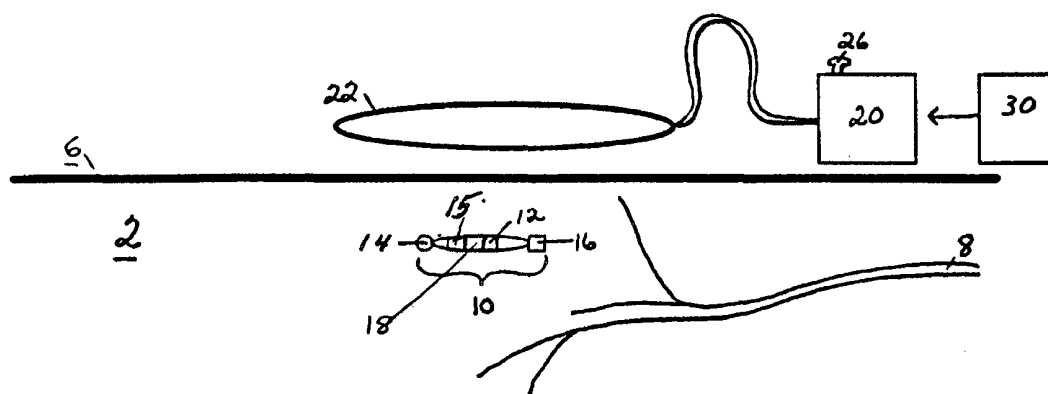




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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|---|-----------|--|
| (51) International Patent Classification ⁷ : A61N 1/36 | A3 | (11) International Publication Number: WO 00/01320 (43) International Publication Date: 13 January 2000 (13.01.00) |
| (21) International Application Number: PCT/US99/14775 (22) International Filing Date: 29 June 1999 (29.06.99) (30) Priority Data: 60/091,762 6 July 1998 (06.07.98) US (71) Applicant (for all designated States except US): ADVANCED BIONICS CORPORATION [US/US]; 12740 San Fernando Road, Sylmar, CA 91342 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): LOEB, Gerald, E. [US/US]; 19348 Wing Foot Circle, Northridge, CA 91326 (US). MANN, Carla, M. [US/US]; 14175 Mulholland Drive, Beverly Hills, CA 90210 (US). RICHMOND, Francis, J., R. [CA/US]; 19348 Wing Foot Circle, Northridge, CA 91326 (US). (74) Agent: GOLD, Bryant, R.; Advanced Bionics Corporation, 12740 San Fernando Road, Sylmar, CA 91342 (US). | | (81) Designated States: AU, CA, JP, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (88) Date of publication of the international search report: 22 June 2000 (22.06.00) |

(54) Title: IMPLANTABLE STIMULATOR SYSTEM AND METHOD FOR TREATMENT OF URINARY INCONTINENCE



PROGRAMMING SYSTEM FOR IMPLANTABLE MICROSTIMULATOR

(57) Abstract

A method and system for treatment of urinary incontinence includes the injection or laparoscopic implantation of one or more battery- or radiofrequency-powered microstimulators (10) beneath the skin of the perineum. The devices are programmed using radio-frequency control via an external controller (20, 30) that can be used by a physician to produce patterns of output stimulation pulses judged to be efficacious by appropriate clinical testing to diminish incontinence symptoms. The stimulation program is retained in the microstimulator device (10) or external controller (20) and is transmitted when commanded to start and stop by a signal from the patient or caregiver. The system and method reduce the incidence of unintentional episodes of bladder emptying by stimulating nerve pathways (8) that diminish involuntary bladder contractions, improve closure of the bladder outlet, and/or improve the long-term health of the urinary system by increasing bladder capacity and emptying. Further, the system and method allow a patient to be taught to receive one or more patterns of neural stimulation that can be prescribed by a physician and administered without continuous oversight by a clinical practitioner.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/14775

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61N 1/36

US CL : 607/41

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)

U.S. : 607/2, 36, 39-41, 116

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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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| A | US 5,405,367 A (SCHULMAN et al.) 11 April 1995, entire document. | 1-12 |

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search

27 MARCH 2000

Date of mailing of the international search report

18 APR 2000

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