

Title (en)
SUNLIGHT CONCENTRATING AND HARVESTING DEVICE

Title (de)
SONNENLICHTKONZENTRATIONS- UND GEWINNUNGSVORRICHTUNG

Title (fr)
DISPOSITIF DE COLLECTE ET DE CONCENTRATION DE LUMIÈRE SOLAIRE

Publication
EP 2971949 A2 20160120 (EN)

Application
EP 14724220 A 20140318

Priority

- US 201361798205 P 20130315
- US 201461948020 P 20140304
- US 201414196523 A 20140304
- US 201414196291 A 20140304
- US 201414196618 A 20140304
- CA 2014050168 W 20140304
- CA 2014000167 W 20140304
- US 201414215913 A 20140317
- US 2014031002 W 20140318

Abstract (en)
[origin: WO2014146078A2] Device for concentrating and harvesting sunlight comprising: A panel having rigid layer having a patterned electrical circuit thereon. An array of sunlight concentrating and harvesting units, each unit being formed by at least one rigid element and a portion of the rigid layer; and including: a rigid optical concentrating element, a photovoltaic cell sandwiched within the panel for converting sunlight into electrical energy, and an electrical conductor. The electrical conductor being the primary heat sink for the photovoltaic cell, the photovoltaic cell being primarily cooled via conduction. The electrical conductor and the optical concentrating element being dimensioned and arranged within the unit such that the electrical conductor does not materially impede transmission of sunlight to the photovoltaic cell. The electrical conductor transmitting electrical and thermal energy received from the photovoltaic cell away from the unit.

IPC 8 full level
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CPC (source: EP US)
F21V 29/00 (2013.01 - EP); **G02B 6/0083** (2013.01 - EP US); **G02B 6/0085** (2013.01 - EP); **H01L 31/04** (2013.01 - EP); **H01L 31/0543** (2014.12 - EP); **H01L 31/0547** (2014.12 - EP); **F21Y 2105/10** (2016.07 - EP US); **F21Y 2115/10** (2016.07 - EP US); **Y02E 10/52** (2013.01 - EP)

Citation (search report)
See references of WO 2014146078A2

Citation (examination)

- US 2011120539 A1 20110526 - MINANO JUAN CARLOS [ES], et al
- US 2007256726 A1 20071108 - FORK DAVID K [US], et al
- EP 2463920 A2 20120613 - DAIDO METAL CO [JP]
- WO 2011079856 A1 20110707 - PIRELLI & C SPA [IT], et al

Designated contracting state (EPC)
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WO 2014146078 A2 20140918; WO 2014146078 A3 20141113; CN 105051452 A 20151111; CN 105051452 B 20181019; EP 2971949 A2 20160120; MX 2015012658 A 20160216; MX 348456 B 20170614; WO 2014146104 A1 20140918; WO 2014146104 A4 20141106

DOCDB simple family (application)
US 2014031002 W 20140318; CN 201480015199 A 20140318; EP 14724220 A 20140318; MX 2015012658 A 20140318; US 2014031076 W 20140318