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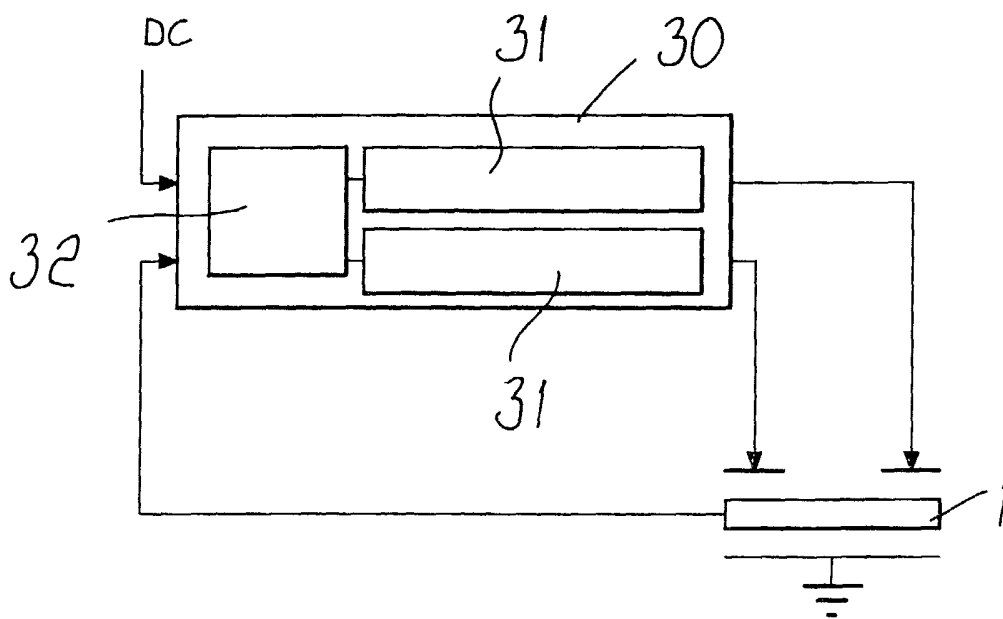
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- (74) Agent: **GIAVARINI, Francesco**; Zanoli & Giavarini S.r.l., Viale Bianca Maria, 35, I-20122 Milano (IT).
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(54) Title: DRIVING DEVICE FOR ULTRASONIC MOTOR



(57) Abstract: A driving device (30) for ultrasonic motors, whose particularity consists of the fact that it comprises at least one piezoelectric transformer (31) for driving an ultrasonic motor (1).



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H02N2/14 H02N2/06 H01L41/04				
According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) IPC 7 H01L H02N H01H				
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 practical, search terms used) EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 08, 6 October 2000 (2000-10-06) & JP 2000 134962 A (TAKATA CORP), 12 May 2000 (2000-05-12)	1-3,5,6		
Y	abstract -& JP 2000 134962 A (TAKATA CORP) 12 May 2000 (2000-05-12) paragraph '0009! - paragraph '0022!; figures 1,2	4,7		
Y	--- US 5 130 619 A (IZUNO YUJI) 14 July 1992 (1992-07-14) column 6, line 51 -column 10, line 33; figures 2,8,9 --- -/--	4,7		
<table style="width:100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.</td> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> Patent family members are listed in annex.</td> </tr> </table>			<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/> Patent family members are listed in annex.
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<table style="width:100%; border: none;"> <tr> <td style="width: 50%; border: none;"> *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document 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 </td> <td style="width: 50%; border: none;"> *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 </td> </tr> </table>			*A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document 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
A document defining the general state of the art which is not considered to be of particular relevance *E* earlier document 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 <p align="center">23 June 2003</p>	Date of mailing of the international search report <p align="center">30/06/2003</p>			
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer <p align="center">Köpf, C</p>			

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 02/08324

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>PATENT ABSTRACTS OF JAPAN vol. 018, no. 073 (E-1503), 7 February 1994 (1994-02-07) & JP 05 284764 A (SEIKO INSTR INC), 29 October 1993 (1993-10-29) abstract -& JP 05 284764 A (SEIKO INSTR INC) 29 October 1993 (1993-10-29) paragraph '0007! - paragraph '0018!; figures 1-7</p> <p style="text-align: center;">---</p>	1,2,6
X	<p>UCHINO K ET AL: "Piezoelectric transformers-new perspective" THIRD ASIAN MEETING ON FERROELECTRICTY (AMF-3), HONG KONG, CHINA, 12-15 DEC. 2000, vol. 263, no. 1-4, 2001, pages 91-100, XP009012167 FERROELECTRICS ISSN: 0015-0193 section 4. "Applications"</p> <p style="text-align: center;">---</p>	1,2,9
A	<p>EP 1 058 323 A (BEYRARD NORBERT) 6 December 2000 (2000-12-06) -& US 6 404 105 B1 (BEYRARD NORBERT) 11 June 2002 (2002-06-11) column 3, line 27 -column 7, line 21; figures</p> <p style="text-align: center;">---</p>	8
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Information on patent family members

International Application No

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US 5130619 A	14-07-1992	JP 4222476 A JP 4222477 A DE 4107802 A1	12-08-1992 12-08-1992 02-07-1992
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