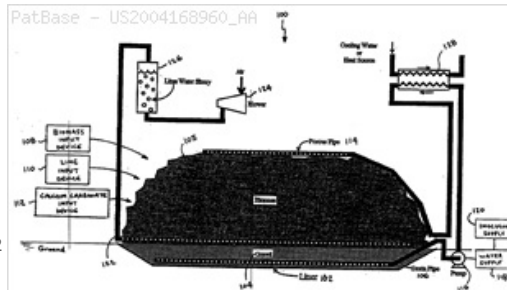
International (IPC 8-9): C05F17/00 C05F17/02 C05F5/00 C12M1/16 C12P1/00 C12P7/40 C12S3/00 C12S3/02 C12S3/08 D21C3/02 D21C5/00 (Advanced/Invention); D21H11/12 (Advanced/Non-invention); C05F17/00 C05F17/02 C05F5/00 C12P1/00 C12S3/00 D21C3/00 D21C5/00 (Core/Invention); D21H11/00 (Core/Non-invention)

International (IPC 1-7): B01D21/24 C05F17/02 C12M1/00 C12M1/16 C12P1/00 D21C3/02 D21C5/00

CPC: C12P2201/00 Y02W30/43 D21C5/005 C05F5/002 C05F17/0036 C05F17/0276 C12P1/00 D21C3/02 D21C3/026 D21C5/00 D21H11/12 Y02P20/145

European: C05F17/00H C05F17/02K2E C05F5/00B C12P1/00 D21C3/02 D21C5/00B N21C3/02D N21C5/00 N21H11/12

US: 162/41 162/57 162/90 162/90P 210/101 210/149 210/149S 210/15 210/150 210/150S 210/177 210/177S 210/205 210/205S 435/136 435/283.1 435/283.100P

**Family:**

Publication number	Publication date	Application number	Application date
AU2003295373 AA	20040607	AU20030295373	20031103
DE60336843 D1	20110601	DE20036036843	20031103
EP1570042 A1	20050907	EP20030786557	20031103
EP1570042 B1	20110420	EP20030786557	20031103
US2004168960 AA	20040902	US20030701409	20031031
US2004171136 AA	20040902	US20030698199	20031031
US2008121359 AA	20080529	US20070850497	20070905
US2012258509 AA	20121011	US20120528567	20120620
US8262853 BB	20120911	US20070850497	20070905
WO04041995 A1	20040521	WO2003US34942	20031103

Priority:

US20020423288P 20021101	US20030698199 20031031	US20070850497 20070905
WO2003US34942 20031103	US20030701409 20031031	US20120528567 20120620

Probable Assignee: TEXAS A AND M UNIV SYSTEM

Assignee(s): (std): DAVISON RICHARD R ; DAVISON RICHARD READ ; LOWERY JR LEE LEON ; HOLTZAPPLE MARK THOMAS ; GRANDA CESAR BENIGNO ; TEXAS A AND M UNIV SYST ; TEXAS A AND M UNIVERSITY SYST ; TEXAS A AND M UNIV SYS

Assignee(s): DAVISON RICHARD ; TEXAS A AND M UNIV SYSTEM ; THE TEXAS A AND M UNIVERSITY SYSTEM ; GRANDA CESAR ; TEXAS A AMP AMP ; M UNIVERSITY SYSTEM ; TEXAS A AND M UNIV ; LOWERY LEE ; HOLTZAPPLE MARK T

Inventor(s): (std): DAVISON RICHARD ; DAVISON RICHARD READ ; GRANDA CESAR ; GRANDA CESAR BENIGNO ; HOLTZAPPLE MARK ; HOLTZAPPLE MARK T ; HOLTZAPPLE MARK THOMAS ; LOWERY LEE ; LOWERY LEE JR ; LOWERY LEE LEON ; LOWERY JR LEE LEON

Inventor(s): CESAR GRANDA ; MARK HOLTZAPPLE ; RICHARD DAVISON ; LEE JR LOWERY

Agent(s): DAUNCEY MARK PETER; BAKER BOTTS LLP; PORTER HEDGES LLP; TIMOTHY S

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 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 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 UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2003295373 AA	20050721	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2) (F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
EP1570042 A1	20050907	LSPB	+	published / reissued	
EP1570042 A1	20050907	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050531
EP1570042 A1	20090826	LSSES	+17Q	FIRST	EFFECTIVE DATE : 20090728

					EXAMINATION REPORT
EP1570042 A1	20110420	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1570042 A1	20110601	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 60336843 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20110601
EP1570042 A1	20120131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20111128 YEAR OF FEE PAYMENT : 09
EP1570042 A1	20120328	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20120123
EP1570042 A1	20120516	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 60336843 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120123
EP1570042 A1	20130228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20121227 YEAR OF FEE PAYMENT : 10
EP1570042 A1	20130329	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130110 YEAR OF FEE PAYMENT : 10
EP1570042 A1	20130430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20121231 YEAR OF FEE PAYMENT : 10
EP1570042 A1	20140723	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20131103
EP1570042 A1	20140822	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20140731
EP1570042 A1	20140828	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60336843 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20140603
EP1570042 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20140603
EP1570042 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131202
EP1570042 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131103
EP1570042 B1	20110420	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1570042 B1	20231103	PEXP		Calculated Patent Term Expiry	
US2004168960 AA	20040902	LSPB	+	published / reissued	

US2004168960 AA	20040511	LSAS	AS	ASSIGNMENT	OWNER NAME : THE TEXAS A AND M UNIVERSITY SYSTEM, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOLTZAPPLE, MARK THOMAS; DAVISON, RICHARD READ; LOWERY, LEE LEON JR.; AND OTHERS; REEL/FRAME:015322/0647; SIGNING DATES FROM 20040420 TO 20040429
US2004168960 AA	20080122	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2004171136 AA	20040902	LSPB	+	published / reissued	
US2004171136 AA	20040517	LSAS	AS	ASSIGNMENT	OWNER NAME : THE TEXAS A AND M UNIVERSITY SYSTEM, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOLTZAPPLE, MARK T.; DAVISON, RICHARD; LOWERY, LEE JR.; AND OTHERS; REEL/FRAME:015340/0172; SIGNING DATES FROM 20031210 TO 20040105
US2004171136 AA	20140630	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2008121359 AA	20080529	LSPB	+	published / reissued	
US2008121359 AA	20070905	LSAS	AS	ASSIGNMENT	OWNER NAME : THE TEXAS A AND M UNIVERSITY SYSTEM, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOLTZAPPLE, MARK THOMAS; DAVISON, RICHARD READ; LOWERY, LEE LEON, JR; AND OTHERS; REEL/FRAME:019786/0446; SIGNING DATES FROM 20040420 TO 20040429
US2012258509 AA	20121011	LSPB	+	published / reissued	
US2012258509 AA	20130211	LSAS	AS	ASSIGNMENT	OWNER NAME : THE TEXAS A AND M UNIVERSITY SYSTEM, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOLTZAPPLE, MARK THOMAS; DAVISON, RICHARD READ; LOWERY, LEE LEON, JR.; AND OTHERS; SIGNING DATES FROM 20040420 TO 20040429; REEL/FRAME:029791/0611
US2012258509 AA	20140108	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US8262853 BB	20120911	LSGT	+	granted / extensions (spc, cpc, pte)	
US8262853 BB	20070905	LSAS	AS	ASSIGNMENT	OWNER NAME : THE TEXAS A AND M UNIVERSITY SYSTEM, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOLTZAPPLE, MARK THOMAS; DAVISON, RICHARD READ; LOWERY, LEE LEON, JR; AND OTHERS; REEL/FRAME:019786/0446; SIGNING DATES FROM 20040420 TO 20040429
US8262853 BB	20070905	LSAS	AS	ASSIGNMENT	OWNER NAME : THE TEXAS A AND M UNIVERSITY SYSTEM, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HOLTZAPPLE, MARK THOMAS; DAVISON, RICHARD READ; LOWERY, LEE LEON, JR; AND OTHERS; SIGNING DATES FROM 20040420 TO 20040429; REEL/FRAME:019786/0446
US8262853 BB	20160911	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8262853 BB	20161010	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	

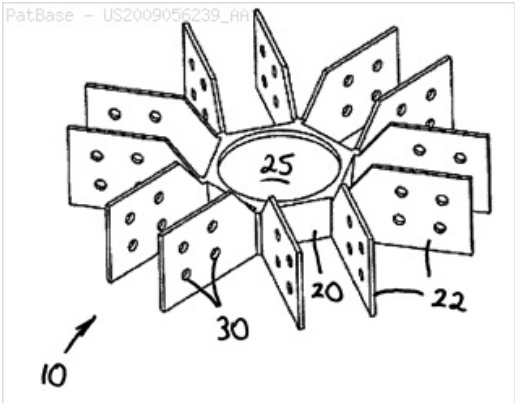
US8262853 BB	20161101	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160911
US8262853 BB	20291209	PEXP		Calculated Patent Term Expiry (PTA 826 days)	
WO04041995 A1	20040521	LSPB	+	published / reissued	
WO04041995 A1	20050531	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003786557 COUNTRY OF REF DOCUMENT : EP
WO04041995 A1	20050907	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003786557 COUNTRY OF REF DOCUMENT : EP
WO04041995 A1	20061002	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO04041995 A1	20061002	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : JP

Title: CONNECTOR FOR **GEODESIC DOME STRUCTURES**

Abstract: Source: US2009056239A A **dome** connector including a hub portion and at least one pair of strut portions. The at least one pair of strut portions attached to and extending from the hub portion. Each of the strut portions has an upper end, a lower end and an intermediate region between the upper end and the lower end. The intermediate region has a greater thickness than the upper end and the lower end.

Classifications:

International (IPC 8-9): E04B1/32 E04B1/38 E04B7/08 (Advanced/Invention); E04B1/32 E04B1/38 E04B7/08 (Core/Invention)
CPC: Y10T403/343 E04B1/3211 E04B2001/3247
European: E04B1/32C P04B1/32M1B
US: 403/172 52/81.1 52/81.3 52/813



Family:

Publication number	Publication date	Application number	Application date
US2009056239 AA	20090305	US20070849663	20070904
US7802404 BB	20100928	US20070849663	20070904

Priority:

US20070849663 20070904

Probable Assignee: WOLFRAM BLAIR F

Assignee(s): (std): WOLFRAM BLAIR F

Inventor(s): (std): WOLFRAM BLAIR F

Agent(s): PAULY DEVRIES SMITH AND DEFFNER LLC; DICKE BILLIG AND CZAJA PLLC

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2009056239 AA	20090305	LSPB	+	published / reissued	
US7802404 BB	20100928	LSGT	+	granted / extensions (spc, cpc, pte)	
US7802404 BB	20100908	LSGT	PAT1	Patented Case	
US7802404 BB	20140128	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7802404 BB	20281116	PEXP		Calculated Patent Term Expiry (PTA 439 days)	

Title: IMPLANTABLE NEUROSTIMULATION SYSTEM AND METHODS OF USING THE SYSTEM FOR APPETITE CONTROL AND PAIN CONTROL

Abstract: Source: US2011144717A An implantable electronic device includes a **geodesic** shaped **dome** housing and means for attaching the **dome** to a target neurologic **structure**. The **dome** includes a radio frequency receiver, an amplifier, and a stimulating electrode. A radio frequency based neurostimulatory system further includes a transmitting coil positioned outside a patient's body for transmitting pulses to the receiver and activating the stimulating electrode within the implantable electronic device. A method of stimulating a patient's neurologic **structure** includes implanting an electronic device proximate the neurologic **structure**, positioning a transmitting coil outside the patient's body for controlling the implantable device, initiating radio frequency waves from a pulse generator to the transmitting coil which in turn activates the stimulating electrode. The neurostimulatory system can be used for relief of visceral and somatic pain as well as for controlling appetite in patients.

