



- (51) **International Patent Classification:**
A61B 5/026 (2006.01) *A61F 2/02* (2006.01)
- (21) **International Application Number:**
PCT/SG2010/000363
- (22) **International Filing Date:**
27 September 2010 (27.09.2010)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2009072448 30 October 2009 (30.10.2009) SG
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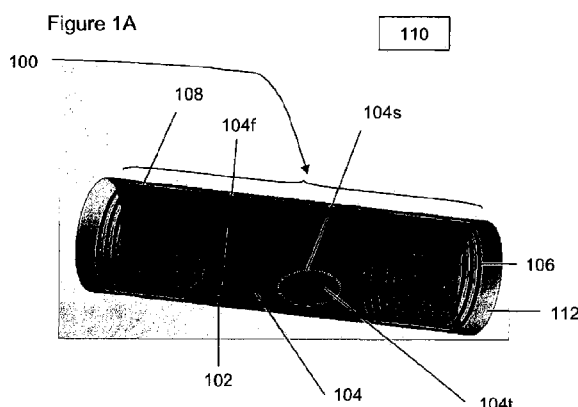
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(81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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.

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(54) **Title:** IMPLANTABLE DEVICE FOR DETECTING VARIATION IN FLUID FLOW RATE



(57) **Abstract:** According to embodiments of the present invention, an implantable device for detecting variation in fluid flow rate is provided. The implantable device includes: a substrate having an active element arrangement; a sensor arrangement having a first portion that is mechanically secured and a second portion that is freely deflectable, the sensor arrangement in electrical communication with the active element arrangement, wherein the active element arrangement is configured to detect changes in deformation of the sensor arrangement and produce an output in response to the detected changes; and at least one inductive element mechanically coupled to the substrate and in electrical communication with the active element arrangement, wherein the inductive element is adapted to power the active element arrangement through inductive coupling to an excitation source, and wherein the inductive element is adapted to transmit the output associated with the detected changes in the sensor.



(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, SE, SI, SK,

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

Published:

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