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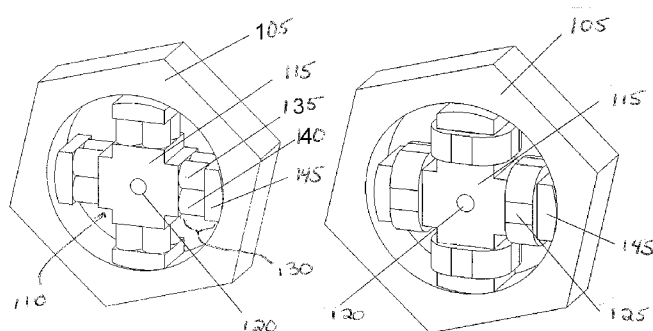


Fig. 1A

Fig. 1B

(57) **Abstract:** An electropermanent magnet-based motor includes a stator having at least one electropermanent magnet, at least one coil around the electropermanent magnet configured to pass current pulses that affect the magnetization of the magnet, and a rotor that is movable with respect to the stator in response to changes in the magnetization of the electropermanent magnet. A wobble motor has a stator with a centrally-located core from which arms radiate outward, an electropermanent magnet and coil on each arm, and a rotor exterior to the stator such that the rotor can rotate around the stator arms. A rotary motor has a centrally-located rotor that rotates about its axis and a stator exterior to the rotor such that the rotor may rotate within the stator arms, the stator including an anteriorly-located stator core from which stator arms radiate inward toward the rotor, and an electropermanent magnet and coil on each stator arm.

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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 310/083, 195, 154280 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched US-PGPUB; USPAT; FPRS; EPO; JPO DERWENT; IBM_TDB Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) electro, magnet, stator, permanent, would, wind, outer rotor, friction, teeth, tooth, gear				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	US 3,601,641 (BERRMAN) 24 June 1971 (24.06.1971), see entire document.	1 and 7		
X	US 3,382,384 (HULLS) 7 May 1968 (07.05.1968), see entire document.	12, 13, 16 and 18		
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Y		2, 11, 17		
Y	US 2005/0242679 A1 (WALTER ET AL) 03 November 2005 (03.11.2005), see entire document.	11		
Y	US 6,707,213 B2 (FUJITA) 16 March 2004 (16.03.2004), see entire document.	2		
Y	US 5,338,993 (BRIGGS ET AL) 16 August 1994 (16.08.1994), see entire document.	17		
☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.				
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