

Search history

Search 1: (CPC = F24S30/*) AND (PD<20150130) AND (FT = (solar W3 (collect* OR panel)) NEAR track*) (Results 586)

Search 2: 1 AND (FT = (pneumatic* OR fluid) NEAR (act* OR piston)) (Results 52)

Search 3: 2 AND (FT = (lift* OR act*) NEAR mechanism) (Results 19)

Title: ARCHITECTURE FOR POWER PLANT COMPRISING CLUSTERS OF POWER-GENERATION DEVICES

Abstract: Various techniques are employed alone or in combination, to reduce the levelized cost of energy imposed by a power plant system. Solar energy concentrators in the form of inflated reflectors, focus light onto photovoltaic receivers. Multiple concentrators are grouped into a series-connected cluster that shares control circuitry and support structure. Individual concentrators are maintained at their maximum power point via balance controllers that control the flow of current that shunts this series connection. DC current from clusters is transmitted moderate distances to a centralized inverter. The inductance of transmission lines is maximized using an air-spaced twisted pair, enhancing the performance of boost-type three phase inverters. Cluster outputs are separate from individual inverters in massively interleaved arrays co-located at a central location. Step-up transformers convert inverter voltages to grid voltages, and small transformers provide isolation and voltage step-up only on receiver-to-receiver imbalance currents, typically <20 percent of the total current.

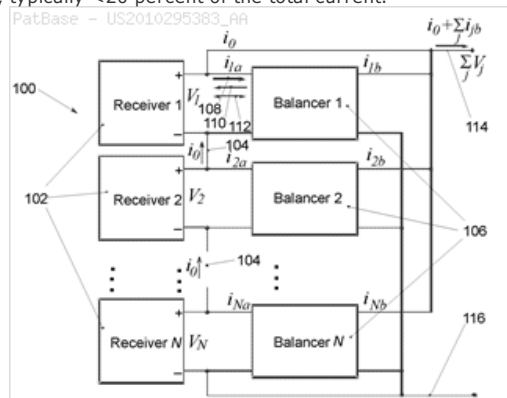
Classifications:

International (IPC 8-9): F24J2/00 F24J2/10 F24J2/38 F24J2/52 F24J2/54 G05F1/10 G05F3/02 G05F3/06 H01L31/02 H02J1/00 H02J1/10 H02J3/00 H02J3/32 H02J3/38 H02J3/46 H02M7/493 H02S10/00 H02S40/22 H02S40/30 H02S40/32 H05K7/20 (Advanced/Invention)

CPC: H05K7/20254 H02J2001/106 H02J3/00 H02J7/35 H02J1/10 H01L31/02021 H02J1/00 H02M7/493 Y02E10/56 Y10T307/865 Y10T29/49826 Y10T307/555 Y10T307/609 Y02E10/566 Y02E10/52 H02J3/383 H02J3/32 H02S40/32 H02J1/102 H02J9/062 Y02B10/72 Y02E10/563 Y02E10/47 F24S25/10 F24S23/81 F24S25/13 F24S25/617 F24S25/70 F24S30/422 F24S2030/133 F24S2030/134 F24S2030/17 F24S2030/19

European: H01L31/02H2B H02M7/493 Y02E10/47 Y02E10/50 Y02E10/56

US: 1/1 126/600 126/685 126/685S 126/696 126/696S 126/697 126/697S 29/428 307/131 307/151 307/151P 307/53 307/63 307/84 361/699

