# (11) **EP 2 317 252 A3**

(12)

## **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3: **30.05.2012 Bulletin 2012/22** 

(43) Date of publication A2: **04.05.2011 Bulletin 2011/18** 

(21) Application number: 10172987.9

(22) Date of filing: 17.08.2010

(51) Int Cl.: F25B 39/02 (2006.01) F28F 1/32 (2006.01)

F28F 1/32 (2006.01) F28F 13/ F28F 21/08 (2006.01)

F28D 1/047 (2006.01) F28F 13/12 (2006.01)

(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 SE SI SK SM TR
Designated Extension States:

BA ME RS

(30) Priority: 23.10.2009 TR 200908059

(71) Applicant: Vestel Beyaz Esya Sanayi ve TicaretA.S.45030 Manisa (TR)

(72) Inventor: Asik, Rüstem 45030, Manisa (TR)

(74) Representative: Cayli, Hülya Paragon Consultancy Inc. Koza Sokak No: 63/2 GOP 06540 Ankara (TR)

### (54) **Evaporator unit**

(57) The evaporator unit (A) of the invention developed for cooler-type white goods comprises an evaporator tube (1) consisting of two lines (I, II) each of which continue with sequential bends (5); plate-shaped fins (2) that are arranged on the evaporator tube (1) in succession. The unit (A) is **characterized in that** each line (I, II) of the tube (1) is within itself while all the parts are sequentially on the same virtual plane (D); and in that there are protrusions (3) on each fin (2) which keep the fins (2) at parallel regular intervals with respect to each other and which are used for heat transfer; and in that there are a great number of slots (4) at the both sides of the each fin (2) plate into which tube lines can laterally enter.

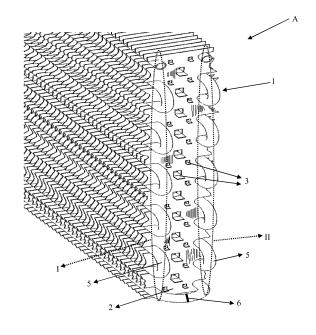


Figure- 2

EP 2 317 252 A3



# **EUROPEAN SEARCH REPORT**

Application Number EP 10 17 2987

Category	Citation of document with ir of relevant passa	ndication, where appropriate, ages	Releva to claim	
Y	JP 2001 091179 A (M CORP) 6 April 2001 * abstract; figures	(2001-04-06)	1-5	INV. F25B39/02 F28D1/047
Y	US 2 540 339 A (KRI 6 February 1951 (19 * figures 1-6 * * column 2, line 20	51-02-06)	1,3	F28F1/32 F28F13/12 F28F21/08
Υ	US 2 023 739 A (MAS 10 December 1935 (1		2	
A	* figures 1-8 * * column 2, line 18	-	1	
Y	WO 2009/046565 A1 ( 16 April 2009 (2009		4	
۹	* abstract; figure		1	
Y	US 2003/209344 A1 ( 13 November 2003 (2	FANG LEI [US] ET AL)	5	
A	* abstract; figure * paragraph [0065]	1 *	1	TECHNICAL FIELDS SEARCHED (IPC)
A	EP 1 586 844 A1 (T 19 October 2005 (20 * abstract; figure	05-10-19)	1-5	F25B F28F F28D
A	EP 1 696 196 A1 (US [JP]) 30 August 200 * abstract; figure	UI KOKUSAI SANGYO KK 6 (2006-08-30) 27 *	1-5	
A	JP 9 096473 A (SHOW 8 April 1997 (1997- * abstract; figures	04-08)	1-5	
	The present search report has I	•		
	Place of search	Date of completion of the search		Examiner
	The Hague	23 April 2012		/ousufi, Stefanie
X : parti Y : parti docu	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with another of the same category nological background	E : earlier pater after the filin ner D : document c L : document ci	ited in the applica ted for other reas	oublished on, or tion

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

EP 10 17 2987

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.

23-04-2012

5.100	ent document in search report		Publication date		Patent family member(s)		Publicatio date
JP 2	001091179	Α	06-04-2001	NONE		•	
US 2	540339	Α	06-02-1951	NONE			
US 2	023739	Α	10-12-1935	NONE			
WO 2	009046565	A1	16-04-2009	NONE			
US 2	003209344	A1	13-11-2003	AU AU DE DE JP JP US US WO WO	2003228849 2003241321 2003245261 10392610 10392624 10392627 2005524820 2005524821 2005524823 2003209344 2004200604 03095918 03095919 03095927	A1 A1 T5 T5 T5 A A A A1 A1 A2 A1	11-11-2 11-11-2 11-11-2 21-04-2 09-06-2 08-09-2 18-08-2 18-08-2 13-11-2 20-11-2 20-11-2
EP 1	586844	A1	19-10-2005	CN EP JP JP US WO	1732366 1586844 4300508 2004205124 2006070726 2004059234	A1 B2 A A1	08-02-2 19-10-2 22-07-2 22-07-2 06-04-2 15-07-2
EP 1	696196	A1	30-08-2006	DE 1 EP GB JP JP US WO	12004002463 1696196 2424473 4520774 2005201622 2007062677 2005057120	A B2 A A1	21-06-2 30-08-2 27-09-2 11-08-2 28-07-2 22-03-2 23-06-2
	096473	Α	08-04-1997	NONE	: :		