

CORRECTED VERSION

(19) World Intellectual Property Organization  
International Bureau



(10) International Publication Number  
WO 2015/191925 A8

(43) International Publication Date  
17 December 2015 (17.12.2015)

- (51) International Patent Classification:  
A61M 31/00 (2006.01) A61M 29/04 (2006.01)
- (21) International Application Number:  
PCT/US2015/035429
- (22) International Filing Date:  
11 June 2015 (11.06.2015)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
62/010,992 11 June 2014 (11.06.2014) US
- (71) Applicants: MASSACHUSETTS INSTITUTE OF TECHNOLOGY [US/US]; 77 Massachusetts Avenue, Cambridge, MA 02139 (US). THE BRIGHAM AND WOMEN'S HOSPITAL, INC [US/US]; 101 Huntington Avenue, 4th Floor, Research Ventures & Licensing, Boston, MA 02115 (US). TOKITAE LLC [US/US]; 11235 S.E. 6th Street, Suite 200, Bellevue, WA 98004 (US).
- (72) Inventors: BELLINGER, Andrew; 30 Standish Road, Wellesley, MA 02181 (US). ZHANG, Shiyi; 197 Kent Street #48, Brookline, MA 02446 (US). TRAVERSO, Carlo, Giovanni; 3938 Bloor Street West, Etobicoke,

Ontario, M9B 1M1 (CA). LANGER, Robert, S.; 98 Montvale Road, Newton, MA 02459 (US). MO, Stacy; 1209 Iroquois Lane, Darien, IL 60561 (US). LIN, Jiaqi; 46 South Street, Apt. 4, Somerville, MA 02143 (US). DI-CICCIO, Angela; 216 Brookline Street, Cambridge, MA 02139 (US). GLETTIG, Dean, Liang; 24 Antrim Street, Apt. 1, Cambridge, MA 02139 (US). WOOD, Lowell, L., Jr.; 989 112th Avenue, N.E. #2310, Bellevue, WA 98004 (US). ECKHOFF, Philip, A.; 4230 105th Avenue, N.E., Kirkland, WA 98033 (US).

(74) Agent: OYER, Timothy, J.; Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210-2206 (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.

[Continued on next page]

(54) Title: SELF-ASSEMBLED RESIDENCE DEVICES AND RELATED METHODS

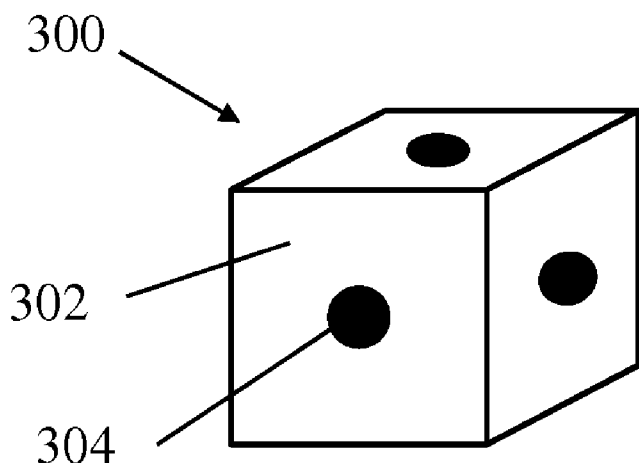


Fig. 3A

(57) Abstract: Residence devices as well as their related methods of manufacture and use are generally provided. In some embodiments, a residence device includes a plurality of self-assembling structures that assemble in vivo to form an aggregate structure. Each structure of the plurality of structures includes a first side and a first attachment point that attaches to a second attachment point on another structure of the plurality of structures. The aggregate structure may be sized and shaped to maintain an in vivo position relative to an internal orifice of a subject. The attachment between the first and second attachment points may degrade after a period of time.

WO 2015/191925 A8



**(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))*

**(48) Date of publication of this corrected version:**

11 February 2016

**(15) Information about Correction:**

see Notice of 11 February 2016