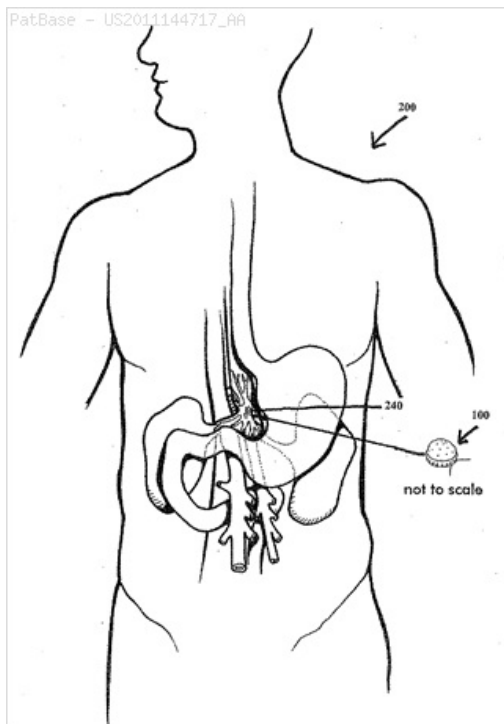
Classifications:

International (IPC 8-9): A61N1/05 A61N1/08 A61N1/34 A61N1/36 A61N1/372 (Advanced/Invention)

CPC: A61N1/36071 A61N1/36085 A61N1/37223 A61N1/375

European: A61N1/36Z A61N1/36Z3C A61N1/372D2E K61N1/36Z3E1 K61N1/375

US: 607/46 607/46P 607/60 607/60S



Family:

Publication number	Publication date	Application number	Application date
US2011144717 AA	20110616	US20090635266	20091210
WO11072183 A2	20110616	WO2010US59789	20101210
WO11072183 A3	20111110	WO2010US59789	20101210
WO11072183 A8	20110922	WO2010US59789	20101210

Priority:

US20090635266 20091210

Probable Assignee: PAUNCEFORTE TECHNOLOGIES LLC

Assignee(s): (std): BURTON CHARLES V ; LOVETT ROBERT H ; PAUNCEFORTE TECHNOLOGIES LLC ; PAUNCEFORTE TECHNOLOGIES LLC

Inventor(s): (std): LOVETT ROBERT HAROLD ; BURTON CHARLES VICTOR ; LOVETT ROBERT H ; BURTON CHARLES V

Agent(s): SAWICKI Z PETER ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR 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 MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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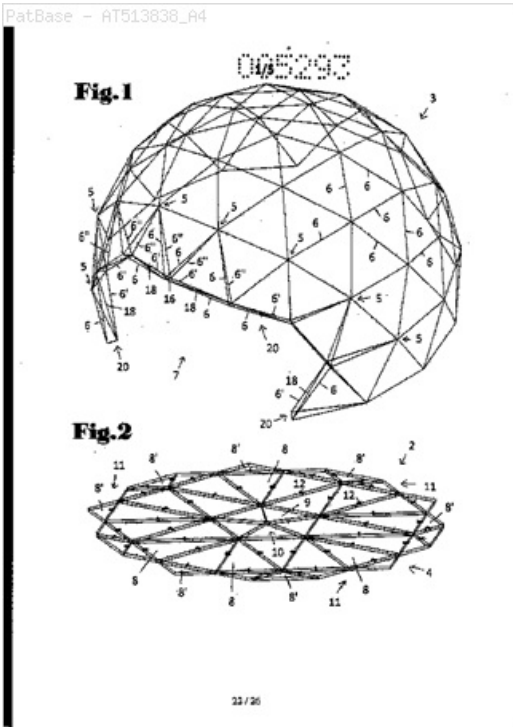
Patent	Date recorded	Event group	Code	Event	Details
US2011144717 AA	20110616	LSPB	+	published / reissued	
US2011144717 AA	20100118	LSAS	AS	ASSIGNMENT	OWNER NAME : PAUNCEFORTE TECHNOLOGIES, LLC, MINNESOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: BURTON, CHARLES VICTOR; LOVETT, ROBERT HAROLD; SIGNING DATES FROM 20091229 TO 20100114; REEL/FRA: 023801/0610
US2011144717 AA	20120404	LSWD	-ABD3	Abandoned - Failure to	

				Respond to an Office Action	
WO11072183 A2	20110616	LSPB	+	published / reissued	
WO11072183 A3	20120611	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11072183 A3	20130508	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10836726 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2

Title: GEODAETISCHE KUPPEL-BUEHNE **Geodesic Dome** stage (Machine translation)

Abstract: Source: AT513838B Geodaetische Kuppel-Buehne (1) mit mindestens einer Tueroeffnung (7), umfassend einen Basisaufbau (2) und ein darueber angeordnetes Traggeruest (3), welches aus anKnotenpunkten (5) loesbar miteinander verbundenen Verstrebungselementen (6) konstituiert ist, welche in dreiecksfoermiger Anordnung jeweils aneinander angrenzen und gemeinsam eine polyederfoermige, konvexe Struktur des Traggeruestes (3) ausbilden. Erfindungsgemaess ist vorgesehen, dass der Basisaufbau (2), betrachtet in einer Draufsicht, aus mindestens fuenf, vorzugsweise aus mehr als zehn Basissegmenten (8, 8', 9), welche um einen Zentrumsbereich (10) des Basisaufbaus (2) herum gruppiert sind, mosaikfoermig miteinander verbindbar und dadurch eine begehbare Bodenflaeche (4) konstituierbar ist, wobei in einem durch Basissegmente (8, 8') ausgebildeten, gegenueber dem Zentrumsbereich (10) peripheren Bereich (11) des Basisaufbaus (2) Verankerungselemente (14) vorgesehen sind, an welchen das Traggeruest (3), insbesondere eine als Tuerkranz (20) bezeichnete Anordnung jener Verstrebungselemente (6), welche die Tueroeffnung (7) umgrenzen, loesbar befestigbar ist. Derartige Aufbauten weisen eine optimale Stabilitaet, Montage- und Transportfaehigkeit auf. **Geodesic dome**-Stage (1) with at least one door operation (7), comprising a base construction (2) and over it arranged Traggeruest (3) which releasably interconnected from anKnotenpunkten (5) strut (6) konstituiert ist which in adjoin dreiecksfoermiger arrangement respectively and jointly eine polyederfoermige, forming convex **structure** of Traggeruestes (3). Erfindungsgemaess ist vorgesehen that the base **structure** (2), viewed in a plan view, at least five, preferably more than ten base segments (8, 8', 9) which are grouped around a central region (10) of the base body (2) around, mosaikfoermig miteinander verbindbar and characterized a walk Bodenflaeche (4) is konstituierbar, said in a through base elements (8, 8') formed, opposite the center portion (10) peripherally area (11) of the base **structure** (2) anchoring elements (14) are provided at welchen das Traggeruest (3), in particular as Tuerkranz (20) arrangement referred jener Verstrebungselemente (6), which define the door operation (7), removably attachable ist. Derartige constructions have optimal stability, assembly and Transportfaehigkeit on.

Classifications:
International (IPC 8-9): E04B1/19 E04B1/32
E04B1/348 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
AT513838 A4	20140815	AT20130000521	20130625
AT513838 B1	20140815	AT20130000521	20130625

Priority:

AT20130000521 20130625

Probable Assignee: ZEISEL JOSEF
Assignee(s): (std): ZEISEL JOSEF
Inventor(s): (std): ARVAND NIMA ; ZEISEL JOSEF

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT513838 A4	20140815	LSPB	+	published / reissued	
AT513838 B1	20140815	LSGT	+	granted / extensions (spc, cpc, pte)	
AT513838 B1	20330625	PEXP		Calculated Patent Term Expiry	

Title: CLIMATE CONTROL IN BUILDING **STRUCTURES**

Abstract: Source: US4660321A To improve heat economy in certain building **structures**, e.g. greenhouses and sports halls, a plastic film is applied which is held in place by evacuating the space between the **structure** and the plastic film. Periodic excess heat is accumulated in a heat storage chamber, which can also be combined with a composting chamber. The building **structure** is preferably made in the shape of a **geodesic dome**. Greenhouses of this type can be placed with advantage on pontoons or barges.

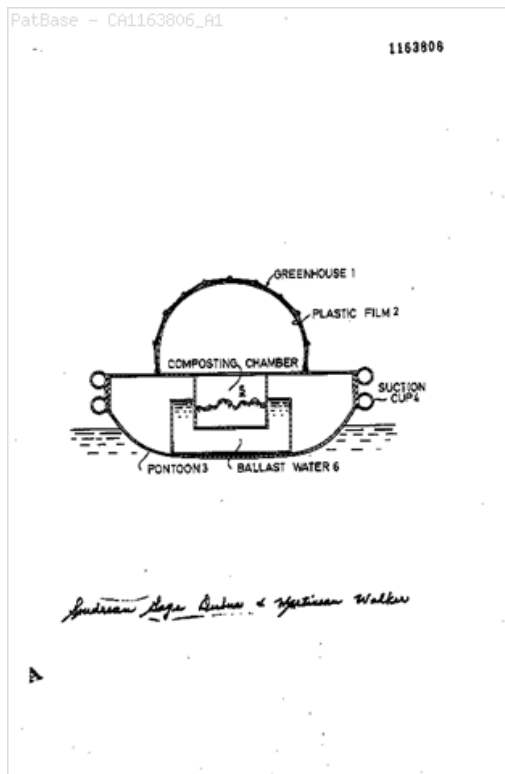
Classifications:

International (IPC 8-9): A01G9/00 A01G9/14 A01G9/24 E04B1/32 E04B1/74 E04H3/10 F24J2/50 F24J2/52 (Advanced/Invention); A01G9/14 A01G9/24 E04B1/32 E04B1/74 E04H3/10 F24J2/00 (Core/Invention)

International (IPC 1-7): A01G9/00 A01G9/14 A01G9/24 E04H3/10 **CPC:** F24J2/5267 A01G9/1469 A01G9/24 E04B1/3211 E04B1/74 E04B2001/3252 E04H3/10 F24J2/506 Y02E10/47

European: A01G9/14F A01G9/24 E04B1/32C E04B1/74 E04H3/10 F24J2/50B2 F24J2/52C P04B1/32M2 Y02B10/20 Y02E10/47

US: 47/17 47/65 52/2.16



Family:

Publication number	Publication date	Application number	Application date
CA1163806 A1	19840320	CA19810372525	19810309
GB2074210 A1	19811028	GB19810007705	19810311
GB2074210 B2	19831005	GB19810007705	19810311
SE435670 B	19841015	SE19800001899	19800311
SE435670 C	19850124	SE19800001899	19800311
SE8001899 A	19810912	SE19800001899D	19800311
SE8001899 L	19810912	SE19800001899	19800311
US4660321 A	19870428	US19810242386	19810310

Priority:

CA19810372525 19810309 SE19800001899 19800311

Probable Assignee: HEDEN C G

Assignee(s): (std): HEDEN C G ; HEDEN CARL GOERAN ; HEDEN CARL GORAN

Assignee(s): CARL GORAN HEDEN

Inventor(s): (std): HEDEN CARL GOERAN ; HEDEN CARL GORAN

Inventor(s): CARL GORAN HEDEN

Agent(s): GOUDREAU GAGE DUBUC

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA1163806 A1	20010320	LSLE	-MKEX	EXPIRY	
GB2074210 A1	19811028	LSPB	+	published / reissued	
GB2074210 A1	19831005	LSGT	+PG	PATENT GRANTED	
GB2074210 A1	19941109	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 19940311
GB2074210 B2	19831005	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2074210 B2	20010311	PEXP		Calculated Patent Term Expiry	
SE435670 B	19841015	LSPB	+	published / reissued	

SE435670 B	19950131	LSLE	-NUG	PATENT HAS LAPSED	REF DOCUMENT NUMBER : 8001899-7 EFFECTIVE DATE : 19941010 FORMAT OF REF DOCUMENT (F/P) : F
SE435670 C	19850124	LSGT	+	granted / extensions (spc, cpc, pte)	
SE435670 C	20000311	PEXP		Calculated Patent Term Expiry	
SE8001899 A	19810912	LSPB	+	published / reissued	
US4660321 A	19870428	LSGT	+	granted / extensions (spc, cpc, pte)	
US4660321 A	19870226	LSGT	PAT1	Patented Case	
US4660321 A	19901003	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4660321 A	19950430	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4660321 A	19950711	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19950503

Title: MULTI-PURPOSE OCST TENTS

Abstract: Source: CA2505778A Modern Outdoor Cold/Cool Season Sun-Tanning (OCST) tents have been introduced. The main purpose of such tents is to provide heat protection for a sun-tanner in cold or cool weather condition. These tents are made by applying modifications on modern camping tents, and hence they enjoy structural advances of modern tents, therefore they are collapsible, low-weight, user-friendly, flexible, strong, stylish and likeable. With special covers, named OCST covers, sheets, and flies, such tents are convertible and can be used for both camping and sun-tanning in all seasons.

