



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**04.04.2012 Bulletin 2012/14**

(51) Int Cl.:  
**F24F 3/14 (2006.01) F24F 1/00 (2011.01)**

(43) Date of publication A2:  
**11.11.2009 Bulletin 2009/46**

(21) Application number: **09250607.0**

(22) Date of filing: **03.03.2009**

(84) Designated Contracting States:  
**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 TR**  
Designated Extension States:  
**AL BA RS**

- **Hwang, Soon Chul**  
**Changwon-si**  
**Kyungsangnam-do 641-110 (KR)**
- **Park, Joon Sung**  
**Changwon-si**  
**Kyungsangnam-do 641-110 (KR)**

(30) Priority: **07.05.2008 KR 20080042162**  
**07.05.2008 KR 20080042166**

(74) Representative: **Palmer, Jonathan R.**  
**Boult Wade Tennant**  
**Verulam Gardens**  
**70 Gray's Inn Road**  
**London WC1X 8BT (GB)**

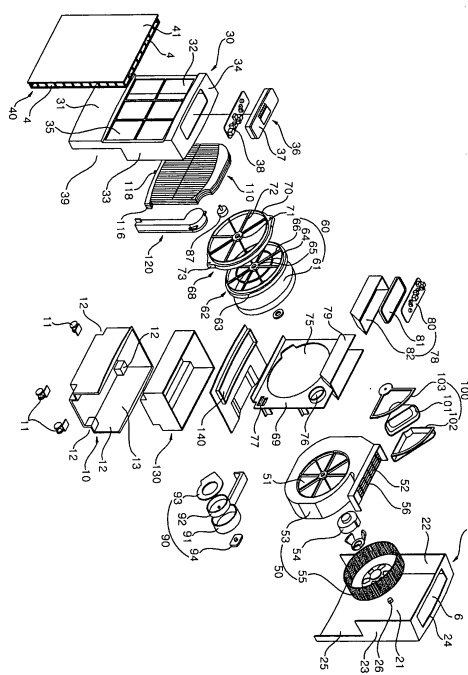
(71) Applicant: **LG Electronics Inc.**  
**Seoul 150-721 (KR)**

(72) Inventors:  
• **Park, Hyung Ho**  
**Changwon-si**  
**Kyungsangnam-do 641-110 (KR)**

(54) **Dehumidifier having dehumidifying rotor**

(57) Disclosed herein is a dehumidifier having a dehumidifying rotor, the dehumidifier comprising a main body 2 including an air suction portion 4 and an air discharge portion 6; a blower 50 sucking indoor air through the air suction portion 4 such that the sucked indoor air passes through the main body 2 and is then discharged through the air discharge portion 6; a dehumidifying rotor 60 rotatably arranged in the main body 2 and including a desiccant 61 containing meso-silica and a desiccant wheel 62 surrounding the circumference of the desiccant 61 and connected to the desiccant 61; a dehumidifying rotor rotating device 84 rotating the dehumidifying rotor 60; and regeneration devices 90, 100, 110, and 120 regenerating the dehumidifying rotor 60, thus providing advantages such as high dehumidification performance and low power consumption.

Fig. 2





## EUROPEAN SEARCH REPORT

Application Number  
EP 09 25 0607

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 515 096 A1 (KANKYO CO LTD [JP]) 16 March 2005 (2005-03-16)	1,3-10	INV. F24F3/14 F24F1/00
Y	* paragraph [0016] - paragraph [0051] * * figures 1-7 *	2	
X	JP 2003 200016 A (DAIKIN IND LTD) 15 July 2003 (2003-07-15) * abstract; figures *	1-3	
Y	US 5 580 370 A (KUMA TOSHIMI [JP] ET AL) 3 December 1996 (1996-12-03) * column 2, line 29 - column 2, line 37 *	2	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			F24F
Place of search		Date of completion of the search	Examiner
Munich		22 February 2012	Mattias Grenbäck
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p> <p>&amp; : member of the same patent family, corresponding document</p>			

1  
EPO FORM 1503 03/82 (P04C01)

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

EP 09 25 0607

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.

22-02-2012

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 1515096	A1	16-03-2005	CA	2490686 A1	20-11-2003
			CN	1666068 A	07-09-2005
			EP	1515096 A1	16-03-2005
			JP	3445790 B1	08-09-2003
			JP	2003329269 A	19-11-2003
			TW	I230244 B	01-04-2005
			US	2006015974 A1	19-01-2006
			WO	03095903 A1	20-11-2003
-----					
JP 2003200016	A	15-07-2003	NONE		
-----					
US 5580370	A	03-12-1996	DE	4313976 A1	04-11-1993
			JP	3233169 B2	26-11-2001
			JP	5309771 A	22-11-1993
			SE	510785 C2	21-06-1999
			SE	9301439 A	04-11-1993
			US	5580370 A	03-12-1996
-----					