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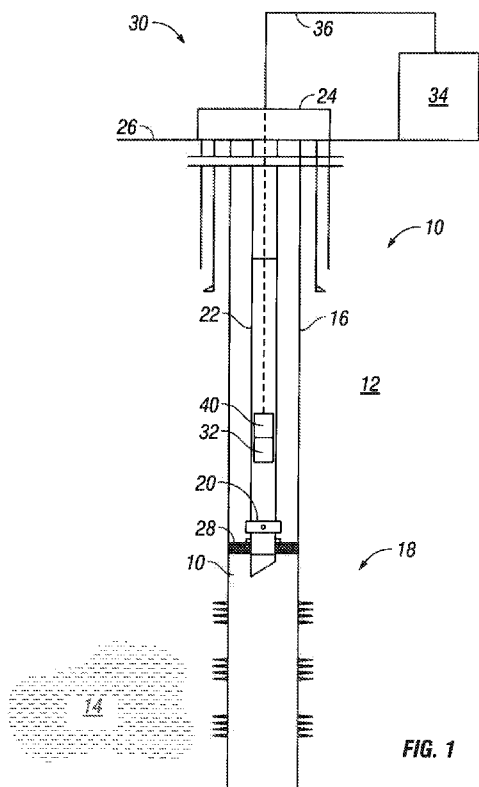
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[Continued on next page]

(54) Title: ACTUATOR FOR DOWNHOLE TOOLS



(57) Abstract: An apparatus, method, and system for actuating a wellbore tool includes a body having a chamber in which a movable member is disposed. The movable member may connect to a selected wellbore tool. Within the chamber is a controllable fluid that substantially prevents relative movement between the body and the movable member when exposed to an applied magnetic field. A generator applies the magnetic field to the fluid and may change the applied magnetic field in response to a first control signal to release the movable member from the body. A driver displaces the movable member relative to the body once the movable member is released from the body.

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Declarations under Rule 4.17:

- *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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A. CLASSIFICATION OF SUBJECT MATTER*E21B 23/00(2006.01)i, E21B 23/08(2006.01)i*

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: E21B 23/00; C10B 1/04; E21B 33/12; E21B 34/06; E21B 4/00; E21B 43/22; E21B 47/02; E21B 7/08

Documentation 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 models

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

eKOMPASS(KIPO internal) & Keywords: actuating, tool, fluid, magnetic field

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003-0192687 A1 (JAMES EDWARD GOODSON JR. et al.) 16 October 2003 See the abstract; figures 1-5; and claims 1-14	1-20
A	US 2007-0125578 A1 (WILLIAM J. MCDONALD et al.) 07 June 2007 See the abstract; figures 1-5; and claims 1-26	1-20
A	US 2002-0011358 A1 (MARK ELLSWORTH WASSELL) 31 January 2002 See the abstract; figures 1-16; and claims 1-4	1-20
A	US 4875292 A (PAUL N. GIBSON) 24 October 1989 See the abstract; figures 1-8; and claims 1-19	1-20
A	US 4579173 A (RONALD E. ROSENSWEIG et al.) 01 April 1986 See the abstract; figures 1A-3; and claims 1-8	1-20

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

* Special categories of cited documents:

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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