Classifications:

International (IPC 8-9): A01G9/16 E04H15/00 E04H15/20 E04H15/30 E04H15/32 (Advanced/Invention);

A01G9/16 E04H15/00 E04H15/20 E04H15/32 (Core/Invention)

CPC: A01G9/16 A01G13/043 E04H15/28 E04H15/30 E04H15/40 E04H15/425 E04H15/50

European: A01G13/04B A01G9/16 E04H15/28 E04H15/30 E04H15/40 E04H15/42A E04H15/50

PatBase - CA2505778.jpg

CA 2505778 2005-04-20

Application number/numéro de demande: 2505778

Figures: 1 à 47

Pages: 25 à 53

Draw-TP

Unclaimable items
received with this application
(Request original documents in File Prep. Section on the 10th Floor)

Documents reçus avec cette demande ne pouvant être baignés
(Commander les documents originaux dans la section de préparation des dossiers au 10^{ème} étage)

Family:

Publication number	Publication date	Application number	Application date
CA2505778 AA	20061020	CA20052505778	20050420

Priority:

CA20052505778 20050420

Probable Assignee:

ALIGHANBARI ABBAS

Assignee(s): (std):

ALIGHANBARI ABBAS

Inventor(s): (std):

ALIGHANBARI ABBAS

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
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CA2505778 AA	20080430	LSLE	-FZDE	DEAD	

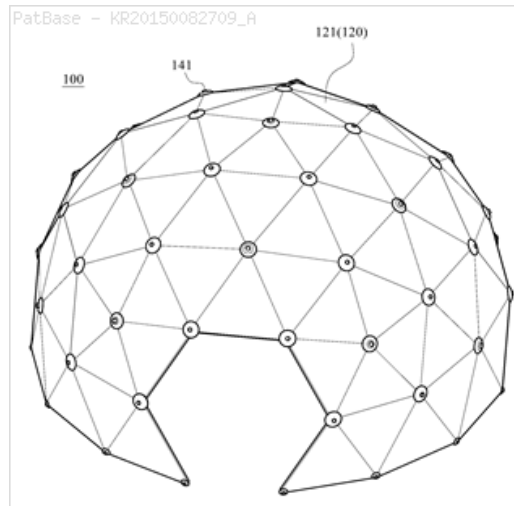
Title: DOUBLE-LAYERED **GEODESIC DOME**-SHAPED **STRUCTURE**

Abstract: Source: KR20150082709A The present invention relates to a **structure** playing a role of a mid- and long-term shelter and, specifically, to a double-layered **geodesic dome**-shaped **structure**, capable of easily and quickly constructing a **structure** which has a very useful space to be used as housing, an exhibition center, a warehouse, or the like, and having a pleasant internal environment by being formed as a multiple **structure** for a heat insulation property to be high. The double-layered **geodesic dome**-shaped **structure** comprises: a frame **structure** formed as a plurality of length members are connected in a **geodesic dome**-shaped form; a surface **structure** installed in an upper portion of the frame **structure** and connecting a plurality of triangle surface members to form an outer wall with a **geodesic dome**-shaped form; an inner wall installed in a lower portion of the frame **structure**; and a long bolt integrally coupling the frame **structure**, the surface **structure**, and the inner wall. The frame **structure**, the surface **structure**, and the inner wall form a separation space therebetween to be integrated with each other.

Classifications:

International (IPC 8-9): E04B1/32 E04B1/38 (Advanced/Invention)

CPC: E04B1/3211 E04B1/1903 E04B2001/3247 E04B2001/3252



Family:

Publication number	Publication date	Application number	Application date
KR101539324 B1	20150727	KR20140001143	20140106
KR20150082709 A	20150716	KR20140001143	20140106

Priority:

KR20140001143 20140106

Probable Assignee: SUPERHOUSE CO LTD
Assignee(s): (std): SUPERHOUSE CO LTD
Assignee(s): SUPER HOUSE LTD ; SUPERHOUSE CO
Inventor(s): (std): CHOI SANG KUN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101539324 B1	20150727	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101539324 B1	20340106	PEXP		Calculated Patent Term Expiry	
KR20150082709 A	20150716	LSPB	+	published / reissued	

Title: BUILDING MODULE, CONNECTION MEANS AND METHOD FOR FORMING SPATIAL **STRUCTURES**

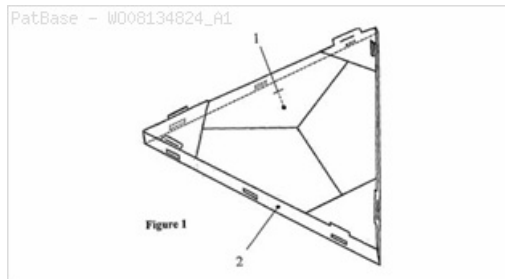
Abstract: A building module made from folded semi-rigid flat sheet-like material, such as cardboard, and having a flat polygonal base panel (1) having at least three sides, one or more sides provided with a side panel, or sidewall (2), said sidewalls (2) being folded and held at a desired angle to the base panel (1) to define an open or closed shallow box-like building module, said module being adapted to be used with similar modules secured to each other by connecting fastening means formed from similar sheet-like material with the sidewalls engaged to form a spatial **structure** or part of a **structure**, the ends of the sidewalls (2) being angularly formed such that when adjacent sidewall panels are folded together the sidewalls at the base panel of the module are sloped inwardly, or outwardly to enable a plurality of similar modules to form the desired form of spatial **structure**.

Classifications:

International (IPC 8-9): E04B1/32 (Advanced/Invention); E04B1/32 (Core/Invention)

CPC: E04B1/3205 E04B1/3211 E04B2001/3276 E04C2/08 E04C2/20

European: E04B1/32B E04B1/32C E04C2/08 E04C2/20 P04B1/32P1



Family:

Publication number	Publication date	Application number	Application date
AU2008247332 AA	20081113	AU20080247332	20080508
WO08134824 A1	20081113	WO2008AU00641	20080508

Priority:

AU20070902449 20070508 WO2008AU00641 20080508

Probable Assignee: ROBERT OATES OATES

Assignee(s): (std): OATES ROBERT MICHAEL JOHN OATES ; ROBERT OATES OATES

Assignee(s): OATES OATES ROBERT MICHAEL JOHN

Inventor(s): (std): OATES ROBERT MICHAEL JOHN OATES

Inventor(s): ROBERT MICHAEL JOHN OATES OATES

Agent(s): OATES ROBERT; HIND RAYMOND ET AL

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2008247332 AA	20130502	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
WO08134824 A1	20081113	LSPB	+	published / reissued	
WO08134824 A1	20091110	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08134824 A1	20101207	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008247332 COUNTRY OF REF DOCUMENT : AU
WO08134824 A1	20110106	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2008247332 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20080508 KIND CODE OF REF DOCUMENT : A
WO08134824 A1	20110803	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 08733459 COUNTRY OF

REF
DOCUMENT :
EP
KIND CODE OF
REF
DOCUMENT :
A1

Abstract: Source: CA2769592A The present invention provides an improved building **structure** of wooden **geodesic dome**, which consists of a frame with quadrilateral grid and a **dome** surface created by rigidly connecting wooden panels to the frame members to make the **dome** surface into a monolithic **structure**. The wooden panels that are used to create the **dome** surface can overcome the shortcoming of a large wooden **structure** that is sensitive to moisture change. The monolithic **structure** of the **dome** surface improves the stability and strength of the wooden **geodesic dome**, allowing it to cover a larger area or resist heavier loads.

CPC: E04B7/105



Publication number	Publication date	Application number	Application date
CA2769592 AA	20130824	CA20122769592	20120224

CA20122769592 20120224

Probable Assignee:	GAO HENRY
Assignee(s): (std):	GAO HENRY
Inventor(s): (std):	GAO HENRY
Agent(s):	NA

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Patent	Date recorded	Event group	Code	Event	Details
CA2769592 AA	20130824	LSPB	+	published / reissued	
CA2769592 AA	20170409	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20170224

Title: PROCESS AND MEANS FOR **GEODESIC DOME** CROP PRODUCTION

Abstract: Source: GB2234147A An insulated **geodesic dome** houses means for hydroponic crop cultivation and is characterised by light sources 7 housed in an insulated tower 6 from which parallel-sided light beams are emitted and directed by reflectors and beam splitters to illuminate plants growing in banks of superposed troughs 10. The **dome** incorporates temperature and humidity control means and means for introducing carbon dioxide. Incoming air is filtered. Tower 6 may be circular at the centre of the **dome**, or part-circular adjacent the **dome** wall with troughs in this case radiating fan-wise therefrom.

Classifications:

International (IPC 8-9): A01G31/00 A01G7/04

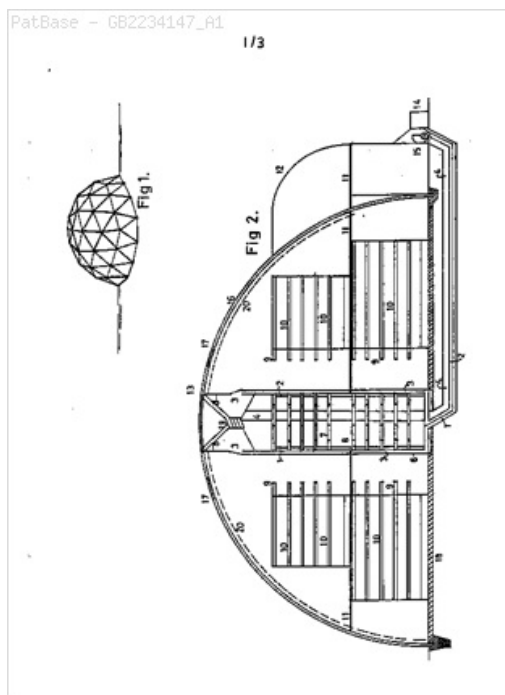
A01G9/14 (Advanced/Invention);

A01G31/00 A01G7/04 A01G9/14 (Core/Invention)

International (IPC 1-7): A01G31/00

CPC: A01G31/00 A01G7/045 A01G9/14 Y02P60/146

European: A01G31/00 A01G7/04B A01G9/14



Family:

Publication number	Publication date	Application number	Application date
GB2234147 A1	19910130	GB19890017430	19890729
GB8917430 A0	19890913	GB19890017430	19890729

Priority:

GB19890017430 19890729

Probable Assignee: ROGERS ANDAM A

Assignee(s): (std): ROGERS ANDAM A ; ROGERS DAVID M ; ROGERS DAVID MARTIN ; ROGERS ANDAM ADEL

Assignee(s): ANDAM ADEL ROGERS ; DAVID MARTIN ROGERS

Inventor(s): (std): ROGERS DAVID MARTIN ; ROGERS ANDAM ADEL

Inventor(s): DAVID MARTIN ROGERS ; ANDAM ADEL ROGERS

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
GB2234147 A1	19910130	LSPB	+	published / reissued	
GB2234147 A1	19911127	LSWD	-WAP	APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	

Title: High efficiency optical limited scan antenna

Abstract: Source: US4825216A An optical limited scan antenna system is disclosed. The invention is a dual lens type array antenna system with a small array feed network. The system includes a bootlace-type microwave aperture lens with an array of radiating elements arranged along the linear aperture and an array of pickup elements arranged along the curved inner surface, an intermediate optical corrective lens, a feed array for illuminating the corrective lens with a source distribution, and with a power divider and phase shifters arranged to drive the feed array. The corrective lens is circularly symmetric (spherically symmetric in the three-dimensional case), and its radially varying dielectric constant is such that a point source on its surface is focused to an image point on the inner surface. The pickup elements on the curved surface of the aperture lens are coupled to corresponding radiating elements on the linear aperture. The corrective and aperture lens cooperate to map an input or source distribution into an aperture distribution which is a scaled version of the source distribution. The system results in high efficiency obtained with a minimum number of active elements and relatively low cost optical components.

