



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
06.03.2013 Bulletin 2013/10

(51) Int Cl.:
F25C 5/00 (2006.01)

(43) Date of publication A2:
12.03.2008 Bulletin 2008/11

(21) Application number: **07115100.5**

(22) Date of filing: **28.08.2007**

(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 RS

(30) Priority: **30.08.2006 KR 20060082823**

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

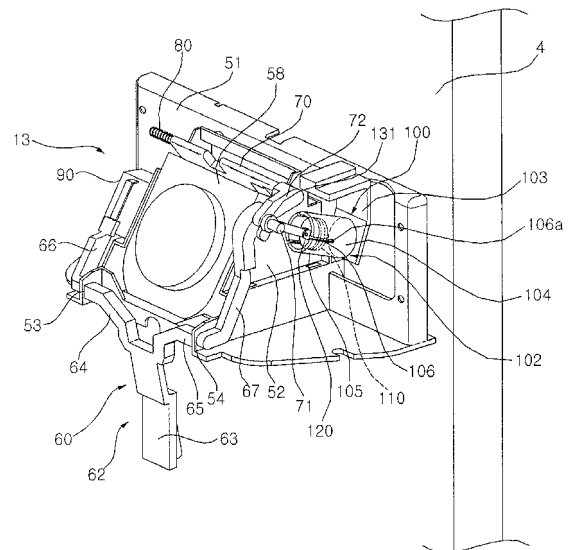
(72) Inventors:
• **Park, Kyong Bae**
Seoul 121-220 (KR)
• **Jhee, Sung**
Seoul 152-053 (KR)
• **Cho, Nam Soo**
Seoul 152-091 (KR)

(74) Representative: **Vossius & Partner**
Siebertstrasse 4
81675 München (DE)

(54) **Refrigerator and duct cap assembly therefor**

(57) A refrigerator and duct cap assembly therefor having a damper (100) that delays closing of a duct cap (58) is disclosed herein. The refrigerator and duct cap assembly therefor include a duct cap (58), an opening and closing device (60), a connecting rod (130), a packing holder (120), a packing (110), and a cylinder (102). The duct cap (58) opens and closes an ice duct (12) of the refrigerator, and the opening and closing device (60) opens and closes the duct cap (58). The connecting rod (130) is connected to one of the duct cap (58) and the opening and closing device (60). The packing holder (120) is connected to the connecting rod (130). The packing (110) is disposed in the packing holder (120). The cylinder (102) may include at least one slot formed at a predetermined portion of a periphery of the cylinder (102) and the packing (110) makes a reciprocating motion within the cylinder (102) while generating a frictional force.

FIG. 4



**PARTIAL EUROPEAN SEARCH REPORT**

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

EP 07 11 5100

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	KR 2001 0055612 A (SAMSUNG ELECTRONICS CO LTD [KR]) 4 July 2001 (2001-07-04)	1,2, 14-22,26	INV. F25C5/00
Y	* page 6 - page 7; figures 1-8 *	3-14, 23-25	

X	US 3 942 334 A (PINK JOHN J) 9 March 1976 (1976-03-09)	1,14-20, 22,26	
A	* column 3 - column 4; figures 1-4 *	2-13,21, 23-25	

Y	US 6 176 475 B1 (BELLA JOSEPH J [US] ET AL) 23 January 2001 (2001-01-23)	3-14, 23-25	
A	* column 1, line 13 - column 1, line 25; figures 1-11 * * column 2, line 6 - line 19 * * column 2, line 56 - column 3, line 4 * * column 3, line 29 - column 4, line 42 *	1,2, 15-22,26	

			TECHNICAL FIELDS SEARCHED (IPC)
			F25C
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.			
Claims searched completely :			
Claims searched incompletely :			
Claims not searched :			
Reason for the limitation of the search: see sheet C			
Place of search Munich		Date of completion of the search 25 January 2013	Examiner Amous, Moez
CATEGORY OF CITED DOCUMENTS		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	
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			

EPO FORM 1503 03.82 (P04E07)



**INCOMPLETE SEARCH
SHEET C**

Application Number
EP 07 11 5100

Claim(s) completely searchable:
1-26

Claim(s) not searched:
27-32

Reason for the limitation of the search:

Rule 62a EPC

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

EP 07 11 5100

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.

25-01-2013

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 20010055612 A	04-07-2001	NONE	
US 3942334 A	09-03-1976	NONE	
US 6176475 B1	23-01-2001	CA 2320591 A1 DE 60024567 T2 EP 1098107 A2 JP 4842431 B2 JP 2001173705 A KR 20010050474 A MX PA00010878 A US 6176475 B1	08-05-2001 29-06-2006 09-05-2001 21-12-2011 26-06-2001 15-06-2001 25-04-2003 23-01-2001