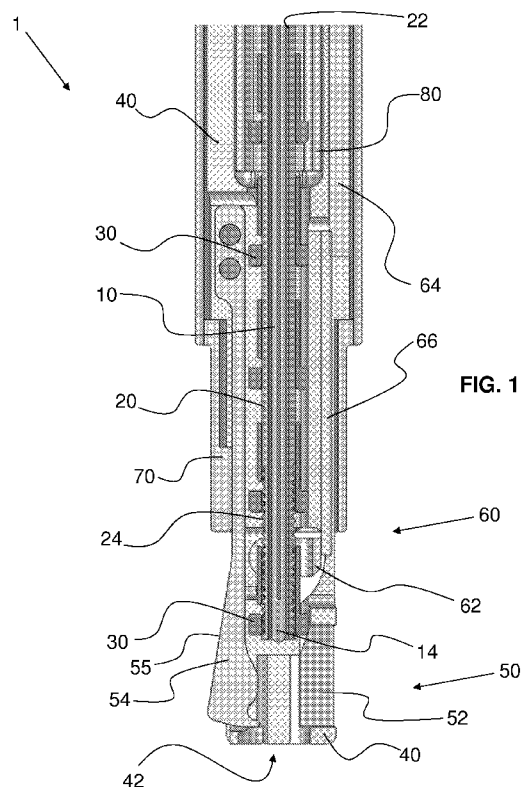




- (51) International Patent Classification:
A61B 17/068 (2006.01) *A61B 17/128* (2006.01)
A61B 17/115 (2006.01)
- (21) International Application Number:
PCT/US2014/066122
- (22) International Filing Date:
18 November 2014 (18.11.2014)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/905,578 18 November 2013 (18.11.2013) US
61/951,162 11 March 2014 (11.03.2014) US
62/069,183 27 October 2014 (27.10.2014) US
14/543,240 17 November 2014 (17.11.2014) US
- (71) Applicant: **SYNTHÉON CARDIOLOGY, LLC**
[US/US]; 13755 Southwest 119th Avenue, Miami, FL 33186 (US).
- (72) Inventors: **SMITH, Kevin, W.**; 570 Arvida Parkway, Coral Gables, FL 33156 (US). **MENDEZ, Max, Pierre**; 4723 Southwest 64 Court, Miami, FL 33155 (US). **PALMER, Matthew, A.**; 12790 Southwest 64 Court, Miami, FL 33156 (US). **MCBRAYER, M., Sean**; 6160 Chapman Field Drive, Miami, FL 33156 (US). **BALES, Thomas, O.**; 9151 Arvida Lane, Coral Gables, FL 33156 (US). **DEVILLE, Derek, Dee**; 5500 Oak Lane, Coral Gables, FL 33156 (US). **CARTLEDGE, Richard**; 2268 Acom Palm Road, Boca Raton, FL 33432 (US). **KLINE, Korey**; 7028 Southwest 65th Avenue, Cooper City, FL 33143 (US). **RIVERA, Carlos**; 5817 Southwest 120 Avenue, Cooper City, FL 33330 (US). **NUNEZ, George**; 2318 Southwest 148th Court, Miami, FL 33185 (US).
- (74) Agents: **BETHEA, Thomas** et al.; Mayback And Hoffman, P.A., 5722 South Flamingo Road, #232, Fort Lauderdale, FL 33330 (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,

[Continued on next page]

(54) Title: MULTIPLE-FIRING CRIMP DEVICE



(57) Abstract: A multiple-firing crimp device comprises crimps, a shaft, a crimp movement assembly, and a snare. Each crimp has an internal hollow. The shaft has a distal crimping location, an exterior surface, and an interior with the clips stacked therein, the crimps moving therein along a longitudinal axis. The shaft defines a lateral opening proximal to the crimping location and communicates the interior to the environment outside the exterior surface. The crimp movement assembly within the shaft delivers the first crimp to the distal crimping location by moving the first crimp longitudinally from a first proximal position into the distal crimping location and returning to a second proximal position without the first crimp. The snare pulls at least one cord from distal of the first crimp through the first crimp and through a portion of the shaft and out the side of the shaft through the lateral opening.



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, 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.

GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, 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).

Published:

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

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