Classifications:

International (IPC 8-9): H01Q19/06 H01Q21/00 H01Q3/26

H01Q3/30 (Advanced/Invention);

H01Q19/00 H01Q21/00 H01Q3/26 H01Q3/30 (Core/Invention);

H01Q (Subclass/Invention)

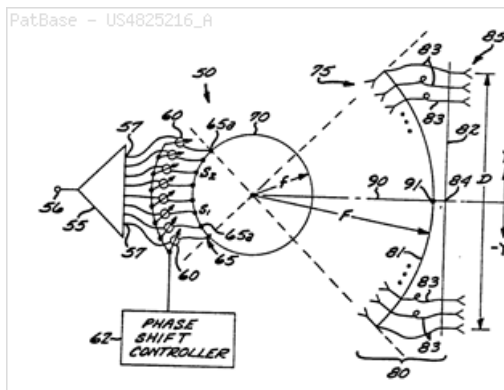
International (IPC 1-7): H01Q19/06 H01Q21/00 H01Q3/00 H01Q3/26

H01Q3/30

CPC: H01Q3/2658 H01Q21/0031

European: H01Q21/00D4 H01Q3/26D

US: 342/372 342/376 343/754



Family:

Publication number	Publication date	Application number	Application date
DE3682771 D1	19920116	DE19863682771	19861202
EP0248886 A1	19871216	EP19870900450	19861202
EP0248886 B1	19911204	EP19870900450	19861202
ES2002439 AF	19880801	ES19860003262	19861203
IL80782 A0	19870227	IL19860080782	19861126
IL80782 A1	19901223	IL19860080782	19861126
JP63502237 T2	19880825	JP19860500146	19861202
JP63502237 T2	19880825	JP19870500146	19861202
NO873049 A	19870721	NO19870003049	19870721
NO873049 A0	19870721	NO19870003049	19870721
US4825216 A	19890425	US19850805068	19851204
WO8703746 A1	19870618	WO1986US02590	19861202

Priority:

US19850805068 19851204 WO1986US02590 19861202

Probable Assignee:

HUGHES AIRCRAFT CO

Assignee(s): (std):

HUGHES AIRCRAFT CO

Assignee(s):

HUGHES AIRCRAFT COMPANY ; RAYTHEON CO

Inventor(s): (std):

DUFORT EDWARD C

Agent(s):

SANFORD TCOLB AND CO

Designated states:

CH DE FR GB IT JP LI NL NO SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE3682771 D1	19930107	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE3682771 D1	19990826	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : RAYTHEON CO. (N.D.GES.D. STAATES DELAWARE), LEXING
DE3682771 D1	20020214	LSLE	-8339	CEASED/NON-PAYMENT OF THE ANNUAL FEE	
EP0248886 A1	19871216	LSPB	+	published / reissued	
EP0248886 A1	19871216	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19870803
EP0248886 A1	19891129	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19891017
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EP0248886 A1	19941231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 19941231 YEAR OF FEE PAYMENT : 09
EP0248886 A1	19950131	LSLE	-EUG	SE: EUROPEAN PATENT HAS LAPSED	REF DOCUMENT NUMBER : 87900450.5 EFFECTIVE DATE : 19940710 FORMAT OF REF DOCUMENT (F/P) : F
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EP0248886 A1	19960701	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL EFFECTIVE DATE : 19960701
EP0248886 A1	19960815	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0248886 A1	19960902	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE	EFFECTIVE DATE : 19960701
EP0248886 A1	19991111	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 19991111 YEAR OF FEE PAYMENT : 14
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EP0248886 A1	19991129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 19991129 YEAR OF FEE PAYMENT : 14
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EP0248886 A1	20010725	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20001202
EP0248886 A1	20010831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20010831
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EP0248886 B1	19911204	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0248886 B1	20061202	PEXP		Calculated Patent Term Expiry	
ES2002439 AF	19880801	LSGT	+	granted / extensions (spc, cpc, pte)	
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ES2002439 AF	20061203	PEXP		Calculated Patent Term Expiry	
IL80782 A0	19970218	LSFE	+KB	PATENT RENEWED	
IL80782 A0	19990620	LSAS	HC	CHANGE OF NAME OF PROPRIETOR(S)	
IL80782 A0	20010724	LSLE	-MM9K	PATENT NOT IN FORCE DUE TO NON-PAYMENT OF RENEWAL FEES	
IL80782 A1	19901223	LSPB	+	published / reissued	
JP63502237 T2	19880825	LSPB	+	published / reissued	
JP63502237 T2	19880825	LSPB	+	published / reissued	
NO873049 A	19870721	LSPB	+	published / reissued	
US4825216 A	19890425	LSGT	+	granted / extensions (spc, cpc, pte)	
US4825216 A	19851204	LSAS	AS	ASSIGNMENT	OWNER NAME : HUGHES AIRCRAFT COMPANY, EL SEGUNDO, CA., A CORP O DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR:DU FORT, EDWARD C.; REEL/FRAME:004493/0470 EFFECTIVE DATE : 19850726
US4825216 A	19890301	LSGT	PAT1	Patented Case	
US4825216 A	19930426	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4825216 A	19970425	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4825216 A	20010422	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US4825216 A	20010626	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20010425
WO8703746 A1	19870618	LSPB	+	published / reissued	
WO8703746 A1	19870803	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1987900450 COUNTRY OF REF DOCUMENT : EP
WO8703746 A1	19871216	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1987900450 COUNTRY OF REF DOCUMENT : EP
WO8703746 A1	19911204	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1987900450 COUNTRY OF REF DOCUMENT : EP

Title: **DOME** HUBS FOR **GEODESIC** CONSTRUCTION

Abstract: Source: US3877824A Goedesic **structures** generally comprise a plurality of members arranged to form polygon spaces and joined together by **dome** hubs. The overall **structure** commonly takes the form of a hemisphere. Prior **dome** hubs for small portable **structures** have been found too weak when the **structure** is subjected to high winds or when snow accumulates unevenly or when the snow on one side thaws and slides off. The weakness has been found due to individual members suffering tensile stresses and withdrawing from **dome** hub sockets. The present invention provides lightweight easily assembled **dome** hubs which lock the structural members against inadvertent withdrawal.

Classifications:

International (IPC 8-9): E04B7/06 E04B7/10

F16B1/00 (Advanced/Invention);

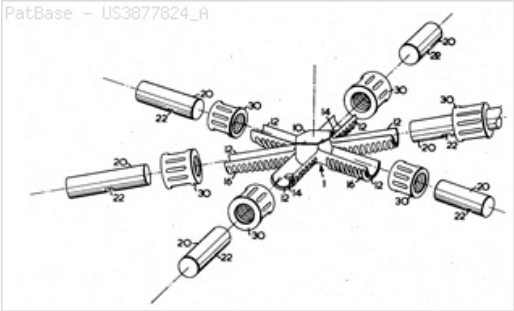
E04B7/06 E04B7/10 F16B1/00 (Core/Invention)

International (IPC 1-7): E04B1/32 E04B1/58 E04B7/06 F16B1/00

CPC: Y10S52/10 E04B7/105 Y10T403/345 Y10T403/347 Y10T403/65 Y10T403/69

European: E04B7/10C

US: 403/174 403/176 403/339 403/344 416/207 416/244R 52/81.3 52/DIG.10



Family:

Publication number	Publication date	Application number	Application date
CA981867 A1	19760120	CA19730171788	19730518
US3877824 A	19750415	US19730385120	19730802

Priority:

CA19730171788 19730518

Probable Assignee:

ARTHUR BELL

Assignee(s): (std):

ARTHUR BELL ; BELL ARTHUR

Assignee(s):

JURY RAE G ; RAE G JURY

Inventor(s): (std):

JURY RAE G ; JURY RAE GOLDWIN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US3877824 A	19750415	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: SPHERE-**DOME** CONSTRUCTION

Abstract: Source: US3696566A A self-supporting **dome**-like or sphere-like **structure** made of interconnected linear or planar elements, comparable to a **geodesic dome** and comprising, in the full sphere approximation, 12 regular pentagons and, in the simplest case, 60 irregular but identical hexagons. For higher orders of the **structure**, the number of pentagons remains 12 but the number of hexagons increases according to the formula $N_k = 3N_{k-1} + 20$, WHERE N_k is the number of hexagons in a sphere approximation of order k , and N_{k-1} is the number of hexagons in a sphere approximation of order $(k-1)$.

Classifications:

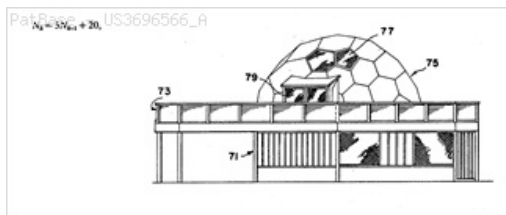
International (IPC 8-9): E04B1/32 E04B1/342 (Advanced/Invention); E04B1/32 E04B1/342 (Core/Invention)

International (IPC 1-7): E04B1/32 E04B1/342

CPC: Y10S52/10 E04B1/3211 E04B2001/3223 E04B2001/3294

European: E04B1/32C P04B1/32K P04B1/32S

US: 52/80 52/800 52/81.1 52/DIG.1 52/DIG.10 D25/13



Family:

Publication number	Publication date	Application number	Application date
CA959227 A1	19741217	CA19710104511	19710204
CA959228 A1	19741217	CA19740197401	19740411
CA959228 A2	19741217	CA19740197401	19740411
US3696566 A	19721010	US19700076107	19700928

Priority:

CA19710104511 19710204 CA19740197401 19740411 US19700076107 19700928

Probable Assignee: LANGNER DOMES LTD

Assignee(s): (std): LANGNER DOMES LIMITED ; LANGNER DOMES LTD

Assignee(s): LANGNER HORST EP

Inventor(s): (std): LANGNER HORST E P ; LANGNER HORST EGON PHILLIP

Inventor(s): LANGNER HORST EP ; HORST EGON PHILLIP LANGNER

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA959228 A2	19741217	LSGT	+	granted / extensions (spc, cpc, pte)	
US3696566 A	19721010	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: UNIVERSAL HUB AND STRUT SYSTEM FOR A **GEODESIC** ENCLOSURE

Abstract: Source: US2013152486A An improved universal hub and strut system for a **geodesic** enclosure framework is disclosed. The universal hub and strut system disclosed herein allows a **geodesic structure** to be more quickly assembled and with increased integrity. The **geodesic structure** is assembled by interconnecting a plurality of universal hubs and struts at each vertex of a **geodesic** spatial framework. To connect a strut to a universal hub of the present system, a strut-tab on a strut end overlaps a hub-tab of the universal hub, which is secured together via a fastening means through the respective ports. Based on the flexibility of the hub-tabs, the **geodesic structure** design disclosed herein may depart from the geometric designs associated with traditional **geodesic structures**. The invention may be applied in any **geodesic** type **dome, structure**, or enclosure.

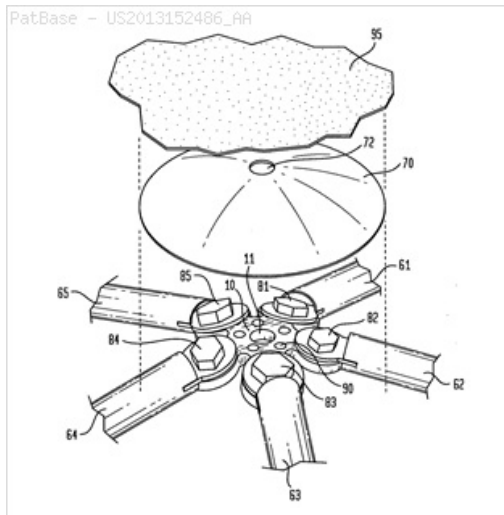
Classifications:

International (IPC 8-9): E04B1/38 E04B7/08

E04B7/10 (Advanced/Invention)

CPC: E04B2001/1927 E04B2001/3247 E04B2001/3252 E04B1/32

US: 52/653.1 52/655.1 52/81.3



Family:

Publication number	Publication date	Application number	Application date
US2013152486 AA	20130620	US20110374194	20111215
US8782965 BB	20140722	US20110374194	20111215

Priority:

US20110374194 20111215

Probable Assignee: HAVA HEATHER MARIE

Assignee(s): (std): HAVA HEATHER MARIE

Inventor(s): (std): HAVA HEATHER MARIE

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
US2013152486 AA	20130620	LSPB	+	published / reissued	
US8782965 BB	20140722	LSGT	+	granted / extensions (spc, cpc, pte)	
US8782965 BB	20140702	LSGT	PAT1	Patented Case	
US8782965 BB	20311215	PEXP		Calculated Patent Term Expiry	

Title: LED LIGHT SOURCE

Abstract: Source: US2014226337A Proposed is a lighting module 100 and an illumination device 200 comprising such a module. The lighting module comprises an array of LEDs 120 mounted on a substrate 110 and an optical **structure** 130 encompassing the LED array for approximating in operation the LED array as a single homogeneous light source. The optical **structure** comprises an optical element 140 arranged to provide a luminous intensity profile as a function of a deviation angle α which is substantially constant between $-\alpha_{\max}$ and $\alpha_{\max}$, wherein $\alpha_{\max}$ is a maximum deviation angle provided by the optical element and substantially zero at angles outside that range. This is especially advantageous for optimizing the trade off between creating a single homogenous light source and maintaining the extendue of the light source. An additional advantage of the optical element 140 is that, except for fresnel reflections on both surfaces, it has no backscattering like a diffuser has, which results in a very low optical loss.

