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(54) **Title:** MAGNETIC ACTUATOR FOR SWITCHING ROLLER FINGER FOLLOWERS

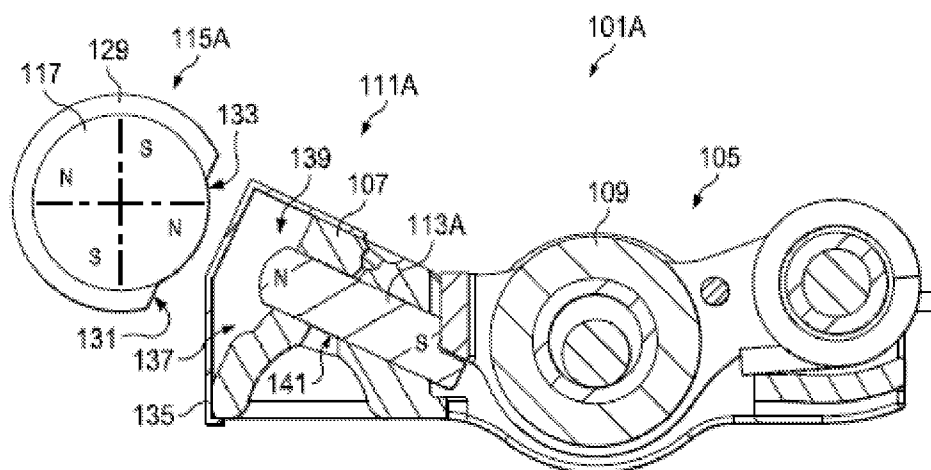


FIG. 1

(57) **Abstract:** A valvetrain suitable for an internal combustion engine that includes a combustion chamber, a moveable valve having a seat formed within the combustion chamber, and a camshaft includes a latch assembly and a rocker arm assembly. The rocker arm assembly include a rocker arm and a cam follower configured to engage a cam on the camshaft as the camshaft rotates. The latch assembly includes a latch pin mounted on the rocker arm and an actuator mounted on a component distinct from the rocker arm. The actuator includes one or more permanent magnets. The actuator is operable to move the one or more permanent magnets to induce the latch pin to translate from a first position to a second position through magnetic forces provided by the one or more permanent magnets.



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2018/033177**A. CLASSIFICATION OF SUBJECT MATTER****F01L 9/04(2006.01)i, F01L 1/18(2006.01)i**

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

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
F01L 9/04; F01L 1/12; F01L 1/18; F01L 1/34; F01L 13/00Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility modelsElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords:
valvetrain, camshaft, rocker arm, magnet, latch pin**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6318318 B1 (JAHR, KEN O.) 20 November 2001 See abstract; column 1, line 5 - column 5, line 47; and figures 1-4.	1-5, 11-15
Y		6-7
A		8-10
Y	US 6499451 B1 (HENDRIKSMA et al.) 31 December 2002 See column 3, lines 24-47; and figure 1.	6-7
A	KR 10-2013-0133545 A (HYUNDAI MOTOR COMPANY) 09 December 2013 See paragraphs [0016]-[0039]; and figures 1-4.	1-15
A	US 6752107 B2 (KREUTER, PETER) 22 June 2004 See claims 1-9; and figures 1-6.	1-15
A	US 2014-0083380 A1 (OTICS CORPORATION) 27 March 2014 See paragraphs [0053]-[0077]; and figures 6A-6B.	1-15

 Further documents are listed in the continuation of Box C. See patent family annex.

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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
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