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(54) Title: APPARATUS AND METHODS FOR APPLYING NEURAL STIMULATION TO A PATIENT

(57) Abstract: Systems and methods for neural stimulation may include a stimulus unit; a first electrode assembly having a first set of contacts; and a second set of contacts. The stimulus unit can be an implantable pulse generator including a first terminal that can be biased at a first signal polarity and a second terminal that can be biased at a second signal polarity. The first electrode assembly includes a support member configured to be placed at the stimulation site, the first set of contacts carried by the support member, and a first lead configured to be attached to the first terminal of the implantable pulse generator for biasing the surface contacts at the first polarity. The second set of contacts is detached from the surface electrode assembly. The second set of contacts can be one or more conductive elements fixed to or forming portions of the implantable pulse generator, or a separate electrode array.



WO 2005/011805 A3

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/25010

A. CLASSIFICATION OF SUBJECT MATTER		
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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. : 607/045, 2, 40-59		
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.
X,E	US 2004/0158298 A1 (GLINER) 12 August 2004(12.08.2004), see entire document.	25,26
X	US 5,674,251 A (COMBS et al.) 07 October 1997(07.10.1997), see entire document.	1-4, 6-10, 13, 14, 17, 18, 21, 25, 26
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Y		5, 15, 16, 27, 28
X	US 2002/0091419 A1 (FIRLIK et al) 11 July 2002(11.07.2002), see entire document.	25-27, 45, 49
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Y		35, 41-43, 50-55
Y	US 2003/0125772 A1 (OLSON et al.) 03 July 2003(03.07.2003), see entire document.	5, 15, 16, 27, 28
Y	US 2002/0077670 A1 (ARCHER et al.) 20 June 2002(20.06.2002), see entire document.	35, 41-43, 50-55
A	US 3,650,276 A (BURGHELE et al.) 21 March 1972(21.03.1972).	11, 12, 19, 20, 22- 24,29,30-34, 36-40, 44, 46-48, 56-75
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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PCT/US04/25010**C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,140,133 A (KASTRUBIN et al) 20 February 1979(20.02.1979).	11, 12, 19-20, 22-24, 29-34, 36-40, 44, 46- 48, 56-75
Y	US 2005/0004620 A1 (SINGHAL et al.) 06 January 2005(06.01.2005), see entire document.	27 and 28