Classifications:

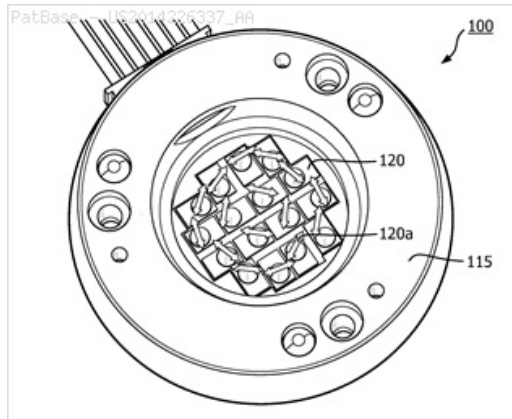
International (IPC 8-9): F21K99/00 F21S2/00 F21V5/04 H01L25/075 H01L33/58 (Advanced/Invention);

F21V13/04 F21Y101/00 F21Y101/02 H01L33/58 (Advanced/Non-invention)

CPC: F21V5/04 F21V13/04 F21Y2101/00 F21Y2105/10 F21Y2115/10 H01L25/0753 H01L33/58 H01L2924/0002 H01L2924/00 F21K9/60

European: H01L33/58

US: 362/293 362/311.02



Family:

Publication number	Publication date	Application number	Application date
CN103636011 A	20140312	CN201280029661	20120615
CN103636011 B	20171027	CN201280029661	20120615
EP2721656 A1	20140423	EP20120735032	20120615
JP2014517489 T2	20140717	JP20140515331T	20120615
JP6096180 B2	20170315	JP20140515331T	20120615
US2014226337 AA	20140814	US20120126097	20120615
US9541240 BB	20170110	US20120126097	20120615
WO12172510 A1	20121220	WO20121B53020	20120615

Priority:

EP20110170276 20110617 EP20120735032 20120615 WO20121B53020 20120615

Probable Assignee: PHILIPS LIGHTING HOLDING BV

Assignee(s): (std): KONINKL PHILIPS ELECTRONICS NV ; KONINKL PHILIPS NV ; OEPTS WOUTER ; TIMMERS WILHELMUS ADRIANUS GERARDUS ; PHILIPS LIGHTING HOLDING BV

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

Inventor(s): (std): OEPTS WOUTER ; TIMMERS WILHELMUS ADRIANUS GERARDUS

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

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

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN103636011 A	20140312	LSPB	+	published / reissued	
CN103636011 A	20170405	LSAS	TA01	TRANSFER OF PATENT APPLICATION RIGHT	
CN103636011 B	20171027	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103636011 B	20171027	LSGT	+GR01	PATENT GRANT	
CN103636011 B	20320615	PEXP		Calculated Patent Term Expiry	
EP2721656 A1	20140423	LSPB	+	published / reissued	
EP2721656 A1	20140423	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140117

EP2721656 A1	20160824	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : PHILIPS LIGHTING HOLDING B.V.
EP2721656 A1	20170927	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20170829
JP2014517489 T2	20140717	LSPB	+	published / reissued	
JP2014517489 T2	20150526	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150526
JP2014517489 T2	20150526	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20150526
JP2014517489 T2	20160329	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20160329
JP2014517489 T2	20160330	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	TEXT : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20160330
JP2014517489 T2	20160927	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160927
JP2014517489 T2	20170105	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014517489 T2	20170120	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	TEXT : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20170120
JP2014517489 T2	20170223	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	TEXT : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20170215
JP2014517489 T2	20170224	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150 REF DOCUMENT NUMBER : 6096180 COUNTRY OF REF DOCUMENT : JP
JP6096180 B2	20170315	LSGT	+	granted / extensions (spc, cpc, pte)	
JP6096180 B2	20320615	PEXP		Calculated Patent Term Expiry	
US2014226337 AA	20140814	LSPB	+	published / reissued	
US2014226337 AA	20131213	LSAS	AS	ASSIGNMENT	OWNER NAME : KONINKLIJKE PHILIPS N.V., NETHERLANDS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TIMMERS, WILHELMUS ADRIANUS GERARDUS; OEPTS, WOUTER; REEL/FRAME:031779/0191 EFFECTIVE DATE : 20131011
US2014226337 AA	20160913	LSAS	AS	ASSIGNMENT	OWNER NAME : PHILIPS LIGHTING HOLDING B.V., NETHERLANDS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:KONINKLIJKE PHILIPS N.V.; REEL/FRAME:040060/0009 EFFECTIVE DATE : 20160607
US9541240 BB	20170110	LSGT	+	granted / extensions (spc, cpc, pte)	
US9541240 BB	20161221	LSGT	PAT1	Patented Case	
US9541240 BB	20330729	PEXP		Calculated Patent Term Expiry (PTA 409 days)	
WO12172510 A1	20121220	LSPB	+	published / reissued	
WO12172510 A1	20131127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014515331 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A

WO12172510 A1	20131217	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12172510 A1	20140212	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14126097 COUNTRY OF REF DOCUMENT : US

Title: BUILDING **STRUCTURE**

Abstract: Source: GB836466A 836,466. Building units; joining metal sheets; transparent sheets; floors and c. KAISER ALUMINUM and CHEMICAL CORPORATION Aug. 12, 1957 [Jan. 7, 1957], No. 25423/57. Classes 20(2), 20(3), 20(4) and 87(1) A structural unit for building roofs, ceilings, walls, **domes** and c., comprises a diamond-shaped or square sheet 1 of aluminium, synthetic plastics, glass and c., bowed about its axis M-M, the corners 4, 5 on the other diagonal axis N-N being connected by a hollow strut 6. The sheet is creased along lines 12, 13 radiating from the corners 2, 3 respectively, and marginal flanges are provided as at 7, 8. The units are so assembled to form a substantially plane wall and c., or a **geodesic dome** that the struts form a framework of hexagons, Fig. 4, or other regular polygons. Each set of six units is connected at a common vortex by a member 20, Figs. 4, 6, each unit being secured to one spoke 42 of the member 20 by bolts or rivets engaged in registering openings 50, 50¹ in the unit and spoke respectively. The flanges of adjacent units are connected by engaging bolts or rivets in openings 52 or by applying a sealing compound or by welding, and the struts also are connected to one another. Additional triangular units 20¹, Fig. 4, with or without a strut along one edge may be used to complete the **structure**.

Classifications:

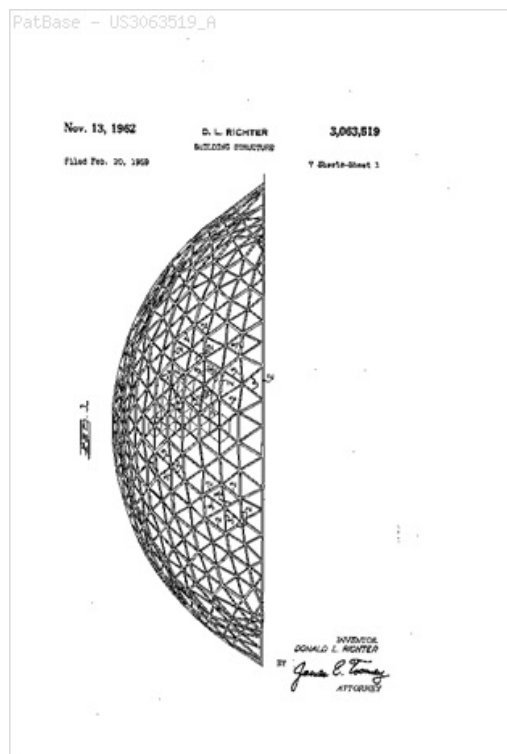
International (IPC 8-9): E04B1/32 E04B7/10
E04C2/08 (Advanced/Invention)

International (IPC 1-7): E04B1/32 E04B1/58 E04B7/08 E04C2/08
E04C2/50 E04C3/08 E04H15/00 E04H6/44

CPC: E04B1/3211 E04B7/10 E04B7/102 E04B7/105 E04B2001/3247
E04B2001/3252 E04B2001/3294 E04C2/08

European: E04B1/32C E04B7/10 E04B7/10B E04B7/10C E04C2/08
P04B1/32M1B P04B1/32M2 P04B1/32S

US: 52/652.1 52/745.07 52/801.11 52/81.2



Family:

Publication number	Publication date	Application number	Application date
BE561898 A	19571114		00000000
CH360794 A	19620315		19570830
DE1116371 B	19611102	DE1957K032783	19570823
FR1184932 A	19590728		00000000
FR77191 E	19620127	FR19600819118	19600220
GB836466 A	19600601	GB19570025423	19570812
GB924868 A	19630501	GB19600005342	19600215
US3063519 A	19621113	US19590794564	19590220

Priority:

US19590794564 19590220

Probable Assignee: KAISER ALUMINIUM CHEM CORP

Assignee(s): (std): KAISER ALUMINIUM CHEM CORP

Assignee(s): KAISER ALUMINUM AND CHEMICAL CORP ; KAISER ALUMINIUM AND CHEMICAL CORP

Inventor(s): (std): RICHTER DONALD L ; RICHTER DONALD LOUIS ; DONALD LOUIS RICHTER

Inventor(s): LOUIS RICHTER DONALD

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BE561898 A	19571114	LSPB	+	published / reissued	
BE561898 A	19200101	PEXP		Calculated Patent Term Expiry	
CH360794 A	19620315	LSGT	+	granted / extensions (spc, cpc, pte)	
CH360794 A	19770830	PEXP		Calculated Patent Term Expiry	
DE1116371 B	19611102	LSPB	+	published / reissued	
FR1184932 A	19590728	LSGT	+	granted / extensions (spc, cpc, pte)	

GB836466 A	19600601	LSGT	+	granted / extensions (spc, cpc, pte)
GB836466 A	19770812	PEXP		Calculated Patent Term Expiry
GB924868 A	19630501	LSGT	+	granted / extensions (spc, cpc, pte)
GB924868 A	19800215	PEXP		Calculated Patent Term Expiry
US3063519 A	19621113	LSGT	+	granted / extensions (spc, cpc, pte)

Title: COMPOSITE AIR **DOME STRUCTURE**

Abstract: Source: US3057368A (Claim 1) 1. Composite air **dome structure** comprising an outer air-sUPPOTted **dome**-shaped skin, a base ring attached to the base portion of said skin, a **geodesic** framework carried on said ring within said skin, and an inner flexible skin having a contintious air seat connection with said z.5 outer skin base portion and supported on the outer surface of said framework in spaced Telation to said outer skin.

Classifications:

International (ipc 8-9): E04H15/22 (Advanced/Invention);

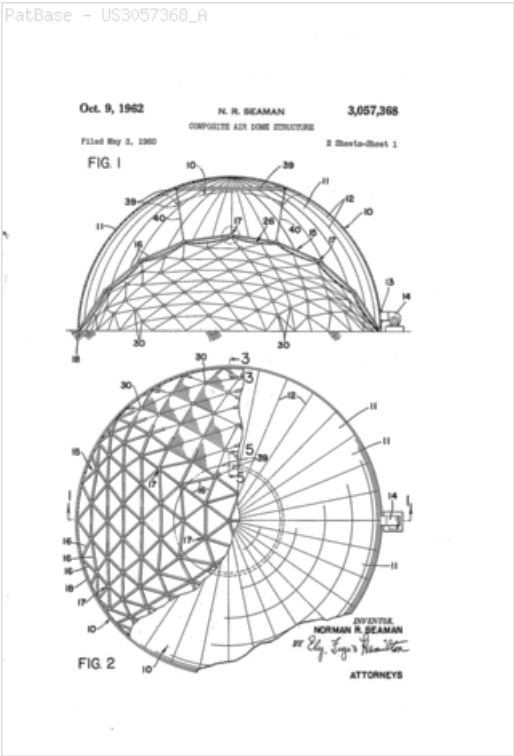
E04H15/20 (Core/Invention)

International (ipc 1-7): E04B1/345

CPC: E04H15/22

European: E04H15/22

US: 264/32 52/2.17 D25/13 D25/19



Family:

Publication number	Publication date	Application number	Application date
US3057368 A	19621009	US19600026615	19600503

Priority:

US19600026615 19600503

Probable Assignee:

SEAMAN NORMAN R

Assignee(s): (std):

SEAMAN NORMAN R

Inventor(s): (std):

SEAMAN NORMAN R

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US3057368 A	19621009	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: **Domes**; building units.

Abstract: Source: GB926229A 926,229. **Domes**; building units. R. B. FULLER. May 18, 1961 [May 27, 1960], No. 18128/61. Classes 20 (4) and 87 (1). In a **geodesic dome** consisting of panels arranged in overlapping relation to one another, each panel is made up from inner and outer sheets separated by spacing means and the panels when assembled are arranged to exhibit an overall pattern of triangular facets paired in diamond-shaped sections-the triangular facets of a pair being disposed at an angle to one another. The panel, Figs. 3 and 4, may consist of inner and outer sheets 5, 6 of paper-board, Kraft paper, metal foil or plastic with a core 7 of expanded polystyrene or corrugated sheet therebetween. Each panel is provided with four attachment flaps 8 whereby it may be secured by a contact-type adhesive to adjacent panels. Each panel may be scored along the major or minor axis and may be waterproofed. Some or all of the panels of the **dome** may consist of two sheets 3, 3¹, Fig. 7, one of which is bent into inward convexity about the longer axis whilst the other sheet is bent into outward convexity about its shorter axis. The two sheets are secured to form an irregular tetrahedron or double hollow panel which may have portions a, b removed to define weatherproof vents. The various panels described above may be interconnected in various combinations to define **domes**, spheres and hemispheres for details of which the Specification and remaining drawings should be referred to. Dimensions and design desiderata are also dealt with in the Specification.

