

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 November 2001 (29.11.2001)

PCT

(10) International Publication Number
WO 01/89392 A2

- (51) International Patent Classification⁷: **A61B 17/08**
- (21) International Application Number: PCT/US01/16346
- (22) International Filing Date: 17 May 2001 (17.05.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/574,603 19 May 2000 (19.05.2000) US
09/788,118 16 February 2001 (16.02.2001) US
09/816,641 22 March 2001 (22.03.2001) US
- (71) Applicant (for all designated States except US): **COAPT SYSTEMS, INC.** [US/US]; 261 Hamilton Avenue, Suite 413, Palo Alto, CA 94301 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **JACOBS, Daniel** [US/US]; 4289 Brianwood, Palo Alto, CA 94306 (US). **ELSON, Robert, James** [US/US]; 601 Bryson Avenue, Palo Alto, CA 94306 (US). **PAGANELLI, Jude, V.** [US/US]; 289 N. Almenar Drive, Greenbrae, CA 94904 (US).
- (74) Agents: **HAN, Johnney, U.** et al.; Morrison & Foerster LLP, 755 Page Mill Road, Palo Alto, CA 94304-1018 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- 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.*

(54) Title: MULTI-POINT TISSUE TENSION DISTRIBUTION DEVICE, A COMBINED ORBITAL RIM REPAIR AND SUSPENSION VARIATION, AND A METHOD OF TISSUE APPROXIMATION USING THE DEVICE

(57) Abstract: A tissue approximation device and processes for using the device are provided. The device is an implantable, biodegradable construct (except for hernia repairs) that has attachment points emanating from a supportive backing. The device improves the mechanical phase of wound healing and evenly distributes tension over the contact area between the device and tissue. Processes for using the device include wound closure, vascular anastomoses, soft tissue attachment and soft tissue to bone attachment. Several variations are particularly applicable to facilitating tissue approximation in surgical cosmetic applications including, for example, orbital rim reconstruction and tissue suspension.



WO 01/89392 A2