

Title (en)
HEAT EXCHANGER AND OUTDOOR UNIT

Title (de)
WÄRMETAUSCHER UND AUSSENEINHEIT

Title (fr)
ÉCHANGEUR DE CHALEUR ET UNITÉ EXTÉRIEURE

Publication
EP 4343251 A1 20240327 (EN)

Application
EP 23197429 A 20230914

Priority
JP 2022151381 A 20220922

Abstract (en)
Provided is a heat exchanger and an outdoor unit that prevent uneven distribution of a refrigerant to a plurality of flat pipes. In a heat exchanger including: a plurality of header pipes 52; and a plurality of flat pipes connected to each of the header pipes 52 in such a manner that the flat pipes are aligned in a longitudinal direction of the header pipes 52, at least one of the header pipes 52 serves as a coupling header pipe 54 to which a plurality of the flat pipes 62 are connected in such a manner that the flat pipes 62 are placed side by side in a direction intersecting the longitudinal direction of the header pipe 52, a side face of the coupling header pipe 54 has a connection side face 57 to which a plurality of the flat pipes 62 are connected and an opposite-side side face 59 located opposite to the connection side face 57, and the opposite-side side face 59 projects away from the connection side face toward substantially a center in the direction intersecting the longitudinal direction of the coupling header pipe 54.

IPC 8 full level
F28D 1/02 (2006.01); **F24F 1/06** (2011.01); **F28F 9/02** (2006.01)

CPC (source: EP)
F24F 1/16 (2013.01); **F24F 1/18** (2013.01); **F28D 1/05391** (2013.01); **F28F 9/0209** (2013.01); **F28F 9/0224** (2013.01); **F28F 9/0268** (2013.01); **F28F 2275/04** (2013.01)

Citation (applicant)
WO 2016121125 A1 20160804 - MITSUBISHI ELECTRIC CORP [JP]

Citation (search report)
• [X] US 2006054310 A1 20060316 - KIM JEUNG H [KR], et al
• [X] US 2015300680 A1 20151022 - KROETSCH KARL P [US], et al
• [X] US 7708054 B2 20100504 - WATANABE HIROHIKO [JP], et al
• [X] US 9546824 B2 20170117 - SEO KANG TAE [KR], et al

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4343251 A1 20240327; JP 2024046157 A 20240403

DOCDB simple family (application)
EP 23197429 A 20230914; JP 2022151381 A 20220922