**Family:**

Publication number	Publication date	Application number	Application date
CN102460338 A	20120516	CN201080032669	20100519
CN102460338 B	20140813	CN201080032669	20100519
CN104135217 A	20141105	CN201410333973	20100519
CN104135217 B	20160824	CN201410333973	20100519
CN104135218 A	20141105	CN201410333974	20100519
CN104135218 B	20180213	CN201410333974	20100519
CN104135219 A	20141105	CN201410334570	20100519
CN104135219 B	20161207	CN201410334570	20100519
IN09410CN2011 A	20130215	IN2011CN09410	20111215
US2010295383 AA	20101125	US20100782932	20100519
US2011180057 AA	20110728	US20110015339	20110127
US2013249319 AA	20130926	US20130840958	20130315
US2014319916 AA	20141030	US20140326229	20140708
US2014319917 AA	20141030	US20140326222	20140708
US2014321057 AA	20141030	US20140326246	20140708
US2016308367 AA	20161020	US20160194029	20160627
US8786139 BB	20140722	US20100782932	20100519
US9136703 BB	20150915	US20130840958	20130315
US9136704 BB	20150915	US20140326246	20140708
US9285139 BB	20160315	US20110015339	20110127
US9300133 BB	20160329	US20140326222	20140708
US9407093 BB	20160802	US20140326229	20140708
WO10135406 A1	20101125	WO2010US35368	20100519
WO11094485 A1	20110804	WO2011US22847	20110128
WO14149775 A1	20140925	WO2014US20862	20140305

Priority:

US20070843531	20070822	US20070843549	20070822	US20070844888	20070824
US20070844877	20070824	US20090179606P	20090519	US20100299124P	20100128
US20100310228P	20100303	CN201080032669	20100519	US20100782932	20100519
WO2010US35368	20100519	US20110015339	20110127	US20130840958	20130315
US20140326246	20140708	US20140326229	20140708	US20140326222	20140708
US20160194029	20160627				

Probable Assignee: COOLEARTH SOLAR

Assignee(s): (std): COOLEARTH SOLAR ; CUMMINGS ERIC ; CUMMINGS ERIC BRYANT ; MAXOUT RENEWABLES INC ; LAMKIN ROBERT L ; THEILE KYLE ; PAGE JAMES S ; BELANGER JACQUES J

Inventor(s): (std): BELANGER JACQUES J ; BRYANT CUMMINGS ERIC ; CUMMINGS ERIC ; CUMMINGS ERIC B ; CUMMINGS ERIC BRYANT ; LAMKIN ROBERT L ; PAGE JAMES S ; THEILE KYLE

Agent(s): TOWNSEND AND TOWNSEND AND CREW LLP; KILPATRICK TOWNSEND AND STOCKTON LLP; DEL CASTILLO JESUS ET AL; SYDENHAM RYAN 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 IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: DUAL AXIS SUPPORT FOR HIGH WIND SOLAR PANELS

Abstract: A solar panel mounting system and structure which provides dual axis tracking while only requiring a force to be applied about a single axis. The system can provide desirable results with both actively-powered and passively-powered drive mechanisms. Also provided is a solar panel mounting frame which permits a solar panel to be mounted without requiring additional frame components.

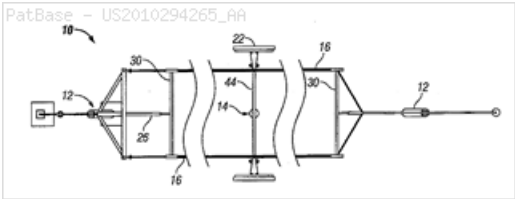
Classifications:

International (IPC 8-9): F24J2/00 F24J2/38 F24J2/52
H01L31/042 (Advanced/Invention)

CPC: Y02E10/47 F24S25/50 F24S30/425 F24S2030/131
F24S2030/136

European: Y02E10/47 Y02E10/50

US: 126/680 126/714 126/714S



Family:

Publication number	Publication date	Application number	Application date
US2010294265 AA	20101125	US20100779639	20100513
WO10135191 A2	20101125	WO2010US34931	20100514
WO10135191 A3	20110303	WO2010US34931	20100514

Priority:

US20090468992 20090520 US20100779639 20100513

Probable Assignee: ZOMEWORKS

Assignee(s): (std): BAER STEVE ; TAN KEVIN ; ZOMEWORKS

Inventor(s): (std): BAER STEVE ; TAN KEVIN

Agent(s): PEACOCK MYERS PC; JACKSON JUSTIN R

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

Title: SOLAR COLLECTOR SUPPORT WINGS FOR EFFICIENT STORAGE AND DEPLOYMENT OF SOLAR COLLECTORS ON A MOBILE STRUCTURE

Abstract: Deployable wings supporting solar collector arrays for mobile structures and associated methods of use are disclosed that provide significant power generation capacity, easy deployment, shaded work areas, and protection for solar collector arrays during transport. Some embodiments include a support surface configured to be hingedly coupled to a vehicle, a plurality of support rails extending away from the support surface to form at least one cavity, a solar collector array coupled to the support surface and within the at least one cavity, and at least one retractable cover configured to selectively cover the at least one cavity.

