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(54) **Turbogenerator assembly for a water heater**

(57) The dynamo-electrical turbo generator assembly is incorporated in a domestic water heater provided with a water flow (19), the turbo generator assembly (1,2) includes a longitudinal portion of conduit pipe (7) fitted with a discharge valve (8), and having an internal flat wall (7c) dividing the water flow (19) and forming a branch conduit (18) for impelling the turbine wheel (5). The drive shaft (4) common with the magnet rotor (3) of

the alternator (2) is positioned offset to a central plane (E) for the formation of a tangential outlet (20) for the water flow (18') towards the wheel vanes (5). A moulded plastic alternator body (6) provided with a chamber (14) housing the rotor, is mounted on said portion of conduit pipe (7) and crossed by the common drive shaft (4). A coupling means (6b,7b) of the alternator body (6) is provided to the portion of conduit pipe (7).

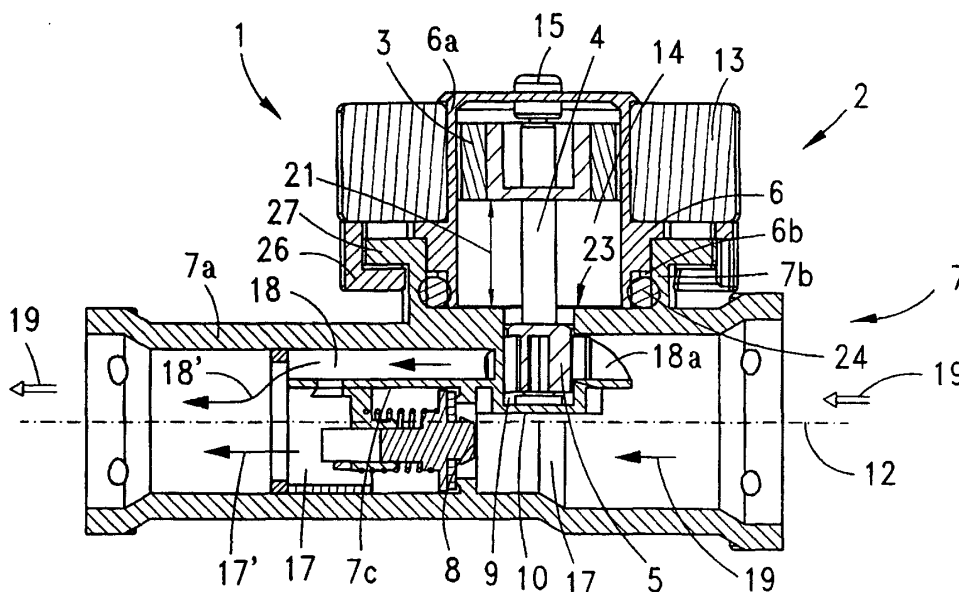


FIG. 2



European Patent
Office

EUROPEAN SEARCH REPORT

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EP 03 38 0163

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.7)
X	WO 86/03260 A (KLEIN SCHANZLIN & BECKER AG) 5 June 1986 (1986-06-05)	1	H02K7/18 F03B13/00
Y	* page 3, line 4 - line 6 *	2-5	
	* page 4, line 1 - line 19; figure 1 *		

Y,D	WO 01/36876 A (BOSCH GMBH ROBERT) 25 May 2001 (2001-05-25)	3-5	
	* page 1 - page 8; figures 2-5,8 *		

Y,D	WO 86/07503 A (CHARRON JEAN CLAUDE) 18 December 1986 (1986-12-18)	2	
	* figure 3 *		

A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 179 (M-399), 24 July 1985 (1985-07-24) & JP 60 047883 A (MASAO KINEMURA;OTHERS: 02), 15 March 1985 (1985-03-15)	1-5	
	* abstract *		

A	US 4 372 113 A (RAMER JAMES L) 8 February 1983 (1983-02-08)	1-5	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
	* abstract; figures 1,2 *		H02K F03B

A	US 4 809 510 A (GASPARD PRESTON T ET AL) 7 March 1989 (1989-03-07)	1-5	
	* abstract; figures 1,3 *		

A	US 4 963 780 A (HOCHSTRASSER FERDINAND F) 16 October 1990 (1990-10-16)	1-5	
	* abstract; figure 1 *		

The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 10 August 2004	Examiner García Moncayo, O
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			

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

EP 03 38 0163

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
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10-08-2004

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 8603260	A	05-06-1986	DE 3443491 A1	28-05-1986
			AU 5061285 A	18-06-1986
			WO 8603260 A1	05-06-1986
			JP 62500797 T	02-04-1987
WO 0136876	A	25-05-2001	DE 19954967 A1	17-05-2001
			BR 0007557 A	23-10-2001
			CN 1327529 T	19-12-2001
			WO 0136876 A1	25-05-2001
			EP 1196721 A1	17-04-2002
			JP 2003515039 T	22-04-2003
			PL 348659 A1	03-06-2002
WO 8607503	A	18-12-1986	FR 2583112 A1	12-12-1986
			EP 0225358 A1	16-06-1987
			WO 8607503 A1	18-12-1986
			JP 63500280 T	28-01-1988
			US 4740725 A	26-04-1988
JP 60047883	A	15-03-1985	NONE	
US 4372113	A	08-02-1983	NONE	
US 4809510	A	07-03-1989	US 4654537 A	31-03-1987
			GB 2191248 A	09-12-1987
US 4963780	A	16-10-1990	AT 69639 T	15-12-1991
			CA 1323906 C	02-11-1993
			DE 58900475 D1	02-01-1992
			EP 0361333 A1	04-04-1990