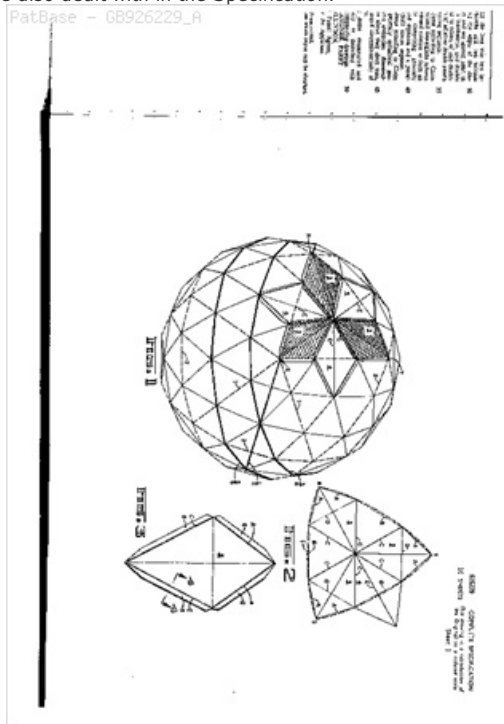
Classifications:

International (IPC 8-9): E04B7/10 (Advanced/Invention); E04B7/10 (Core/Invention)

International (IPC 1-7): B31D3/02 E04B1/32 E04B7/08

CPC: E04B7/10 E04B7/107

European: E04B7/10 E04B7/10D



Family:

Publication number	Publication date	Application number	Application date
BE604219 A	00000000		00000000
FR1294387 A	19620526	FR19610863124	19610527
GB926229 A	00000000		00000000
NL265182 A	00000000		00000000

Priority:

FR19610863124 19610527

Inventor(s): (std): FULLER RICHARD BUCKMINSTER

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
BE604219 A	00000000	LSPB	+	published / reissued	
BE604219 A	19200101	PEXP		Calculated Patent Term Expiry	
FR1294387 A	19620526	LSGT	+	granted / extensions (spc, cpc, pte)	
FR1294387 A	19810527	PEXP		Calculated Patent Term Expiry	
GB926229 A	00000000	LSGT	+	granted / extensions (spc, cpc, pte)	
NL265182 A	00000000	LSPB	+	published / reissued	

Title: SPIRAL HELIX TENSEGRITY **DOMES**

Abstract: Source: US4901483A A building of **geodesic dome** type based on a variant of the helix formula and exhibiting the engineering characteristic known as tensegrity. All juncture points are precisely located from the jig for construction. A method of top closure enabling easy construction is included.

Classifications:

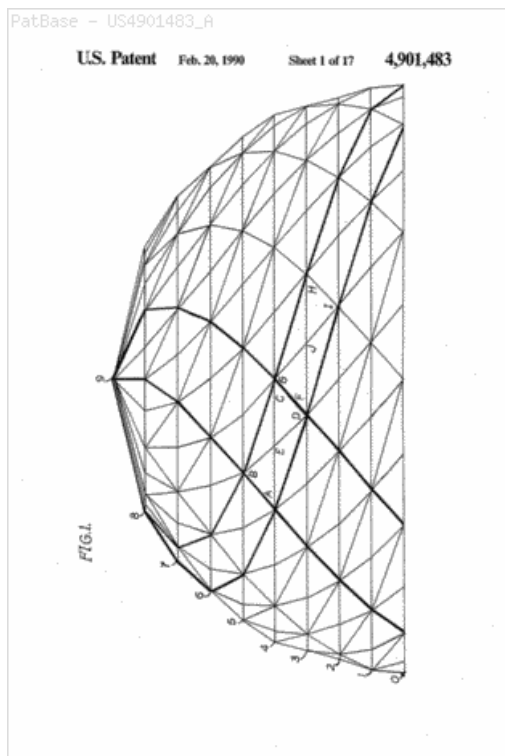
International (IPC 8-9): E04B1/32 (Advanced/Invention);
E04B1/32 (Core/Invention)

International (IPC 1-7): E04B1/32

CPC: Y10S52/10 E04B1/3211 E04B2001/3288 E04B2001/3294

European: E04B1/32C P04B1/32P2 P04B1/32S

US: 52/81 52/81.2 52/DIG.1 52/DIG.10



Family:

Publication number	Publication date	Application number	Application date
US4901483 A	19900220	US19880248340	19880920

Priority:

US19840603341 19840416 US19860891401 19860502 US19880248340 19880920

Probable Assignee:

HUEGY CHARLES W

Assignee(s): (std):

HUEGY CHARLES W

Inventor(s): (std):

HUEGY CHARLES W

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US4901483 A	19900220	LSGT	+	granted / extensions (spc, cpc, pte)	
US4901483 A	19891215	LSGT	PAT1	Patented Case	
US4901483 A	19930706	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4901483 A	19970930	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4901483 A	20010529	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US4901483 A	20080920	PEXP		Calculated Patent Term Expiry	

Title: **GEODESIC DOME**, METHOD FOR CARRYING OUT A **GEODESIC DOME** AND **GEODESIC DOME**-TYPE MODULES

Abstract: Source: RO123358B The invention relates to a **geodesic dome**, a method for carrying out a **geodesic dome** and a **geodesic dome**-type module system. According to the invention, the **dome** has a **geodesic** shape in the class of dual polyhedra, and less in the class of regular polyhedra, such as tetrahedron, cube, octahedron, dodecahedron and icosahedron having all the faces identical with one another, and comprises some main long and short girders (1 and 2), some joints (I), some transparent, semitransparent or opaque faces (F), some insulations and some auxiliary devices. The method, as claimed by the invention, consists in that the number of girders and faces of the **dome** is determined by generating a maximal number of right triangles of the faces of the dual polyhedron selected for the **geodesic** shape of the **dome**, by symmetrically dividing said faces and designing the polyhedron junction points and the junction points resulting from division on a polyhedron-concentric sphere, and using some X-shaped girders assembled in a self-supporting **structure** or some panels embedding some crossing girders, thereby supporting some **structure** elements during assembling, followed by obturating the holes of an envelope with some prefabricated blocks made of insulating foams, which are integral or not with the external panels of the envelope, or with some windows, followed by placing the covering and inside placing the internal panels and installations. The system claimed by the invention is carried out in the shape of a rhombic tricontahedron arranged in plane cubic, hexagonal, pentagonal or decagonal distributions, in spatial cube, icosahedron, dodecahedron distributions, pentagonal, hexagonal, cylindrical or helical pyramids or truncated icosahedric pyramids.

Classifications:

International (IPC 8-9): E04B1/32 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
RO123358 B1	20111028	RO20070000690	20071003

Priority:

RO20070000690 20071003

Probable Assignee: DOBRESCU FLORIN

Assignee(s): (std): DOBRESCU FLORIN

Inventor(s): (std): DOBRESCU FLORIN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
RO123358 B1	20271003	PEXP		Calculated Patent Term Expiry	

Title: Polygon-shaped structural panel and construction method for **geodesic domes**

Abstract: Source: US2002078635A A method and structural component for use in constructing **geodesic domes** using standardized polygon panels. The invention allows for the use of a reduced number of components to construct a **geodesic dome**. In one embodiment, a set of kite-shaped quadrilateral panels with an external convex surface are used to substantially construct a **geodesic dome**. A panel includes two lip seal panel edges. The lip seam edge includes an inwardly disposed lip forming a mating surface suitable for mating with an adjacent straight seam edge of a corresponding panel so that the engagement between the two edges forms a seal. The seal may be made to impede moisture by various fastening methods, including screwing, riveting, gluing, taping or welding. Practice of the invention reduces transportation, inventory, and handling expense. Procurement, assembly, and maintenance complexity for the end user is also reduced.

Classifications:

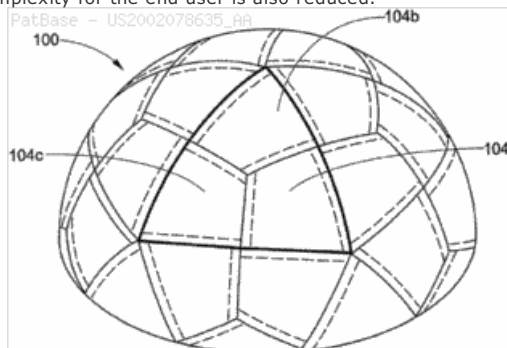
International (IPC 8-9): E04B1/32 E04B7/10 (Advanced/Invention); E04B1/32 E04B7/10 (Core/Invention)

International (IPC 1-7): E04B1/34 E04B7/00 E04B7/08

CPC: E04B1/3211 E04B7/102 E04B2001/3276 E04B2001/3288 E04B2001/3294

European: E04B1/32C E04B7/10B P04B1/32P1 P04B1/32P2 P04B1/32S

US: 52/80.1 52/80.1 52/81.1 52/81.4 52/81.5 52/81.1 52/81.4 52/81.5



Family:

Publication number	Publication date	Application number	Application date
US2002078635 AA	20020627	US20010971257	20011004
US6658800 BB	20031209	US20010971257	20011004

Priority:

US20000243075P 20001025 US20010971257 20011004

Probable Assignee:

MONSON JAMES C

Assignee(s): (std):

MONSON JAMES C ; MONSON JOHN A

Inventor(s): (std):

MONSON JAMES C ; MONSON JOHN A

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2002078635 AA	20020627	LSPB	+	published / reissued	
US6658800 BB	20031209	LSGT	+	granted / extensions (spc, cpc, pte)	
US6658800 BB	20071209	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6658800 BB	20080107	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US6658800 BB	20080129	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20071209
US6658800 BB	20211201	PEXP		Calculated Patent Term Expiry (PTA 58 days)	

Title: **GEODESIC STRUCTURE**

Abstract: Source: US7389612B A **geodesic structure** comprising convex-concave elements. The elements are easily manufactured, simple shapes that can be assembled randomly to form a **geodesic structure**, such as a **dome**. The **geodesic structure** can also be used to make flat maps of spherical bodies, exhibiting very little distortion.

Classifications:

International (IPC 8-9): E04B1/32 (Advanced/Invention);

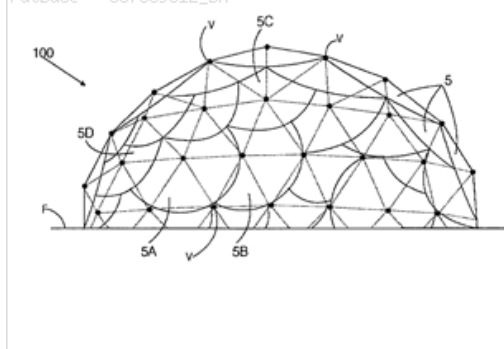
E04B1/32 (Core/Invention)

CPC: E04B1/3211 E04B2001/327 Y10S52/10

European: E04B1/32C P04B1/32P

US: 52/655.2 52/81.1 52/81.4 52/811 52/82 52/DIG.1 52/DIG.10

PatBase - US7389612_BA

**Family:**

Publication number	Publication date	Application number	Application date
US7389612 BA	20080624	US20010928717	20010809

Priority:

US20010928717 20010809

Probable Assignee:

FISCHBECK RICHARD D

Assignee(s): (std):

FISCHBECK RICHARD D

Inventor(s): (std):

FISCHBECK RICHARD D

Agent(s):

MATHERS PATRICIA M; PATRICIA M

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US7389612 BA	20080624	LSGT	+	granted / extensions (spc, cpc, pte)	
US7389612 BA	20080604	LSGT	PAT1	Patented Case	
US7389612 BA	20110701	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7389612 BA	20160624	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US7389612 BA	20160725	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US7389612 BA	20160816	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160624
US7389612 BA	20210809	PEXP		Calculated Patent Term Expiry	

Title: INFLATABLE FORMERS

Abstract: Source: GB1242647A 1,242,647. Inflatable formers. H. HEIFETZ. 4 March, 1969 [7 March, 1968], No. 11511/69. Heading B5A. [Also in Division E1] A removable former, over which the whole or part of a building is cast, comprises an inflatable form having a flexible base, the form being secured around the periphery of the base to a rigid or rigidizable ring. The ring is connected with either downwardly or upwardly radially inwardly directed curved rods or struts so that the pressure of the form inflating medium acting on the struts or rods through the base either pulls or pushes the ring downwardly into contact with its support, thereby counteracting the elevating effect of the inflated form. In the embodiment illustrated in Figs. 1 and 3, the form 1 having a base 8 and a peripheral inflatable anchoring pipe 32 is clamped by elements 22 to a segmented ring 4, inwardly directed downwardly curved cables 28 being attached at their outer ends to the ring 4 and at their inner ends to ring 30. The material cast over the form may be cement or plastics, e.g. glass fibre reinforced polystyrene and the form may be made of rubberized fabric which if desired may be externally coated with hard rubber plates (see Figs. 13A, 13B) not shown. In a second embodiment (see Fig. 16, not shown), for particular use in casting ceilings, the form and base are connected to a ring as above and are supported by a similar set of cables, additional cables intended for retention as reinforcements in the cast article being fixed to the ring and running over the top of the form. In a third embodiment specifically intended for insitu casting, the form is connected to an in-situ cast concrete ring 85 by means of parts 86 set in the ring, against which parts the form is clamped by segments 90 and clamping elements 91.