Classifications:

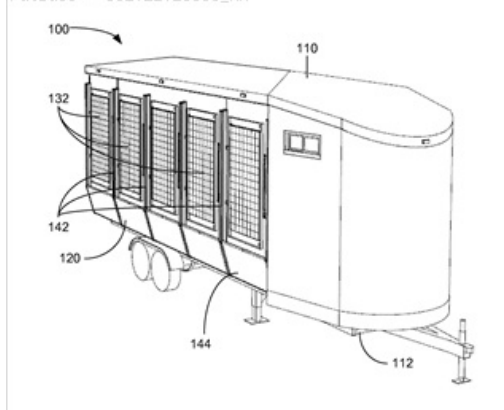
International (IPC 8-9): B60P3/00 B62D21/00 B62D25/06 B62D25/20 B62D63/08 E04D13/18 E04H1/00 F24J2/00 F24J2/02 F24J2/38 F24J2/40 F24J2/46 F24J2/52 H01L31/042 H02S10/40 H02S20/10 H02S30/20 (Advanced/Invention); F24J2/54 (Advanced/Non-invention)

CPC: B60P3/00 H02S20/00 Y02B10/12 Y02B10/20 Y02E10/47 Y02E10/50 B62D21/00 B62D25/06 B62D63/08 H02S10/40 H02S20/10 H02S30/20 F24S25/70 F24S30/425

European: Y02B10/20 Y02B40/18 Y02B40/82 Y02E10/47

US: 1/1 126/570 126/601 126/601S 126/680 126/680S 126/714 126/714S 280/475 296/171 296/204 296/204P 296/24.3 52/173.3 52/173.300S 52/79.5 52/79.500P 52/795

PatBase - US2011023863_AA

**Family:**

Publication number	Publication date	Application number	Application date
US2011023863 AA	20110203	US20100845678	20100728
US2011023864 AA	20110203	US20100845696	20100728
US2011025101 AA	20110203	US20100845062	20100728
US2011047891 AA	20110303	US20100844603	20100727
US2014117694 AA	20140501	US20140148688	20140106
US2016001691 AA	20160107	US20150854018	20150914
US8622454 BB	20140107	US20100845062	20100728
US8720125 BB	20140513	US20100844603	20100727
US9132764 BB	20150915	US20140148688	20140106
US9573510 BB	20170221	US20150854018	20150914

Priority:

US20090271925P 20090728	US20100844603 20100727	US20100845678 20100728
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US20150854018 20150914		

Probable Assignee: ANDRETICH MICAH F

Assignee(s): (std): ANDRETICH MICAH F

Inventor(s): (std): ANDRETICH MICAH F

Agent(s): RUSS WEINZIMMER; RUSS WEINZIMMER AND ASSOCIATES PC

Title: SUSTAINABLE, MOBILE, EXPANDABLE STRUCTURE

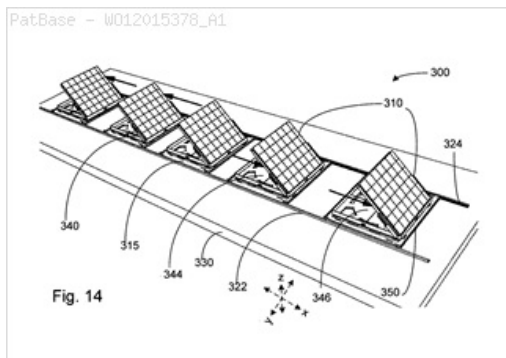
Abstract: A mobile, sustainable, green temporary work location or habitation is disclosed that provides fast, easy, deployment and set-up with multiple potential configurations for various needs. A trailer can have expandable sections, trailer orientation independent solar power, deployable supports, renewable water filtration, with quick set-up and mobilization. The trailer can make responding to emergencies and natural disasters with good supplies and work environment for relief workers fast and easy, saving money and precious time.

