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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, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,

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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))

Published:

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(54) **Title:** HYDRAULIC FRACTURE DIVERTER APPARATUS AND METHOD THEREOF

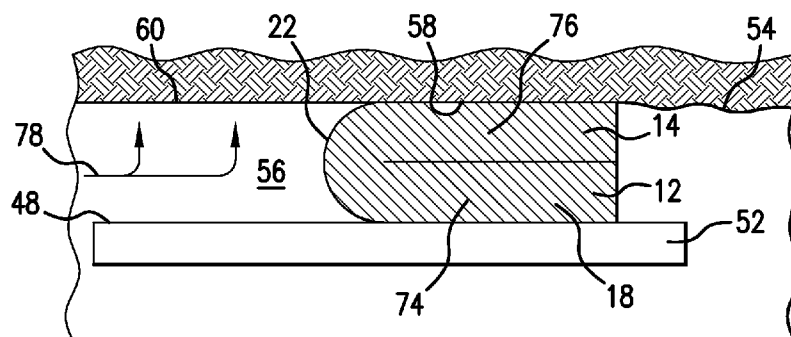


FIG. 3

(57) **Abstract:** An apparatus positionable along a downhole string. The apparatus includes a flexible structure retained on a surface of the string in a first condition. The flexible structure movable by a flow to substantially fill an annular space between the string and a radially positioned structure in a second condition. A method of diverting fracturing treatments in a wellbore is also included.



A. CLASSIFICATION OF SUBJECT MATTER***E21B 43/26(2006.01)i, E21B 19/09(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)

E21B 43/26; E21B 23/08; E21B 33/126; E21B 23/06; E21B 33/12; B09C 1/00

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: well bore, fracturing treatment, plugging, diverter and flexible structure.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 04356865A A (APPEL; CORNELIS et al.) 02 November 1982 See abstract, column 4, line 22 - column 5, line 13 and figures 1, 4, 5.	1, 13 2-12, 14-20
A	US 7264047 B2 (MICHAEL M. BREZINSKI et al.) 04 September 2007 See abstract, column 20, line 33 - column 21, line 7 and figures 28, 29.	1-20
A	US 7004260 B2 (MARTIN GERARD RENE BOSMA et al.) 28 February 2006 See abstract, column 2, line 15 - column 3, line 8 and figures 1A, 1B.	1-20
A	US 7380592 B2 (ATKINS NICHOLAS et al.) 03 June 2008 See abstract, column 4, line 50 - column 5, line 57 and figure 3.	1-20
A	US 05944446A A (HOCKING GRANT) 31 August 1999 See abstract, column 2, line 54 - column 2, line 63 and figure 2.	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

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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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