

Title (en)  
HEAT EXCHANGER

Title (de)  
WÄRMETAUSCHER

Title (fr)  
ECHANGEUR DE CHALEUR

Publication  
**EP 4215863 A1 20230726 (EN)**

Application  
**EP 23151760 A 20230116**

Priority  
JP 2022009142 A 20220125

Abstract (en)  
A heat exchanger includes a fin group and a tube group for a heat exchange medium. The fin group includes plate fins each of which is shaped as a flat polygonal plate having a first acute-angled corner. The plate fins are spaced by gaps through which air for air conditioning passes and arranged such that the air for air conditioning flows in a first direction along one of sides forming the first corner. The tube group includes heat transfer tubes which meander in the first direction. The heat transfer tubes includes fin-mounted portions mounted to and penetrating through the fin group. On the plate fin, between first fin-mounted portions adjacent to one another in the first direction, there are second fin-mounted portions adjacent to the first fin-mounted portions in a direction orthogonal to the first direction.

IPC 8 full level  
**F28F 1/32** (2006.01); **F28D 1/047** (2006.01)

CPC (source: CN EP KR US)  
**F24F 1/0063** (2019.02 - CN); **F24F 1/0067** (2019.02 - CN KR); **F24F 13/222** (2013.01 - CN); **F25B 39/00** (2013.01 - US); **F28D 1/0477** (2013.01 - EP KR); **F28D 7/0016** (2013.01 - CN); **F28D 7/0066** (2013.01 - CN); **F28F 1/02** (2013.01 - US); **F28F 1/022** (2013.01 - CN); **F28F 1/30** (2013.01 - KR); **F28F 1/325** (2013.01 - CN EP KR US); **F28F 9/0243** (2013.01 - KR); **F28F 13/06** (2013.01 - CN); **F28F 13/08** (2013.01 - CN); **F24F 2221/14** (2013.01 - KR); **F28D 2021/0068** (2013.01 - EP KR); **F28F 2215/10** (2013.01 - US)

Citation (applicant)  
JP 2013100992 A 20130523 - KIMURA KOHKI CO

Citation (search report)  
• [X] JP H1054683 A 19980224 - HITACHI LTD  
• [X] JP S60122670 U 19850819  
• [X] WO 0167020 A1 20010913 - HITACHI LTD [JP], et al

Cited by  
CN118168356A

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

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KH MA MD TN

DOCDB simple family (publication)  
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DOCDB simple family (application)  
**EP 23151760 A 20230116**; AU 2022279430 A 20221129; CA 3183026 A 20221201; CN 202310056379 A 20230119; CN 202320110373 U 20230119; KR 20230003456 A 20230110; US 202218061335 A 20221202