

Title (en)
HEAT EXCHANGER

Title (de)
WÄRMETAUSCHER

Title (fr)
ÉCHANGEUR DE CHALEUR

Publication
EP 3421919 A4 20191106 (EN)

Application
EP 17756143 A 20170203

Priority
• JP 2016032615 A 20160224
• JP 2017003941 W 20170203

Abstract (en)
[origin: US2018320989A1] A fin has a U-form cutaway portion into which a flat tube is fitted and a fin collar standing inclined from an edge portion of the cutaway portion, and an opened end width W2 of the cutaway portion is formed to be larger than an outer width W1 of the flat tube. Also, the fin collar has a fin collar inclined face portion standing inclined with respect to a fin flat face from the edge portion of the cutaway portion, and a fin collar end face portion bent from an end portion of the fin collar inclined face portion and in surface contact with an outer face of the flat tube.

IPC 8 full level
F28F 1/32 (2006.01); **F28F 1/02** (2006.01)

CPC (source: EP US)
F28D 1/05366 (2013.01 - US); **F28F 1/325** (2013.01 - EP US); **F28F 1/02** (2013.01 - EP US); **F28F 2215/12** (2013.01 - EP US); **F28F 2255/00** (2013.01 - EP US)

Citation (search report)
• [X] JP 2011127867 A 20110630 - MITSUBISHI ELECTRIC CORP
• [A] JP 2011202820 A 20111013 - MITSUBISHI ELECTRIC CORP
• [A] JP 2014238204 A 20141218 - MITSUBISHI ELECTRIC CORP
• [A] JP H02169177 A 19900629 - MATSUSHITA REFRIGERATION, et al
• See references of WO 2017145701A1

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

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DOCDB simple family (application)
US 201715779912 A 20170203; CN 201780010193 A 20170203; EP 17756143 A 20170203; JP 2017003941 W 20170203; JP 2018501103 A 20170203