

Title (en)

LAMINATED HEADER, HEAT EXCHANGER, AND AIR-CONDITIONING APPARATUS

Title (de)

LAMINIERTES KOPFTEIL, WÄRMETAUSCHER UND KLIMAANLAGENVORRICHTUNG

Title (fr)

COLLECTEUR STRATIFIÉ, ÉCHANGEUR DE CHALEUR, ET APPAREIL DE CLIMATISATION

Publication

**EP 3064880 A4 20171018 (EN)**

Application

**EP 13896215 A 20131030**

Priority

JP 2013079346 W 20131030

Abstract (en)

[origin: EP3064880A1] A stacking-type header of the present invention includes a first plate-like body and a plurality of second plate-like bodies. The first plate body has first opening ports 30. Flat tubes 20 are connected to the opening ports 30 of the first plate-like body. The plurality of second plate-like bodies have second opening ports 40. The plurality of second plate-like bodies are stacked on the first plate-like body so that the second opening ports 40 communicate with the first opening ports 30 to form flow passages. Each of the flow passages has a flow passage area that continuously or gradually changes in a stacking direction of the plurality of second plate-like bodies.

IPC 8 full level

**F25B 41/00** (2006.01); **F28D 1/053** (2006.01); **F28F 9/02** (2006.01)

CPC (source: EP)

**F28F 1/022** (2013.01); **F28F 1/30** (2013.01); **F28F 9/0246** (2013.01); **F28F 9/0278** (2013.01); **F25B 13/00** (2013.01); **F25B 39/00** (2013.01); **F28F 2275/04** (2013.01)

Citation (search report)

- [XAI] US 2005284621 A1 20051229 - KATOH YOSHIKI [JP], et al
- [X] US 5241839 A 19930907 - HUGHES GREGORY G [US]
- [A] US 2010186934 A1 20100729 - BELLENFANT AURELIE [FR], et al
- See references of WO 2015063875A1

Cited by

EP4012296A4; US11555655B2; US10794636B2

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 3064880 A1 20160907**; **EP 3064880 A4 20171018**; **EP 3064880 B1 20210324**; JP 6116702 B2 20170419; JP WO2015063875 A1 20170309; WO 2015063875 A1 20150507

DOCDB simple family (application)

**EP 13896215 A 20131030**; JP 2013079346 W 20131030; JP 2015544683 A 20131030