

(51) International Patent Classification:
A61F 2/24 (2006.01)(21) International Application Number:
PCT/US2014/059076(22) International Filing Date:
3 October 2014 (03.10.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

61/887,343	5 October 2013 (05.10.2013)	US
61/927,490	15 January 2014 (15.01.2014)	US
14/279,511	16 May 2014 (16.05.2014)	US
62/024,097	14 July 2014 (14.07.2014)	US

(71) Applicant: SINO MEDICAL SCIENCES TECHNOLOGY, INC. [CN/CN]; 2nd Floor, TEDA Biopharm Res., Building B, #5, 4th Street, TEDA, Tianjin (CN).

(72) Inventors; and

(71) Applicants : **MA, Jianlu** [CN/US]; 66 Keepsake, Irvine, CA 92606 (US). **HUO, Yong** [CN/CN]; #502, Gate 5, Building 14, FuGuoLi, XiCheng District, Beijing 100034 (CN). **LI, Tianzhu** [CN/US]; 26322 Town Center Drive, Apt. 624, Foothill Ranch, CA 92610 (US). **ZHAO, Jinhong** [CN/US]; 26322 Town Center Drive, Apt. 624, Foothill Ranch, CA 92610 (US). **MA, Jianxiang** [CN/US]; 26322 Town Center Drive, Apt. 624, Foothill Ranch, CA

92610 (US). **MENG, Lei** [CN/US]; 26322 Town Center Drive, Apt. 624, Foothill Ranch, CA 92610 (US).(74) Agents: **SUN, Raymond** et al.; Law Office of Raymond Sun, 20 Corporate Park, Suite 155, Irvine, CA 92606 (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, 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.

(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, 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:

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

(54) Title: DEVICE AND METHOD FOR MITRAL VALVE REGURGITATION METHOD

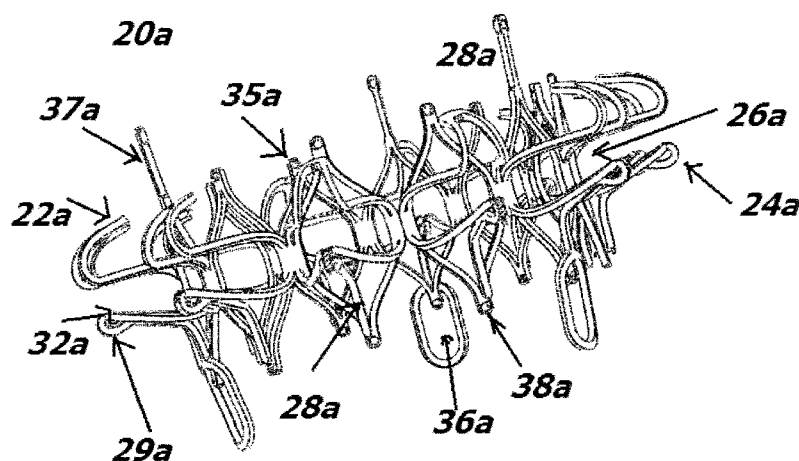


Fig. 16

(57) Abstract: A mitral valve replacement device is adapted to be deployed at a mitral valve position in a human heart. The device has an atrial flange defining an atrial end of the device, a ventricular portion defining a ventricular end of the device, the ventricular portion having a height ranging between 2 mm to 15 mm, and an annulus support that is positioned between the atrial flange and the ventricular portion. The annulus support includes a ring of anchors extending radially therefrom, with an annular clipping space defined between the atrial flange and the ring of anchors. A plurality of leaflet holders positioned at the atrial end of the atrial flange, and a plurality of valve leaflets secured to the leaflet holders, and positioned inside the atrial flange at a location above the native annulus.