Classifications:

International (IPC 8-9): F24J2/38 F24J2/52 F24J2/54
H01L31/042 (Advanced/Invention)

CPC: Y02E10/47 Y02E10/50 H02S20/00 H02S10/40 H02S30/20
F24S25/40 F24S25/70 F24S30/452 F24S2025/012

European: H01L31/042B H01L31/045



Family:

Publication number	Publication date	Application number	Application date
WO12015378 A1	20120202	WO2010US02113	20100729

Priority:

WO2010US02113 20100729

Probable Assignee: ANDRETICH MICAH

Assignee(s): (std): ANDRETICH MICAH

Inventor(s): (std): ANDRETICH MICAH

Agent(s): WEINZIMMER RUSS

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

Title: SOLAR PANEL SYSTEM AND METHODS OF PASSIVE TRACKING

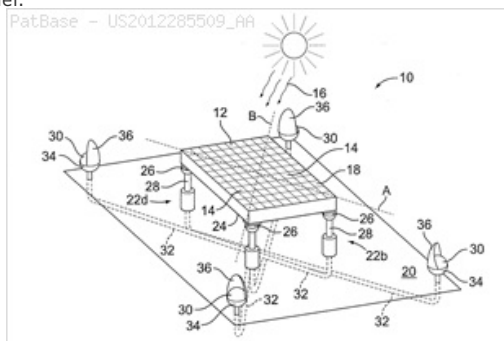
Abstract: A solar tracking system and methods based on passive tracking of solar illumination impinging on solar panels. The system includes a solar panel having cardinal points of the panel provided with piston assemblies. Actuating of pistons in the piston assemblies orients the solar panel to maximize solar illumination impinging on the solar panel. A conduit facilitates flow of a fluid between a solar illumination sensor and piston assembly based on changes in temperature of a canister and fluid contained within the canister. The heating of the fluid causes the fluid to flow toward and activate the piston assembly to rotate the solar panel about a longitudinal axis or lateral axis, which passively orients the solar panel in a position to maximize solar illumination impinging on a front face of the solar panel.

Classifications:

International (IPC 8-9): F24J2/38 F24J2/54 H01L31/042 H01L31/052 H01L31/054 (Advanced/Invention); F24J2/52 (Advanced/Non-invention)

CPC: H01L31/0547 H02S20/00 Y02E10/47 Y02E10/52 H02S20/32 F24S30/48 F24S25/10 F24S30/425 F24S50/20 F24S2030/115 F24S2030/17

US: 1/1 136/246

**Family:**

Publication number	Publication date	Application number	Application date
US2012285509 AA	20121115	US20120467985	20120509
US9146044 BB	20150929	US20120467985	20120509

Priority:

US20110483933P 20110509

US20120467985 20120509

Probable Assignee:

SURGANOV ANTHONY

Assignee(s): (std):

SURGANOV ANTHONY

Inventor(s): (std):

SURGANOV ANTHONY

Agent(s):

VALAUSKAS CORDER LLC

Title: SOLAR TRACKER

Abstract: The solar tracker comprises a base (1) and a solar panel (2) having first and second opposite ends (2a, 2b). The first end (2a) can be connected to the base (1) by a first shaft (E1) and the second end (2b) can be connected to the base (1) by a second shaft (E2), such that said solar panel (2) can pivot with respect to the base (1) alternately around the first shaft (E1) and around the second shaft (E2) under the drive of a **lifting mechanism**. An automatic connection/disconnection device connects the second end (2b) of the solar panel (2) to the base (1) while at the same time disconnecting the first end (2a) of the solar panel (2) from the base (1), and vice versa, every time the solar panel (2) reaches a position parallel to the base (1) for inverting the inclination of the solar panel (2) with respect to the base (1).

