

Title (en)
ELECTRONIC TEMPERATURE CONTROL APPARATUS, COOLER USING THE SAME, HEATER USING THE SAME, AND CONTROL METHOD THEREOF

Title (de)
ELEKTRONISCHE TEMPERATURREGELUNGSVORRICHTUNG, KÜHLER DAMIT, HEIZER DAMIT UND STEUERVERFAHREN DAFÜR

Title (fr)
APPAREIL DE COMMANDE ÉLECTRONIQUE DE LA TEMPÉRATURE, REFROIDISSEUR UTILISANT CET APPAREIL, APPAREIL DE CHAUFFAGE UTILISANT CET APPAREIL ET PROCÉDÉ DE COMMANDE DE CET APPAREIL

Publication
EP 2737266 A4 20150805 (EN)

Application
EP 12817503 A 20120725

Priority

- KR 20110073508 A 20110725
- KR 20110076053 A 20110729
- KR 2012005935 W 20120725

Abstract (en)
[origin: WO2013015610A2] An electronic temperature control apparatus a cooler using the same, a heater using the same, and a control method thereof are provided. The electronic temperature control apparatus includes: a thermoelectric module including a first metal member having one end in contact with an object and a second metal member having one end joined with the other end of the first metal member, a voltage applied to one end of the first metal member and the other end of the second metal member; a voltage supply unit supplying a first voltage or a variable voltage having a range from a second voltage to a third voltage to the thermoelectric module; and a controller controlling a voltage supplied to the thermoelectric module by the voltage supply unit according to a difference between a temperature of the object or the first metal member and a target temperature.

IPC 8 full level
F25B 21/02 (2006.01); **F25B 21/04** (2006.01); **G05F 1/565** (2006.01)

CPC (source: EP)
F25B 21/04 (2013.01); **F25B 2321/0212** (2013.01); **F25D 2700/16** (2013.01)

Citation (search report)

- [X] US 5371665 A 19941206 - QUISENBERRY TONY M [US], et al
- [A] US 2009195980 A1 20090806 - SHIH YU-YUN [US]
- See references of WO 2013015610A2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2013015610 A2 20130131; WO 2013015610 A3 20130321; CN 103703327 A 20140402; CN 103703327 B 20160316; EP 2737266 A2 20140604; EP 2737266 A4 20150805; EP 2737266 B1 20180328; ES 2675304 T3 20180710; RU 2014106869 A 20150910; RU 2594371 C2 20160820; TR 201807670 T4 20180621

DOCDB simple family (application)
KR 2012005935 W 20120725; CN 201280036889 A 20120725; EP 12817503 A 20120725; ES 12817503 T 20120725; RU 2014106869 A 20120725; TR 201807670 T 20120725