



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
02.06.1999 Bulletin 1999/22

(51) Int. Cl.⁶: **D06F 37/22**

(43) Date of publication A2:
05.08.1998 Bulletin 1998/32

(21) Application number: **97500210.6**

(22) Date of filing: **04.12.1997**

(84) Designated Contracting States:
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(71) Applicant: **FAGOR, S.Coop**
20500 Mondragon (Guipuzcoa) (ES)

(72) Inventor:
Iruretagoiena Etxaniz, Marcial
20570 Bergara (Guipuzcoa) (ES)

(30) Priority: **31.01.1997 ES 9700199**

(54) **Method for balancing a washingmachine**

(57) The washing machine (1) has a drum (3) rotating about a horizontal axis (3a) and is equipped with at least three water chambers (4a,4b,4c) distributed through the internal periphery of the drum to which chambers a flow of water (13) is provided selectively from the chambers' respective solenoid valves (10a,10b,10c) to compensate for the unbalance, while the drum is accelerated at a gradual rate by means of a

T/F speed variator (6) of the motor (5), and the magnitude of the vibration (12) and its position (11) are measured by a vibration sensor (8) and a position sensor (9). The measured values are compared to a preset threshold value which changes with drum rotation speed until the maximum spinning speed is reached.

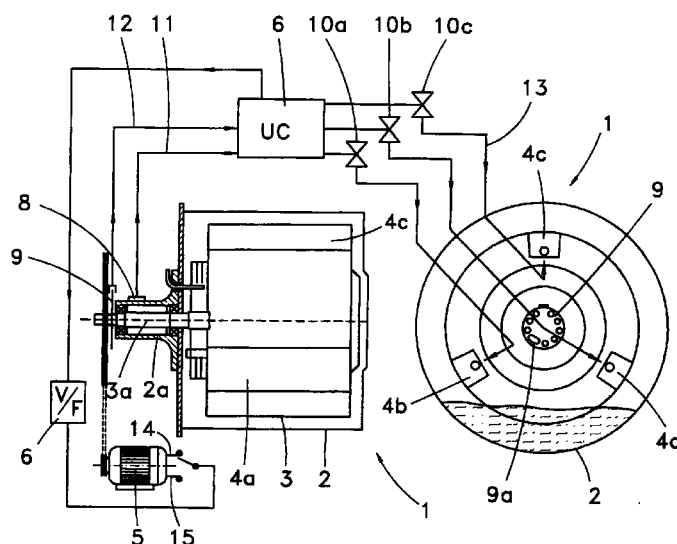


FIG. 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 50 0210

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	GB 2 080 836 A (MITSUBISHI JUKOGYO K.K.) 10 February 1982 * page 3, line 8 - line 41; claims; figures 8,10 *	1-4	D06F37/22
A	CH 672 803 A (SULZER-ESCHER WYSS AG) 29 December 1989 * page 3, column 1, line 22 - line 27; claims; figures *	1-4	
A	EP 0 476 423 A (O. TONNELLO) 25 March 1992 * claims; figures *	1-4	
A,D	US 5 280 660 A (PELLERIN MILNOR CORPORATION) 25 January 1994 * claims; figures *	1-4	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			D06F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 13 April 1999	Examiner Courrier, G
<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 & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03/82 (P04C01)

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

EP 97 50 0210

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.

13-04-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2080836 A	10-02-1982	JP 1411693 C	27-11-1987
		JP 57003698 A	09-01-1982
		JP 62016672 B	14-04-1987
		JP 1741519 C	15-03-1993
		JP 4016659 B	24-03-1992
		JP 57076341 A	13-05-1982
		JP 57084099 A	26-05-1982
		JP 62016673 B	14-04-1987
		JP 1517626 C	07-09-1989
		JP 57084100 A	26-05-1982
		JP 63066240 B	20-12-1988
		JP 57086733 A	29-05-1982
		DE 3123386 A	29-04-1982
		DE 3153272 C	24-09-1987
		GB 2138029 A,B	17-10-1984
		GB 2141232 A,B	12-12-1984
CH 672803 A	29-12-1989	NONE	
EP 476423 A	25-03-1992	IT 1243140 B	24-05-1994
		AT 125006 T	15-07-1995
		DE 69111162 D	17-08-1995
		DE 69111162 T	21-03-1996
		ES 2077127 T	16-11-1995
US 5280660 A	25-01-1994	BE 1007939 A	21-11-1995
		DE 4313819 A	07-04-1994
		GB 2271172 A,B	06-04-1994
		IT 1262320 B	19-06-1996
		JP 2036098 C	28-03-1996
		JP 6134205 A	17-05-1994
		JP 7057284 B	21-06-1995
		SE 9300471 A	06-04-1994