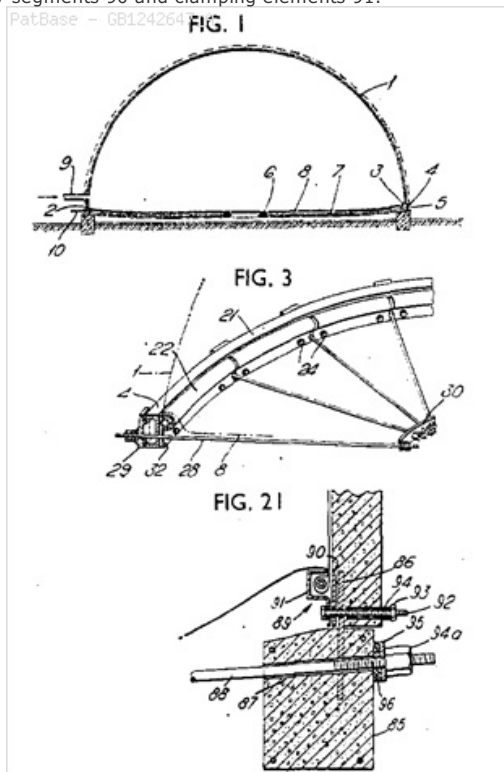
Classifications:**International (IPC 8-9):** E02D27/32 E04B1/16

E04G11/04 (Advanced/Invention);

E02D27/32 E04B1/16 E04G11/00 (Core/Invention)

International (IPC 1-7): B28B1/30 B29C13/00 B29C17/02

B29C17/03 B29H7/03 E02D27/00 E04G11/04

CPC: E04B1/169 E04G11/04 E04G11/045**European:** E04B1/16F1A E04G11/04**Family:**

Publication number	Publication date	Application number	Application date
CH515400 A	19711115	CH19690003158	19690303
CY626 A	19720121	CY19720000626	19720121
GB1242647 A	19710811	GB19690011511	19690304
JP50016580 B4	19750613	JP19690016928	19690307

Priority:

IL19680028018 19680307

Probable Assignee:

HEIFETZ H

Assignee(s): (std):

HEIFETZ H ; HEIFETZ HAIM

Assignee(s):

HAIM HEIFETZ

Inventor(s): (std):

HAIM HEIFETZ ; HEIFETZ HAIM

Legal status (INPADOC)

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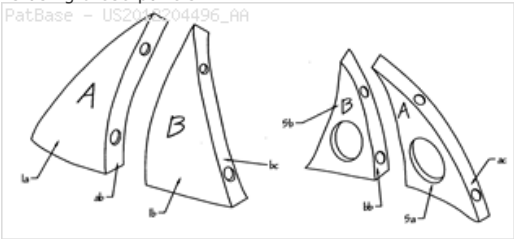
Patent	Date recorded	Event group	Code	Event	Details
CH515400 A	19711115	LSGT	+	granted / extensions (spc, cpc, pte)	
CH515400 A	19741015	LSLE	-PL	PATENT CEASED	
CH515400 A	19890303	PEXP		Calculated Patent Term Expiry	
CY626 A	19720121	LSGT	+	granted / extensions (spc, cpc, pte)	
CY626 A	19920121	PEXP		Calculated Patent Term Expiry	
GB1242647 A	19710811	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1242647 A	19711222	LSGT	+PS	PATENT SEALED	

GB1242647 A	19741002	LSLE	-PLNP	PATENT LAPSED THROUGH NONPAYMENT OF RENEWAL FEES
GB1242647 A	19890304	PEXP		Calculated Patent Term Expiry
JP50016580 B4	19750613	LSPB	+	published / reissued

Title: BUILDING PANEL MODULE, SPHERICAL SHELL AND METHOD FOR MAKING THE SAME

Abstract: Source: US2012204496A Synclastic hollow core building panels are employed to form dome-like structures. The synclastic curve allows the panels to be lightweight, yet capable of carrying the weight of the structural loads. When combined, the panels create a sphere or a section of a sphere for enclosing space, with optional egress, skylight, and foundation portals incorporated into the structure without disturbing the spherical curvature of the interior or exterior surfaces. The spheres or sphere sections require no additional framing; the panels themselves are the frame. Workers with only the basic assembly skills can construct a sphere or sphere sections using these panels.

Classifications:
International (IPC 8-9): B41D3/04 E04B1/32 E04B7/08 E04C2/30 E04C2/34 (Advanced/Invention)
CPC: E04B1/3211 E04B2001/3276
European: E04B1/32C P04B1/32P1
US: 249/154 249/154S 52/578 52/578S 52/783.1 52/783.100S 52/80.1 52/80.100P 52/81.1 52/81.4



Family:

Publication number	Publication date	Application number	Application date
US2012204496 AA	20120816	US20110932031	20110216
US8365474 BB	20130205	US20110932031	20110216

Priority:

US20110932031 20110216

Probable Assignee:	MCSWEENEY JOHN PATRICK
Assignee(s): (std):	MCSWEENEY JOHN PATRICK
Inventor(s): (std):	MCSWEENEY JOHN PATRICK
Agent(s):	PETER

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2012204496 AA	20120816	LSPB	+	published / reissued	
US8365474 BB	20130205	LSGT	+	granted / extensions (spc, cpc, pte)	
US8365474 BB	20130116	LSGT	PAT1	Patented Case	
US8365474 BB	20161206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8365474 BB	20310216	PEXP		Calculated Patent Term Expiry	

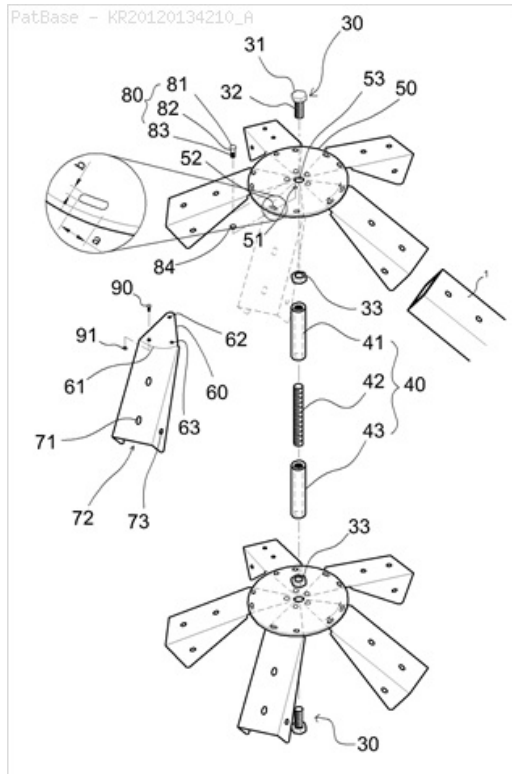
Title: **GEODESIC DOME** HAVING MULTITUDE **STRUCTURE**

Abstract: Source: KR20120134210A PURPOSE: A **geodesic dome** with multiple **structures** is provided to improve structural stability by connecting inner and outer **domes** to each other. CONSTITUTION: A **geodesic dome** with multiple **structures** comprises an inner **dome**, an outer **dome**, a protruded member(30), and an interlayer connection member(40). The protruded member is installed on the center top or center bottom of a connector of the inner and outer **domes**. The interlayer connection member is coupled to the protruded member and comprises an outer **dome** connection member(41), an inner **dome** connection member(42), and a length adjusting member(43). One side of the outer **dome** connection member is screwed on the protruded member of the outer **dome**, and one side of the inner **dome** connection member is screwed on the protruded member of the inner **dome**. The length adjusting member is screwed on the other sides of the outer and inner **dome** connection members.

Classifications:

International (IPC 8-9): E04B1/32 E04B1/58 (Advanced/Invention)

CPC: E04B1/3211 E04B1/1903 E04B1/2403 E04B1/58
E04B2001/1978 E04B2001/2406



Family:

Publication number	Publication date	Application number	Application date
KR101310327 B1	20130923	KR20110052986	20110601
KR20120134210 A	20121212	KR20110052986	20110601

Priority:

KR20110052986 20110601

Probable Assignee:

KIM YOUNG MAN

Assignee(s): (std):

KIM YOUNG MAN

Inventor(s): (std):

KIM YOUNG MAN

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
KR101310327 B1	20130923	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101310327 B1	20110601	LSSES	A201	REQUEST FOR EXAMINATION	
KR101310327 B1	20121212	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101310327 B1	20130912	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101310327 B1	20161116	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20161116 YEAR OF FEE PAYMENT : 4
KR101310327 B1	20310601	PEXP		Calculated Patent Term Expiry	
KR20120134210 A	20121212	LSPB	+	published / reissued	

Title: ESTRUCTURA MODULAR PARA CONFORMACION DE CUPULAS GEODESICAS MODULAR **STRUCTURE** FOR FORMATION OF **geodesic domes** (Machine translation)

Abstract: Source: ES1198233U [Source: Claim 1] 1. Estructura modular para conformation de cupulas geodesicas que comprende una pluralidad de paneles (1) de cuerpo geometrico con "n" lados adaptados para vincularse entre si y conformar una cupula geodesica (2), cada panel (1) comprende una primera tapa (1.1) y una segunda tapa (1.2) acopladas a un medio espaciador (1.3) de dichas tapas (1.1, 1.2), caracterizado por que el medio espaciador (1.3) comprende una pared perimetral (1.31) que conforma un primer espacio interior (1.32) entre la primera y la segunda tapa (1.1, 1.2), y sendas aberturas (1.311) estan dispuestas atravesando la pared perimetral (1.31) por cada uno de sus "n" lados, donde, cuando los paneles (1) estan vinculados conformando la cupula geodesica (2), las aberturas (1.311) estan adaptadas para comunicar los primeros espacios interiores (1.32) entre si. [Source: Claim 1] 1. Modular **structure** for conformation of **geodesic domes** that comprises a plurality of panels (1) geometric body with "n" sides adapted to engage with each other and form a **geodesic dome** (2), each panel (1) comprises a first lid and a second lid (1.1) (1.2) coupled to a spacer (1.3) of said covers (1.1, 1.2), characterized in that the spacer (1.3) comprises a perimetric wall (1.31) forming a first interior space (1.32) between the first and the second lid (1.1, 1.2), and respective openings (1,311) are arranged through the perimeter wall (1.31) for each one of its sides, where "n", when the panels (1) are linked by forming the **geodesic dome** (2), openings (1,311) are adapted to communicate The first interior spaces (1.32).

Classifications:
International (IPC 8-9): E04B1/32 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
ES1198233 UA	20171115	ES20170031333U	20171103

Priority:
ES20170031333U 20171103

Probable Assignee: PASCUAL SALGUERO DIEGO
Assignee(s): (std): PASCUAL SALGUERO DIEGO
Assignee(s): DIEGO PASCUAL SALGUERO
Inventor(s): (std): PASCUAL SALGUERO DIEGO
Inventor(s): DIEGO PASCUAL SALGUERO
Agent(s): CAPITAN NURIA

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
ES1198233 UA	20171115	LSPB	+	published / reissued	

Title: **Geodesic** inflatable **structure**, and methods of constructing and utilizing same

Abstract: Source: US4807405A A **geodesic** inflatable **structure** having a lattice-like support framework defined by a multiplicity of inflatable tubular ribs. Triangular frame sections defined by the ribs each support one of a multiplicity of inflatable panels having inner and outer plies defining an inflation chamber therein. When inflated with pressurized air or another inflation substance, the inflatable ribs and panels form a **geodesic dome structure**.

