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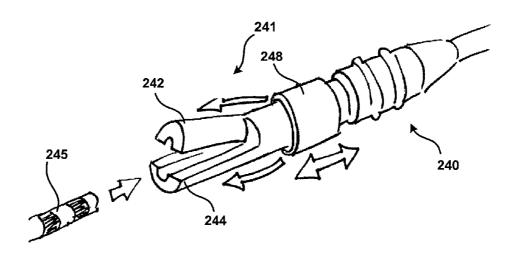
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as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,

[Continued on next page]

(54) Title: NEUROGICAL STIMULATION LEAD EXTENSION



(57) Abstract: Neurological lead extensions (16; 40; 100; 140; 150; 160; 170; 180; 190; 200; 220; 230; 240; 260; 270; 280; 290; 300; 310; 350; 410; 450; 470; 520; 530; 540; 550; 560; 570; 580; 590; 600) are described that do not require set screws, set screw blocks, or set screw inserts. Elimination of set screws, blocks and inserts can reduce the amount of metal and ferromagnetic material in the extension. The neurological lead extension may include a proximal end configured to couple to a neurological device (24; 616; 626) and a distal end (18; 41; 101; 111; 141; 151; 161; 171; 181; 191; 201; 241; 271; 281; 291; 301; 311; 351; 411; 451; 471; 501; 511; 521; 531) configured to couple to an implanted neurological lead (10; 206; 230; 245; 265; 275; 285; 295; 315; 345; 415; 455; 525; 535; 612; 622). A set of electrical contacts (45A-45G; 105A-105D; 115A-115D; 313) are disposed in proximity to the distal end to provide electrical contact to an inserted end of the implanted neurological lead. Various elements and structures are described which can mechanically secure the inserted end of the implanted neurological lead to the distal end of the extension.



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CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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### INTERNATIONAL SEARCH REPORT



a. classification of subject matter IPC 7 A61N1/04 A61N A61N1/05 H01R24/04 H01R13/639 A61N1/375 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) H01R IPC 7 A61N Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Category 9 Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. χ US 4 744 371 A (HARRIS DONALD L) 1-8,17 May 1988 (1988-05-17) 11-22 Α 9,10 the whole document χ WO 00/64535 A (ADVANCED NEUROMODULATION 1,2,4,5, SYSTE) 2 November 2000 (2000-11-02) 8,11-16, 18,19, 21,22 6,7,20 Α 3,9,10, page 9, line 8 -page 15, line 25; figures Further documents are listed in the continuation of box C. χ Patent family members are listed in annex. ° Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but \*A\* document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to document which may throw doubts on priority claim(s) or involve an inventive step when the document is taken alone which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docudocument referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled in the art. document published prior to the international filing date but later than the priority date claimed \*&\* document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 6 September 2004 15/09/2004 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 Fischer, 0

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