Classifications:

International (IPC 8-9): F24J F24J2/36 F24J2/40 F24J2/52 F24J2/54

H01L31/042 H01L31/052 H02S20/20 H02S20/30

H02S30/20 (Advanced/Invention);

F24J (Subclass/Invention)

CPC: H02S20/32 H02S20/20 Y02B10/20 H02S20/23 H02S20/00

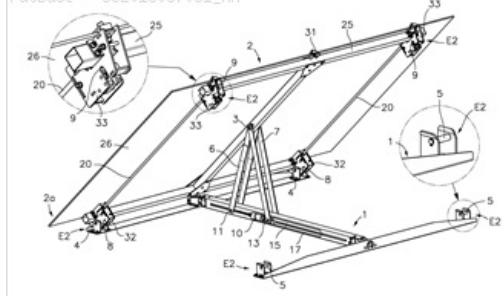
Y02B10/12 Y02E10/50 H02S20/30 H02S30/20 Y02E10/47

F24S2030/135 F24S25/632 F24S20/50 F24S50/00 F24S25/13

F24S30/425 F24S2025/023 F24S2030/132 F24S2030/134

US: 1/1 136/246 136/246

PatBase - US2013037081_AA



Family:

Publication number	Publication date	Application number	Application date
AU2012293559 AA	20130214	AU20120293559	20120504
AU2012293559 AI	20170504	AU20120293559	20120504
AU2012293559 BB	20170601	AU20120293559	20120504
BR112014003263 A2	20170314	BR20141103263	20120504
CL2014000342 A1	20140818	CL20140000342	20140211
CN103930738 A	20140716	CN201280049724	20120504
CN103930738 B	20170616	CN201280049724	20120504
DE602012017910 D1	20160616	DE201260017910T	20120504
EP2743605 A1	20140618	EP20120822865	20120504
EP2743605 A4	20150401	EP20120822865	20120504
EP2743605 B1	20160427	EP20120822865	20120504
ES2395179 AA	20130208	ES20110000916	20110811
ES2395179 BA	20131226	ES20110000916	20110811
ES2403168 AA	20130514	ES20110031787	20111108
ES2403168 BA	20140312	ES20110031787	20111108
ES2577252 T3	20160713	ES20120822865T	20120504
HK1198450 A1	20150424	HK20140111944	20141126
HK1198450 B	20180427	HK20140111944	20141126
IN01319DN2014 A	20150130	IN2014DN01319	20140221
MX2014001603 A1	20140425	MX20140001603	20120504
MX340677 B	20160720	MX20140001603	20120504
US2013037081 AA	20130214	US20110221210	20110830
US2013037082 AA	20130214	US20110295147	20111114
US9166525 BB	20151020	US20110295147	20111114
WO13021078 A1	20130214	WO2012ES00122	20120504

Priority:

ES20110000916 20110811 US20110221210 20110830 ES20110031787 20111108
 US20110295147 20111114 EP20120822865 20120504 WO2012ES00122 20120504

Probable Assignee: SOLTEC ENERGIAS RENOVABLES SL

Assignee(s): (std): GRANT THOMAS ; SOLTEC EN RENOVABLES S L ; SOLTEC EN RENOVABLES S L ; SOLTEC EN RENOVABLES S L ; SOLTEC EN RENOVABLES SL ; SOLTEC ENERGIAS RENOVABLES SL

Assignee(s): SOLTEC ENERGIAS REMOVABLES SL ; SOLTEC ENERGIAS RENOVABLES S L ; SOLTEC ENERGIAS REMOVABLES S L ; SOLTEC ENERGIAS RENOVABLES SL

Inventor(s): (std): GRANT THOMAS ; THOMAS GRANT ; GRANT THOMAS T

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; JOHANSSON AND LANGLOIS LTDA; JUNCOSA MIRO JAIME; TORNER ELISABET; NTD PATENT AND TRADE MARK AGENCY LTD; HESS PATENT LAW FIRM LLC; ROBERT J; TORNER LASALLE ELISABET

