

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 November 2008 (13.11.2008)

PCT

(10) International Publication Number
WO 2008/137411 A1

(51) International Patent Classification:
F16L 41/00 (2006.01)

(21) International Application Number:
PCT/US2008/061876

(22) International Filing Date: 29 April 2008 (29.04.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/743,484 2 May 2007 (02.05.2007) US

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

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SHAW, Brian S.** [US/US]; 4416 West Urbana Street, Broken Arrow, Oklahoma 74012 (US).

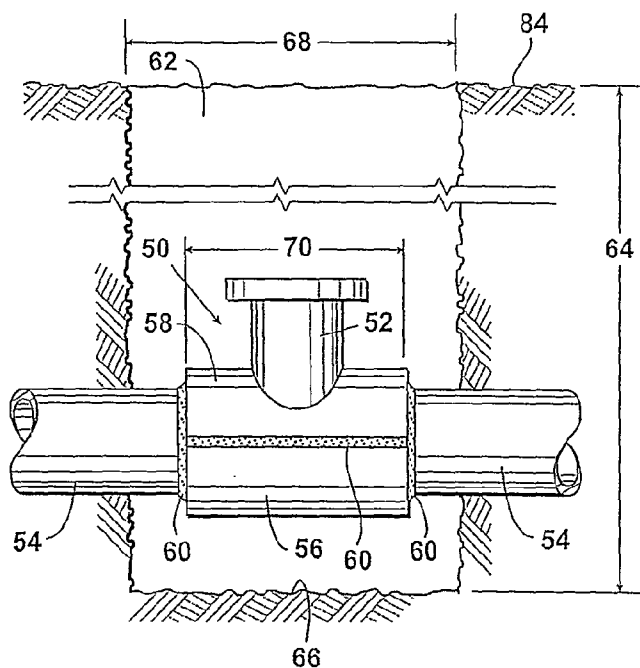
(74) Agents: **HINRICHS, Chad M.** et al.; Gable Gotwals, 100 West 5th Street, 10th Floor, Tulsa, Oklahoma 74103 (US).

(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, 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, 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).

Published:
— with international search report

(54) Title: SELF-CONTAINED KEYHOLE WELD FITTING AND METHOD OF USE



(57) Abstract: The present invention is generally directed toward a method for attaching a self-contained keyhole weld fitting and apparatus. More specifically, the present invention provides an improved fitting and method of use providing a branch outlet which can be physically and sealably secured to an underground pipe while causing less disturbance to the earth above the pipe than using a traditional fitting and excavation.

Fig. 2