



(43) International Publication Date
27 February 2014 (27.02.2014)

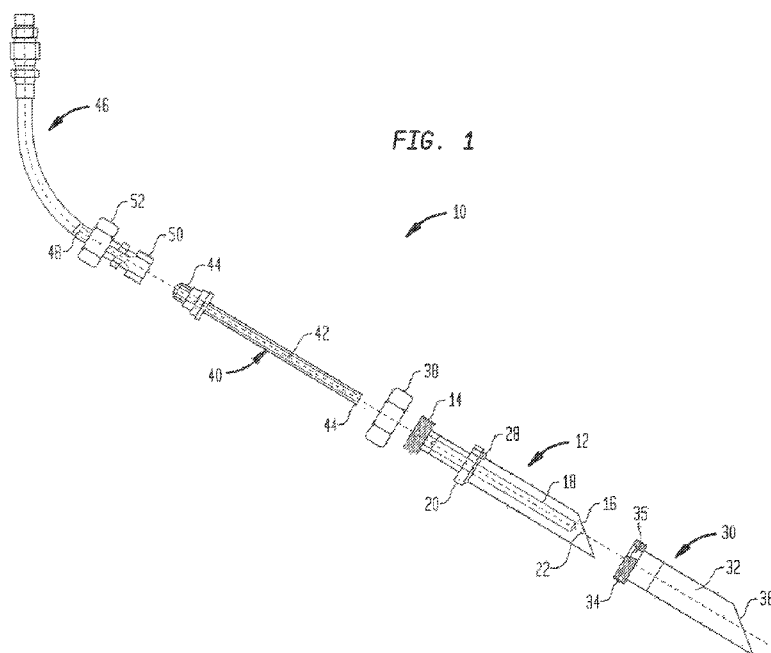
- (51) International Patent Classification:
B29C 45/20 (2006.01)
- (21) International Application Number:
PCT/US2013/055952
- (22) International Filing Date:
21 August 2013 (21.08.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/691,823 22 August 2012 (22.08.2012) US
- (71) Applicant: **LINDE AKTIENGESELLSCHAFT**
[DE/DE]; Klosterhofstr. 1, 80331 Munich (DE).
- (72) Inventors; and
- (71) Applicants : **MADSEN, Scott T.** [US/US]; 7309
Hamilton Avenue, Burr Ridge, IL 60527 (US).
SHAMOUN, Simon J. [US/US]; 1907 Flat Creek Court,
Acworth, GA 30101 (US). **SILVEIRA, Danny** [US/US];
2459 Anita Court, Tracy, CA 95304 (US).
- (74) Agent: **COHEN, Joshua L.**; Linde LLC, 575 Mountain
Avenue, Murray Hill, NJ 07974 (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, 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, 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, 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: PLASTIC INJECTION NOZZLE FOR BOTTOM INJECTION CHILLING



(57) Abstract: An injection nozzle includes a plastic body portion having a first end and a second end opposed to the first end; a passageway extending through the plastic body portion and having a first opening proximate the first end and a second opening at the second end; and a plurality of channels in communication with the first opening, each one of the plurality of channels terminating in a corresponding aperture at the first end.



Published:

- *without international search report and to be republished
upon receipt of that report (Rule 48.2(g))*