



- (51) **International Patent Classification:**
E21B 21/10 (2006.01) *E21B 19/16* (2006.01)
- (21) **International Application Number:**
PCT/GB2013/052712
- (22) **International Filing Date:**
17 October 2013 (17.10.2013)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
1218729.0 18 October 2012 (18.10.2012) GB
- (71) **Applicant: MANAGED PRESSURE OPERATIONS PTE. LTD.** [SG/SG]; 1 Maritime Square, #12-04A, Harbour Front Centre, Singapore 099253 (SG).
- (71) **Applicant (for CR only): LAWSON, Alison** [GB/GB]; Rutland House, 148 Edmund Street, Birmingham, West Midlands B3 2JA (GB).
- (72) **Inventors: LEUCHTENBERG, Christian**; 1 Maritime Square, #12-04A Harbour Front Centre, 099253, Singapore (SG). **YOUNGER, Rae**; Nether Ardgrain, Ellon, Scotland, Aberdeenshire AB41 8RA (GB).

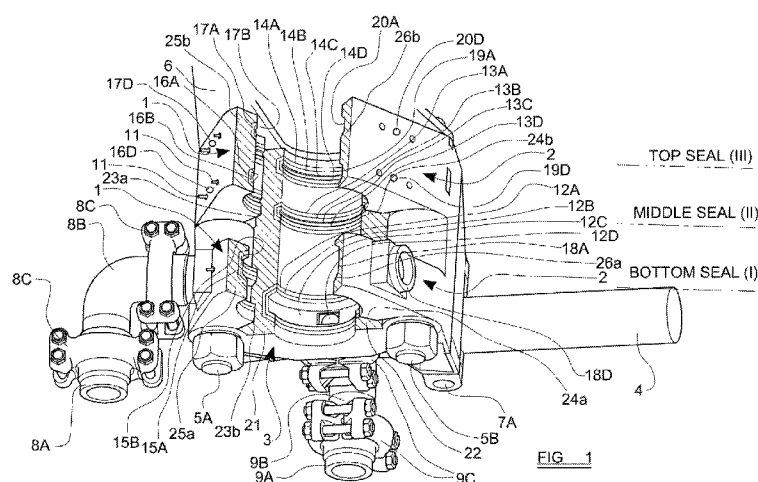
(74) **Agent: FORRESTERS**; Rutland House, 148 Edmund Street, Birmingham, West Midlands B3 2JA (GB).

(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, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, QA, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) **Title:** APPARATUS FOR CONTINUOUS CIRCULATION DRILLING OF A WELLBORE



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

30 April 2015

- *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))*