

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 April 2007 (26.04.2007)

PCT

(10) International Publication Number
WO 2007/048021 A3

(51) International Patent Classification:
F16L 19/10 (2006.01)

(21) International Application Number:
PCT/US2006/041214

(22) International Filing Date: 20 October 2006 (20.10.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/255,499 20 October 2005 (20.10.2005) US
11/375,843 14 March 2006 (14.03.2006) US

(71) Applicant (*for all designated States except US*):
SWAGELOK COMPANY [US/US]; 29500 SOLON
ROAD, Solon, OH 44139 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **WILLIAMS, Peter, C.** [US/US]; 3495 EDISON ROAD, Cleveland Heights, OH 44121 (US). **MARSHALL, Andrew, P.** [US/US]; 2208 SOUTH BELVOIR BLVD., University Heights, OH 44118 (US). **CLASON, Mark, A.** [US/US]; 10201 CHAFFEE DODGEVILLE ROAD,

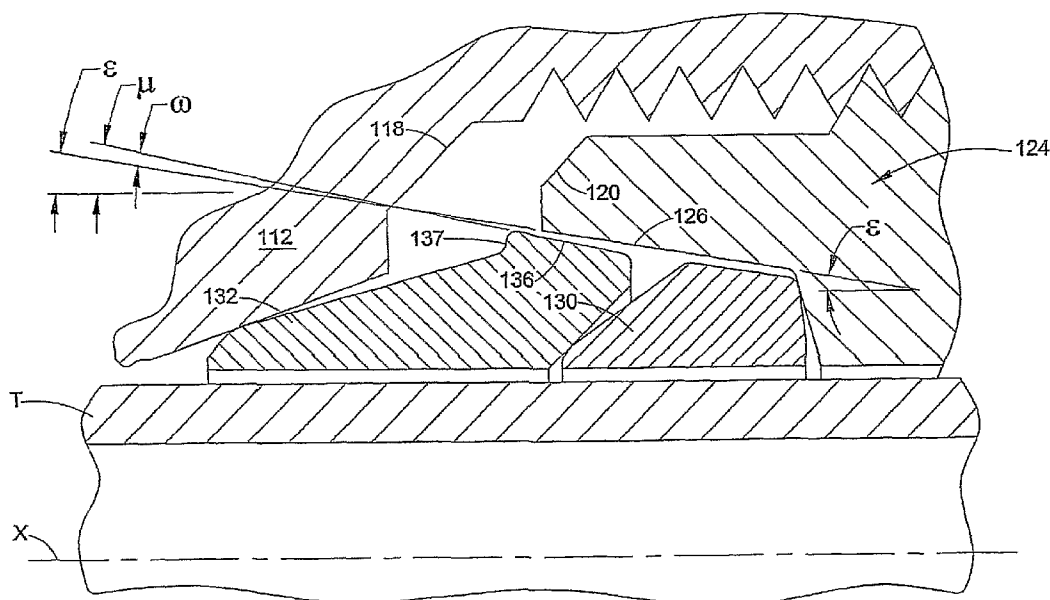
Orwell, OH 44076 (US). **FRUH, Jason, M.** [US/US]; 32738 SOUTH ROUNDHEAD DRIVE, Solon, OH 44139 (US). **KVARDA, Eric, M.** [US/US]; 6490 BRYSON DRIVE, Mentor, OH 44060 (US). **ANDERSON, Bret, M.** [US/US]; 576 E. ARCHWOOD AVENUE, Akron, OH 44301 (US). **FOTTA, Robert, A.** [US/US]; 12098 SNOW ROAD, Burton, OH 44021 (US). **HAYES, Charles, W., II** [US/US]; 28921 RIDGE ROAD, Wickliffe, OH 44092 (US). **NEDELKA, Harry, A.** [US/US]; 7999 NICODEMUS ROAD, Ravenna, OH 44266 (US). **PATIL, Appasahed, T.** [US/US]; 7757 HUDSON PARK DRIVE, Hudson, OH 44236 (US). **STUMP, J., D.** [US/US]; 7856 CHAMPAIGN DRIVE, Mentor, OH 44060 (US).

(74) Agent: **LEWIS, Leonard, L.**; CALFEE, HALTER & GRISWOLD LLP, 800 SUPERIOR AVE., STE. 1400, Cleveland, OH 44114 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,

[Continued on next page]

(54) Title: FITTING FOR TUBE AND PIPE



(57) Abstract: A fitting for a conduit has a first fitting component adapted to receive the conduit end; a conduit gripping device such as a ferrule or ferrules (130, 132), and a second fitting component (112) that can be joined to the first fitting component (124) to cause the conduit gripping device to grip the conduit (T) and seal when assembled. In one aspect of the invention, a portion of the second fitting component (112) at least partially retains the conduit gripping device (130, 132). The retaining portion can also be configured to retain the conduit gripping device to the second fitting component prior to installation and in a finger-tight condition. In another aspect of the invention, a tool is provided to retain a fitting component and a conduit gripping device prior to assembly of the fitting and conduit gripping device to a conduit end.

WO 2007/048021 A3



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, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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

7 June 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.