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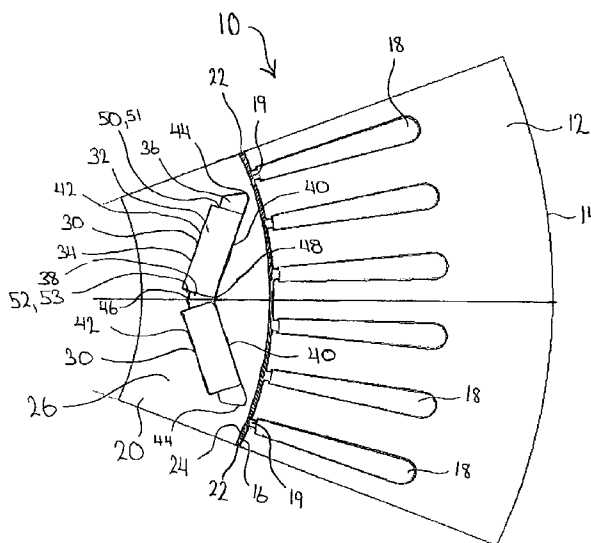
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(54) Title: ELECTRIC MACHINE WITH INTERIOR PERMANENT MAGNETS



(57) Abstract: An electric machine is disclosed herein comprising a stator and a rotor opposing the stator. A plurality of slots are formed in the rotor, each of the plurality of slots including a stator side and an opposing side. Each of the plurality of slots further include a central magnet retaining portion positioned between two opposing end portions of the slot. The central magnet retaining portion is defined by at least one protrusion formed on the stator side of the slot. The at least one protrusion forms a neck in the slot and separates the magnet retaining portion from one of the end portions. A magnet is positioned in the magnet retaining portion of the slot. The two opposing end portions of the slot are empty, providing voids at the ends of the slot.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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USPC - 310/156.01

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(8) - H02K 21/12 (2007.10)

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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)

USPTO EAST System (US, USPG-PUB, EPO, DERWENT)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/0217666 A1 (MELLOR et al) 04 November 2004 (04.11.2004) entire document	1-19
A	US 2005/0269888 A1 (UTAKA) 08 December 2005 (08.12.2005) entire document	1-19
A	US 2006/0028082 A1 (ASAGARA et al) 09 February 2006 (09.02.2006) entire document	1-19

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