



(51) International Patent Classification:

*E21B 10/54* (2006.01)      *B23K 35/28* (2006.01)  
*E21B 10/42* (2006.01)      *B23K 1/00* (2006.01)  
*E21B 10/62* (2006.01)      *B23K 101/20* (2006.01)  
*B23K 31/02* (2006.01)

(21) International Application Number:

PCT/US2010/038365

(22) International Filing Date:

11 June 2010 (11.06.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/186,722      12 June 2009 (12.06.2009)      US

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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, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: CUTTER ASSEMBLIES, DOWNHOLE TOOLS INCORPORATING SUCH CUTTER ASSEMBLIES AND METHODS OF MAKING SUCH DOWNHOLE TOOLS

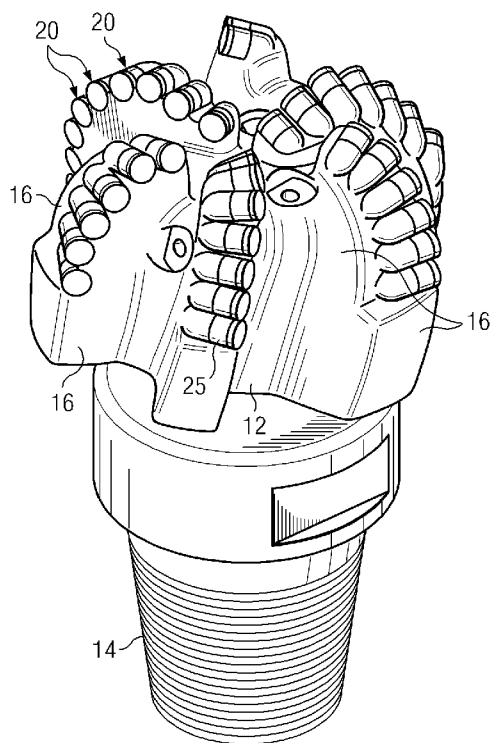


FIG. 1

(57) Abstract: Cutter assemblies comprising an outer support element and a cutting element disposed therein. The cutting element is immovably attached to the outer support element. Also provided are downhole tools incorporating such cutter assemblies and methods of making such downhole tools.



GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**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))*

**Published:**

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

**(88) Date of publication of the international search report:**

24 March 2011

## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2010/038365****A. CLASSIFICATION OF SUBJECT MATTER****E21B 10/54(2006.01)i, E21B 10/42(2006.01)i, E21B 10/62(2006.01)i, B23K 31/02(2006.01)i, B23K 35/28(2006.01)i, B23K 1/00(2006.01)i, B23K 101/20(2006.01)n**

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 10/54; E21B 10/36; E21B 10/46

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) &amp; Keywords: 'cutting element', 'brazo'

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                         | Relevant to claim No. |
|-----------|----------------------------------------------------------------------------------------------------------------------------|-----------------------|
| A         | US 2007-0278017 A1 (SHEN et al.) 06 December 2007<br>See the abstract; figures 1-20; paragraphs [0052]-[0104]; claims 1-54 | 1-50                  |
| A         | US 2009-0020339 A1 (SHERWOOD, JR.) 22 January 2009<br>See the abstract; figures 2-5; paragraphs [0021]-[0042]; claims 1-22 | 1-50                  |
| A         | US 2005-0087371 A1 (KEMBAIYAN) 28 April 2005<br>See the abstract; figures 5-7; paragraphs [0029]-[0060]; claims 1-40       | 1-50                  |

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

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Date of the actual completion of the international search

24 JANUARY 2011 (24.01.2011)

Date of mailing of the international search report

**25 JANUARY 2011 (25.01.2011)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
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Facsimile No. 82-42-472-7140

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2010/038365**

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s)                                                                                                           | Publication<br>date                                                                                          |
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