



(11) **EP 1 843 112 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
19.12.2007 Bulletin 2007/51

(51) Int Cl.:
F25D 21/08 (2006.01)

(43) Date of publication A2:
10.10.2007 Bulletin 2007/41

(21) Application number: **07104040.6**

(22) Date of filing: **13.03.2007**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(72) Inventors:
• **Parnisari, Matteo**
21025 Comerio (IT)
• **Stura, Marco**
21025 Comerio (IT)

(30) Priority: **07.04.2006 WOPCT/IT2006/000132**

(74) Representative: **Guerci, Alessandro**
Whirlpool Europe S.r.l.
Patent Department
Viale G. Borghi 27
21025 Comerio (VA) (IT)

(71) Applicant: **WHIRLPOOL CORPORATION**
Benton Harbor
Michigan 49022 (US)

(54) **Arrangement to quickly remove the frost from the lower temperature wall of a 0 °C cavity of a refrigerator**

(57) An arrangement for rapidly removing condensate from the lower temperature wall (10) of a 0°C compartment or drawer (4) in a refrigerator (1), said compartment (4) being bounded by side walls (6, 7), an upper wall (9), a lower wall (8) and a rear wall (10), the rear wall (10) being refrigerated and presenting on a face (11) facing the interior of the compartment (4) a series of drainage ribs (15) arranged to direct the defrost water and/or con-

densate formed on it towards a drainage hole (20) positioned at the bottom of said wall (10), a defrost resistance element (18) being present on a second face (12) of the rear wall (10) opposite the first (11). Each rib (15) presents at least two portions (15A, 15B) with different inclinations on the wall (10), the defrost resistance element (18) being arranged to generate greater heat in proximity to a lower portion (10K) of the wall (10) close to the lower wall (8) of the compartment (4).

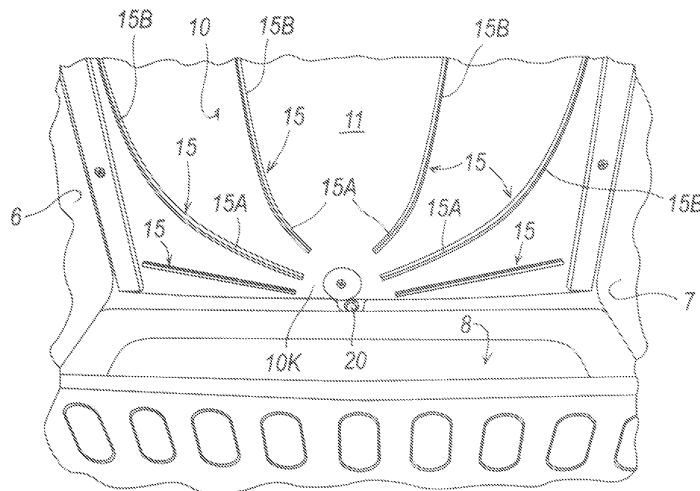


FIG. 2

EP 1 843 112 A3



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	GB 2 175 384 A (HOTPOINT LTD HOTPOINT LTD [GB]) 26 November 1986 (1986-11-26) * page 1, lines 71-79; claims 1-5; figure 1 *	1,2,4	INV. F25D21/08
A	----- US 2002/069659 A1 (LEE YOUNG-GIL [KR]) 13 June 2002 (2002-06-13) * page 1, paragraphs 16,17 * * page 2, paragraphs 19,31,32,36 * * claims 1,3; figure 3 *	1,5-7	
A	----- WO 03/021169 A (MULTIBRAS ELETRODOMESTICOS SA [BR]; CORREA JUNIOR JOAO ALFREDO [BR]; R) 13 March 2003 (2003-03-13) * page 3, lines 14-19 * * page 4, lines 12-21 * * claims 1,2; figures 1-3 *	1,2,4	
A	----- US 1 855 432 A (WESLEY VANCE JACOB) 26 April 1932 (1932-04-26) * page 2, lines 3-13,68-73; figure 1 *	1-4	
A	----- DE 102 59 765 A1 (BSH BOSCH SIEMENS HAUSGERAETE [DE]) 1 July 2004 (2004-07-01) * claim 1; figures 1,2,4 *	1,5	
A	----- WO 2005/064249 A (BSH BOSCH SIEMENS HAUSGERAETE [DE]; LAIBLE KARL-FRIEDRICH [DE]) 14 July 2005 (2005-07-14) * claim 1; figures 1,2 *	1,5	
A	----- DE 20 2004 008765 U1 (BERTO ELISABETH [DE]; BERTO RAPHAELA [DE]) 9 September 2004 (2004-09-09) * figure 1 * * page 2, paragraph 8 *	1	TECHNICAL FIELDS SEARCHED (IPC) F25D H05B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 31 October 2007	Examiner Amous, Moez
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	

1

EPO FORM 1503 03.82 (P04C01)

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

EP 07 10 4040

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.

31-10-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2175384 A	26-11-1986	NONE	
US 2002069659 A1	13-06-2002	CN 1346959 A JP 2002130897 A KR 20020022837 A	01-05-2002 09-05-2002 28-03-2002
WO 03021169 A	13-03-2003	BR 8102363 U CA 2459281 A1 MX PA04002100 A US 2004255605 A1	08-07-2003 13-03-2003 07-06-2004 23-12-2004
US 1855432 A	26-04-1932	NONE	
DE 10259765 A1	01-07-2004	AU 2003293849 A1 CN 1754077 A WO 2004057251 A1 EP 1576327 A1	14-07-2004 29-03-2006 08-07-2004 21-09-2005
WO 2005064249 A	14-07-2005	DE 10360901 A1 EP 1709377 A1	21-07-2005 11-10-2006
DE 202004008765 U1	09-09-2004	NONE	