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Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

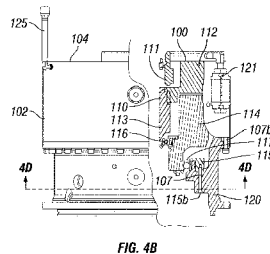
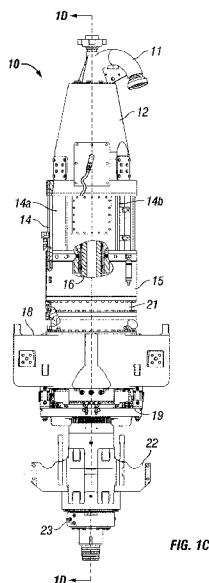
Published:

— with international search report (Art. 21(3))

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(88) Date of publication of the international search report:
16 December 2010

(54) Title: TOP DRIVE APPARATUS



WO 2009/081186 A3

(57) Abstract: A top drive apparatus comprising a drive shaft (16), a motor apparatus (14), a motor shaft (9) extending from the motor apparatus (14), a gear system (25) arranged in a gear housing (102,107), the gear system (25) driven by the motor shaft (9), the gear system (25) driving the drive shaft (16), characterised in that the gear system (25) comprises a planetary carrier (114), a single bearing (117) adjacent and in contact with the planetary carrier (114), a bearing cartridge (115) fitted to the gear housing (102,107), and the bearing cartridge (115) abutting the single bearing (117) and in contact with and holding the single bearing (117) in position with respect to the planetary carrier (114).

INTERNATIONAL SEARCH REPORT

International application No PCT/GB2008/051181
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A. CLASSIFICATION OF SUBJECT MATTER
INV. E21B3/02

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)
E21B

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	<p>WO 2005/121493 A2 (VARCO INT [US]; FOLK ROBERT ALDEN [CA]; FOLK STEVEN LORNE [CA]; LUCAS) 22 December 2005 (2005-12-22) figure 4D</p>	<p>1,3,8,9, 13-15, 18,19 2,4-7, 11,12, 16,17,20</p>
Y	<p>----- US 4 339 161 A (MAY FRANCIS A) 13 July 1982 (1982-07-13) column 2, line 39 - column 5, line 14; figures 1,2,3</p>	<p>2,4-7, 11,12, 16,17,20</p>
Y	<p>----- US 4 529 045 A (BOYADJIEFF GEORGE I [US] ET AL) 16 July 1985 (1985-07-16) figures 5,7</p> <p>-----</p>	<p>7</p>

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "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

Date of the actual completion of the international search

17 June 2010

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2008/051181

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-20

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-20

A top drive apparatus comprising a motor and a gear system wherein the gear system comprises a planetary carrier, a single bearing and a bearing cartridge and corresponding method

2. claim: 21

A top drive apparatus comprising a motor and a gearing system wherein the motor apparatus is arranged in a motor housing and wherein the motor housing comprises a top, a bottom and a plurality of rods.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2008/051181

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
WO 2005121493	A2	22-12-2005	CA 2563938 A1	22-12-2005
			EP 1753932 A2	21-02-2007
			EP 1961912 A1	27-08-2008
			US 2005274508 A1	15-12-2005

US 4339161	A	13-07-1982	NONE	

US 4529045	A	16-07-1985	NONE	
