



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
29.08.2012 Bulletin 2012/35

(51) Int Cl.:
D06F 37/22 (2006.01)

(43) Date of publication A2:
14.09.2011 Bulletin 2011/37

(21) Application number: **11003982.3**

(22) Date of filing: **30.05.2007**

(84) Designated Contracting States:
DE ES FR GB IT

(30) Priority: **01.06.2006 KR 20060049497**
01.06.2006 KR 20060049494

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
07109185.4 / 1 862 578

(71) Applicant: **Samsung Electronics Co., Ltd.**
Suwon-si, Gyeonggi-do 443-742 (KR)

(72) Inventors:
• **Kim, Ja Young**
Suwon-si,
Gyeonggi-do (KR)

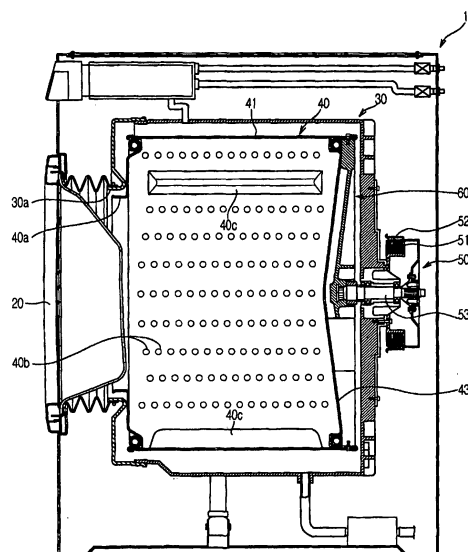
- **Michiaki, Ito**
Suwon-si
Gyeonggi-do (KR)
- **Ryu, Doo Young,**
Suwon-si Gyeonggi-do (KR)
- **Kang, Myung Sun**
Suwon-si Gyeonggi-do (KR)

(74) Representative: **Grünecker, Kinkeldey,**
Stockmair & Schwanhäusser
Leopoldstrasse 4
80802 München (DE)

(54) **Drum type washing machine**

(57) A drum type washing machine including a balancer capable of rapidly reducing vibration of a spin tub. The drum type washing machine includes a spin tub which is rotated by receiving rotational force from a driving motor through a rotating shaft, a rear balancer having an annular shape and being coupled to the spin tub, and a shaft flange provided at a center portion thereof with the rotating shaft and coupled to the spin tub so as to uniformly transfer the rotational force to the spin tub. The rear balancer is supported on a rear surface of a rear cover by the shaft flange. Thus, the balls accommodated in the balancer are prevented from moving out of the balancer, even if the balancer is broken due to long-period use.

FIG.1





EUROPEAN SEARCH REPORT

Application Number
EP 11 00 3982

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 0 806 515 A (SAMSUNG ELECTRONICS CO LTD [KR]) 12 November 1997 (1997-11-12) * column 2, line 38 - column 4, line 18; figures 1,2 *	1,4,5,9	INV. D06F37/22
X	US 5 850 748 A (KIM CIN YONG [KR] ET AL) 22 December 1998 (1998-12-22) * figures 1,2a-2c * * column 4, line 20 - line 44 * * column 5, line 14 - line 39 *	1,4,5,9	
A	DE 26 33 604 A1 (LICENTIA GMBH) 2 February 1978 (1978-02-02) * figure 1 *	1	
A	WO 02/40761 A1 (LG ELECTRONICS INC [KR]; YOON SEONG NO [KR]) 23 May 2002 (2002-05-23) * figure 3 *	1,11	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			D06F
Place of search		Date of completion of the search	Examiner
Munich		19 July 2012	Kising, Axel
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			

2

EPO FORM 1503 03.82 (P44C01)

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

EP 11 00 3982

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.

19-07-2012

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 0806515	A	12-11-1997	CN	1170057 A	14-01-1998
			DE	69703715 D1	25-01-2001
			DE	69703715 T2	27-06-2002
			EP	0806515 A1	12-11-1997
			JP	10043472 A	17-02-1998
			TR	9700361 A2	21-11-1997
			US	5857361 A	12-01-1999

US 5850748	A	22-12-1998	CN	1160099 A	24-09-1997
			DE	69608876 D1	20-07-2000
			DE	69608876 T2	22-02-2001
			EP	0781882 A1	02-07-1997
			JP	2915863 B2	05-07-1999
			JP	9187597 A	22-07-1997
			TR	970563 A2	21-07-1997
			US	5850748 A	22-12-1998

DE 2633604	A1	02-02-1978	NONE		

WO 0240761	A1	23-05-2002	AU	2417402 A	27-05-2002
			AU	2002224174 B2	25-08-2005
			CN	1531611 A	22-09-2004
			EP	1334226 A1	13-08-2003
			JP	4131540 B2	13-08-2008
			JP	2004513721 A	13-05-2004
			KR	20020037814 A	23-05-2002
			US	2004035155 A1	26-02-2004
			WO	0240761 A1	23-05-2002
