



- (51) **International Patent Classification:**
A61F 2/44 (2006.01) **A61B 17/70** (2006.01)
A61F 2/28 (2006.01)
- (21) **International Application Number:**
PCT/US2012/061084
- (22) **International Filing Date:**
19 October 2012 (19.10.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/549,848 21 October 2011 (21.10.2011) US
- (71) **Applicant:** INNOVATIVE SURGICAL DESIGNS, INC.
[US/US]; 2660 E. 2nd Street, #10, Bloomington, IN 47401 (US).
- (72) **Inventors:** ANDERSON, D., Greg; 351 Tom Brown Road, Moorestown, NJ 08057 (US). BEAMS, Wayne; 1959 N. Lower Birdie Galyan, Bloomington, IN 47408 (US). TURNER, Barry; 820 Repp Drive, Columbus, IN 47201 (US). MORRIS, Ed; 2660 E. 2nd Street, #10, Bloomington, IN 47401 (US).
- (74) **Agents:** ZACHARIAS, Peter et al.; Blank Rome, LLP, One Logan Square, 130 N. 18th Street, Philadelphia, PA 19103 (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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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,

[Continued on next page]

(54) **Title:** SURGICAL IMPLANTS FOR PERCUTANEOUS LENGTHENING OF SPINAL PEDICLES TO CORRECT SPINAL STENOSIS

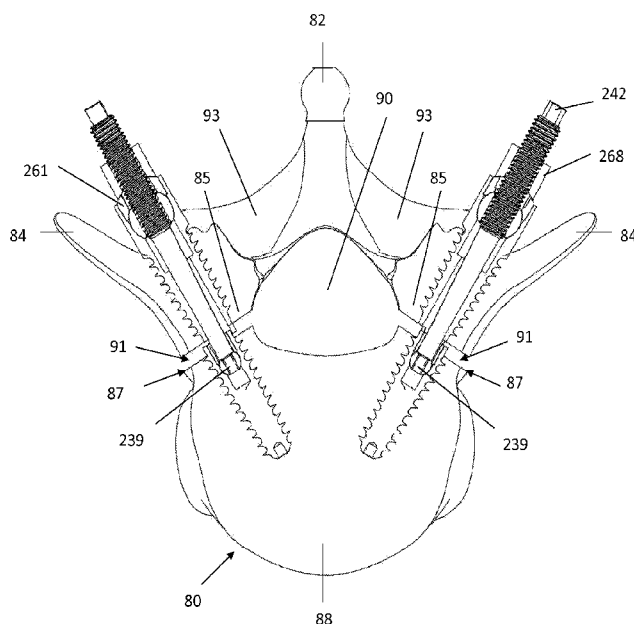


FIG. 13

(57) **Abstract:** An implant for expanding a spinal canal having an upper portion, a lower portion, and an inner member. The inner member communicates with a swivelable coupling located at each end of the inner member within the implant. Each swivelable coupling also interacts with a respective one of the upper and lower portion, within an inner bore thereof. Accordingly, movement of the inner member relative to one or both of the upper and the lower portions, via one or both swivelable couplings, translates the upper portion away from the lower portion, about a vertebral cut, to widen the vertebral cut and expand the spinal canal. The swivelable action of the couplings during translation allows angulation of the inner member, relative to a longitudinal axis of the implant, to accommodate a natural lateral shift occurring during a widening of a vertebral cut.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, —
ML, MR, NE, SN, TD, TG).

*before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))*

Published:

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