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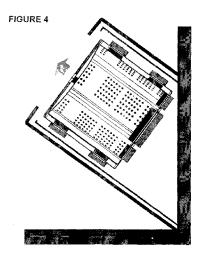
— as to the identity of the inventor (Rule 4.17(i))

Published:

- with international search report (Art. 21(3))
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- (88) Date of publication of the international search report:

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(54) Title: THE WASHING MACHINE INCLUDING FRICTIONLESS DRUM WITH MAGNETIC BEARING



(57) Abstract: The invention relates to magnetic bearing system providing drum used as rotor (2.1) to turn to different positions without friction, thanks to driving system formed by brushless, synchronous, servo electric motor (2) constituted by caldron and drum which are in the washing machines.



INTERNATIONAL SEARCH REPORT

International application No PCT/TR2013/000356

A. CLASSIFICATION OF SUBJECT MATTER
INV. D06F37/20 D06F37/30 H02K7/14
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\begin{array}{ll} \text{Minimum documentation searched (olassification system followed by classification symbols)} \\ \text{D06F} & \text{H02K} \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Х	TR 2011 11626 A2 (ORAN BUELENT [TR]) 21 March 2012 (2012-03-21) the whole document	1,3,6		
Α	WO 01/41287 A2 (ISPAT INLAND INC [US]) 7 June 2001 (2001-06-07) the whole document	1-7		
X	US 3 840 764 A (BURGER M) 8 October 1974 (1974-10-08) column 6, line 21 - column 7, line 39; figure 8	1,2,6		
A	WO 2004/059066 A1 (ARCELIK AS [TR]; AVCI SERDAL KORKUT [TR]; ALTINSU RAIF [TR]; GUELAY ER) 15 July 2004 (2004-07-15) the whole document	1-7		

X Further documents are listed in the continuation of Box C.	X See patent family annex.
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
Date of the actual completion of the international search 13 June 2014	Date of mailing of the international search report $26/06/2014$
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Diaz y Diaz-Caneja

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INTERNATIONAL SEARCH REPORT

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7 658 015 B1 (GARDELL CHRISTOPHER M [US]) 9 February 2010 (2010-02-09) figure 3	1,2,6

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
TR 201111626 A2	21-03-2012	TR 201111626 A2 WO 2013077828 A1	21-03-2012 30-05-2013
WO 0141287 A2	07-06-2001	AU 1809201 A US 6531801 B1 WO 0141287 A2	12-06-2001 11-03-2003 07-06-2001
US 3840764 A	08-10-1974	FR 2197260 A1 IT 994663 B JP S4985507 A US 3840764 A	22-03-1974 20-10-1975 16-08-1974 08-10-1974
WO 2004059066 A1	15-07-2004	AT 393255 T AU 2003298499 A1 DE 60320587 T2 EP 1581682 A1 TR 200502343 T1 WO 2004059066 A1	15-05-2008 22-07-2004 04-06-2009 05-10-2005 22-01-2007 15-07-2004
US 7658015 B1	09-02-2010	NONE	