

Title (en)

HEAT EXCHANGER AND REFRIGERATION CYCLE APPARATUS

Title (de)

WÄRMETAUSCHER UND KÄLTEKREISLAUFVORRICHTUNG

Title (fr)

ÉCHANGEUR DE CHALEUR ET APPAREIL À CYCLE FRIGORIFIQUE

Publication

**EP 3578913 A4 20200219 (EN)**

Application

**EP 17894875 A 20170131**

Priority

JP 2017003401 W 20170131

Abstract (en)

[origin: EP3578913A1] A heat exchanger and a refrigeration cycle apparatus for which a manufacturing cost can be reduced are provided. A heat exchanger (10) includes a first flat tube (6), a second flat tube (6) and a header (1). The header (1) is configured to connect one end of the first flat tube (6) and one end of the second flat tube (6). The header (1) is formed of a first member included in a first plate-shaped body (11) and a second member included in a second plate-shaped body (12). One end of the first flat tube (6) and one end of the second flat tube (6) are fixed to the first member. The second member is connected so as to overlap with the first member. The second member is provided with a recessed portion extending from a position that one end of the first flat tube (6) faces to a position that one end of the second flat tube (6) faces.

IPC 8 full level

**F28F 9/02** (2006.01); **F25B 39/00** (2006.01); **F28F 1/02** (2006.01)

CPC (source: EP)

**F25B 39/00** (2013.01); **F28D 1/0435** (2013.01); **F28D 1/0471** (2013.01); **F28D 1/05391** (2013.01); **F28F 1/025** (2013.01); **F28F 9/02** (2013.01); **F28F 9/0202** (2013.01); **F28F 9/0224** (2013.01); **F28F 9/16** (2013.01); **F28F 9/262** (2013.01)

Citation (search report)

- [Y] EP 2372289 A2 20111005 - MODINE MFG CO [US]
- [Y] DE 4432972 A1 19950413 - VALEO THERMIQUE HABITACLE [FR]
- [A] US 2733899 A 19560207
- [A] JP 2014035122 A 20140224 - TOSHIBA CORP, et al
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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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3578913 A1 20191211**; **EP 3578913 A4 20200219**; **EP 3578913 B1 20230503**; JP 6826133 B2 20210203; JP WO2018142460 A1 20191114; WO 2018142460 A1 20180809

DOCDB simple family (application)

**EP 17894875 A 20170131**; JP 2017003401 W 20170131; JP 2018565103 A 20170131