

Title (en)  
HEAT EXCHANGER

Title (de)  
WÄRMETAUSCHER

Title (fr)  
ÉCHANGEUR DE CHALEUR

Publication  
**EP 3078930 B1 20200311 (EN)**

Application  
**EP 14878644 A 20141223**

Priority  
• KR 20140004858 A 20140115  
• KR 20140068195 A 20140605  
• KR 2014012709 W 20141223

Abstract (en)  
[origin: EP3078930A1] The present invention relates to a heat exchanger which additionally has a bead structure to be folded in a predetermined shape, and an air conditioner having the same. The heat exchanger includes a plurality of refrigerant tubes which respectively extend in a first direction, and are disposed to be spaced apart from each other in a second direction; and a fin array which is fitted to the plurality of refrigerant tubes in a third direction, wherein the fin array includes a plurality of insertion grooves which are disposed to be spaced apart in the second direction, such that the plurality of refrigerant tubes are inserted, a plurality of folding parts which are bent so that the plurality of insertion grooves are disposed at one side of the fin array, and a plurality of heat exchange fins which are divided by the plurality of insertion grooves and the plurality of folding parts. The strength can be reinforced by including the bead, and thus the fin array can be folded in the predetermined shape.

IPC 8 full level  
**F24F 13/30** (2006.01); **F24F 1/0059** (2019.01); **F28D 1/053** (2006.01); **F28F 1/02** (2006.01); **F28F 1/12** (2006.01); **F28F 9/02** (2006.01)

CPC (source: EP US)  
**F24F 1/0059** (2013.01 - EP US); **F24F 13/30** (2013.01 - EP US); **F28D 1/05333** (2013.01 - EP US); **F28F 1/022** (2013.01 - EP US); **F28F 1/128** (2013.01 - EP US); **F28F 9/0207** (2013.01 - EP US); **F28F 2009/0285** (2013.01 - EP US)

Cited by  
FR3088706A1

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 3078930 A1 20161012**; **EP 3078930 A4 20170726**; **EP 3078930 B1 20200311**; AU 2014377820 A1 20160714; AU 2014377820 B2 20170525; CN 105934645 A 20160907; CN 105934645 B 20181214; ES 2796080 T3 20201125; KR 102227419 B1 20210315; KR 20150085453 A 20150723; US 2018195744 A1 20180712

DOCDB simple family (application)  
**EP 14878644 A 20141223**; AU 2014377820 A 20141223; CN 201480073328 A 20141223; ES 14878644 T 20141223; KR 20140068195 A 20140605; US 201415106983 A 20141223