



(51) International Patent Classification:
F16L 55/12 (2006.01)

(21) International Application Number:
PCT/US2009/038272

(22) International Filing Date:
25 March 2009 (25.03.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/256,150 22 October 2008 (22.10.2008) US

(71) Applicant (for all designated States except US): **TDW DELAWARE, INC.** [US/US]; 1100 Market Street, Suite 780, Wilmington, DE 19801 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **YEAZEL, Kenneth, L.** [US/US]; 3749 East 83rd Street South, Tulsa, OK 74137 (US). **PUCKETT, Gregory, L.** [US/US]; 1930 West Woodbury Street, Broken Arrow, OK 74012 (US). **GOSWICK, Richard, L.** [US/US]; 9634 East 26th Place, Tulsa, OK 74129 (US).

(74) Agents: **ROSSLER, Paul, E.** et al.; Gable Gotwals, 100 West 5th Street, 10th Floor, Tulsa, OK 74103 (US).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: IMPROVED DOUBLE BLOCK AND BLEED PLUG

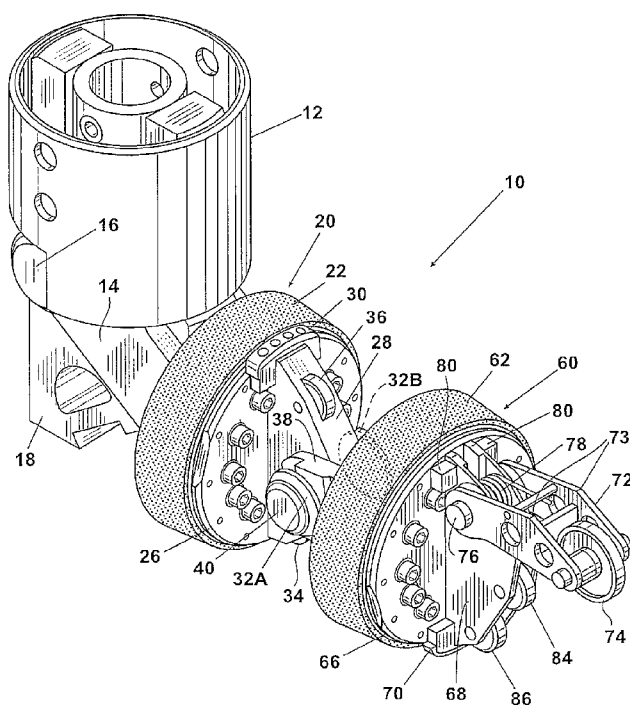


Fig. 1

(57) Abstract: A pipe plug includes two or more pivotally connected plugging heads that work in combination to double block and bleed a pipe. At least one of the plugging heads has an expandable sealing element that is in communication with an inflation source. The sealing element may be an inflatable sealing element or a compression packer sealing element. A passageway-sections of which may pass through the pivotal connection and into the plugging head-carries the inflation medium from the source to the sealing element. A bleed port passageway is also provided that passes through the plugging head. The leading plugging head may include a cleaning element for sweeping away debris ahead of the plug. The plugging heads may also include a skid plate that slideably engages the interior surface of the pipe to properly orient the plugging heads within the pipe.



Published:

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