

Title (en)
Permeable electric heat resistant foil for evaporating liquids out of disposable mouthpieces with evaporator nozzles

Title (de)
Permeable elektrische Heizwiderstandsfolie zum Verdampfen von Flüssigkeiten aus Einwegmundstücken mit Verdampfermembranen

Title (fr)
Feuille chauffante électrique perméable pour l'évaporation de liquides à partir d'embouts buccaux à usage unique avec membranes d'évaporation

Publication
EP 2574247 B1 20190828 (DE)

Application
EP 11183197 A 20110928

Priority
EP 11183197 A 20110928

Abstract (en)
[origin: EP2574247A1] The device has a heating resistor (1) designed in the form of a metallic film or thin sheet e.g. double spiral (101) and/or wavy line with two ends. Intermediate spaces of the double spiral and/or wavy line are open and permeable to flowing fluids. Contact plates (13) are made from metallic film or thin sheet and connected with respective ends of the double spiral and/or wavy line. The contact plates are not directly connected with one another. The heating resistor is covered with an insulation layer that is made from polyimide, micanite or silicone. An independent claim is also included for an evaporation device.

IPC 8 full level
A24F 40/46 (2020.01); **A24F 40/485** (2020.01); **A24F 40/50** (2020.01); **H05B 3/26** (2006.01); **A24F 40/10** (2020.01)

CPC (source: EP KR US)
A24F 40/46 (2020.01 - EP KR US); **A24F 40/485** (2020.01 - EP KR US); **A24F 40/50** (2020.01 - EP US); **H05B 3/26** (2013.01 - EP KR US); **A24F 40/10** (2020.01 - EP US); **H05B 2203/013** (2013.01 - EP KR US)

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WO2016096745A1; CN105658100A; US2016309785A1; US10609958B2; RU2664228C1; RU2677846C1; USD870375S; WO2016061859A1; US10687555B2; US11903419B2; US2016309786A1; EA035155B1; EP3920660A1; EP4241591A3; EP3721728A4; EP3753427A4; US12016377B2; US12016378B2; US12022861B2; US9795168B2; US11464081B2; WO2017162724A1; JPWO2018163262A1; WO2016107767A1; WO2016172441A1; US10015990B2; US11412783B2; US10251424B2; US11259369B2; US11838996B2; US11357258B2; US10772356B2; US11083229B2; US11991793B2; WO2016172448A1; WO2019073010A1; US10842192B2; US11998051B2; US10874142B2; US11602602B2; TWI674071B; JP2017519492A; CN106998816A; RU2666666C1; AU2015367781B2; EP3797615A1; CN112741371A; CN112806611A; JP2022009271A; IL251333B; KR20230018552A; US10687557B2; US10932496B2; US11039647B2; US11039643B2; US11166492B2; US11882878B2; US10750784B2; US11051552B2; US11490659B2; US11723409B2; EP3114947B1

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)
EP 2574247 A1 20130403; EP 2574247 B1 20190828; AR 088447 A1 20140611; AU 2012314392 A1 20140508; AU 2012314392 B2 20160331; BR 112014007296 A2 20170404; BR 112014007296 B1 20201208; CA 2846286 A1 20130404; CA 2846286 C 20160802; CN 104010529 A 20140827; CN 104010529 B 20160817; DK 2760302 T3 20160321; EP 2760302 A2 20140806; EP 2760302 B1 20160302; ES 2567641 T3 20160425; ES 2746505 T3 20200306; HK 1198108 A1 20150313; HU E026825 T2 20160728; HU E045286 T2 20191230; IL 231021 A0 20140331; IL 231021 A 20161229; JP 2014527835 A 20141023; JP 5849159 B2 20160127; KR 101634019 B1 20160627; KR 20140046022 A 20140417; MX 2014003877 A 20140527; MX 342249 B 20160922; MY 185436 A 20210519; NZ 621422 A 20151224; PL 2574247 T3 20200331; PL 2760302 T3 20160930; RS 54609 B1 20160831; RU 2566914 C1 20151027; SG 2014011845 A 20140828; TW 201318573 A 20130516; TW I558327 B 20161121; UA 111495 C2 20160510; US 2014305454 A1 20141016; US 9814265 B2 20171114; WO 2013045582 A2 20130404; WO 2013045582 A3 20130523; ZA 201400870 B 20150527

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EP 11183197 A 20110928; AR P120103640 A 20120928; AU 2012314392 A 20120927; BR 112014007296 A 20120927; CA 2846286 A 20120927; CN 201280045111 A 20120927; DK 12777874 T 20120927; EP 12777874 A 20120927; EP 2012069135 W 20120927; ES 11183197 T 20110928; ES 12777874 T 20120927; HK 14111754 A 20141121; HU E11183197 A 20110928; HU E12777874 A 20120927; IL 23102114 A 20140218; JP 2014532392 A 20120927; KR 20147003526 A 20120927; MX 2014003877 A 20120927; MY P12014000302 A 20120927; NZ 62142212 A 20120927; PL 11183197 T 20110928; PL 12777874 T 20120927; RS P20160135 A 20120927; RU 2014116984 A 20120927; SG 2014011845 A 20120927; TW 101135443 A 20120927; UA A201402193 A 20120927; US 201214344026 A 20120927; ZA 201400870 A 20140205