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(81) Designated States (unless otherwise indicated, for every kind of national protection available):

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.1 7(in))

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(54) Title: DEBRIS BARRIER FOR HYDRAULIC DISCONNECT TOOLS

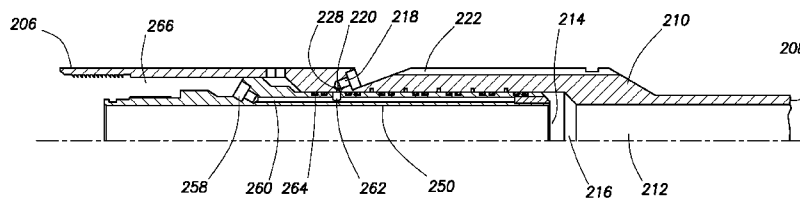


FIG. 3

(57) Abstract: A hydraulic connection mechanism for use in a wellbore comprises an upper connection running tool, a lower connection tool configured to engage the upper connection running tool and form a fluid communication pathway through the hydraulic connection mechanism, and a debris barrier disposed in the fluid communication pathway. The debris barrier comprises a body element, and a spring element configured to maintain the body element in a closed position when the upper connection running tool is disengaged from the lower connection tool.

A. CLASSIFICATION OF SUBJECT MATTER***E21B 23/08(2006.01)i, E21B 17/04(2006.01)1, E21B 31/12(2006.01)1, E21B 33/12(2006.01)1***

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 23/08; E21B 23/04; E03B 3/18; E21B 43/00; E21B 19/00; E21B 43/10; E21B 34/10

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: wellbore, connector, valve, debris and similar terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	US 2006-0113083 A1 (CONNELL, MICHAEL L. et al) 01 June 2006 See abstract, paragraphs [0015H0020], [0029] -[0030], and figures 1, 2.	1, 13, 18 2-5, 14-16, 19-20
Y	US 3433455 A (COOK, CHARLES J.) 18 March 1969 See column 1, lines 55 - column 2, line 30, and figures 1, 2.	1, 13, 18
A	US 2011-0108266 A1 (SMITH, STEVEN B. et al.) 12 May 2011 See abstract, paragraphs [0024] -[0026], and figures 1A-2B.	1-5, 13-16, 18-20
A	US 6408946 B1 (MARSHALL, GREGORY S. et al.) 25 June 2002 See abstract, column 3, line 48 - column 5, line 16 and figures 1-4.	1-5, 13-16, 18-20

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

* Special categories of cited documents:

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006-0 113083 A1	01.06.2006	None	
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