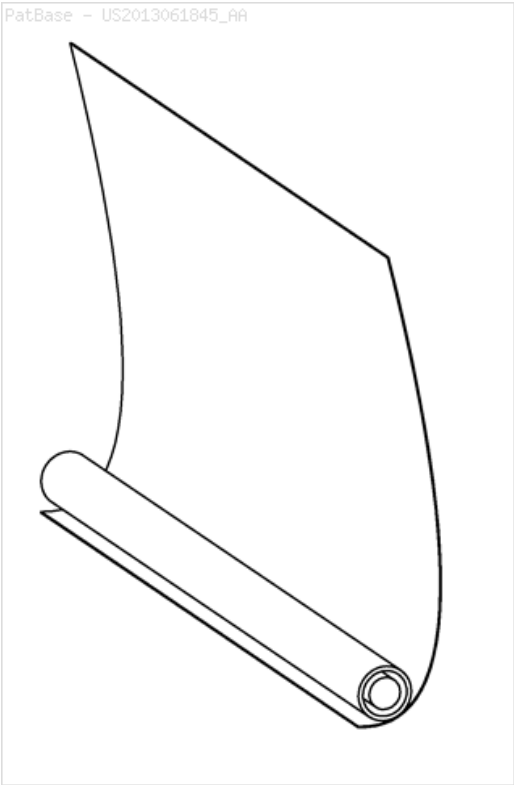
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Title: RADIANT ENERGY DRIVEN ORIENTATION SYSTEM

Abstract: An autonomous passive solar tracker having a thermal actuator that is connected through a cable and pulley and drum to a spring. The drum and spring are mounted on a cross beam of the tracker frame. The cable is attached on one end to the actuator push rod. It then threads through the pulley and wraps around the drum. The spring biases the tracker to pivot towards one direction, and the actuator when heated and extended forces the tracker to pivot in the opposite direction. The tracker is oriented so that the spring has a bias to pivot the tracker to the east, and the outward force of the actuator rod against the cable causes the actuator to pivot to the west. One may take advantage of this **tracking** by attaching a **solar collector** to the frame of the **tracker**.

Classifications:

International (IPC 8-9): F24J2/38 F24J2/52 (Advanced/Invention)
CPC: Y02E10/47 F24S50/20 F24S30/425 F24S30/428
US: 126/582 126/600



Family:

Publication number	Publication date	Application number	Application date
US2013061845 AA	20130314	US20110230285	20110912

Priority:

US20110230285 20110912

Probable Assignee: ZOMEWORKS CORP
Assignee(s): (std): TAN KEVIN ; ZOMEWORKS CORP
Inventor(s): (std): TAN KEVIN

Title: HURRICANE PROOF SOLAR TRACKER

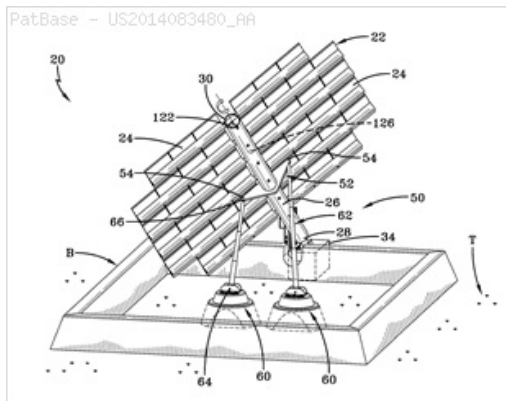
Abstract: A hurricane-proof solar tracker and related method of operation includes a solar panel array assembly having one end coupled to a ballast and a tilting assembly supporting a solar panel assembly. The tilting assembly tilts the solar panel array assembly to track with the sun in a first position, and retracts the solar panel array to a substantially flat second position.

Classifications:

International (IPC 8-9): F24J2/46 F24J2/54 H01L31/042 H02S20/00 H02S20/32 H02S40/00 (Advanced/Invention); F24J2/38 F24J2/52 (Advanced/Non-invention)

CPC: H02S40/00 H02S20/00 H02S20/32 Y02E10/47 Y02E10/50 H02S20/10 H02S30/20 F24S30/458 F24S40/85 F24S2030/131

US: 136/246



Family:

Publication number	Publication date	Application number	Application date
CA2827937 AA	20140324	CA20132827937	20130923
US2014083480 AA	20140327	US20130029860	20130918
US9496822 BB	20161115	US20130029860	20130918

Priority:

US20120704646P 20120924 US20130029860 20130918

Probable Assignee: LOCKHEED MARTIN CORP

Assignee(s): (std): LOCKHEED CORP

Assignee(s): LOCKHEED MARTIN CORP ; GERWING DAVID H

Inventor(s): (std): GERWING DAVID H

Agent(s): DEETH WILLIAMS WALL LLP; WITHROW AND TERRANOVA PLLC