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(54) Title: OVERRUNNING, NON-FRICTION, RADIAL COUPLING AND CONTROL ASSEMBLY AND SWITCHABLE LINEAR ACTUATOR DEVICE FOR USE IN THE ASSEMBLY

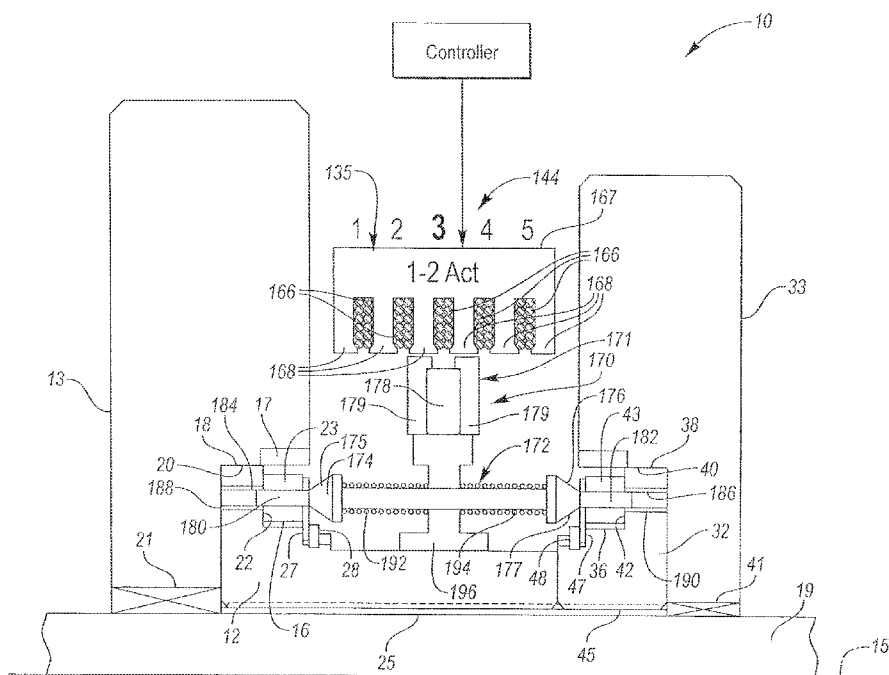


FIG. 1

(57) Abstract: A switchable linear actuator device and an overrunning, non-friction, radial coupling and control assembly using the device are provided. The device has magnetic sources which produce corresponding magnetic fields to create net translational forces. The device includes a first and locking members and a stator structure including a first and second electromagnetic sources configured to create first and second electronically-switched magnetic fields, respectively. A translator structure includes first and second cams having contour surfaces and a magnetically-latching, permanent magnetic source magnetically coupled to the stator structure across a radial air gap. The translator structure translates along an axis between first and second axial positions and between second and third axial positions upon experiencing first and second net translational forces, respectively, to cause the first and second locking members

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- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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INTERNATIONAL SEARCH REPORT

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CPC - F16H 2063/305, F16H 3/126, F16H 63/304, F16D 11/14, F16D 27/00, F16D 27/004, F16D 27/108, F16D 41/10

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)

See Search History Document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History Document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History Document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 8,491,439 B2 (Kimes) 23 July 2013 (23.07.2013), entire document	1-20
A	US 2016/0290426 A1 (Schaeffler Technologies AG & CO. KG) 06 October 2016 (06.10.2016), entire document	1-20
A	US 2014/0291100 A1 (Warner Electric Technology LLC) 02 October 2014 (02.10.2014), entire document	1-20
A	US 7,223,198 B2 (Kimes et al.) 29 May 2007 (29.05.2007), entire document	1-20
A	US 9,188,172 B2 (Means Industries, Inc) 17 November 2015 (17.11.2015), entire document	1-20
A	US 2006/0021836 A1 (Kimes et al.) 02 February 2006 (02.02.2006), entire document	1-20
A	US 2015/0034448 A1 (Denso Corporation) 05 February 2015 (05.02.2015), entire document	1-20



Further documents are listed in the continuation of Box C.



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19 July 2018

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