Classifications:

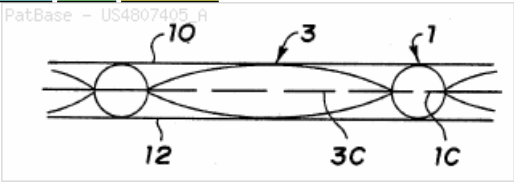
International (IPC 8-9): E04B1/32 E04H15/20 (Advanced/Invention); E04B1/32 E04H15/20 (Core/Invention)

International (IPC 1-7): E04B1/32

CPC: E04B1/3211 E04B2001/3294 E04H15/20 E04H2015/203

European: E04B1/32C E04H15/20 P04B1/32S P04H15/20C1

US: 52/2 52/2.18 52/81 52/81.4



Family:

Publication number	Publication date	Application number	Application date
US4807405 A	19890228	US19870087294	19870820

Priority:

US19870087294 19870820

Probable Assignee: BORGQUIST RONALD B

Assignee(s): (std): BORGQUIST RONALD B

Inventor(s): (std): BORGQUIST RONALD B

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US4807405 A	19890228	LSGT	+	granted / extensions (spc, cpc, pte)	
US4807405 A	19881230	LSGT	PAT1	Patented Case	
US4807405 A	19891031	LSRE	CC	CERTIFICATE OF CORRECTION	
US4807405 A	19920828	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4807405 A	19960828	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US4807405 A	20000321	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

Title: INTEGRATED SYSTEMS FOR HARNESSING SOLAR AND WIND ENERGY

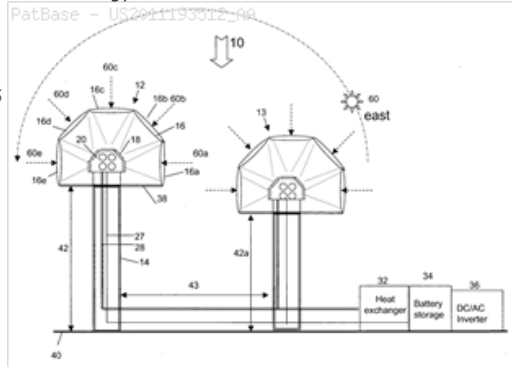
Abstract: Source: US2011193512A An energy farm system that harnesses energy from the environment has an integrated energy collector that harnesses solar light radiation, solar heat radiation, and harnesses wind energy. Some embodiments of the collector may be used for powering lights on a pole, communication equipment outdoors, and be suitable for powering homes and buildings. The collector harnesses wind energy by a horizontal axis rotation wind mill, harnesses solar light radiation by using a system of lenses that focus light to the center to the photovoltaic cells, and harnesses solar heat radiation by using a system of lenses that focus heat to the center to a heat exchanger. The collector mounted on a pole receives solar energy from the sun rays, as the sun travels from east to west. The lens elements focus light and heat radiation towards the center of the collector to a solar cell array and a solar energy collector.

Classifications:

International (IPC 8-9): F03G6/06 F24J2/08 F24S23/30 H01L31/04 H01L31/042 H01L31/058 H01M10/44 H01M10/46 (Advanced/Invention)
CPC: Y02E10/60 F24J2/08 F03D9/007 F24J2/07 H01M10/465 Y02B10/10 Y02B10/20 Y02B10/30 Y02B10/70 Y02E10/41 Y02E10/465 Y02E10/52 Y02E10/72 H01L31/0543 H02S10/10 H02S40/44 F03D9/11

European: F03D9/00E F03D9/02B F24J2/07 F24J2/08 H01L31/052B2 H01L31/058 H01L31/058B H01M10/46B Y02B10/10 Y02B10/20 Y02B10/30 Y02B10/70 Y02E10/41 Y02E10/46U Y02E10/52 Y02E10/72

US: 126/643 126/643S 126/683 126/683S 136/246 136/248 136/248S 136/259 136/259S 290/55 290/55S 320/101 320/101P 60/641.15 60/641.150S



Family:

Publication number	Publication date	Application number	Application date
US2011193512 AA	20110811	US20100658492	20100208
US8378621 BB	20130219	US20100658492	20100208

Priority:

US20100658492 20100208

Probable Assignee: SINGHAL MUKUNDA

Assignee(s): (std): SINGHAL MUKUNDA ; SINGHAL TARA CHAND

Inventor(s): (std): SINGHAL MUKUNDA ; SINGHAL TARA CHAND

Agent(s): STEVE

Legal status (INPADOC)

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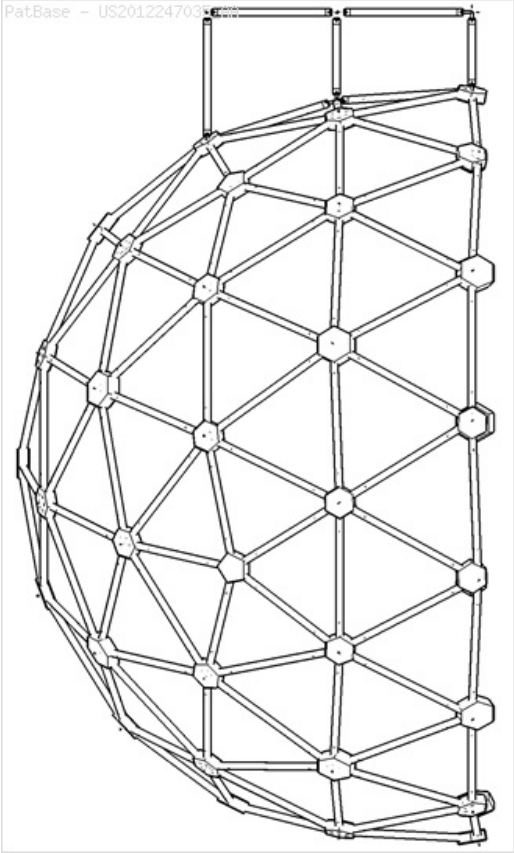
Patent	Date recorded	Event group	Code	Event	Details
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US8378621 BB	20130219	LSGT	+	granted / extensions (spc, cpc, pte)	
US8378621 BB	20130130	LSGT	PAT1	Patented Case	
US8378621 BB	20160807	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8378621 BB	20310115	PEXP		Calculated Patent Term Expiry (PTA 341 days)	

Title: HUB AND STRUT CONNECTION FOR CONSTRUCTING A **GEODESIC DOME**

Abstract: Source: US2012247035A The present invention relates generally to **geodesic dome structures**. More particularly, the present invention relates to a hub and strut connection for a **geodesic dome structure** and method for making same. The apparatus described herein provides a unique design for a **geodesic dome** utilizing materials that are affordable and readily available throughout much of the world for the construction and connection of hubs and struts.

Classifications:

International (IPC 8-9): E04B1/32 E04B1/38 E04B7/08
E04B7/10 (Advanced/Invention)
CPC: E04B1/3211 E04B2001/3247 E04B2001/3252
European: E04B1/32C P04B1/32M1B P04B1/32M2
US: 52/655.1 52/81.3



Family:

Publication number	Publication date	Application number	Application date
US2012247035 AA	20121004	US20120432013	20120328
US8820006 BB	20140902	US20120432013	20120328

Priority:

US20110469043P 20110329 US20120432013 20120328

Probable Assignee: ZOOK BRIAN PAUL
Assignee(s): (std): ZOOK BRIAN PAUL
Inventor(s): (std): ZOOK BRIAN PAUL

Legal status (INPADOC)

[View legal status timeline](#)

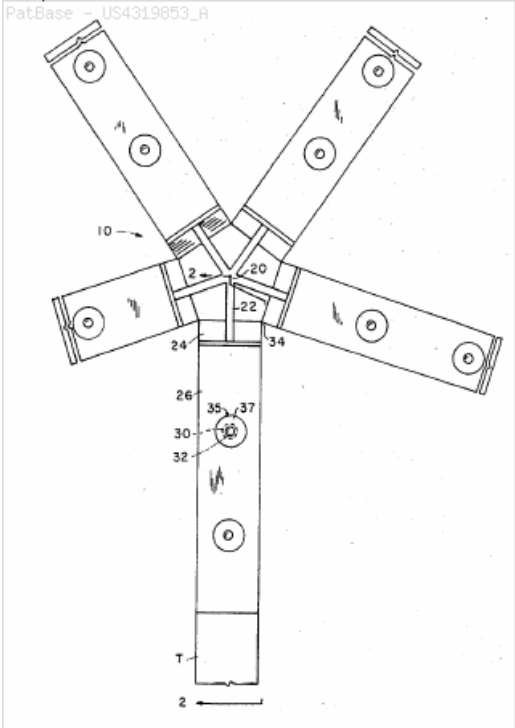
Patent	Date recorded	Event group	Code	Event	Details
US2012247035 AA	20121004	LSPB	+	published / reissued	
US8820006 BB	20140902	LSGT	+	granted / extensions (spc, cpc, pte)	
US8820006 BB	20140813	LSGT	PAT1	Patented Case	
US8820006 BB	20320328	PEXP		Calculated Patent Term Expiry	

Title: **GEODESIC DOME STRUCTURE** TIE-BEAM CONNECTOR

Abstract: Source: US4319853A A **geodesic dome structure** tie-beam connector provides an axially swept-back, flexibly alignable, circular array of paired-jaw bolt-tightened vises for holding respective tenon-ends of tie beams; each vise jaw pair is on the end of and generally aligned with a respective radially deployed rib and the jaws of each vise-jaw are axially spaced relative to the connector axis so that they clamp in a direction radial to a **geodesic dome** in which employed and can provide through oversize holes a degree of circumferential adjustment of the associated tie beams relative to a **geodesic dome** while preserving structural stiffness in directions radial to a **geodesic dome** as for example, in resisting snowloads; clear wrenching access for all types of wrenches is provided by the vise orientation.

Classifications:

International (IPC 8-9): E04B1/32 (Advanced/Invention);
E04B1/32 (Core/Invention)
International (IPC 1-7): F16B7/00
CPC: E04B1/3211 E04B2001/3247 E04B2001/3294 Y10T403/343
European: E04B1/32C P04B1/32M1B P04B1/32S
US: 403/172 52/81.3



Family:

Publication number	Publication date	Application number	Application date
US4319853 A	19820316	US19800122988	19800220

Priority:

US19800122988 19800220

Probable Assignee:	PHILLIPS MARTHA E
Assignee(s): (std):	PHILLIPS MARTHA E
Inventor(s): (std):	PHILLIPS MARTHA E

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US4319853 A	19820316	LSGT	+	granted / extensions (spc, cpc, pte)	
US4319853 A	19820525	LSGT	PAT1	Patented Case	

Title: MODULAR CONSTRUCTION FOR A **GEODESIC DOME**

Abstract: Source: US5628154A A **geodesic dome structure** formed from a plurality of panels. The **dome** is shaped generally as a spherical icosahedron, and will generally be constructed as a spherical dodecahedron. Each of the panels is divided into nine triangular sections by a ribbing **structure** integral to the panel. The ribbing provides the panels with extra rigidity for support. This eliminates the need for any internal framing in the **structure**. The sides of the panels include interlocking means to bind the panels together. The interlocking means allow a user to simply snap the panels together to form the **structure**.

Classifications:

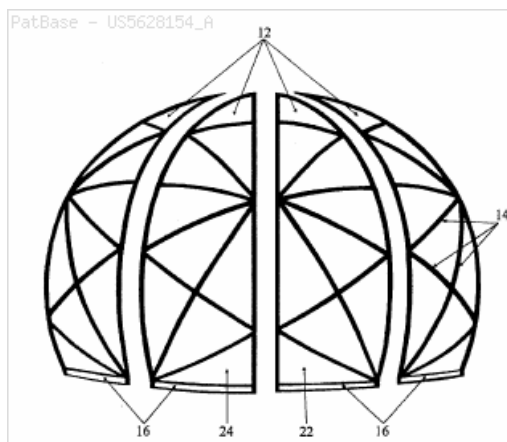
International (IPC 8-9): E04B1/32 (Advanced/Invention);
E04B1/32 (Core/Invention)

International (IPC 1-7): E04B1/32

CPC: E04B1/3211 E04B2001/3276 E04B2001/3288 Y10T403/60
Y10T403/7073 Y10T403/7094

European: E04B1/32C P04B1/32P1 P04B1/32P2

US: 403/326 403/375 403/381 52/588.1 52/589.1 52/81.1 52/81.4
52/811 52/814



Family:

Publication number	Publication date	Application number	Application date
US5628154 A	19970513	US19950514158	19950811

Priority:

US19950514158 19950811

Probable Assignee:

GAVETTE JAMES A

Assignee(s): (std):

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Inventor(s): (std):

GAVETTE JAMES A

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US5628154 A	19970513	LSGT	+	granted / extensions (spc, cpc, pte)	
US5628154 A	20000907	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5628154 A	20050513	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5628154 A	20050615	LSLE	-PEX1	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362	
US5628154 A	20050712	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20050513
US5628154 A	20150811	PEXP		Calculated Patent Term Expiry	