

(19)



(11)

EP 2 719 961 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
14.03.2018 Bulletin 2018/11

(51) Int Cl.:
F24F 1/00 (2011.01) F24F 13/08 (2006.01)
F24F 13/30 (2006.01)

(43) Date of publication A2:
16.04.2014 Bulletin 2014/16

(21) Application number: **13188246.6**

(22) Date of filing: **11.10.2013**

(84) Designated Contracting States:
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 States:
BA ME

(72) Inventors:
• **Higashiura, Kunihiro**
TOKYO, 108-8215 (JP)
• **Naito, Yasuhiro**
TOKYO, 108-8215 (JP)
• **Mori, Hironori**
TOKYO, 108-8215 (JP)

(30) Priority: **12.10.2012 JP 2012226887**

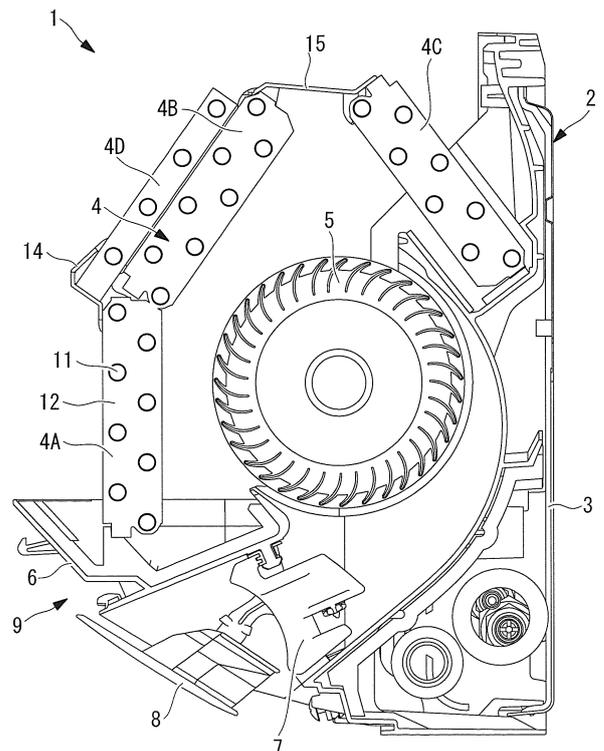
(74) Representative: **Intès, Didier Gérard André et al**
Cabinet Beau de Loménie
158 rue de l'Université
75340 Paris Cedex 07 (FR)

(71) Applicant: **MITSUBISHI HEAVY INDUSTRIES**
THERMAL SYSTEMS, LTD.
Tokyo 108-8215 (JP)

(54) **Indoor unit of air conditioner**

(57) Provided is an indoor unit (1) of an air conditioner capable of facilitating installation of air shield members (14,15) at folded or divided portions of an indoor heat exchanger, and capable of enhancing workability in this installation as well as preventing deterioration of performance of the indoor heat exchanger due to deformation or the like of plate fins. The indoor unit of an air conditioner includes an indoor heat exchanger (4) folded or divided into plural heat exchangers; and air shield members (14,15) disposed at folded or divided portions of the indoor heat exchanger, wherein each air shield member is detachably installed to the indoor heat exchanger through pairs of claws for holding heat transfer tubes of the indoor heat exchanger, and the claws of each pair are arranged at positions deviating from each other by a multiple of a pitch (P) between two adjacent plate fins.

FIG. 3



EP 2 719 961 A3



EUROPEAN SEARCH REPORT

Application Number
EP 13 18 8246

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	JP 2005 024223 A (DAIKIN IND LTD) 27 January 2005 (2005-01-27) * abstract; figure 6 * -----	1-4	INV. F24F1/00 F24F13/08 F24F13/30
A,D	JP 2010 121826 A (MITSUBISHI HEAVY IND LTD) 3 June 2010 (2010-06-03) * figures 3,4 * -----	1-4	
A,D	JP S59 23018 U (NOT READABLE) 13 February 1984 (1984-02-13) * abstract; figure 4 * -----	1-4	
A	US 6 227 001 B1 (OYABU KEIKO [JP] ET AL) 8 May 2001 (2001-05-08) * abstract; figures 3,4 * -----	1-4	
A	EP 2 463 594 A1 (DAIKIN IND LTD [JP]; DAIKIN EUROPE NV [BE]) 13 June 2012 (2012-06-13) * abstract; figure 6 * -----	1-4	
A	JP H05 42923 U (NOT READABLE) 11 June 1993 (1993-06-11) * abstract; figure 3 * -----	1-4	TECHNICAL FIELDS SEARCHED (IPC) F24F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 24 January 2018	Examiner Valenza, Davide
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03/02 (P04/C01)

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 13 18 8246

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-01-2018

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2005024223 A	27-01-2005	NONE	
JP 2010121826 A	03-06-2010	NONE	
JP S5923018 U	13-02-1984	JP S5923018 U JP S6219858 Y2	13-02-1984 21-05-1987
US 6227001 B1	08-05-2001	CN 1265459 A JP 2000213798 A MY 116800 A US 6227001 B1	06-09-2000 02-08-2000 31-03-2004 08-05-2001
EP 2463594 A1	13-06-2012	EP 2463594 A1 WO 2011083519 A1	13-06-2012 14-07-2011
JP H0542923 U	11-06-1993	JP 2532441 Y2 JP H0542923 U	16-04-1997 11-06-1993

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82